No.	Co-authors	Article title	Keywords	Vol., No., pp.	DOI	Citation
1	Chandrasekaran, R., Neeli, J., Alsberi, H., Hassan, M.M., Uikey, J., Yahya, M.	Pioneering Prognosis and Management in Neuromuscular Healthcare Using EMG Signal Processing with Advanced Deep Learning Techniques	advanced signal processing, attention mechanisms, Electromyography (EMG) signals, Graph Neural Network (GNN), hybrid deep learning architecture, machine learning, neuromuscular disorders, NeuroFusionNet	41, 4, 1633-1645	https://doi.org/10.18280/ts.410401	Chandrasekaran, R., Neeli, J., Alsberi, H., Hassan, M.M., Uikey, J., Yahya, M. (2024). Pioneering prognosis and management in neuromuscular healthcare using EMG signal processing with advanced deep learning techniques. Traitement du Signal, Vol. 41, No. 4, pp. 1633-1645. https://doi.org/10.18280/ts.410401
2	Coşar, H.İ., Kılıç, F., Altın, C., Tanık, N.	EEG Classification to Food Stimuli in Diverse Weight Groups with Regression Analysis of Eating Behavior Questionnaires	deep learning (DL), electroencephalography (EEG) classification, overweight, supervised tabular meta-learning (SuperTML), machine learning (ML), regression	41, 4, 1647-1665	https://doi.org/10.18280/ts.410402	Coşar, H.İ., Kılıç, F., Altın, C., Tanık, N. (2024). EEG classification to food stimuli in diverse weight groups with regression analysis of eating behavior questionnaires. Traitement du Signal, Vol. 41, No. 4, pp. 1647-1665. https://doi.org/10.18280/ts.410402
3	Gupta, M., Yadav, D., Khan, S.S., Kumawat, A.K., Chourasia, A., Rane, P., Ujlayan, A.	Modeling the Detection and Classification of Tomato Leaf Diseases Using a Robust Deep Learning Framework	plant diseases, image processing, machine learning, deep learning, artificial intelligence	41, 4, 1667-1678	https://doi.org/10.18280/ts.410403	Gupta, M., Yadav, D., Khan, S.S., Kumawat, A.K., Chourasia, A., Rane, P., Ujlayan, A. (2024). Modeling the detection and classification of tomato leaf diseases using a robust deep learning framework. Traitement du Signal, Vol. 41, No. 4, pp. 1667-1678. https://doi.org/10.18280/ts.410403
4	Zhang, L., Huang, X., Zhong, H.	Measurement of Street Greenness and Interface Permeability Based on Street View Image Analysis	street view images, deep learning, street greenness, interface permeability, urban ecological environment	41, 4, 1679-1688	https://doi.org/10.18280/ts.410404	Zhang, L., Huang, X., Zhong, H. (2024). Measurement of street greenness and interface permeability based on street view image analysis. Traitement du Signal, Vol. 41, No. 4, pp. 1679-1688. https://doi.org/10.18280/ts.410404
5	Alshehri, A.	Skin-NeT: Skin Cancer Diagnosis Using VGG and ResNet-Based Ensemble Learning Approaches	skin cancer, ensemble learning, machine learning, feature extraction, VGG-16, ResNeT-50, VGG-19, Xception	41, 4, 1689-1705	https://doi.org/10.18280/ts.410405	Alshehri, A. (2024). Skin-NeT: Skin cancer diagnosis using VGG and ResNet-based ensemble learning approaches. Traitement du Signal, Vol. 41, No. 4, pp. 1689-1705. https://doi.org/10.18280/ts.410405
6	Dalal, S., Singh, J.P., Tiwari, A.K., Nandan, D.	An Automated Computed Tomography Scan Analysis Framework for COVID-19 Detection Using Machine Learning	COVID-19 detection, computed tomography, Kernel extreme machine learning, feature extraction, classification, autoencoder, seagull optimization	41, 4, 1707-1726	https://doi.org/10.18280/ts.410406	Dalal, S., Singh, J.P., Tiwari, A.K., Nandan, D. (2024). An automated computed tomography scan analysis framework for COVID-19 detection using machine learning. Traitement du Signal, Vol. 41, No. 4, pp. 1707-1726. https://doi.org/10.18280/ts.410406
7	Bakirci, M.	Real-Time Vehicle Detection Using YOLOv8-Nano for Intelligent Transportation Systems	vehicle detection, YOLOv8, aerial monitoring, intelligent transportation systems, UAV	41, 4, 1727-1740	https://doi.org/10.18280/ts.410407	Bakirci, M. (2024). Real-time vehicle detection using YOLOv8-nano for intelligent transportation systems. Traitement du Signal, Vol. 41, No. 4, pp. 1727-1740. https://doi.org/10.18280/ts.410407
8	Chen, Y.	Real-Time Load Monitoring of Logistics Delivery Vehicles Using Deep Learning-Based Image Analysis	logistics delivery vehicles, real-time load monitoring, deep learning, subpixel edge detection, interpolation, load volume calculation	41, 4, 1741-1748	https://doi.org/10.18280/ts.410408	Chen, Y. (2024). Real-time load monitoring of logistics delivery vehicles using deep learning-based image analysis. Traitement du Signal, Vol. 41, No. 4, pp. 1741-1748. https://doi.org/10.18280/ts.410408
9	Singh, S.K., Rashid, M., Alshamrani, S.S., Alnfiai, M.M., Saxena, P., Khamparia, A.	Efficient Transfer Learning Approach for Acute Lymphoblastic Leukemia Diagnosis: Classification of Lymphocytes and Lymphoblastic Cells	transfer learning, acute lymphoblastic leukemia, lymphoblast, principal component analysis, deep learning	41, 4, 1749-1761	https://doi.org/10.18280/ts.410409	Singh, S.K., Rashid, M., Alshamrani, S.S., Alnfiai, M.M., Saxena, P., Khamparia, A. (2024). Efficient transfer learning approach for acute lymphoblastic leukemia diagnosis: Classification of lymphocytes and lymphoblastic cells. Traitement du Signal, Vol. 41, No. 4, pp. 1749-1761. https://doi.org/10.18280/ts.410409
10	Akyürek, H.A., Koçer, B.	Spectral Similarity Based Multiscale Spatial-Spectral Preprocessing Framework for Hyperspectral Image Classification	Fréchet distance, hyperspectral image classification, multiscale filtering, spatial-spectral preprocessing, spectral angle mapper, spectral correlation measure, spectral information divergence, spectral similarity	41, 4, 1763-1779	https://doi.org/10.18280/ts.410410	Akyürek, H.A., Koçer, B. (2024).Spectral similarity based multiscale spatial-spectral preprocessing framework for hyperspectral image classification. Traitement du Signal, Vol. 41, No. 4, pp. 1763-1779. https://doi.org/10.18280/ts.410410
11	Alqahtani M.A.	A Novel End-to-End Deep Learning Approach for Skin Cancer Detection Based on Web Application	skin cancer, convolutional neural network (CNN), deep learning, classification, image processing, web	41, 4, 1781-1796	https://doi.org/10.18280/ts.410411	Alqahtani M.A. (2024). A novel end-to-end deep learning approach for skin cancer detection based on web application. Traitement du Signal, Vol. 41, No. 4, pp. 1781-1796. https://doi.org/10.18280/ts.410411
12	Yu, L.	Adaptive Signal Filtering and Health Monitoring for Electric Motor Control Systems in New Energy Vehicles	new energy vehicles, electric motor control systems, health monitoring, adaptive signal filtering, magnetic flux estimation, hierarchical transfer learning	41, 4, 1797-1805	https://doi.org/10.18280/ts.410412	Yu, L. (2024). Adaptive signal filtering and health monitoring for electric motor control systems in new energy vehicles. Traitement du Signal, Vol. 41, No. 4, pp. 1797-1805. https://doi.org/10.18280/ts.410412
13	Alwan, A.H., Hashim, A.T., Ali, S.A.	Partial Encryption Scheme of Medical Images Based on DWT, Secret Image Sharing and Hyperchaotic System	medical image, image encryption, IWT, partial encryption, secret image sharing, hyperchaotic system	41, 4, 1807-1821	https://doi.org/10.18280/ts.410413	Alwan, A.H., Hashim, A.T., Ali, S.A. (2024). Partial encryption scheme of medical images based on DWT, secret image sharing and hyperchaotic system. Traitement du Signal, Vol. 41, No. 4, pp. 1807-1821. https://doi.org/10.18280/ts.410413
14	Diana, D.C., Hema, R., Jane Carline, M.	D2L2-Dense LSTM Deep Learning Based Nonlinear Acoustic Echo Cancellation	non-linear acoustic echo cancellation, deep learning, LSTM, spectral magnitude, source separation, short time Fourier transform	41, 4, 1823-1834	https://doi.org/10.18280/ts.410414	Diana, D.C., Hema, R., Jane Carline, M. (2024). D2L2-Dense LSTM deep learning based nonlinear acoustic echo cancellation. Traitement du Signal, Vol. 41, No. 4, pp. 1823-1834. https://doi.org/10.18280/ts.410414
15	Mahmoud, A.O., Ziedan, I., Zamel, A.A.	Optimized Hybrid Convolution Neural Network with Machine Learning for Arabic Sign Language Recognition	classification, convolution neural network, hybrid CNN, hybrid ML, machine learning algorithms, optimization, sign language	41, 4, 1835-1846	https://doi.org/10.18280/ts.410415	Mahmoud, A.O., Ziedan, I., Zamel, A.A. (2024). Optimized hybrid convolution neural network with machine learning for Arabic sign language recognition. Traitement du Signal, Vol. 41, No. 4, pp. 1835-1846. https://doi.org/10.18280/ts.410415
16	Mallikarjunamallu, K., Khasim, S.	Arrhythmia Classification Using Noise Filtering and 1D CNN	electrocardiogram (ECG), gaussian noise, notch filter, one-dimensional convolutional neural network (1D CNN)	41, 4, 1847-1859	https://doi.org/10.18280/ts.410416	Mallikarjunamallu, K., Khasim, S. (2024). Arrhythmia classification using noise filtering and 1D CNN. Traitement du Signal, Vol. 41, No. 4, pp. 1847-1859. https://doi.org/10.18280/ts.410416
17	Zhang, R.X.	Optimizing and Assessing the Quality of E-Commerce Product Images Using Deep Learning Techniques	e-commerce, product images, quality assessment, image optimization, deep learning, Laplacian operator, wavelet transform	41, 4, 1861-1870	https://doi.org/10.18280/ts.410417	Zhang, R.X. (2024). Optimizing and assessing the quality of e-commerce product images using deep learning techniques. Traitement du Signal, Vol. 41, No. 4, pp. 1861-1870. https://doi.org/10.18280/ts.410417
18	Gnanapirakasam, S.B., Manjula, J.	Develop the Hybrid Empirical Mode Decomposition with Fast Mask CNN to Improve the Performance Measures of PCG Signals	Cardiovascular Diseases (CVD), denoising, double density discrete wavelet transform, Empirical Mode Decomposition (EMD), faster mask convolutional neural network, Mean Square Error (MSE), phonocardiogram, Signal-to-Noise Ratio (SNR)	41, 4, 1871-1883	https://doi.org/10.18280/ts.410418	Gnanapirakasam, S.B., Manjula, J. (2024). Develop the hybrid Empirical Mode Decomposition with fast mask CNN to improve the performance measures of PCG signals. Traitement du Signal, Vol. 41, No. 4, pp. 1871-1883. https://doi.org/10.18280/ts.410418

19	Aguilar-Domínguez, K.S., Pinto-Elías, R., González-Serna, G., Magadán-Salazar, A.	A Novel Correlated Microstructure Elements Descriptor for Image Retrieval	image retrieval, microstructure descriptor, correlated visual features, structure descriptor, image descriptor, image representation, texture descriptor, color descriptor	41, 4, 1885-1897	https://doi.org/10.18280/ts.410419	Aguilar-Domínguez, K.S., Pinto-Elías, R., González-Serna, G., Magadán-Salazar, A. (2024). A novel correlated microstructure elements descriptor for image retrieval. Traitement du Signal, Vol. 41, No. 4, pp. 1885-1897. https://doi.org/10.18280/ts.410419
20	Garg, N., Choudhry, M.S., Bodade, R.M.	Alzheimer's Disease Classification Using Wavelet-Based Image Features	Alzheimer's disease detection, local binary pattern, mild cognitive impairment, principal component analysis, wavelet transform-based method	41, 4, 1899-1910	https://doi.org/10.18280/ts.410420	Garg, N., Choudhry, M.S., Bodade, R.M. (2024). Alzheimer's disease classification using wavelet-based image features. Traitement du Signal, Vol. 41, No. 4, pp. 1899-1910. https://doi.org/10.18280/ts.410420
21	Anbalagan, D., Dakshinamurthy, S.	Enhancing the Early Detection and Diagnosis of Plant Diseases Using Deep Learning and Advanced Imaging Techniques	image processing, deep learning, ERLSTMH, downy mildew, ergot, rust, DenseNet- 121, ResNet-152	41, 4, 1911-1922	https://doi.org/10.18280/ts.410421	Anbalagan, D., Dakshinamurthy, S. (2024). Enhancing the early detection and diagnosis of plant diseases using deep learning and advanced imaging techniques. Traitement du Signal, Vol. 41, No. 4, pp. 1911-1922. https://doi.org/10.18280/ts.410421
22	Lu, M.L., Yang, Y.X.	Image Processing Applications in Smart Contracts: Automated Financial Transaction Verification	smart contracts, image processing, financial transaction verification, automation, table detection, text extraction	41, 4, 1923-1932	https://doi.org/10.18280/ts.410422	Lu, M.L., Yang, Y.X. (2024). Image processing applications in smart contracts: Automated financial transaction verification. Traitement du Signal, Vol. 41, No. 4, pp. 1923-1932. https://doi.org/10.18280/ts.410422
23	Kumar, C.K., Ramachandran, N.	Intrusion Signalling System by Using AH-MAC in Network-Coded Mobile Small Cells	network coding, small cells, intrusion signal, pollution attack, attacker- location, homomorphic MAC,5G security	41, 4, 1933-1943	https://doi.org/10.18280/ts.410423	Kumar, C.K., Ramachandran, N. (2024). Intrusion signalling system by using AH-MAC in network-coded mobile small cells. Traitement du Signal, Vol. 41, No. 4, pp. 1933-1943. https://doi.org/10.18280/ts.410423
24	Orman, A.	Content-Based Image Retrieval Using Composite Feature Vectors with Edge Features Based on Color and Pixel Similarity	content-based image retrieval, human visual system (HVS), edge-detection, pixel similarity, gradient	41, 4, 1945-1952	https://doi.org/10.18280/ts.410424	Orman, A. (2024). Content-based image retrieval using composite feature vectors with edge features based on color and pixel similarity. Traitement du Signal, Vol. 41, No. 4, pp. 1945-1952. https://doi.org/10.18280/ts.410424
25	Sreedharan, S.E., Sundar, G.N., Narmadha, D.	NutriFoodNet: A High-Accuracy Convolutional Neural Network for Automated Food Image Recognition and Nutrient Estimation	food recognition, convolutional neural network (CNN), data augmentation, nutrition evaluation, calorie estimation	41, 4, 1953-1965	https://doi.org/10.18280/ts.410425	Sreedharan, S.E., Sundar, G.N., Narmadha, D. (2024). NutriFoodNet: A high-accuracy convolutional neural network for automated food image recognition and nutrient estimation. Traitement du Signal, Vol. 41, No. 4, pp. 1953-1965. https://doi.org/10.18280/ts.410425
26	Iourzikene, Z., Gougam, F., Benazzouz, D.	Performance Evaluation of Feature Extraction and SVM for Brain Tumor Detection Using MRI Images	brain tumor, feature extraction, support vector machines, ResNet50, Image classification	41, 4, 1967-1979	https://doi.org/10.18280/ts.410426	Iourzikene, Z., Gougam, F., Benazzouz, D. (2024). Performance evaluation of feature extraction and SVM for brain tumor detection using MRI images. Traitement du Signal, Vol. 41, No. 4, pp. 1967-1979. https://doi.org/10.18280/ts.410426
27	Dai, Z.C., Pan, D., Wu, P., Xu, L.X., Li, J.	A Repeater Deception Jamming System Based on High Gain Antenna Array Spatial Separation Receiving	high gain antenna array, satellite navigation, spatial separation, repeater deception jamming, preferred star strategy	41, 4, 1981-1989	https://doi.org/10.18280/ts.410427	Dai, Z.C., Pan, D., Wu, P., Xu, L.X., Li, J. (2024). A repeater deception jamming system based on high gain antenna array spatial separation receiving. Traitement du Signal, Vol. 41, No. 4, pp. 1981-1989. https://doi.org/10.18280/ts.410427
28	Matthew, J.M., Mustafa, M.B.N.M.	Enhancement of Hybrid Deep Neural Network Using Activation Function for EEG Based Emotion Recognition	activation function, ELU, BCI, emotion recognition, ReLU, Leaky ReLU, Deep Neural Network	41, 4, 1991-2002	https://doi.org/10.18280/ts.410428	Matthew, J.M., Mustafa, M.B.N.M. (2024). Enhancement of hybrid deep neural network using activation function for EEG based emotion recognition. Traitement du Signal, Vol. 41, No. 4, pp. 1991-2002. https://doi.org/10.18280/ts.410428
29	Hemamalini, S., Kumar, V.D.A., Ramachandran, V., Robin, R.	Retinal Image Enhancement Through Hyperparameter Selection Using RSO for CLAHE to Classify Diabetic Retinopathy	image enhancement, diabetic retinopathy, histogram equivalence, convolutional neural network, rat swarm optimization algorithm, image segmentation	41, 4, 2003-2012	https://doi.org/10.18280/ts.410429	Hemamalini, S., Kumar, V.D.A., Ramachandran, V., Robin, R. (2024). Retinal image enhancement through hyperparameter selection using RSO for CLAHE to classify diabetic retinopathy. Traitement du Signal, Vol. 41, No. 4, pp. 2003-2012. https://doi.org/10.18280/ts.410429
30	Yazan, E., Talu, M.F., Aydoğmuş, Ö.	Frameless Registration Method Using a Depth Camera for Robot-Assisted Stereotactic Brain Surgery	landmark registration, face landmark, stereotactic surgery, brain targeting, random forest, SVD	41, 4, 2013-2021	https://doi.org/10.18280/ts.410430	Yazan, E., Talu, M.F., Aydoğmuş, Ö. (2024). Frameless registration method using a depth camera for robot-assisted stereotactic brain surgery. Traitement du Signal, Vol. 41, No. 4, pp. 2013-2021. https://doi.org/10.18280/ts.410430
31	Dubey, A., Yadav, P., Patel, S.C., Bhargava, C.P., Tomar, A.	Identifying Lung Cancer: A Review on Classification and Detection	lung cancer, sputum test, CAD, multimodal CAD systems, 2D-CNN, F1 score, confusion matrix	41, 4, 2023-2034	https://doi.org/10.18280/ts.410431	Dubey, A., Yadav, P., Patel, S.C., Bhargava, C.P., Tomar, A. (2024). Identifying lung cancer: A review on classification and detection. Traitement du Signal, Vol. 41, No. 4, pp. 2023-2034. https://doi.org/10.18280/ts.410431
32	Samreen, S., Venu, V.S.	Enhanced Image Super Resolution Using ResNet Generative Adversarial Networks	GAN, residual network, super resolution, ResNet-GAN	41, 4, 2035-2046	https://doi.org/10.18280/ts.410432	Samreen, S., Venu, V.S. (2024). Enhanced image super resolution using ResNet generative adversarial networks. Traitement du Signal, Vol. 41, No. 4, pp. 2035-2046. https://doi.org/10.18280/ts.410432
33	Gu, S.S., Sun, X.L., Chen, B., Tao, W.J.	Depression Micro-Expression Recognition Technology Based on Multimodal Knowledge Graphs	multimodal psychological data, multimodal knowledge graph, Convolutional Neural Network (CNN), Graph Convolutional Network (GCN), transfer learning	41, 4, 2047-2056	https://doi.org/10.18280/ts.410433	Gu, S.S., Sun, X.L., Chen, B., Tao, W.J. (2024). Depression micro-expression recognition technology based on multimodal knowledge graphs. Traitement du Signal, Vol. 41, No. 4, pp. 2047-2056. https://doi.org/10.18280/ts.410433
34	Srinubabu, M., Rajasekhar, N.V.	Design and Analysis of a Compact 4-Port MIMO Antenna for Improved Isolation and 5G (n78/n77/n48) Performance	MIMO antenna, modified ground, decoupling, Isolation, efficiency, diversity parameters, 5G-NR n78/n77/n48 bands	41, 4, 2057-2067	https://doi.org/10.18280/ts.410434	Srinubabu, M., Rajasekhar, N.V. (2024). Design and analysis of a compact 4-port MIMO antenna for improved isolation and 5G (n78/n77/n48) performance. Traitement du Signal, Vol. 41, No. 4, pp. 2057-2067. https://doi.org/10.18280/ts.410434
35	Ahmed, B., Omer, O.A., Rashed, A., Abdel-Nasser, M.	No-Reference Quality Assessment of Blurred Images by Combining Hybrid Metrics	non-referential image quality assessment (NR-IQA), reblurring, gradient magnitude similarity deviation (GMSD), peak signal-to-noise ratio (PSNR), structural similarity index measure (SSIM), combined metrics, point spread function (PSF)	41, 4, 2069-2080	https://doi.org/10.18280/ts.410435	Ahmed, B., Omer, O.A., Rashed, A., Abdel-Nasser, M. (2024). No-reference quality assessment of blurred images by combining hybrid metrics. Traitement du Signal, Vol. 41, No. 4, pp. 2069-2080. https://doi.org/10.18280/ts.410435
36	Sabitha, P., Canessane, R.A., Minu, M.S.P., Gowri, V., Vigil, M.S.A.	An Improved Deep Network Model to Isolate Lung Nodules from Histopathological Images Using an Orchestrated and Shifted Window Vision Transformer	attention units, lung nodules, isolation, shifted window transformer, Vision Transformer (ViT)	41, 4, 2081-2091	https://doi.org/10.18280/ts.410436	Sabitha, P., Canessane, R.A., Minu, M.S.P., Gowri, V., Vigil, M.S.A. (2024). An improved deep network model to isolate lung nodules from histopathological images using an orchestrated and shifted window vision transformer. Traitement du Signal, Vol. 41, No. 4, pp. 2081-2091. https://doi.org/10.18280/ts.410436

37	Vamsi, B., Al Bataineh, A., Doppala, B.P.	Machine Learning-Based Classification of Mosquito Wing Beats Using Mel Spectrogram Images and Ensemble Modeling	convolution neural network (CNN), ensemble modeling, Mel spectrogram, mosquito wing beats	41, 4, 2093-2101	https://doi.org/10.18280/ts.410437	Vamsi, B., Al Bataineh, A., Doppala, B.P. (2024). Machine learning-based classification of mosquito wing beats using Mel spectrogram images and ensemble modeling. Traitement du Signal, Vol. 41, No. 4, pp. 2093-2101. https://doi.org/10.18280/ts.410437
38	Patel, S.R., Madireddy, V.R., Rajiv, K.	Fetal Heart Abnormality Detection in Prior Stage Using LeNet 20 Deep Learning Architecture	fetal heart, heart abnormality, diagnosis, FCNN, LeNet 20	41, 4, 2103-2114	https://doi.org/10.18280/ts.410438	Patel, S.R., Madireddy, V.R., Rajiv, K. (2024). Fetal heart abnormality detection in prior stage using LeNet 20 deep learning architecture. Traitement du Signal, Vol. 41, No. 4, pp. 2103-2114. https://doi.org/10.18280/ts.410438
39	Chen, X.H., Wang, T.Z., Un, C.E., Qin, H.W.	Application of Deep Learning-Based Image Registration Techniques in Autonomous Robot Navigation	autonomous robot navigation, image registration, deep learning, network-in-network, dual-attention mechanisms, feature matching, parameter regression network	41, 4, 2115-2122	https://doi.org/10.18280/ts.410439	Chen, X.H., Wang, T.Z., Un, C.E., Qin, H.W. (2024). Application of deep learning-based image registration techniques in autonomous robot navigation. Traitement du Signal, Vol. 41, No. 4, pp. 2115-2122. https://doi.org/10.18280/ts.410439
40	Türkmen, M., Orman, Z., Hamid, R., Arslan, S., Kızılkılıç, O.	Vertebral Bone Segmentation and Detection of Non-Traumatic Vertebral Compression Fractures with CNN from Computed Tomography Images	vertebra dataset, non-traumatic vertebral compression fracture detection, CNN classification, U-Net segmentation, deep learning	41, 4, 2123-2133	https://doi.org/10.18280/ts.410440	Türkmen, M., Orman, Z., Hamid, R., Arslan, S., Kızılkılıç, O. (2024). Vertebral bone segmentation and detection of non-traumatic vertebral compression fractures with CNN from computed tomography images. Traitement du Signal, Vol. 41, No. 4, pp. 2123-2133. https://doi.org/10.18280/ts.410440
41	Atitallah, A.B.	An Optimized HW/SW Implementation of the Vector Median Rational Hybrid Filter for Real-Time Color Image Denoising	nonlinear filter, VMRHF filter, real-time image denoising, HW/SW codesign, HLS flow, FPGA, low-latency implementation	41, 4, 2135-2142	https://doi.org/10.18280/ts.410441	Atitallah, A.B. (2024). An optimized HW/SW implementation of the vector median rational hybrid filter for real-time color image denoising. Traitement du Signal, Vol. 41, No. 4, pp. 2135-2142. https://doi.org/10.18280/ts.410441
42	R, S., Thiyam, D.B.	Performance Analysis of Hybrid – BCI Signals Using CNN for Motor Movement Classification	time series CNN, hybrid BCI, thin – ICA, EEG, fNIRS, motor movement, Arm-Hand classification	41, 4, 2143-2152	https://doi.org/10.18280/ts.410442	R, S., Thiyam, D.B. (2024). Performance analysis of hybrid – BCI signals using CNN for motor movement classificationn. Traitement du Signal, Vol. 41, No. 4, pp. 2143-2152. https://doi.org/10.18280/ts.410442
43	Polat, L.N.Ö., Özen, Ş.	Evaluating the Audiological Testing Process Through Galvanic Skin Response Using a One-Dimensional Convolutional Neural Network	audiological test, convolutional neural network (CNN), Fourier transform, galvanic skin response (GSR)	41, 4, 2153-2158	https://doi.org/10.18280/ts.410443	Polat, L.N.Ö., Özen, Ş. (2024). Evaluating the audiological testing process through galvanic skin response using a one-dimensional convolutional neural network. Traitement du Signal, Vol. 41, No. 4, pp. 2153-2158. https://doi.org/10.18280/ts.410443
44	Kiran Mayee, M., Humera Khanam, M.	Simplifying Glaucoma Diagnosis with U-Net on Retinal Images	image segmentation, image classification, glaucoma, autoencoder	41, 4, 2159-2168	https://doi.org/10.18280/ts.410444	Kiran Mayee, M., Humera Khanam, M. (2024). Simplifying glaucoma diagnosis with U-Net on retinal images. Traitement du Signal, Vol. 41, No. 4, pp. 2159-2168. https://doi.org/10.18280/ts.410444
45	Liu, R.B., Wang, L., Ma, H., Qian, W., Liang, G.B., Chu, G.X., Jin, H.	Digital Subtraction Angiography Generation with Deep Decoupling Network	cerebrovascular disease, disentangled representation learning, decoupling training strategy, digital subtraction angiography	41, 4, 2169-2175	https://doi.org/10.18280/ts.410445	Liu, R.B., Wang, L., Ma, H., Qian, W., Liang, G.B., Chu, G.X., Jin, H. (2024). Digital subtraction angiography generation with deep decoupling network. Traitement du Signal, Vol. 41, No. 4, pp. 2169-2175. https://doi.org/10.18280/ts.410445
46	Vijay, P., Sarangan, M.	Improving Efficiency in Prediction of Dementia Using Deep Learning Technique	dementia, CNN, deep learning, patients, disorder, early detection of Alzheimer	41, 4, 2177-2183	https://doi.org/10.18280/ts.410446	Vijay, P., Sarangan, M. (2024). Improving efficiency in prediction of dementia using deep learning technique. Traitement du Signal, Vol. 41, No. 4, pp. 2177-2183. https://doi.org/10.18280/ts.410446
47	Rengasamy, V., Nadar, M.T.	Optimizing Lung Cancer Classification with Extreme Learning Machine and Ant Lion Optimization for Enhanced Early Detection	hyperparameter tuning, optimization, metaheuristic algorithm, extreme learning machine, lung cancer	41, 4, 2185-2193	https://doi.org/10.18280/ts.410447	Rengasamy, V., Nadar, M.T. (2024). Optimizing lung cancer classification with extreme learning machine and ant lion optimization for enhanced early detection. Traitement du Signal, Vol. 41, No. 4, pp. 2185-2193. https://doi.org/10.18280/ts.410447
48	Madavaram, S.R., George, M.V.	Low-Power Approximate SAD Design for Efficient Integer Motion Estimation in Video Compression	Adders, area, delay, power, video coding, integer motion estimation(IME), sum of absolute difference (SAD), high efficiency video coding (HEVC)	41, 4, 2195-2201	https://doi.org/10.18280/ts.410448	Madavaram, S.R., George, M.V. (2024). Low-power approximate SAD design for efficient integer motion estimation in video compression. Traitement du Signal, Vol. 41, No. 4, pp. 2195-2201. https://doi.org/10.18280/ts.410448
49	Miloud, K., Abdelmounaim, M.L., Mohammed, B., Ilyas, B.R.	Advancing Ancient Arabic Manuscript Restoration with Optimized Deep Learning and Image Enhancement Techniques	image deblurring, deep learning in image restoration, CLSR, image restoration with the Wiener filter, genetic CNN, EfficientNet-B7, AmoebaNet-A, NASNet-A	41, 4, 2203-2219	https://doi.org/10.18280/ts.410449	Miloud, K., Abdelmounaim, M.L., Mohammed, B., Ilyas, B.R. (2024). Advancing ancient arabic manuscript restoration with optimized deep learning and image enhancement techniques. Traitement du Signal, Vol. 41, No. 4, pp. 2203-2219. https://doi.org/10.18280/ts.410449
50	Hassani, I., Bendoumia, R., Guessoum, A., Abed, A.	New Variable Selected Coefficients Adaptive Sparse Algorithm for Acoustic System Identification	adaptive filter, IP-NLMS algorithm, sparse impulse responses, communication system, variable step-size	41, 3, 1089-1099	https://doi.org/10.18280/ts.410301	Hassani, I., Bendoumia, R., Guessoum, A., Abed, A. (2024). New variable selected coefficients adaptive sparse algorithm for acoustic system identification. Traitement du Signal, Vol. 41, No. 3, pp. 1089-1099. https://doi.org/10.18280/ts.410301
51	Govindarajan, K., Narayanasamy, D.	DLF: A Deep Learning Framework Using Convolution Neural Network Algorithm for Breast Cancer Detection and Classification	breast cancer, mammogram image, feature extraction, benign, malignant, CNN, deep learning algorithm	41, 3, 1101-1114	https://doi.org/10.18280/ts.410302	Govindarajan, K., Narayanasamy, D. (2024). DLF: A deep learning framework using convolution neural network algorithm for breast cancer detection and classification. Traitement du Signal, Vol. 41, No. 3, pp. 1101-1114. https://doi.org/10.18280/ts.410302
52	Ma, N., Jin, S.W., Zhao, Y.M.	Adaptive Graph Convolution Algorithm Based on 3D Vision Selectivity and Its Application in Scene Segmentation	visual selectivity, graph convolution, multi-view, visual information processing pattern, information fusion	41, 3, 1115-1127	https://doi.org/10.18280/ts.410303	Ma, N., Jin, S.W., Zhao, Y.M. (2024). Adaptive graph convolution algorithm based on 3D vision selectivity and its application in scene segmentation. Traitement du Signal, Vol. 41, No. 3, pp. 1115-1127. https://doi.org/10.18280/ts.410303
53	Soora, N.R., Kotte, V.K., Dorthi, K., Vodithala, S., Kumar, N.C.S.	A Comprehensive Literature Review of Vehicle License Plate Detection Methods	image processing, pattern recognition, license plate detection, license plate recognition, intelligent transport system, automatic number plate recognition	41, 3, 1129-1141	https://doi.org/10.18280/ts.410304	Soora, N.R., Kotte, V.K., Dorthi, K., Vodithala, S., Kumar, N.C.S. (2024). A comprehensive literature review of vehicle license plate detection methods. Traitement du Signal, Vol. 41, No. 3, pp. 1129-1141. https://doi.org/10.18280/ts.410304
54	Mirza, A.M.A., Khawaja, A., Butt, R.A., Mughal, S.	Symmetric Turbo Coded OFDM System for Multi-relay Coded-Cooperative Wireless Communication under Wideband Noise Jamming Environment	anti-jamming technique, best relay selection, bit error rate, distributed symmetric turbo code, multi-relay coded-cooperation, orthogonal frequency division multiplexing, recursive systematic convolutional encoder, wideband noise jamming	41, 3, 1143-1161	https://doi.org/10.18280/ts.410305	Mirza, A.M.A., Khawaja, A., Butt, R.A., Mughal, S. (2024). Symmetric turbo coded OFDM system for multi-relay coded-cooperative wireless communication under wideband noise jamming environment. Traitement du Signal, Vol. 41, No. 3, pp. 1143-1161. https://doi.org/10.18280/ts.410305

55	Zeng, Y.H.	Analysis and Emotion Recognition of Educational Network New Media Images Based on Deep Learning	deep learning, Educational Network New Media (ENNM) images, content annotation, emotion recognition, feature re-calibration, cyclic structural representation	41, 3, 1163-1172	https://doi.org/10.18280/ts.410306	Zeng, Y.H. (2024). Analysis and emotion recognition of educational network new media images based on deep learning. Traitement du Signal, Vol. 41, No. 3, pp. 1163-1172. https://doi.org/10.18280/ts.410306
56	Srivastava, P., Shukla, A., Bansal, A.	Predictive Analysis of Soil Organic Matter and Moisture Content Using Image-Based Modeling	predictive analysis, soil moisture content (SMC), step-wise linear regression, soil organic matter (SOM), cubist, Vtreat, ANOVA, computer vision, soil colour	41, 3, 1173-1182	https://doi.org/10.18280/ts.410307	Srivastava, P., Shukla, A., Bansal, A. (2024). Predictive analysis of soil organic matter and moisture content using image-based modeling. Traitement du Signal, Vol. 41, No. 3, pp. 1173-1182. https://doi.org/10.18280/ts.410307
57	Çay, T., Ölmez, E., Tanık, N., Altın, C.	EEG Based Cigarette Addiction Detection with Deep Learning	discrete wavelet transform, power spectral density, nicotine dependence, EEG, deep learning, artificial neural networks	41, 3, 1183-1192	https://doi.org/10.18280/ts.410308	Çay, T., Ölmez, E., Tanık, N., Altın, C. (2024). EEG based cigarette addiction detection with deep learning. Traitement du Signal, Vol. 41, No. 3, pp. 1183-1192. https://doi.org/10.18280/ts.410308
58	Wang, Z.Q., Yang, B.Q., Wang, S.H., Sun, J.F., Yin, Z.F.	Enhancing Online Teaching Effectiveness Through Computer Vision Analysis of Teacher Expressions and Gestures in Educational Videos	online education, computer vision, teacher expression recognition, facial action units, temporal attention, spatiotemporal feature disentanglement	41, 3, 1193-1204	https://doi.org/10.18280/ts.410309	Wang, Z.Q., Yang, B.Q., Wang, S.H., Sun, J.F., Yin, Z.F. (2024). Enhancing online teaching effectiveness through computer vision analysis of teacher expressions and gestures in educational videos. Traitement du Signal, Vol. 41, No. 3, pp. 1193-1204. https://doi.org/10.18280/ts.410309
59	Haltas, K., Erguzen, A.	Enhancing Speech Impairment Support: Designing an EEG-Based BCI System for Turkish Vowel Recognition	Brain-Computer Interfaces (BCI), EEG, vowel, Support Vector Machine (SVM), Common Spatial Patterns (CSP), signal	41, 3, 1205-1213	https://doi.org/10.18280/ts.410310	Haltas, K., Erguzen, A. (2024). Enhancing speech impairment support: Designing an EEG-Based BCI system for Turkish vowel recognition. Traitement du Signal, Vol. 41, No. 3, pp. 1205-1213. https://doi.org/10.18280/ts.410310
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61	Wang, Z.Y., Huang, F.P.	Evaluating the Adaptability of Deep Learning-Based Multi-feature Sonar Image Detection Algorithms	sonar image, multi feature detection, convolutional neural network (CNN), weighted feature fusion, image processing	41, 3, 1223-1230	https://doi.org/10.18280/ts.410312	Wang, Z.Y., Huang, F.P. (2024). Evaluating the adaptability of deep learning-based multi-feature sonar image detection algorithms. Traitement du Signal, Vol. 41, No. 3, pp. 1223-1230. https://doi.org/10.18280/ts.410312
62	Prasad, P.S., Agniraj, S.	C-MAN: A Multi-attention Approach for Precise Plant Species Classification and Disease Detection Using Multi-scale, Channel-Wise, and Cross-Modal Attentions	multi-scale attention, channel-wise attention, cross-modal attention, model fusion, plant disease diagnosis and deep learning	41, 3, 1231-1243	https://doi.org/10.18280/ts.410313	Prasad, P.S., Agniraj, S. (2024). C-MAN: A multi-attention approach for precise plant species classification and disease detection using multi-scale, channel-wise, and cross-modal attentions. Traitement du Signal, Vol. 41, No. 3, pp. 1231-1243. https://doi.org/10.18280/ts.410313
63	AlGhamdi, A.S.	Efficient Deep Learning Approach for the Classification of Pneumonia in Infants from Chest X-Ray Images	pediatric pneumonia, X-ray, deep learning, MobileNeT-V3, radiology, childcare, medical imaging, image classification	41, 3, 1245-1262	https://doi.org/10.18280/ts.410314	AlGhamdi, A.S. (2024). Efficient deep learning approach for the classification of pneumonia in infants from chest X-Ray images. Traitement du Signal, Vol. 41, No. 3, pp. 1245-1262. https://doi.org/10.18280/ts.410314
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65	Kilinc, O., Vágner, J.	Wayside Condition Monitoring of Metro Wheelsets Using Vibration and Acoustic Sensors	wheel defects, wayside diagnosis, speed adaptive fault detection, vibration signals, acoustic signals, wavelet packet energy, time-domain features	41, 3, 1271-1282	https://doi.org/10.18280/ts.410316	Kilinc, O., Vágner, J. (2024). Wayside condition monitoring of metro wheelsets using vibration and acoustic sensors. Traitement du Signal, Vol. 41, No. 3, pp. 1271-1282. https://doi.org/10.18280/ts.410316
66	Mallampati, D., Hegde, N.P.	Enhanced Detection of Text and Image Spam Using Cost-Sensitive Deep Learning	convolutional neural network (CNN), class imbalanced, cost-sensitive (CS) strategy, loss functions	41, 3, 1283-1292	https://doi.org/10.18280/ts.410317	Mallampati, D., Hegde, N.P. (2024). Enhanced detection of text and image spam using cost-sensitive deep learning. Traitement du Signal, Vol. 41, No. 3, pp. 1283-1292. https://doi.org/10.18280/ts.410317
67	Deo, A., Pandey, I., Khan, S.S., Mandlik, A., Doohan, N.V., Panchal, B.	Deep Learning-Based Red Blood Cell Classification for Sickle Cell Anemia Diagnosis Using Hybrid CNN-LSTM Model	sickle cell anemia, machine learning, deep learning, CNN, LSTM, blood disorder, image classification, microscopy images	41, 3, 1293-1301	https://doi.org/10.18280/ts.410318	Deo, A., Pandey, I., Khan, S.S., Mandlik, A., Doohan, N.V., Panchal, B. (2024). Deep learning-based red blood cell classification for sickle cell anemia diagnosis using hybrid CNN-LSTM model. Traitement du Signal, Vol. 41, No. 3, pp. 1293-1301. https://doi.org/10.18280/ts.410318
68	Ashok, P., Latha, B.	Feature Extraction of Underwater Acoustic Signal Target Using Machine Learning Technique	features extractor, image processing, underwater acoustic, Region-based Convolutional Neural Network, ship-radiated noise, target recognition	41, 3, 1303-1314	https://doi.org/10.18280/ts.410319	Ashok, P., Latha, B. (2024). Feature extraction of underwater acoustic signal target using machine learning technique. Traitement du Signal, Vol. 41, No. 3, pp. 1303-1314. https://doi.org/10.18280/ts.410319
69	Murariu, M.G., Dorobanțu, F.R., Tărniceriu, D.	Enhanced Classification of Focal and Generalized Epilepsy Using EEMD and CEEMDAN Methods	adaptive methods, classifiers, diagnostic systems, electroencephalography signals, epilepsy, focal, generalized	41, 3, 1315-1322	https://doi.org/10.18280/ts.410320	Murariu, M.G., Dorobanțu, F.R., Tărniceriu, D. (2024). Enhanced classification of focal and generalized epilepsy using EEMD and CEEMDAN methods. Traitement du Signal, Vol. 41, No. 3, pp. 1315-1322. https://doi.org/10.18280/ts.410320
70	Lei, H.Q., Li, D.Q., Jiang, H.D.	Research on Bistatic Sonar Positioning and Its Optimization Algorithm	positioning optimization algorithm, sonar positioning, bistatic sonar, WLS algorithm	41, 3, 1323-1329	https://doi.org/10.18280/ts.410321	Lei, H.Q., Li, D.Q., Jiang, H.D. (2024). Research on bistatic sonar positioning and its optimization algorithm. Traitement du Signal, Vol. 41, No. 3, pp. 1323-1329. https://doi.org/10.18280/ts.410321
71	Salim, N.O.M., Mohammed, A.K.	Comparative Analysis of Classical Machine Learning and Deep Learning Methods for Fruit Image Recognition and Classification	fruit recognition, image classification, deep learning, feature extraction, fruit classification, machine learning	41, 3, 1331-1343	https://doi.org/10.18280/ts.410322	Salim, N.O.M., Mohammed, A.K. (2024). Comparative analysis of classical machine learning and deep learning methods for fruit image recognition and classification. Traitement du Signal, Vol. 41, No. 3, pp. 1331-1343. https://doi.org/10.18280/ts.410322
72	Pandi, V.S., Prasina, A., Shibu, S., Sripriya, T.	A Novel Downlink Frequency Allocation (DFA) Technique for Enhanced Throughput in 5G and Beyond (B5G) Multi-hop Networks	DFA, 5G networks, B5G, multi-hop transmission, enhanced throughput	41, 3, 1345-1354	https://doi.org/10.18280/ts.410323	Pandi, V.S., Prasina, A., Shibu, S., Sripriya, T. (2024). A novel downlink frequency allocation (DFA) technique for enhanced throughput in 5G and beyond (B5G) multi-hop networks. Traitement du Signal, Vol. 41, No. 3, pp. 1345-1354. https://doi.org/10.18280/ts.410323

73	Tian, Y., Ali, M.K.M., Wu, L.L., Li, T.	High-Dimensional Data Visualisation Methods Using Machine Learning and Their Use in Image Analysis	information visualization, big data, deep learning, pattern recognition, VisCode	41, 3, 1355-1364	https://doi.org/10.18280/ts.410324	Tian, Y., Ali, M.K.M., Wu, L.L., Li, T. (2024). High-dimensional data visualisation methods using machine learning and their use in image analysis. Traitement du Signal, Vol. 41, No. 3, pp. 1355-1364. https://doi.org/10.18280/ts.410324
74	Morab, F., Hegde, R., Hegde, V.	Swift Convergent Weighted Quadrigeminal Beamformer Using Smart Antenna System	beamforming, 5G, smart antennas, 6G, phased antenna array signal processing, massive MIMO	41, 3, 1365-1375	https://doi.org/10.18280/ts.410325	Morab, F., Hegde, R., Hegde, V. (2024). Swift convergent weighted quadrigeminal beamformer using smart antenna system. Traitement du Signal, Vol. 41, No. 3, pp. 1365-1375. https://doi.org/10.18280/ts.410325
75	Nasehi, M., Ashourian, M., Emami, H.	Vehicle Type and Speed Detection on Android Devices Using YOLO V5 and MobileNet	vehicle type detection, object recognition, MobileNet, neural network, YOLO V5	41, 3, 1377-1386	https://doi.org/10.18280/ts.410326	Nasehi, M., Ashourian, M., Emami, H. (2024). Vehicle type and speed detection on Android devices using YOLO V5 and MobileNet. Traitement du Signal, Vol. 41, No. 3, pp. 1377-1386. https://doi.org/10.18280/ts.410326
76	Liang, S.L.	Building Energy Efficiency Analysis and Diagnosis Using Integrated Image Processing and Thermal Imaging Technologies	building energy efficiency, image processing, thermal imaging technology, selection search algorithm, (SHapley Additive exPlanations) SHAP attribution clustering algorithm, energy efficiency state segmentation	41, 3, 1387-1395	https://doi.org/10.18280/ts.410327	Liang, S.L. (2024). Building energy efficiency analysis and diagnosis using integrated image processing and thermal imaging technologies. Traitement du Signal, Vol. 41, No. 3, pp. 1387-1395. https://doi.org/10.18280/ts.410327
77	Rao, B.S., Aparna, M., Kolisetty, S.S., Janapana, H., Koteswararao, Y.V.	Multi-class Classification of Alzheimer's Disease Using Deep Learning and Transfer Learning on 3D MRI Images	image processing techniques, MRI 3D images, neuro image analysis, deep learning models, Alzheimer's disease and transfer learning	41, 3, 1397-1404	https://doi.org/10.18280/ts.410328	Rao, B.S., Aparna, M., Kolisetty, S.S., Janapana, H., Koteswararao, Y.V. (2024). Multi-class classification of Alzheimer's disease using deep learning and transfer learning on 3D MRI images. Traitement du Signal, Vol. 41, No. 3, pp. 1397-1404. https://doi.org/10.18280/ts.410328
78	Alshazly, H., Elmannai, H., Alkanhel, R.I., Abdelnazeer, A.	Advancing Biometric Identity Recognition with Optimized Deep Convolutional Neural Networks	deep learning, ear recognition, ear biometrics, convolutional neural networks, transfer learning, visual explanation, interpretable models	41, 3, 1405-1418	https://doi.org/10.18280/ts.410329	Alshazly, H., Elmannai, H., Alkanhel, R.I., Abdelnazeer, A. (2024). Advancing biometric identity recognition with optimized deep convolutional neural networks. Traitement du Signal, Vol. 41, No. 3, pp. 1405-1418. https://doi.org/10.18280/ts.410329
79	Zhang, F.L.	Application of Multi-objective Optimization in 3D Image Reconstruction	3D image reconstruction, multi-objective optimization, medical imaging, computational efficiency, structural continuity	41, 3, 1419-1427	https://doi.org/10.18280/ts.410330	Zhang, F.L. (2024). Application of multi-objective optimization in 3D image reconstruction. Traitement du Signal, Vol. 41, No. 3, pp. 1419-1427. https://doi.org/10.18280/ts.410330
80	Mali, S.G., Mahajan, S.P.	Blind Sound Source Separation by Combining the Convolutional Neural Network and Degree Separator	artificial neural network, blind sound source separation, convolutional neural network-direction of arrival deep learning, degree separator, hybrid algorithms, microphone arrays, soft computing	41, 3, 1429-1439	https://doi.org/10.18280/ts.410331	Mali, S.G., Mahajan, S.P. (2024). Blind sound source separation by combining the convolutional neural network and degree separator. Traitement du Signal, Vol. 41, No. 3, pp. 1429-1439. https://doi.org/10.18280/ts.410331
81	Zontul, M., Ersan, Z.G., Yelmen, I., Cevik, T., Anka, F., Gesoglu, K.	Enhancing GPS Accuracy with Machine Learning: A Comparative Analysis of Algorithms	map matching, machine learning, location estimation, Global Positioning System (GPS)	41, 3, 1441-1450	https://doi.org/10.18280/ts.410332	Zontul, M., Ersan, Z.G., Yelmen, I., Cevik, T., Anka, F., Gesoglu, K. (2024). Enhancing GPS accuracy with machine learning: A comparative analysis of algorithms. Traitement du Signal, Vol. 41, No. 3, pp. 1441-1450. https://doi.org/10.18280/ts.410332
82	Yang, S.Y.	Optimizing Image Recognition Algorithms with Differential Privacy Integration	differential privacy, image recognition, vision transformer, algorithm fusion, privacy protection	41, 3, 1451-1460	https://doi.org/10.18280/ts.410333	Yang, S.Y. (2024). Optimizing image recognition algorithms with differential privacy integration. Traitement du Signal, Vol. 41, No. 3, pp. 1451-1460. https://doi.org/10.18280/ts.410333
83	Rao, D.S., Rao, L.K., Bhagyaraju, V., Meng, G.K.	Enhanced Depth Motion Maps for Improved Human Action Recognition from Depth Action Sequences	human action recognition, depth action sequences, deep learning, convolutional neural networks, depth maps, depth motion maps and spatial window	41, 3, 1461-1472	https://doi.org/10.18280/ts.410334	Rao, D.S., Rao, L.K., Bhagyaraju, V., Meng, G.K. (2024). Enhanced depth motion maps for improved human action recognition from depth action sequences. Traitement du Signal, Vol. 41, No. 3, pp. 1461-1472. https://doi.org/10.18280/ts.410334
84	Guno, Y., Rezaldi, M.Y., Triputra, F.R., Suhud, R., Febriandirza, A., Rustandi, A., Sutyawan, A.G., Syahrul, Tanasa, I.Y., Wicaksono, G., Leonardus, A., Karyawan, Widyawasta, Kaharjito, F.A., Fuadi, A.P., Hidayat, A., Wibowo, M., Depari, Y.P.D.S., Raharjo, D., Rudiyono.	Images Processing of Unmanned Aerial Vehicle (UAV) for Cannabis Identification	cannabis, image processing, Orthomosaic, photogrammetry, UAV, visual analytics	41, 3, 1473-1483	https://doi.org/10.18280/ts.410335	Guno, Y., Rezaldi, M.Y., Triputra, F.R., Suhud, R., Febriandirza, A., Rustandi, A., Sutyawan, A.G., Syahrul, Tanasa, I.Y., Wicaksono, G., Leonardus, A., Karyawan, Widyawasta, Kaharjito, F.A., Fuadi, A.P., Hidayat, A., Wibowo, M., Depari, Y.P.D.S., Raharjo, D., Rudiyono. (2024). Images processing of Unmanned Aerial Vehicle (UAV) for cannabis identification. Traitement du Signal, Vol. 41, No. 3, 1473-1483. https://doi.org/10.18280/ts.410335
85	Xiang, C., Yang, Y., Zhou, T., Wang, T.	Digital Reconstruction of Historical Cultural Landscapes Based on Image Recognition Technology	historical cultural landscapes, digital reconstruction, image recognition, Multi-scale Dilated Convolution (MSDC), YOLOv3, pyramid feature attention, Pixel2Mesh, 3D reconstruction	41, 3, 1485-1494	https://doi.org/10.18280/ts.410336	Xiang, C., Yang, Y., Zhou, T., Wang, T. (2024). Digital reconstruction of historical cultural landscapes based on image recognition technology. Traitement du Signal, Vol. 41, No. 3, pp. 1485-1494. https://doi.org/10.18280/ts.410336
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87	Nagm, A.M., Shehata, M., Salama, A.S., Abdallah, M.S., Cho, Y.I., Elwan, M.	Digital Documents Integrity Protection Using Invisible Changeable Watermark	integrity protection, image, watermark, hiding capacity of images, optical character recognition	41, 3, 1507-1515	https://doi.org/10.18280/ts.410338	Nagm, A.M., Shehata, M., Salama, A.S., Abdallah, M.S., Cho, Y.I., Elwan, M. (2024). Digital documents integrity protection using invisible changeable watermark. Traitement du Signal, Vol. 41, No. 3, pp. 1507-1515. https://doi.org/10.18280/ts.410338
88	Sundararajan, M., Selvam, S.P., Jayachandran, G.S.S.	A Hybrid Firefly with Particle Swarm Optimization Based Hyperspectral Image Classification and Segmentation Using Structured Support Vector Machine	hyperspectral satellite imaging, hybrid firefly with particle swarm optimization, gray-level co-occurrence matrix (GLCM), structured support vector machine (SSVM)	41, 3, 1517-1526	https://doi.org/10.18280/ts.410339	Sundararajan, M., Selvam, S.P., Jayachandran, G.S.S. (2024). A hybrid firefly with particle swarm optimization based hyperspectral image classification and segmentation using structured support vector machine. Traitement du Signal, Vol. 41, No. 3, pp. 1517-1526. https://doi.org/10.18280/ts.410339
89	Bao, M., Zhang, N.	Enhanced Methodology for Building Surface Inspection Using Infrared Thermography and Numerical Simulation	infrared thermography (IRT), ANSYS Fluent, building surface inspection, heat transfer modeling, numerical simulation	41, 3, 1527-1537	https://doi.org/10.18280/ts.410340	Bao, M., Zhang, N. (2024). Enhanced methodology for building surface inspection using infrared thermography and numerical simulation. Traitement du Signal, Vol. 41, No. 3, pp. 1527-1537. https://doi.org/10.18280/ts.410340
90	Singh, K.N., Kumar, S.	A Spectral Graph Fractional Stockwell Transform for Signal Analysis	graph wavelet transform, graph fractional Fourier transform, graph fractional wavelet transform, graph Stockwell transform, Laplacian matrix, graph signal processing, time-frequency analysis, Stockwell transform	41, 3, 1539-1546	https://doi.org/10.18280/ts.410341	Singh, K.N., Kumar, S. (2024). A spectral graph fractional Stockwell transform for signal analysis. Traitement du Signal, Vol. 41, No. 3, pp. 1539-1546. https://doi.org/10.18280/ts.410341

91	Madala, G., Namburu, A.	A Meta-Learning Approach for Diabetic Retinopathy Severity Grading	diabetic retinopathy, multipath convolutional neural network, weighted stacking-based ensemble classifiers, support vector machine, fuzzy neural network, diabetic retinopathy screening, AdaBoost classifier	41, 3, 1547-1556	https://doi.org/10.18280/ts.410342	Madala, G., Namburu, A. (2024). A meta-learning approach for diabetic retinopathy severity grading. Traitement du Signal, Vol. 41, No. 3, pp. 1547-1556. https://doi.org/10.18280/ts.410342
92	Laouamer, L., Alswaili, M.	Hough Transform-Based Robust Informed Watermarking Approach for Medical Images	medical image, attacks, robustness, imperceptibility, Hough transform	41, 3, 1557-1564	https://doi.org/10.18280/ts.410343	Laouamer, L., Alswaili, M. (2024). Hough transform-based robust informed watermarking approach for medical images. Traitement du Signal, Vol. 41, No. 3, pp. 1557-1564. https://doi.org/10.18280/ts.410343
93	Shinde, A.S., Patil, V.V.	Effect of Data Augmentation, Cross-Validation Methods in Robustness of Explainable Speech Based Emotion Recognition	explainable speech based emotion recognition, data augmentation, mel-frequency cepstral coefficients, discrete wavelet transform, spectral features, SHAP, speaker dependent, speaker independent	41, 3, 1565-1574	https://doi.org/10.18280/ts.410344	Shinde, A.S., Patil, V.V. (2024). Effect of data augmentation, cross-validation methods in robustness of explainable speech based emotion recognition. Traitement du Signal, Vol. 41, No. 3, June, 2024, pp. 1565-1574. https://doi.org/10.18280/ts.410344
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95	Damarla, A., Doraikannan, S.	Adaptive Fine-Tuned AdaBoost and Improved Firefly Algorithm for Skin Cancer Detection	skin cancer, Median Filter (MF), Contour-Based Image Enhancement (CIE), Inception v3 Clustering Algorithm (IV3-CA), Inception ResNet v2 (IRV2), Adaptive Fine Tuned AdaBoost Algorithm (AFTAA), Improved Firefly Algorithm (IFFA)	41, 3, 1583-1596	https://doi.org/10.18280/ts.410346	Damarla, A., Doraikannan, S. (2024). Adaptive fine-tuned AdaBoost and improved firefly algorithm for skin cancer detection. Traitement du Signal, Vol. 41, No. 3, pp. 1583-1596. https://doi.org/10.18280/ts.410346
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98	Ganesh, V.D., Bommi, R.	FlankPix: An Image Segmentation Algorithm for Flank Wear Analysis in Monel K500 Turning	turning, flank wear, canny edge detection, average prediction error, accuracy, error rate	41, 3, 1625-1631	https://doi.org/10.18280/ts.410349	Ganesh, V.D., Bommi, R. (2024). FlankPix: An image segmentation algorithm for flank wear analysis in Monel K500 turning. Traitement du Signal, Vol. 41, No. 3, pp. 1625-1631. https://doi.org/10.18280/ts.410349
99	Hamza, M.M., Noreddine, B., Abdeslem, B.Z., Benyssaad, Y., Ilham, B.S.	Classifying Abnormal Arterial Pulse Patterns in Cardiovascular Diseases: A Photoplethysmography and Machine Learning Approach	abnormal arterial pulse (AAP), arterial blood pressure (ABP), classification, machine learning (ML), modeling, photoplethysmography (PPG)	41, 2, 543-562	https://doi.org/10.18280/ts.410201	Hamza, M.M., Noreddine, B., Abdeslem, B.Z., Benyssaad, Y., Ilham, B.S. (2024). Classifying abnormal arterial pulse patterns in cardiovascular diseases: A photoplethysmography and machine learning approach. Traitement du Signal, Vol. 41, No. 2, pp. 543-562. https://doi.org/10.18280/ts.410201
100	Gogu, S.R., Sathe, S.R.	Ensemble Stacking for Grading Facial Paralysis Through Statistical Analysis of Facial Features UtilizingEnsemble Stacking for Grading Facial Paralysis Through Statistical Analysis of Facial Features	classification, ensemble stacking, facial features, facial paralysis (FP), machine learning	41, 2, 563-574	https://doi.org/10.18280/ts.410202	Gogu, S.R., Sathe, S.R. (2024). Ensemble stacking for grading facial paralysis through statistical analysis of facial features. Traitement du Signal, Vol. 41, No. 2, pp. 563-574. https://doi.org/10.18280/ts.410202
101	Jin, L., Guan, Y.L., Li, P.F., Shi, C.X.	Applications of Multiscale Geometric Analysis in Image Texture Recognition and Classification	image texture recognition, image texture classification, contourlet-kernel spectral regression (KSR), domain multiresolution co-occurrence matrix (MCM), computer vision	41, 2, 575-584	https://doi.org/10.18280/ts.410203	Jin, L., Guan, Y.L., Li, P.F., Shi, C.X. (2024). Applications of multiscale geometric analysis in image texture recognition and classification. Traitement du Signal, Vol. 41, No. 2, pp. 575-584. https://doi.org/10.18280/ts.410203
102	Chandrasekaran, S.N., Nagaraju, V.K.M., Nicholas, V.A.G., Jayaraman, T.	Enhanced Prediction of Fetal Heart Chamber Defects Using a Deep Belief Network-Based Transit Search Method	Enhanced Deep Belief Network (EDBN), Fetal Heart Chamber Defect (FHCD) Segmentation and Prediction, Grey Level Co-occurrence Matrix (GLCM), Otsu Thresholding, Transit Search (TS) algorithm	41, 2, 585-597	https://doi.org/10.18280/ts.410204	Chandrasekaran, S.N., Nagaraju, V.K.M., Nicholas, V.A.G., Jayaraman, T. (2024). Enhanced prediction of fetal heart chamber defects using a deep belief network-based transit search method. Traitement du Signal, Vol. 41, No. 2, pp. 585-597. https://doi.org/10.18280/ts.410204
103	Akkaya, S.	Optimization of Convolutional Neural Networks for Classifying Power Quality Disturbances Using Wavelet Synchrosqueezed Transform	power quality disturbances (PQDs), detection and classification (D&C), convolutional neural network (CNN), hyperparameter optimization, time-series signal, wavelet synchrosqueezed transform (WSST)	41, 2, 599-614	https://doi.org/10.18280/ts.410205	Akkaya, S. (2024). Optimization of convolutional neural networks for classifying power quality disturbances using wavelet synchrosqueezed transform. Traitement du Signal, Vol. 41, No. 2, pp. 599-614. https://doi.org/10.18280/ts.410205
104	Hu, T., Fu, Q.W., Chen, L., Shi, M.D.	Optimizing Building Information Modeling System Design Elements for Enhanced User Experience: A Multidimensional Approach	user experience (UX), Building Information Modeling (BIM), contextual design, design optimization	41, 2, 615-628	https://doi.org/10.18280/ts.410206	Hu, T., Fu, Q.W., Chen, L., Shi, M.D. (2024). Optimizing building information modeling system design elements for enhanced user experience: A multidimensional approach. Traitement du Signal, Vol. 41, No. 2, pp. 615-628. https://doi.org/10.18280/ts.410206
105	Ganguly, S., Ghosh, I., Kumar, P.K., Sarkar, I., Ghosh, J., Mukhopadhyay, M.	Advancements in Jammer Location Identification and Suppression: Employing a Multi-Target Least Square Constant Modulus Array Approach	constant modulus algorithm (CMA), direction-of-arrival (DOA) estimation, intentional interferers, jamming signal suppression, least square constant modulus algorithm (LSCMA), null steering, root mean square error (RMSE)	41, 2, 629-641	https://doi.org/10.18280/ts.410207	Ganguly, S., Ghosh, I., Kumar, P.K., Sarkar, I., Ghosh, J., Mukhopadhyay, M. (2024). Advancements in jammer location identification and suppression: Employing a multi-target least square constant modulus array approach. Traitement du Signal, Vol. 41, No. 2, pp. 629-641. https://doi.org/10.18280/ts.410207
106	Dhamale, T.D., Bhandari, S.U., Harpale, V.K., Nandan, D.	Autism Spectrum Disorder Detection Using Parallel Deep Convolution Neural Network and Generative Adversarial Networks	ABIDE-I, autism spectrum disorder, data augmentation, deep learning, Deep Convolution Neural Network, fMRI, generative adversarial neural network	41, 2, 643-652	https://doi.org/10.18280/ts.410208	Dhamale, T.D., Bhandari, S.U., Harpale, V.K., Nandan, D. (2024). Autism spectrum disorder detection using parallel deep convolution neural network and generative adversarial networks. Traitement du Signal, Vol. 41, No. 2, pp. 643-652. https://doi.org/10.18280/ts.410208
107	Rong, L.F., Chen, Y.Q., Hu, J.L., Liu, Y.L., Li, H.R.	Ultrasonic Synthetic Aperture Imaging for Inner Defect of Concrete Based on Delay-Multiple-and-Sum	ultrasonic tests, concrete inner defect, SAFT, DMAS, imaging quality	41, 2, 653-668	https://doi.org/10.18280/ts.410209	Rong, L.F., Chen, Y.Q., Hu, J.L., Liu, Y.L., Li, H.R. (2024). Ultrasonic synthetic aperture imaging for inner defect of concrete based on delay-multiple-and-sum. Traitement du Signal, Vol. 41, No. 2, pp. 653-668. https://doi.org/10.18280/ts.410209
108	Ratha, A.K., Barpanda, N.K., Sethy, P.K., Behera, S.K.	Automated Classification of Indian Mango Varieties Using Machine Learning and MobileNet-v2 Deep Features	mango identification, deep learning, convolutional neural network (CNN), computer vision, machine learning, Support Vector Machine (SVM)	41, 2, 669-678	https://doi.org/10.18280/ts.410210	Ratha, A.K., Barpanda, N.K., Sethy, P.K., Behera, S.K. (2024). Automated classification of Indian mango varieties using machine learning and MobileNet-v2 deep features. Traitement du Signal, Vol. 41, No. 2, pp. 669-678. https://doi.org/10.18280/ts.410210

109	Mahmoud, H., Omer, O.A., Ragab, S., Esmaiel, H., Abdel-Nasser, M.	Classifying Melanoma in ISIC Dermoscopic Images Using Efficient Convolutional Neural Networks and Deep Transfer Learning	skin cancer, image classification, precise Computer-Aided Diagnosis (CAD), deep learning, Convolutional Neural Network (CNN), dermoscopic images	41, 2, 679-691	https://doi.org/10.18280/ts.410211	Mahmoud, H., Omer, O.A., Ragab, S., Esmaiel, H., Abdel-Nasser, M. (2024). Classifying melanoma in ISIC dermoscopic images using efficient Convolutional Neural Networks and deep transfer learning. Traitement du Signal, Vol. 41, No. 2, pp. 679-691. https://doi.org/10.18280/ts.410211
110	Shao, T., Xu, J., Dai, Y.Q.	Spinal Cord Injury Identification and Localization Detection Based on MRI Imaging and Deep Learning Technology	spinal cord injury (SCI), Magnetic Resonance Imaging (MRI), convolutional neural network (CNN), faster R-CNN, VGG-16, Resnet50	41, 2, 693-703	https://doi.org/10.18280/ts.410212	Shao, T., Xu, J., Dai, Y.Q. (2024). Spinal cord injury identification and localization detection based on MRI imaging and deep learning technology. Traitement du Signal, Vol. 41, No. 2, pp. 693-703. https://doi.org/10.18280/ts.410212
111	Dutta, M., Gupta, D., Gulzar, Y., Mir, M.S., Onn, C.W., Soomro, A.B.	Leveraging Inception V3 for Precise Early and Late Blight Disease Classification in Potato Crops	deep learning, image classification, precision agriculture, potato disease, disease detection	41, 2, 705-715	https://doi.org/10.18280/ts.410213	Dutta, M., Gupta, D., Gulzar, Y., Mir, M.S., Onn, C.W., Soomro, A.B. (2024). Leveraging Inception V3 for precise early and late blight disease classification in potato crops. Traitement du Signal, Vol. 41, No. 2, pp. 705-715. https://doi.org/10.18280/ts.410213
112	Neelima, M., Prabha, I.S.	Hybrid Feature Optimization for Voice Spoof Detection Using CNN-LSTM	convolutional neural network (CNN), constant Q cepstral coefficients (CQCC), hybrid feature extraction, long short-term memory (LSTM), Mel-frequency cepstral coefficients (MFCC), spectrogram	41, 2, 717-727	https://doi.org/10.18280/ts.410214	Neelima, M., Prabha, I.S. (2024). Hybrid feature optimization for voice spoof detection using CNN-LSTM. Traitement du Signal, Vol. 41, No. 2, pp. 717-727. https://doi.org/10.18280/ts.410214
113	Zuo, B., Xiong, F.	Enhancing Lung Cancer Diagnosis with MixMAE: Integrating Mixup and Masked Autoencoders for Superior Pathological Image Analysis	self-supervised learning (SSL), mask autoencoders (MAE), Mixup, image classification, lung cancer	41, 2, 729-738	https://doi.org/10.18280/ts.410215	Zuo, B., Xiong, F. (2024). Enhancing lung cancer diagnosis with MixMAE: Integrating Mixup and Masked Autoencoders for superior pathological image analysis. Traitement du Signal, Vol. 41, No. 2, pp. 729-738. https://doi.org/10.18280/ts.410215
114	Chaudhary, S., Kumar, U.	Automated Detection and Classification of Rice Crop Diseases Using Advanced Image Processing and Machine Learning Techniques	classification, image processing, feature extraction, machine learning	41, 2, 739-752	https://doi.org/10.18280/ts.410216	Chaudhary, S., Kumar, U. (2024). Automated detection and classification of rice crop diseases using advanced image processing and machine learning techniques. Traitement du Signal, Vol. 41, No. 2, pp. 739-752. https://doi.org/10.18280/ts.410216
115	Balcı, F.	Hybrid Elmann-BiLSTM Based Brain Tumor Classification on Augmented Data with Combination of Variational Auto-Encoders and Generative Adversarial Network	variational auto-encoder, Generative Adversarial Networks (GAN), brain tumor classification, deep learning, Elmann RNN	41, 2, 753-769	https://doi.org/10.18280/ts.410217	Balcı, F. (2024). Hybrid Elmann-BiLSTM based brain tumor classification on augmented data with combination of variational auto-encoders and generative adversarial network. Traitement du Signal, Vol. 41, No. 2, pp. 753-769. https://doi.org/10.18280/ts.410217
116	Gu, H.W., Wang, P.J., Li, Y., Bao, N., Wang, H.W., Xie, Y.C., Xuan, A.W., Zhao, Y.H., Yu, H.L., Ma, H.	MFP-DeepLabv3+: A Multi-scale Feature Fusion and Parallel Attention Network for Enhanced Bone Metastasis Segmentation	bone metastasis segmentation, DeepLabv3+, AFFP, PSCAN, multi-layer skip connection	41, 2, 771-780	https://doi.org/10.18280/ts.410218	Gu, H.W., Wang, P.J., Li, Y., Bao, N., Wang, H.W., Xie, Y.C., Xuan, A.W., Zhao, Y.H., Yu, H.L., Ma, H. (2024). MFP-DeepLabv3+: A multi-scale feature fusion and parallel attention network for enhanced bone metastasis segmentation. Traitement du Signal, Vol. 41, No. 2, pp. 771-780. https://doi.org/10.18280/ts.410218
117	Sapra, V., Sapra, L., Bhardwaj, A., Almogren, A., Bharany, S., Rehman, A.U., Ouahada, K.	Diabetic Retinopathy Detection Using Deep Learning with Optimized Feature Selection	diabetic retinopathy, machine learning, random forest, artificial neural network, feature selection, deep learning	41, 2, 781-790	https://doi.org/10.18280/ts.410219	Sapra, V., Sapra, L., Bhardwaj, A., Almogren, A., Bharany, S., Rehman, A.U., Ouahada, K. (2024). Diabetic retinopathy detection using deep learning with optimized feature selection. Traitement du Signal, Vol. 41, No. 2, pp. 781-790. https://doi.org/10.18280/ts.410219
118	Avaroğlu, E., Kahveci, S., Akkurt, R.	Optimization of Acoustic Entropy Source for Random Sequence Generation Using an Improved Grey Wolf Algorithm	acoustic entropy source, swarm intelligence, random number generator	41, 2, 791-799	https://doi.org/10.18280/ts.410220	Avaroğlu, E., Kahveci, S., Akkurt, R. (2024). Optimization of acoustic entropy source for random sequence generation using an improved grey wolf algorithm. Traitement du Signal, Vol. 41, No. 2, pp. 791-799. https://doi.org/10.18280/ts.410220
119	Chen, R., Li, D.S., Zhu, F., Yan, X.S., Wang, H., Guan, C.K., Ke, X., Zeng, L.J., Zhao, J.	Advanced Techniques in Dynamic Cardiac Ultrasound Imaging for Assessing Left Ventricular Function in Heart Failure Patients	heart failure, cardiac ultrasound imaging, image processing technology, visual attention mechanisms, generative adversarial networks (GAN), dynamic contour models, left ventricular function assessment	41, 2, 801-810	https://doi.org/10.18280/ts.410221	Chen, R., Li, D.S., Zhu, F., Yan, X.S., Wang, H., Guan, C.K., Ke, X., Zeng, L.J., Zhao, J. (2024). Advanced techniques in dynamic cardiac ultrasound imaging for assessing left ventricular function in heart failure patients. Traitement du Signal, Vol. 41, No. 2, pp. 801-810. https://doi.org/10.18280/ts.410221
120	Abdulhussein, M.A., Aldeen, A.W., Al-Abboodi, H.	Differential Cortical Connectivity in Migraine: Insights from High-Density EEG and Steady-State Visual Evoked Potentials	cortical connectivity, high-density EEG, steady-state visual evoked potentials (SSVEP), migraine, cortical spreading depression (CSD), aura	41, 2, 811-826	https://doi.org/10.18280/ts.410222	Abdulhussein, M.A., Aldeen, A.W., Al-Abboodi, H. (2024). Differential cortical connectivity in migraine: Insights from high-density EEG and steady-state visual evoked potentials. Traitement du Signal, Vol. 41, No. 2, pp. 811-826. https://doi.org/10.18280/ts.410222
121	Sivaprasad, P., Venkataraman, A., Murty, P.S.	Advanced Phase Estimation and Design for Next-Generation Radar Systems: A Digital Approach	radar system design, Field-Programmable Gate Array (FPGA), milli-degree phase estimation, CORDIC algorithm, digital signal processing	41, 2, 827-833	https://doi.org/10.18280/ts.410223	Sivaprasad, P., Venkataraman, A., Murty, P.S. (2024). Advanced phase estimation and design for next-generation radar systems: A digital approach. Traitement du Signal, Vol. 41, No. 2, pp. 827-833. https://doi.org/10.18280/ts.410223
122	Karthikeyan, T., Govindarajan, M., Vijayakumar, V.	Enhancing Financial Fraud Detection Through Chimp-Optimized Long Short-Term Memory Networks	financial fraud detection, credit card fraud, neural networks, metaheuristic optimization, chimp optimization, long short-term memory (LSTM), feature selection (FS), performance evaluation	41, 2, 835-845	https://doi.org/10.18280/ts.410224	Karthikeyan, T., Govindarajan, M., Vijayakumar, V. (2024). Enhancing financial fraud detection through chimp-optimized long short-term memory networks. Traitement du Signal, Vol. 41, No. 2, pp. 835-845. https://doi.org/10.18280/ts.410224
123	Akarsu, E., Karacali, T.	Comparison of Video Classification Results with Machine Learning	artificial intelligence, deep learning, video classification, video dataset, pre-training algorithm	41, 2, 847-855	https://doi.org/10.18280/ts.410225	Akarsu, E., Karacali, T. (2024). Comparison of video classification results with machine learning. Traitement du Signal, Vol. 41, No. 2, pp. 847-855. https://doi.org/10.18280/ts.410225
124	Li, J.Y., Lv, Y.B., Yan, X., Weng, H.J., Li, D., Shi, N.	Automatic Cloud Detection and Removal in Satellite Imagery Using Deep Learning Techniques	satellite imagery, cloud detection, cloud removal, superpixel segmentation, generative adversarial networks (GAN), deep learning	41, 2, 857-865	https://doi.org/10.18280/ts.410226	Li, J.Y., Lv, Y.B., Yan, X., Weng, H.J., Li, D., Shi, N. (2024). Automatic cloud detection and removal in satellite imagery using deep learning techniques. Traitement du Signal, Vol. 41, No. 2, pp. 857-865. https://doi.org/10.18280/ts.410226
125	Sundararajan, M., Selvam, S.P.	Optimizing Hyperspectral Image Classification Through Advanced Deep Learning Models Enhanced by Adam	deep learning, hyperspectral images, spatial context, spectral correlation, feature extraction, optimization algorithms, convolutional neural network (CNN), Adam optimizer	41, 2, 867-877	https://doi.org/10.18280/ts.410227	Sundararajan, M., Selvam, S.P. (2024). Optimizing hyperspectral image classification through advanced deep learning models enhanced by Adam. Traitement du Signal, Vol. 41, No. 2, pp. 867-877. https://doi.org/10.18280/ts.410227
126	Al Musalhi, N., Celebi, E.	Advanced Age Group Estimation Using Gait Analysis: A Novel Multi-Energy Image and Invariant Moments Method	age group estimation, age verification, accumulated frame difference energy image (AFDEI), convolutional neural network (CNN), gait energy image (GEI), human gait, invariant moments, view angle variability	41, 2, 879-889	https://doi.org/10.18280/ts.410228	Al Musalhi, N., Celebi, E. (2024). Advanced age group estimation using gait analysis: A novel multi-energy image and invariant moments method. Traitement du Signal, Vol. 41, No. 2, pp. 879-889. https://doi.org/10.18280/ts.410228

127	Cheng, X.Y., Li, J.Y., Mi, M.Q., Wang, H., Wang, J.J., Su, P.	Accuracy Study on Deep Learning-Based CT Image Analysis for Lung Nodule Detection and Classification	deep learning, lung nodule detection, lung nodule classification, CT, domain adaptation, adversarial networks, few-shot learning, deep propagation generation network (DPGN)	41, 2, 891-899	https://doi.org/10.18280/ts.410229	Cheng, X.Y., Li, J.Y., Mi, M.Q., Wang, H., Wang, J.J., Su, P. (2024). Accuracy study on deep learning-based CT image analysis for lung nodule detection and classification. Traitement du Signal, Vol. 41, No. 2, pp. 891-899. https://doi.org/10.18280/ts.410229
128	Arepalli, G.S., Boobalan, P.	Enhanced Security in Biometrics: A Cancelable Multi-Instance Iris Authentication Utilizing Quotient Filter	biometric authentication system, privacy-preserving, cancelable biometrics, quotient filter, multi-instance iris	41, 2, 901-910	https://doi.org/10.18280/ts.410230	Arepalli, G.S., Boobalan, P. (2024). Enhanced security in biometrics: A cancelable multi-instance iris authentication utilizing quotient filter. Traitement du Signal, Vol. 41, No. 2, pp. 901-910. https://doi.org/10.18280/ts.410230
129	Manseur, A., Dendouga, A.	Enhanced Noise Cancellation: A Variable Step Size Normalized Least Mean Square Approach	adaptive filtering, noise cancellation, LMS algorithm, NLMS algorithm, VSS-NLMS algorithm, variable step size, convergence factor, Mean Square Error (MSE)	41, 2, 911-918	https://doi.org/10.18280/ts.410231	Manseur, A., Dendouga, A. (2024). Enhanced noise cancellation: A variable step size normalized least mean square approach. Traitement du Signal, Vol. 41, No. 2, 911-918. https://doi.org/10.18280/ts.410231
130	Feng, X.C., Han, J.L., Liu, Y., Hou, R.S., Li, T.L.	Dual-Scale Dataset-Based Intelligent Recognition of Power Equipment for Enhanced Digital Grid Planning	power equipment identification, deep learning, object detection, dual-scale datasets	41, 2, 919-927	https://doi.org/10.18280/ts.410232	Feng, X.C., Han, J.L., Liu, Y., Hou, R.S., Li, T.L. (2024). Dual-scale dataset-based intelligent recognition of power equipment for enhanced digital grid planning. Traitement du Signal, Vol. 41, No. 2, pp. 919-927. https://doi.org/10.18280/ts.410232
131	Fuladi, S., Chaturvedi, H., Nallakaruppan, M.K., Grover, V., Alshahrani, H., Baza. M.	Efficient Approach for Kidney Stone Treatment Using Convolutional Neural Network	CNN, CT scan, RelU, kidney tumor, deep learning	41, 2, 929-937	https://doi.org/10.18280/ts.410233	Fuladi, S., Chaturvedi, H., Nallakaruppan, M.K., Grover, V., Alshahrani, H., Baza. M. (2024). Efficient approach for kidney stone treatment using convolutional neural network. Traitement du Signal, Vol. 41, No. 2, pp. 929-937. https://doi.org/10.18280/ts.410233
132	Hadjaidji, E., Korba, M.C.A., Khelil, K.	COVID-19 Detection from Cough Sounds Using XGBoost and LSTM Networks	COVID-19 detection, cough detection, deep learning, long short-term memory (LSTM), XGBoost, acoustic features, digital health	41, 2, 939-947	https://doi.org/10.18280/ts.410234	Hadjaidji, E., Korba, M.C.A., Khelil, K. (2024). COVID-19 detection from cough sounds using XGBoost and LSTM networks. Traitement du Signal, Vol. 41, No. 2, pp. 939-947. https://doi.org/10.18280/ts.410234
133	Diba, M., Khosravi, H.	SNResNet: A New Architecture Based on SqNxt Blocks and Rish Activation for Efficient Face Recognition	deep learning, face recognition, Inception-ResNet, activation function, triplet loss, SqNxt block, ArcFace	41, 2, 949-959	https://doi.org/10.18280/ts.410235	Diba, M., Khosravi, H. (2024). SNResNet: A new architecture based on SqNxt blocks and rish activation for efficient face recognition. Traitement du Signal, Vol. 41, No. 2, pp. 949-959. https://doi.org/10.18280/ts.410235
134	Agarwal, K., Dixit, M.	Touchless Fingerprint Recognition with Capsule Networks and PCA Filtration Using Dual-Cross Generative Adversarial Networks	Principal Component Analysis (PCA), Capsule Neural Network (CapsNet), Generative Adversarial Network (GAN), computer vision, image recognition, touchless fingerprint recognition	41, 2, 961-969	https://doi.org/10.18280/ts.410236	Agarwal, K., Dixit, M. (2024). Touchless fingerprint recognition with capsule networks and PCA filtration using dual-cross generative adversarial networks. Traitement du Signal, Vol. 41, No. 2, pp. 961-969. https://doi.org/10.18280/ts.410236
135	Abdullayeva, E., Örnek, H.K.	Diagnosing Epilepsy from EEG Using Machine Learning and Welch Spectral Analysis	Electroencephalogram (EEG), epilepsy, Welch method, Support Vector Machine (SVM), Naive Bayes (NB), Random Forest (RF), Levenberg-Marquardt (LM), Long Short Term Memory (LSTM) neural network	41, 2, 971-977	https://doi.org/10.18280/ts.410237	Abdullayeva, E., Örnek, H.K. (2024). Diagnosing epilepsy from EEG using machine learning and Welch spectral analysis. Traitement du Signal, Vol. 41, No. 2, pp. 971-977. https://doi.org/10.18280/ts.410237
136	Wang, L., Yin, B.Y., Zhu, M.W., Hao, S.	3D Image Modeling and Visual Presentation Technologies for Education	3D image modeling, visual presentation technologies, educational technology, inter-layer feature learning, visual rendering optimization, deep learning, real-time interaction, immersive learning	41, 2, 979-987	https://doi.org/10.18280/ts.410238	Wang, L., Yin, B.Y., Zhu, M.W., Hao, S. (2024). 3D image modeling and visual presentation technologies for education. Traitement du Signal, Vol. 41, No. 2, pp. 979-987. https://doi.org/10.18280/ts.410238
137	Kumari, L.V.R., Jagruti, K., Chandra, G.R., Reddy, M.S., Bhadramma, B.	Transfer Learning Based EfficientNet for Knee Osteoarthritis Classification	deep learning, EfficientNet, Kellgren and Lawrence (KL), Knee Osteoarthritis (KOA), transfer learning	41, 2, 989-997	https://doi.org/10.18280/ts.410239	Kumari, L.V.R., Jagruti, K., Chandra, G.R., Reddy, M.S., Bhadramma, B. (2024). Transfer learning based EfficientNet for knee osteoarthritis classification. Traitement du Signal, Vol. 41, No. 2, pp. 989-997. https://doi.org/10.18280/ts.410239
138	Nair, R.R., Ranganathan, S.S.	Unified Diffusion Smoothing Models for Edge-Preserving Image Denoising Amidst Gaussian and Mixed Noise	image denoising, diffusion smoothing, partial differential equation, mixed noise	41, 2, 999-1007	https://doi.org/10.18280/ts.410240	Nair, R.R., Ranganathan, S.S. (2024). Classification of lung adenocarcinoma using convolutional neural networks: A bioinformatics approach. Traitement du Signal, Vol. 41, No. 2, pp. 999-1007. https://doi.org/10.18280/ts.410240
139	Yang, Y., Xiang, C., Hu, H., Ye, T.X.	Application of High-Resolution Satellite Imagery Techniques in the Assessment of Urban Park Green Cover	urban parks, green cover rate, high-resolution satellite imagery, image enhancement, image segmentation, vision ranging	41, 2, 1009-1017	https://doi.org/10.18280/ts.410241	Yang, Y., Xiang, C., Hu, H., Ye, T.X. (2024). Application of high-resolution satellite imagery techniques in the assessment of urban park green cover. Traitement du Signal, Vol. 41, No. 2, pp. 1009-1017. https://doi.org/10.18280/ts.410241
140	Babu, V.S., Venkatram, N.	Weed Detection and Localization in Soybean Crops Using YOLOv4 Deep Learning Model	weed detection, convolutional neural networks, object detection, localization, precision agriculture, YOLOv4	41, 2, 1019-1025	https://doi.org/10.18280/ts.410242	Babu, V.S., Venkatram, N. (2024). Weed detection and localization in soybean crops using YOLOv4 deep learning model. Traitement du Signal, Vol. 41, No. 2, pp. 1019-1025. https://doi.org/10.18280/ts.410242
141	Aharonu, M., Kumar, R.L.	Classification of Lung Adenocarcinoma Using Convolutional Neural Networks: A Bioinformatics Approach	adenocarcinoma categorization, non-small cell lung cancer (NSCLC), bioinformatics, classification, convolutional neural network (CNN), lung adenocarcinoma	41, 2, 1027-1034	https://doi.org/10.18280/ts.410243	Aharonu, M., Kumar, R.L. (2024). Classification of lung adenocarcinoma using convolutional neural networks: A bioinformatics approach. Traitement du Signal, Vol. 41, No. 2, pp. 1027-1034. https://doi.org/10.18280/ts.410243
142	Elaraby, A., AlMohimeed, A., Saad, R.M.A.	An Enhanced CT Liver Segmentation Framework Using Differential Evolution-Optimized Rényi Entropy	segmentation, liver CT, threshold, fuzzy Rényi entropy, differential evolution	41, 2, 1035-1041	https://doi.org/10.18280/ts.410244	Elaraby, A., AlMohimeed, A., Saad, R.M.A. (2024). An enhanced CT liver segmentation framework using differential evolution-optimized Rényi entropy. Traitement du Signal, Vol. 41, No. 2, pp. 1035-1041. https://doi.org/10.18280/ts.410244
143	Shanmugam, S.D.	Enhanced Low-Power Digital Signal Processing via a Novel Reversible MCML-Based Carry Select Adder	reversible carry select adder, low power design, MOS current-mode logic, digital signal processing, reversible logic	41, 2, 1043-1048	https://doi.org/10.18280/ts.410245	Shanmugam, S.D. (2024). Enhanced low-power digital signal processing via a novel reversible MCML-based carry select adder. Traitement du Signal, Vol. 41, No. 2, pp. 1043-1048. https://doi.org/10.18280/ts.410245
144	Banarjee, K., Pathak, A., Sarkar, C., Choubey, C.K.	Systematic Realization of VDGA-Based Comb Filter for Biomedical Signal Processing	comb filter, biomedical signals, power line interference, voltage differencing gain amplifier	41, 2, 1049-1062	https://doi.org/10.18280/ts.410246	Banarjee, K., Pathak, A., Sarkar, C., Choubey, C.K. (2024). Systematic realization of VDGA-based comb filter for biomedical signal processing. Traitement du Signal, Vol. 41, No. 2, pp. 1049-1062. https://doi.org/10.18280/ts.410246

145	Chen, M.M., Xiang, Y., Xiong, C.X.	Synthesis and Restoration of Traditional Ethnic Musical Instrument Timbres Based on Time-Frequency Analysis	traditional ethnic musical instruments, time-frequency analysis, timbre separation, timbre synthesis, timbre restoration, transformer model, signal processing	41, 2, 1063-1072	https://doi.org/10.18280/ts.410247	Chen, M.M., Xiang, Y., Xiong, C.X. (2024). Synthesis and restoration of traditional ethnic musical instrument timbres based on time-frequency analysis. Traitement du Signal, Vol. 41, No. 2, pp. 1063-1072. https://doi.org/10.18280/ts.410247
146	Gaddala, L.K., Radha, V.K.R., Buraga, S.R., Narla, V.L., Kodepogu, K.R., Yalamanchili, S.	Machine Learning-Based Lung Cancer Classification and Enhanced Accuracy on CT Images	lung cancer, machine learning, classification, benign and malignant	41, 2, 1073-1078	https://doi.org/10.18280/ts.410248	Gaddala, L.K., Radha, V.K.R., Buraga, S.R., Narla, V.L., Kodepogu, K.R., Yalamanchili, S. (2024). Machine learning-based lung cancer classification and enhanced accuracy on CT images. Traitement du Signal, Vol. 41, No. 2, pp. 1073-1078. https://doi.org/10.18280/ts.410248
147	Yu, Z.	Image Super-Resolution Reconstruction in Sports Scenarios and Its Application in Motion Analysis	image super-resolution reconstruction, motion scenarios, dynamic adaptive cascaded network, 3D motion scene imaging, motion analysis	41, 2, 1079-1087	https://doi.org/10.18280/ts.410249	Yu, Z. (2024). Image super-resolution reconstruction in sports scenarios and its application in motion analysis. Traitement du Signal, Vol. 41, No. 2, pp. 1079-1087. https://doi.org/10.18280/ts.410249
148	Uçar, G., Dandıl, E.	Enhanced Detection of White Matter Hyperintensities via Deep Learning-Enabled MR Imaging Segmentation	white matter hyperintensities (WMH), computer-aided detection, hyper-parameter optimization, deep learning, Mask R-CNN, U-Net, automatic segmentation	41, 1, 1-21	https://doi.org/10.18280/ts.410101	Uçar, G., Dandıl, E. (2024). Enhanced detection of white matter hyperintensities via deep learning-enabled MR imaging segmentation. Traitement du Signal, Vol. 41, No. 1, pp. 1-21. https://doi.org/10.18280/ts.410101
149	Shanmugam, S., Radhakrishnan, M.	Autism Classification and Identification of Significant Brain Lobe Using Cepstral Coefficients	autism, EEG, ensemble classifier, Linear Frequency Cepstral Coefficients (LFCC), machine learning	41, 1, 23-34	https://doi.org/10.18280/ts.410102	Shanmugam, S., Radhakrishnan, M. (2024). Autism classification and identification of significant brain lobe using cepstral coefficients. Traitement du Signal, Vol. 41, No. 1, pp. 23-34. https://doi.org/10.18280/ts.410102
150	Zheng, W.S., Cai, J.S., Wang, F.	An Investigation into the Four-Dimensional Acoustic Analogy Model for Homogeneous Media and the Prediction of Flow-Induced Noise in Spatio-Temporal Fields	uniformly moving medium, flow-induced noise, vector acoustic signal, numerical simulation, Doppler effect, convective effect	41, 1, 35-50	https://doi.org/10.18280/ts.410103	Zheng, W.S., Cai, J.S., Wang, F. (2024). An investigation into the four-dimensional acoustic analogy model for homogeneous media and the prediction of flow-induced noise in spatio-temporal fields. Traitement du Signal, Vol. 41, No. 1, pp. 35-50. https://doi.org/10.18280/ts.410103
151	Shrivastav, A., Bhandari, S., Kolte, M.	Enhanced Hearing Aid Performance with an African Buffalo Optimization-Based Frequency Response Masking Filter	African buffalo optimization, bio-inspired optimization algorithm, filter bank, FPGA, FRM, hearing impaired, speech perception	41, 1, 51-61	https://doi.org/10.18280/ts.410104	Shrivastav, A., Bhandari, S., Kolte, M. (2024). Enhanced hearing aid performance with an African buffalo optimization-based frequency response masking filter. Traitement du Signal, Vol. 41, No. 1, pp. 51-61. https://doi.org/10.18280/ts.410104
152	Ornek, A.H., Ceylan, M.	Improving Explainability in CNN-Based Classification of Mask Images with HayCAM+: An Enhanced Visual Explanation Technique	class activation mapping, deep learning, explainable artificial intelligence, HayCAM, visual explanation, weakly-supervised object detection	41, 1, 63-71	https://doi.org/10.18280/ts.410105	Ornek, A.H., Ceylan, M. (2024). Improving explainability in CNN-based classification of mask images with HayCAM+: An enhanced visual explanation technique. Traitement du Signal, Vol. 41, No. 1, pp. 63-71. https://doi.org/10.18280/ts.410105
153	Li, C.C., Cai, Y.T., Li, Y.F., Zhang, P.H.	Fusion of Dual Sensor Features for Fall Risk Assessment with Improved Attention Mechanism	efficient channel attention mechanism, fall risk, feature weighted fusion, inertial sensor, neural network, plantar pressure	41, 1, 73-83	https://doi.org/10.18280/ts.410106	Li, C.C., Cai, Y.T., Li, Y.F., Zhang, P.H. (2024). Fusion of dual sensor features for fall risk assessment with improved attention mechanism. Traitement du Signal, Vol. 41, No. 1, pp. 73-83. https://doi.org/10.18280/ts.410106
154	Elhamzi, W.	Enhancing Medical Image Security with FPGA-Accelerated LED Cryptography and LSB Watermarking	medical imaging, least significant bit (LSB) watermarking, LED lightweight cryptography, parallel computing, high-level synthesis (HLS), field-programmable gate array (FPGA)	41, 1, 85-97	https://doi.org/10.18280/ts.410107	Elhamzi, W. (2024). Enhancing medical image security with FPGA-accelerated LED cryptography and LSB watermarking. Traitement du Signal, Vol. 41, No. 1, pp. 85-97. https://doi.org/10.18280/ts.410107
155	Demirtaş, M.	Multiple-Image Encryption Using Sine Quadratic Polynomial Mapping and U-Shaped Scanning Techniques	chaotic map, image encryption, multiple-image encryption (MIE), sine quadratic polynomial map (SQPM), U-shaped scanning	41, 1, 99-113	https://doi.org/10.18280/ts.410108	Demirtaş, M. (2024). Multiple-image encryption using sine quadratic polynomial mapping and U-shaped scanning techniques. Traitement du Signal, Vol. 41, No. 1, pp. 99-113. https://doi.org/10.18280/ts.410108
156	Wang, Q.J., Yu, Z.W.	Deep Learning-Based Scene Processing and Optimization for Virtual Reality Classroom Environments: A Study	Virtual Reality (VR) classroom, scene image enhancement, visual layout optimization, deep learning, U-net Network, Spatial Pyramid Pooling in Fast Regions with Convolutional Neural Networks (SPPF) structure, visual graph attention model (GAM)	41, 1, 115-125	https://doi.org/10.18280/ts.410109	Wang, Q.J., Yu, Z.W. (2024). Deep learning-based scene processing and optimization for virtual reality classroom environments: A study. Traitement du Signal, Vol. 41, No. 1, pp. 115-125. https://doi.org/10.18280/ts.410109
157	Kumar, A., Saini, R., Kumar, R.	A Comparative Analysis of Machine Learning Algorithms for Breast Cancer Detection and Identification of Key Predictive Features	benign, feature importance, malignant, supervised machine learning, feature selection	41, 1, 127-140	https://doi.org/10.18280/ts.410110	Kumar, A., Saini, R., Kumar, R. (2024). A comparative analysis of machine learning algorithms for breast cancer detection and identification of key predictive features. Traitement du Signal, Vol. 41, No. 1, pp. 127-140. https://doi.org/10.18280/ts.410110
158	Gammoudi, I., Ghozi, R., Mahjoub, M.A.	An Innovative Approach to Multimodal Brain Tumor Segmentation: The Residual Convolution Gated Neural Network and 3D UNet Integration	brain tumor segmentation, 3D UNet, ResNet, Res-Gated-3DUNet, BraTS2020 validation dataset	41, 1, 141-151	https://doi.org/10.18280/ts.410111	Gammoudi, I., Ghozi, R., Mahjoub, M.A. (2024). An innovative approach to multimodal brain tumor segmentation: The residual convolution gated neural network and 3D UNet integration. Traitement du Signal, Vol. 41, No. 1, pp. 141-151. https://doi.org/10.18280/ts.410111
159	Wang, M.N., Ma, J.J., Zhao, X., Xing, X.	Automated Physiological Status Detection and Disease Evaluation of Critically Ill Patients via Image Processing Technologies	medical imaging technology, critical care, physiological status detection, disease evaluation, image segmentation, feature enhancement, deep learning	41, 1, 153-163	https://doi.org/10.18280/ts.410112	Wang, M.N., Ma, J.J., Zhao, X., Xing, X. (2024). Automated physiological status detection and disease evaluation of critically ill patients via image processing technologies. Traitement du Signal, Vol. 41, No. 1, pp. 153-163. https://doi.org/10.18280/ts.410112
160	Narayanrao, P.V., Kohirker, K., Preeth, T.S., Kumari, P.L.S.	Depression Symptom Identification Through Acoustic Speech Analysis: A Transfer Learning Approach	depression, transfer learning (TL), grid search (GS), speech analysis, Multi-Layer Perceptron (MLP) classifier	41, 1, 165-177	https://doi.org/10.18280/ts.410113	Narayanrao, P.V., Kohirker, K., Preeth, T.S., Kumari, P.L.S. (2024). Depression symptom identification through acoustic speech analysis: A transfer learning approach. Traitement du Signal, Vol. 41, No. 1, pp. 165-177. https://doi.org/10.18280/ts.410113
161	Fradi, M., Lazhar, K., Zahzah, E.H., Machhout, M.	FPGA Implementation of a CNN Application for ECG Class Detection	ECG, Pynq-Z2, CNN, co-design (hard/soft), time, accuracy	41, 1, 179-188	https://doi.org/10.18280/ts.410114	Fradi, M., Lazhar, K., Zahzah, E.H., Machhout, M. (2024). FPGA implementation of a CNN application for ECG class detection. Traitement du Signal, Vol. 41, No. 1, pp. 179-188. https://doi.org/10.18280/ts.410114
162	Qi, Y.J., Xu, Y., He, X.	Multimodel-Based Gait Recognition Method with Joint Motion Constraints	constraint attention, gait recognition, motion constraint, multimodal	41, 1, 189-199	https://doi.org/10.18280/ts.410115	Qi, Y.J., Xu, Y., He, X. (2024). Multimodel-based gait recognition method with joint motion constraints. Traitement du Signal, Vol. 41, No. 1, pp. 189-199. https://doi.org/10.18280/ts.410115

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164	Alabdulkreem, E., Elmannai, H., Saad, A., Kamil, I.S., Elaraby, A.	Deep Learning-Based Classification of Melanoma and Non-Melanoma Skin Cancer	image enhancement, light wight convolutional neural networks (LWCNN), melanoma classification, transfer learning	41, 1, 213-223	https://doi.org/10.18280/ts.410117	Alabdulkreem, E., Elmannai, H., Saad, A., Kamil, I.S., Elaraby, A. (2024). Deep learning-based classification of melanoma and non-melanoma skin cancer. Traitement du Signal, Vol. 41, No. 1, pp. 213-223. https://doi.org/10.18280/ts.410117
165	Fang, Q., Zhang, Y.W.	Optimizing Remote Teaching Interaction Platforms Through Multimodal Image Recognition Technology	remote teaching, multimodal image recognition, self-attention mechanism, encoder-decoder model, image annotation, visual saliency, education technology optimization	41, 1, 225-235	https://doi.org/10.18280/ts.410118	Fang, Q., Zhang, Y.W. (2024). Optimizing remote teaching interaction platforms through multimodal image recognition technology. Traitement du Signal, Vol. 41, No. 1, pp. 225-235. https://doi.org/10.18280/ts.410118
166	Sharmila Joseph, J., Vidyarthi, A.	Dual Deep Learning and Feature-Based Models for Classification of Laryngeal Squamous Cell Carcinoma Using Narrow Band Imaging	laryngeal cancer, narrow band imaging, contrast enhancement, SqueezeNet, statistical features	41, 1, 237-248	https://doi.org/10.18280/ts.410119	Sharmila Joseph, J., Vidyarthi, A. (2024). Dual deep learning and feature-based models for classification of Laryngeal Squamous Cell Carcinoma using narrow band imaging. Traitement du Signal, Vol. 41, No. 1, pp. 237-248. https://doi.org/10.18280/ts.410119
167	Sun, X.L., Liu, J., Qian, Y.B.	Enhancing Emotion Recognition in College Students' Online Learning: A Research on Integrating Feature Fusion and Attention Mechanisms	online learning, emotion recognition, feature extraction, feature fusion, attention mechanism, Deep Residual Network (ResNet), Deep Residual Shrinkage Network (DRSN)	41, 1, 249-259	https://doi.org/10.18280/ts.410120	Sun, X.L., Liu, J., Qian, Y.B. (2024). Enhancing emotion recognition in college students' online learning: A research on integrating feature fusion and attention mechanisms. Traitement du Signal, Vol. 41, No. 1, pp. 249-259. https://doi.org/10.18280/ts.410120
168	Gavali, P., Saira Banu, J.	Deep Convolutional Neural Network for Automated Bird Species Classification	deep learning, feature extraction, image classification, Birdnet architecture, Indian birds, bird species classification	41, 1, 261-271	https://doi.org/10.18280/ts.410121	Gavali, P., Saira Banu, J. (2024). Deep convolutional neural network for automated bird species classification. Traitement du Signal, Vol. 41, No. 1, pp. 261-271. https://doi.org/10.18280/ts.410121
169	Çeçen, Ş., Çeribaşı, S., Erkuş, M., Özer, A.B., Tuncer, T., Çınar, A.	Classification of Estrus Cycles in Rats by Using Deep Learning	deep learning, histopathology, estrus cycle, estrus staging, pathological image, classification, uterus, YOLOv5	41, 1, 273-282	https://doi.org/10.18280/ts.410122	Çeçen, Ş., Çeribaşı, S., Erkuş, M., Özer, A.B., Tuncer, T., Çınar, A. (2024). Classification of estrus cycles in rats by using deep learning. Traitement du Signal, Vol. 41, No. 1, pp. 273-282. https://doi.org/10.18280/ts.410122
170	He, D.L., Wei, Z.H.	A Multimodal Approach for Attitude Measurement of Near-Earth Daytime Star Sensors	near-Earth, daytime star sensors, attitude measurement, star image superposition, centroid positioning	41, 1, 283-292	https://doi.org/10.18280/ts.410123	He, D.L., Wei, Z.H. (2024). A multimodal approach for attitude measurement of near-earth daytime star sensors. Traitement du Signal, Vol. 41, No. 1, pp. 283-292. https://doi.org/10.18280/ts.410123
171	Murugiah, E., William, J.H., Mariapushpam, I.T., Nesaian, M.L.	Enhancing Myoelectric Signal Classification Through Conditional Spectral Moments and Wavelet-Enhanced Time-Domain Descriptors	electromyography (EMG), myoelectric, prosthesis, pattern recognition, feature extraction, spectral moments, classification	41, 1, 293-302	https://doi.org/10.18280/ts.410124	Murugiah, E., William, J.H., Mariapushpam, I.T., Nesaian, M.L. (2024). Enhancing myoelectric signal classification through conditional spectral moments and wavelet-enhanced time-domain descriptors. Traitement du Signal, Vol. 41, No. 1, pp. 293-302. https://doi.org/10.18280/ts.410124
172	Hao, Y.M., Wang, Y., Wang, X., He, Y., Fu, H.L.	Predicting and Analyzing Rock Mechanical Properties Using Image Processing Techniques	rock mechanical properties, image processing, microscopic structure analysis, image segmentation, minimum threshold method, Laplacian histogram method, maximum interclass variance method, structural parameter extraction	41, 1, 303-312	https://doi.org/10.18280/ts.410125	Hao, Y.M., Wang, Y., Wang, X., He, Y., Fu, H.L. (2024). Predicting and analyzing rock mechanical properties using image processing techniques. Traitement du Signal, Vol. 41, No. 1, pp. 303-312. https://doi.org/10.18280/ts.410125
173	Ainapure, B.S., Appasani, B., Schiopu, A.G., Oproescu, M., Bizon, N.	A Lightweight Deep Learning Model and Web Interface for COVID-19 Detection Using Chest X-Rays	convolutional neural network, COVID-19, X-ray image, accuracy, confusion matrix, web-based model	41, 1, 313-322	https://doi.org/10.18280/ts.410126	Ainapure, B.S., Appasani, B., Schiopu, A.G., Oproescu, M., Bizon, N. (2024). A lightweight deep learning model and web interface for COVID-19 detection using chest X-rays. Traitement du Signal, Vol. 41, No. 1, pp. 313-322. https://doi.org/10.18280/ts.410126
174	Zheng, Y.L., Miao, J.F., Ren, S.F.	Intelligent Recommendation System for Personalized Learning Resources for College Students Based on Image Processing	personalized learning resource recommendation, image semantic annotation, granular computing, second-order Conditional Random Field (CRF), product quantization sparse coding, image retrieval, intelligent recommendation system	41, 1, 323-331	https://doi.org/10.18280/ts.410127	Zheng, Y.L., Miao, J.F., Ren, S.F. (2024). Intelligent recommendation system for personalized learning resources for college students based on image processing. Traitement du Signal, Vol. 41, No. 1, pp. 323-331. https://doi.org/10.18280/ts.410127
175	Omar, N.	EEG-Based Autism Detection Using Multi-Input 1D Convolutional Neural Networks	Autism Spectrum Disorder, EEG signals, multi-input CNN model, EEG channels, deep learning	41, 1, 333-341	https://doi.org/10.18280/ts.410128	Omar, N. (2024). EEG-based autism detection using multi-input 1D convolutional neural networks. Traitement du Signal, Vol. 41, No. 1, pp. 333-341. https://doi.org/10.18280/ts.410128
176	Kundu, T.K., Anguraj, D.K., Bhattacharyya, D.	Utilizing Image Analysis with Machine Learning and Deep Learning to Identify Malaria Parasites in Conventional Microscopic Blood Smear Images	malaria parasitic blood smear, microscopy for object detection, feature extraction and parasite identification, machine learning & hybrid machine learning classification, deep learning technique, malaria diagnosis using mobile microscopy	41, 1, 343-362	https://doi.org/10.18280/ts.410129	Kundu, T.K., Anguraj, D.K., Bhattacharyya, D. (2024). Utilizing image analysis with machine learning and deep learning to identify malaria parasites in conventional microscopic blood smear images. Traitement du Signal, Vol. 41, No. 1, pp. 343-362. https://doi.org/10.18280/ts.410129
177	Cheng, X.L., Zhang, X.J.	Image Processing Techniques for Dynamic Surface Velocity Measurement in Rivers	dynamic river surface velocity, image processing, non-contact measurement, Mean shift algorithm, optical flow technique, calibration technology	41, 1, 363-372	https://doi.org/10.18280/ts.410130	Cheng, X.L., Zhang, X.J. (2024). Image processing techniques for dynamic surface velocity measurement in rivers. Traitement du Signal, Vol. 41, No. 1, pp. 363-372. https://doi.org/10.18280/ts.410130
178	Kavitha, V.R., Hussain, F.B.J., Chillakuru, P., Shanmugam, P.	Automated Classification of Liver Cancer Stages Using Deep Learning on Histopathological Images	histopathological images, R-CNN, GLCM, Fuzzy C-Means algorithm, liver cancer classification	41, 1, 373-381	https://doi.org/10.18280/ts.410131	Kavitha, V.R., Hussain, F.B.J., Chillakuru, P., Shanmugam, P. (2024). Automated classification of liver cancer stages using deep learning on histopathological images. Traitement du Signal, Vol. 41, No. 1, pp. 373-381. https://doi.org/10.18280/ts.410131
179	Djalab, A., Lalaoui, L., Bisker, A., Hadibi, A.	Enhancing Image Classification Through a Hybrid Approach: Integrating Convolutional Neural Networks with Hidden Markov Mod	deep learning, Convolutional Neural Network (CNN), Hidden Markov Model (HMM), hybrid HMM and CNN, image classification	41, 1, 383-390	https://doi.org/10.18280/ts.410132	Djalab, A., Lalaoui, L., Bisker, A., Hadibi, A. (2024). Enhancing image classification through a hybrid approach: Integrating Convolutional Neural Networks with hidden Markov mod. Traitement du Signal, Vol. 41, No. 1, pp. 383-390. https://doi.org/10.18280/ts.410132
180	Wu, Z., Pan, D.D.	The Application and Optimization of Deep Learning in Recognizing Student Learning Emotions	deep learning, learning emotion recognition, facial expression image preprocessing, temporal expression recognition, attention mechanism	41, 1, 391-399	https://doi.org/10.18280/ts.410133	Wu, Z., Pan, D.D. (2024). The application and optimization of deep learning in recognizing student learning emotions. Traitement du Signal, Vol. 41, No. 1, pp. 391-399. https://doi.org/10.18280/ts.410133

181	Palanisamy, G.A., Rajappan, S., Murugasamy, V.	Enhancing Secure Data Transmission in IoT via Advanced Conditional Generative Adversarial Network and Encryption Techniques	Algebraic Matrix Encryption, data transmission, deep learning, Fully Homomorphic Encryption, Generative Adversarial Network, Jaro-Winkler similarity	41, 1, 401-410	https://doi.org/10.18280/ts.410134	Palanisamy, G.A., Rajappan, S., Murugasamy, V. (2024). Enhancing secure data transmission in IoT via advanced Conditional Generative Adversarial Network and encryption techniques. Traitement du Signal, Vol. 41, No. 1, pp. 401-410. https://doi.org/10.18280/ts.410134
182	Gao, W.F.	Electromagnetic Signal Anomaly Detection and Classification Methods Based on Deep Learning	electromagnetic signals, anomaly detection, classification methods, deep learning, adaptive noise suppression, Deep Q-net (DQN), signal processing, communication security	41, 1, 411-419	https://doi.org/10.18280/ts.410135	Gao, W.F. (2024). Electromagnetic signal anomaly detection and classification methods based on deep learning. Traitement du Signal, Vol. 41, No. 1, pp. 411-419. https://doi.org/10.18280/ts.410135
183	Salim, S.P., James, A., Simon, P., Divakaran, B.N.	Multiscale Residual Network for Recognizing Handwritten Malayalam Characters	convolutional neural network (CNN), deep learning, handwritten character recognition (HCR), machine learning, multi-scaled features, neural network, residual network, Malayalam	41, 1, 421-430	https://doi.org/10.18280/ts.410136	Salim, S.P., James, A., Simon, P., Divakaran, B.N. (2024). Multiscale residual network for recognizing handwritten Malayalam characters. Traitement du Signal, Vol. 41, No. 1, pp. 421-430. https://doi.org/10.18280/ts.410136
184	Nie, B.H., Ma, B.	VADNet: Visual-Based Anti-Cheating Detection Network in FPS Games	cheat detection, first-person shooter (FPS) games, visual algorithm	41, 1, 431-440	https://doi.org/10.18280/ts.410137	Nie, B.H., Ma, B. (2024). VADNet: Visual-based anti-cheating detection network in FPS games. Traitement du Signal, Vol. 41, No. 1, pp. 431-440. https://doi.org/10.18280/ts.410137
185	Daphal, S.D., Koli, S.M.	Enhanced Classification of Sugarcane Diseases Through a Modified Learning Rate Policy in Deep Learning	deep learning, learning rate, plant diseases, sugarcane, small databases, mobilenet-v2, learning rate decay	41, 1, 441-449	https://doi.org/10.18280/ts.410138	Daphal, S.D., Koli, S.M. (2024). Enhanced classification of sugarcane diseases through a modified learning rate policy in deep learning. Traitement du Signal, Vol. 41, No. 1, pp. 441-449. https://doi.org/10.18280/ts.410138
186	Keti, F.	A New Proposed Model for Dispersion Compensation via Linear Chirped Fiber Bragg Grating	dispersion compensation, fiber optics, Fiber Bragg Grating, Gaussian filter, Optisystem	41, 1, 451-457	https://doi.org/10.18280/ts.410139	Keti, F. (2024). A new proposed model for dispersion compensation via Linear Chirped Fiber Bragg Grating. Traitement du Signal, Vol. 41, No. 1, pp. 451-457. https://doi.org/10.18280/ts.410139
187	Xu, G.L., Wong, C.U.I.	Deep Learning-Based Educational Image Content Understanding and Personalized Learning Path Recommendation	deep learning, educational image content understanding, personalized learning pathways, bidirectional encoder representations from transformer (BERT) models, attention mechanisms, hierarchical Long Short-Term Memory (LSTM) models, multi-feature Latent Dirichlet Allocation (LDA) recommendation models	41, 1, 459-467	https://doi.org/10.18280/ts.410140	Xu, G.L., Wong, C.U.I. (2024). Deep learning-based educational image content understanding and personalized learning path recommendation. Traitement du Signal, Vol. 41, No. 1, pp. 459-467. https://doi.org/10.18280/ts.410140
188	Urooj, S., Dar, M.A., Mehfuz, S., Saleh, W.S.	Optimization of Deep Neural Networks for Enhanced Efficiency in Small Scale Autonomous Vehicles	A.I. autopilot, autonomous vehicles, deep neural networks	41, 1, 469-476	https://doi.org/10.18280/ts.410141	Urooj, S., Dar, M.A., Mehfuz, S., Saleh, W.S. (2024). Optimization of deep neural networks for enhanced efficiency in small scale autonomous vehicles. Traitement du Signal, Vol. 41, No. 1, pp. 469-476. https://doi.org/10.18280/ts.410141
189	Sekar, S., Sankaran, L.	Enhanced Karyotyping Through Deep Learning-Assisted Segmentation and Classification of Chromosomal Cells	chromosome cells, deep-learning, VGG-UNet, segmentation, classification, testimonial.	41, 1, 477-484	https://doi.org/10.18280/ts.410142	Sekar, S., Sankaran, L. (2024). Enhanced karyotyping through deep learning-assisted segmentation and classification of chromosomal cells. Traitement du Signal, Vol. 41, No. 1, pp. 477-484. https://doi.org/10.18280/ts.410142
190	Han, J.L., Chen, Z.Y., Hu, P., Li, H.T., Li, G.Y.	Enhanced Detection of Electric Power Facilities Utilizing a Re-Parameterized Convolutional Network	region-based convolutional network (R-CNN), unmanned aerial vehicle (UAV), deep learning, digital twin, electric power facility detection	41, 1, 485-491	https://doi.org/10.18280/ts.410143	Han, J.L., Chen, Z.Y., Hu, P., Li, H.T., Li, G.Y. (2024). Enhanced detection of electric power facilities utilizing a re-parameterized convolutional network. Traitement du Signal, Vol. 41, No. 1, pp. 485-491. https://doi.org/10.18280/ts.410143
191	Chintamaneni, V., Krishna, B.H., Suresh, M., Bukkaptanm, K., Sujatha, C.N., Swaraja, K., Kumar, P.M.	Deep Learning-Based Diagnostic Model for Automated Detection of Monkeypox: Introducing MonkeypoxNet	monkeypox virus, skin images, customized deep learning, genetic algorithm, particle swarm optimization, convolution neural network	41, 1, 493-502	https://doi.org/10.18280/ts.410144	Chintamaneni, V., Krishna, B.H., Suresh, M., Bukkaptanm, K., Sujatha, C.N., Swaraja, K., Kumar, P.M. (2024). Deep learning-based diagnostic model for automated detection of monkeypox: Introducing MonkeypoxNet. Traitement du Signal, Vol. 41, No. 1, pp. 493-502. https://doi.org/10.18280/ts.410144
192	Saraswat, R., Jhanwar, D., Gupta, M.	Enhanced Solar Power Forecasting Using XG Boost and PCA-Based Sky Image Analysis	solar energy forecasting, XG Boost regression, Principal Component Analysis (PCA), sky image analysis, renewable energy, machine learning, photovoltaic (PV) system	41, 1, 503-510	https://doi.org/10.18280/ts.410145	Saraswat, R., Jhanwar, D., Gupta, M. (2024). Enhanced solar power forecasting using XG Boost and PCA-based sky image analysis. Traitement du Signal, Vol. 41, No. 1, pp. 503-510. https://doi.org/10.18280/ts.410145
193	Liu, J.X., Ma, Y.P., Meng, X., Zhang, S., Liu, Z.G., Song, Y.F.	Enhancing Intrinsic Image Decomposition with Transformer and Laplacian Pyramid Network	Intrinsic Image Decomposition (IID), transformer, Laplacian pyramid, reflectance, shading, feature encoding	41, 1, 511-517	https://doi.org/10.18280/ts.410146	Liu, J.X., Ma, Y.P., Meng, X., Zhang, S., Liu, Z.G., Song, Y.F. (2024). Enhancing intrinsic image decomposition with transformer and Laplacian pyramid network. Traitement du Signal, Vol. 41, No. 1, pp. 511-517. https://doi.org/10.18280/ts.410146
194	Olewi, H.I., Msallam, M.M., Salim, S.K., Al-Behadili, H.A.H.	Enhanced Security Through Integrated Morse Code Encryption and LSB Steganography in Digital Communications	encryption data, steganography, Morse code, cryptography, least significant bit (LSB) technique, data hiding	41, 1, 519-524	https://doi.org/10.18280/ts.410147	Olewi, H.I., Msallam, M.M., Salim, S.K., Al-Behadili, H.A.H. (2024). Enhanced security through integrated Morse code encryption and LSB steganography in digital communications. Traitement du Signal, Vol. 41, No. 1, pp. 519-524. https://doi.org/10.18280/ts.410147
195	Venkatraman, D., Pitchaipillai, V.	Deep Learning-Based Auto-LSTM Approach for Renewable Energy Forecasting: A Hybrid Network Model	long short-term memory (LSTM), deep learning, deep belief network (DBN), renewable energy, forecasting	41, 1, 525-530	https://doi.org/10.18280/ts.410148	Venkatraman, D., Pitchaipillai, V. (2024). Deep learning-based auto-LSTM approach for renewable energy forecasting: A hybrid network model. Traitement du Signal, Vol. 41, No. 1, pp. 525-530. https://doi.org/10.18280/ts.410148
196	Kaya, G.U.	A Novel Hybrid Optical Imaging Sensor for Early Stage Short-Circuit Fault Diagnosis in Printed Circuit Boards	printed circuit board, short circuit fault, lateral shearing digital holography, microscopic fringe projection profilometry, hybrid optical imaging sensor, early fault detection	41, 1, 531-542	https://doi.org/10.18280/ts.410149	Kaya, G.U. (2024). A novel hybrid optical imaging sensor for early stage short-circuit fault diagnosis in printed circuit boards. Traitement du Signal, Vol. 41, No. 1, pp. 531-542. https://doi.org/10.18280/ts.410149
197	Efe, E.M., Böcekçi, V.G.	Deep Learning-Driven Regulation of Vehicle Speed Limits in Response to Weather Conditions	deep learning, Kalman filter, morphological transformations, speed estimation, video processing	40, 6, 2321-2336	https://doi.org/10.18280/ts.400601	Efe, E.M., Böcekçi, V.G. (2023). Deep learning-driven regulation of vehicle speed limits in response to weather conditions. Traitement du Signal, Vol. 40, No. 6, pp. 2321-2336. https://doi.org/10.18280/ts.400601
198	Chetana, V.L., Seetha, H.	Enhancing Movie Recommendations: An Ensemble-Based Deep Collaborative Filtering Approach Utilizing AdaMVRGO Optimization	adaptive moment variance reduced gradient optimization, matrix factorization, movie recommendation, ensemble deep neural networks and recommendation systems	40, 6, 2337-2351	https://doi.org/10.18280/ts.400602	Chetana, V.L., Seetha, H. (2023). Enhancing movie recommendations: An ensemble-based deep collaborative filtering approach utilizing AdaMVRGO optimization. Traitement du Signal, Vol. 40, No. 6, pp. 2337-2351. https://doi.org/10.18280/ts.400602

199	Gao, Y.H., Xu, Z.Z., Xu, X.	Enhanced Cigarette Pack Counting via Image Enhancement Techniques and Advanced SAFECount Methodology	image enhancement techniques, cigarette pack counting, Similarity-Aware Feature Enhancement block for object Counting (SAFECount), Few-shot learning (FSC), warehouse inventory management	40, 6, 2353-2365	https://doi.org/10.18280/ts.400603	Gao, Y.H., Xu, Z.Z., Xu, X. (2023). Enhanced cigarette pack counting via image enhancement techniques and advanced SAFECount methodology. Traitement du Signal, Vol. 40, No. 6, pp. 2353-2365. https://doi.org/10.18280/ts.400603
200	Aykat, S., Senan, S.	Advanced Detection of Retinal Diseases via Novel Hybrid Deep Learning Approach	convolutional neural networks, deep learning, disease detection, retinal diseases	40, 6, 2367-2382	https://doi.org/10.18280/ts.400604	Aykat, S., Senan, S. (2023). Advanced detection of retinal diseases via novel hybrid deep learning approach. Traitement du Signal, Vol. 40, No. 6, pp. 2367-2382. https://doi.org/10.18280/ts.400604
201	Vasantrao, C.P., Gupta, N.	A High-Performance, Equus Jubatus-Optimized Deep Learning Model for Satellite Image-Based Change Detection	hybrid deep fusion model, segmentation, change detection, Equus Jubatus optimization, multispectral images	40, 6, 2383-2395	https://doi.org/10.18280/ts.400605	Vasantrao, C.P., Gupta, N. (2023). A high-performance, Equus Jubatus-optimized deep learning model for satellite image-based change detection. Traitement du Signal, Vol. 40, No. 6, pp. 2383-2395. https://doi.org/10.18280/ts.400605
202	Li, F., Xu, M.L., Rosli, M.M.	Application of Multi-Modal Neural Networks in Verifying the Authenticity of News Text and Images	multi-modal neural networks, news authenticity verification, anomalous image block search, gated cooperative attention, tampered and forged images, modality fusion, information security	40, 6, 2397-2407	https://doi.org/10.18280/ts.400606	Li, F., Xu, M.L., Rosli, M.M. (2023). Application of multi-modal neural networks in verifying the authenticity of news text and images. Traitement du Signal, Vol. 40, No. 6, pp. 2397-2407. https://doi.org/10.18280/ts.400606
203	Komati, R.D., Nagmode, M.S.	Amplifying Imperceptible Variations in Video Sequences for Time-Varying Process Analysis	Eulerian video magnification, motion amplification, region of interest, vibration frequency measurement	40, 6, 2409-2422	https://doi.org/10.18280/ts.400607	Komati, R.D., Nagmode, M.S. (2023). Amplifying imperceptible variations in video sequences for time-varying process analysis. Traitement du Signal, Vol. 40, No. 6, pp. 2409-2422. https://doi.org/10.18280/ts.400607
204	Jaid, U.H., AbdulHassan, A.K.	Optimizing Acoustic Feature Selection for Estimating Speaker Traits: A Novel Threshold-Based Approach	acoustic features, age estimation, feature selection, gender detection, height estimation, speaker profiling, TIMIT dataset	40, 6, 2423-2432	https://doi.org/10.18280/ts.400608	Jaid, U.H., AbdulHassan, A.K. (2023). Optimizing acoustic feature selection for estimating speaker traits: A novel threshold-based approach. Traitement du Signal, Vol. 40, No. 6, pp. 2423-2432. https://doi.org/10.18280/ts.400608
205	Wang, H.Z.	Advanced Image Processing Techniques for Enhancing Cargo Capacity Optimization in Intelligent Logistics Vehicles	intelligent logistics, cargo capacity optimization, image processing, stereo matching algorithms, volume measurement	40, 6, 2433-2442	https://doi.org/10.18280/ts.400609	Wang, H.Z. (2023). Advanced image processing techniques for enhancing cargo capacity optimization in intelligent logistics vehicles. Traitement du Signal, Vol. 40, No. 6, pp. 2433-2442. https://doi.org/10.18280/ts.400609
206	Ezzat, A., Omer, O.A., Mohamed, U.S., Mubarak, A.S.	Blood Pressure Estimation from Photoplethysmogram Using Hybrid Bidirectional Long Short-Term Memory and Convolutional Neural Network Architecture	arterial blood pressure, blood pressure, deep neural network, Conv-BiLSTM	40, 6, 2443-2453	https://doi.org/10.18280/ts.400610	Ezzat, A., Omer, O.A., Mohamed, U.S., Mubarak, A.S. (2023). Blood pressure estimation from photoplethysmogram using hybrid bidirectional long short-term memory and convolutional neural network architecture. Traitement du Signal, Vol. 40, No. 6, pp. 2443-2453. https://doi.org/10.18280/ts.400610
207	Krishna, D.M., Sahu, S.K., Raju, G.	Enhanced Skin Cancer Classification Through a Hybrid Optimized Approach: Deep Echo Network Machine Utilizing Pelican-Optimized Deep Kohonen Features	skin cancer classification, deep convolutional inverse graphics network, skin lesion detection, swarm-based pelican optimization, hybrid deep Kohonen network, deep echo network machine	40, 6, 2455-2469	https://doi.org/10.18280/ts.400611	Krishna, D.M., Sahu, S.K., Raju, G. (2023). Enhanced skin cancer classification through a hybrid optimized approach: Deep echo network machine utilizing pelican-optimized deep Kohonen features. Traitement du Signal, Vol. 40, No. 6, pp. 2455-2469. https://doi.org/10.18280/ts.400611
208	Xiao, X.H., Xie, J.G., Cai, B.	Optimizing Water Body Detection in Southeast Hubei Using PCA on Landsat ETM+ Imagery	remote sensing, water body extraction, principal component analysis (PCA), Landsat Enhanced Thematic Mapper Plus (ETM+)	40, 6, 2471-2480	https://doi.org/10.18280/ts.400612	Xiao, X.H., Xie, J.G., Cai, B. (2023). Optimizing water body detection in southeast Hubei using PCA on Landsat ETM+ imagery. Traitement du Signal, Vol. 40, No. 6, pp. 2471-2480. https://doi.org/10.18280/ts.400612
209	Ganesan, V., Ramasamy, V., Manoj, C., Tejaswi, T.	Contextual Emotional Classifier: An Advanced AI-Powered Emotional Health Ecosystem for Women Utilizing Edge Devices	Edge AI device, emotional health management for women, women's digital ecosystem, emotional tracker, Contextual Emotional Classifier, text and audio emotions	40, 6, 2481-2494	https://doi.org/10.18280/ts.400613	Ganesan, V., Ramasamy, V., Manoj, C., Tejaswi, T. (2023). Contextual Emotional Classifier: An advanced AI-powered emotional health ecosystem for women utilizing edge devices. Traitement du Signal, Vol. 40, No. 6, pp. 2481-2494. https://doi.org/10.18280/ts.400613
210	Ergun, O.N., Ilhan, H.O.	Advancing Diabetic Retinopathy Severity Classification Through Stacked Generalization in Ensemble Deep Learning Models	diabetic retinopathy (DR), ensemble deep learning, hard voting, soft voting, stacked generalization	40, 6, 2495-2506	https://doi.org/10.18280/ts.400614	Ergun, O.N., Ilhan, H.O. (2023). Advancing diabetic retinopathy severity classification through stacked generalization in ensemble deep learning models. Traitement du Signal, Vol. 40, No. 6, pp. 2495-2506. https://doi.org/10.18280/ts.400614
211	Li, P.F., Xie, S.D., Xia, H.P., Wang, D.K., Xu, Z.Y.	Advanced Analysis of Blast Pile Fragmentation in Open-Pit Mining Utilizing 3D Point Cloud Technology	3D point cloud, blast pile fragmentation, clustering, contour extraction, block volume	40, 6, 2507-2519	https://doi.org/10.18280/ts.400615	Li, P.F., Xie, S.D., Xia, H.P., Wang, D.K., Xu, Z.Y. (2023). Advanced analysis of blast pile fragmentation in open-pit mining utilizing 3D point cloud technology. Traitement du Signal, Vol. 40, No. 6, pp. 2507-2519. https://doi.org/10.18280/ts.400615
212	Vajiram, J., Shanmugasundaram, S.	Improving Segmentation of Pilocytic Astrocytoma in MRI Using Genomic Cluster-Shape Feature Analysis	pilocytic astrocytoma, brain tumor, magnetic resonance imaging, genomic feature selection	40, 6, 2521-2538	https://doi.org/10.18280/ts.400616	Vajiram, J., Shanmugasundaram, S. (2023). Improving segmentation of pilocytic astrocytoma in MRI using genomic cluster-shape feature analysis. Traitement du Signal, Vol. 40, No. 6, pp. 2521-2538. https://doi.org/10.18280/ts.400616
213	Eriş, M., Kaya, M.	Leveraging Deep Learning for Identification of Illicit Images in Digital Forensic Investigations	deep learning, pornography detection, child sexual abuse detection, digital forensics, convolutional neural networks, obscene image detection	40, 6, 2539-2552	https://doi.org/10.18280/ts.400617	Eriş, M., Kaya, M. (2023). Leveraging deep learning for identification of illicit images in digital forensic investigations. Traitement du Signal, Vol. 40, No. 6, pp. 2539-2552. https://doi.org/10.18280/ts.400617
214	Jiang, L., Lu, X.	Analyzing and Optimizing Virtual Reality Classroom Scenarios: A Deep Learning Approach	Virtual Reality (VR) classroom, deep learning, scene analysis, feature enhancement, feature distillation, multi-scale information, transformer, attention mechanism, semantic segmentation, classification optimization	40, 6, 2553-2563	https://doi.org/10.18280/ts.400618	Jiang, L., Lu, X. (2023). Analyzing and optimizing Virtual Reality classroom scenarios: A deep learning approach. Traitement du Signal, Vol. 40, No. 6, pp. 2553-2563. https://doi.org/10.18280/ts.400618
215	Dharmichand, S., Perumal, S.	Leveraging Tripartite Tier Convolutional Neural Network for Human Emotion Recognition: A Multimodal Data Approach	tripartite tier convolutional neural network, classification, emotion recognition, cognitive approach, electroencephalogram, multimodal data	40, 6, 2565-2576	https://doi.org/10.18280/ts.400619	Dharmichand, S., Perumal, S. (2023). Leveraging tripartite tier convolutional neural network for human emotion recognition: A multimodal data approach. Traitement du Signal, Vol. 40, No. 6, pp. 2565-2576. https://doi.org/10.18280/ts.400619
216	Ayachi, R., Afif, M., Said, Y., Atri, M., Ben Abdelali, A.	Integrating Recurrent Neural Networks with Convolutional Neural Networks for Enhanced Traffic Light Detection and Tracking	convolutional neural network, recurrent neural network, traffic light detection, and tracking, mobile systems	40, 6, 2577-2586	https://doi.org/10.18280/ts.400620	Ayachi, R., Afif, M., Said, Y., Atri, M., Ben Abdelali, A. (2023). Integrating recurrent neural networks with convolutional neural networks for enhanced traffic light detection and tracking. Traitement du Signal, Vol. 40, No. 6, pp. 2577-2586. https://doi.org/10.18280/ts.400620

217	Pang, J.L.	Enhancing Urban Traffic Management: Advanced Strategies in Image Recognition-Based Intelligent Traffic Monitoring	intelligent traffic monitoring system, image recognition, license plate recognition, traffic violation detection, template matching, neural networks, graph convolutional networks, spatial attention modules	40, 6, 2587-2597	https://doi.org/10.18280/ts.400621	Pang, J.L. (2023). Enhancing urban traffic management: Advanced strategies in image recognition-based intelligent traffic monitoring. Traitement du Signal, Vol. 40, No. 6, pp. 2587-2597. https://doi.org/10.18280/ts.400621
218	Adiraju, R.V., Elias, S.	Temporal Stability and Prognostic Power of Radiomic Features for Survival Analysis in Lung Adenocarcinoma	temporal stability of radiomic features, lung nodule segmentation, survival analysis, radiomic features, computer tomography, prognostic power, Kaplan-Meier survival curve	40, 6, 2599-2611	https://doi.org/10.18280/ts.400622	Adiraju, R.V., Elias, S. (2023). Temporal stability and prognostic power of radiomic features for survival analysis in lung adenocarcinoma. Traitement du Signal, Vol. 40, No. 6, pp. 2599-2611. https://doi.org/10.18280/ts.400622
219	Özyurt, F., Majidpour, J., Rashid, T.A., Koç, C.	Offline Handwriting Signature Verification: A Transfer Learning and Feature Selection Approach	signature verification, transfer learning, deep learning, MobileNetV2, feature selection, machine learning, SVM	40, 6, 2613-2622	https://doi.org/10.18280/ts.400623	Özyurt, F., Majidpour, J., Rashid, T.A., Koç, C. (2023). Offline handwriting signature verification: A transfer learning and feature selection approach. Traitement du Signal, Vol. 40, No. 6, pp. 2613-2622. https://doi.org/10.18280/ts.400623
220	Zhang, L.J., Wu, J.Z., Wei, J.X., Yu, X.Y., Yu, J., Yuan, B.	Enhanced Laboratory Safety Education Through Interactive Applications of Machine Learning-Boosted Image Processing Technologies	laboratory safety education, machine learning, image processing, wavelet threshold denoising, data augmentation, Spatio-Temporal Graph Convolutional Network (ST-GCN), hazardous behavior recognition	40, 6, 2623-2633	https://doi.org/10.18280/ts.400624	Zhang, L.J., Wu, J.Z., Wei, J.X., Yu, X.Y., Yu, J., Yuan, B. (2023). Enhanced laboratory safety education through interactive applications of machine learning-boosted image processing technologies. Traitement du Signal, Vol. 40, No. 6, pp. 2623-2633. https://doi.org/10.18280/ts.400624
221	Thokala, B., Doraikannan, S.	Detection and Classification of Plant Stress Using Hybrid Deep Convolution Neural Networks: A Multi-Scale Vision Transformer Approach	plant stress, multi-scale vision transformer, cross-attention, deep convolutional neural network	40, 6, 2635-2647	https://doi.org/10.18280/ts.400625	Thokala, B., Doraikannan, S. (2023). Detection and classification of plant stress using hybrid deep convolution neural networks: A multi-scale vision transformer approach. Traitement du Signal, Vol. 40, No. 6, pp. 2635-2647. https://doi.org/10.18280/ts.400525
222	Yücelbaş, C., Yücelbaş, Ş.	Enhanced Cross-Validation Methods Leveraging Clustering Techniques	large-scale classification, cross-validation methodology, k-means, k-medoids, clustering techniques	40, 6, 2649-2660	https://doi.org/10.18280/ts.400626	Yücelbaş, C., Yücelbaş, Ş. (2023). Enhanced cross-validation methods leveraging clustering techniques. Traitement du Signal, Vol. 40, No. 6, pp. 2649-2660. https://doi.org/10.18280/ts.400626
223	Sun, H.	Innovative Approaches in Image Quality Assessment: A Deep Learning-Enabled Multi-Level and Multi-Scale Perspective	image quality assessment, deep learning, multi-level feature fusion, multi-scale analysis, end-to-end model	40, 6, 2661-2670	https://doi.org/10.18280/ts.400627	Sun, H. (2023). Innovative approaches in image quality assessment: A deep learning-enabled multi-level and multi-scale perspective. Traitement du Signal, Vol. 40, No. 6, pp. 2661-2670. https://doi.org/10.18280/ts.400627
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227	Shimpi, J.K., Shanmugam, P.	A Hybrid Diabetic Retinopathy Neural Network Model for Early Diabetic Retinopathy Detection and Classification of Fundus Images	diabetic retinopathy, detection, fundus images, classification, deep learning	40, 6, 2711-2722	https://doi.org/10.18280/ts.400631	Shimpi, J.K., Shanmugam, P. (2023). A hybrid diabetic retinopathy neural network model for early diabetic retinopathy detection and classification of fundus images. Traitement du Signal, Vol. 40, No. 6, pp. 2711-2722. https://doi.org/10.18280/ts.400631
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231	Sundaravadivelu, B., Santhanakrishnan, K.	Breast Cancer Detection Using Comprising Fuzzy C-Means and Artificial Bee Colony Optimization Segmentation and Grading with Random Forest Classifier	mammogram, breast cancer, Comprising Fuzzy C-Means and Artificial Bee Colony optimization, random forest, grading	40, 6, 2751-2759	https://doi.org/10.18280/ts.400635	Sundaravadivelu, B., Santhanakrishnan, K. (2023). Breast cancer detection using Comprising Fuzzy C-Means and Artificial Bee Colony optimization segmentation and grading with random forest classifier. Traitement du Signal, Vol. 40, No. 6, pp. 2751-2759. https://doi.org/10.18280/ts.400635
232	Zhang, C., Wu. Q., Wang, J., Yang, L.Y., Zhang, H.X.	Massage Acupoint Positioning Method of Human Body Images Based on Transfer Learning	transfer learning, human body images, massage acupoints, acupoint positioning	40, 6, 2761-2768	https://doi.org/10.18280/ts.400636	Zhang, C., Wu. Q., Wang, J., Yang, L.Y., Zhang, H.X. (2023). Massage acupoint positioning method of human body images based on transfer learning. Traitement du Signal, Vol. 40, No. 6, pp. 2761-2768. https://doi.org/10.18280/ts.400636
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234	Aydin, C.	Enhanced Material Classification via MobileSEMNet: Leveraging MobileNetV2 for SEM Image Analysis	MobileSEMNet, MobileNetV2, SEM image processing, deep learning, deep feature engineering	40, 6, 2779-2787	https://doi.org/10.18280/ts.400638	Aydin, C. (2023). Enhanced material classification via MobileSEMNet: Leveraging MobileNetV2 for SEM image analysis. Traitement du Signal, Vol. 40, No. 6, pp. 2779-2787. https://doi.org/10.18280/ts.400638

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237	Ganesan, A., Durgamahanthi, V.	Non-Invasive Breast Cancer Detection Using Electrical Impedance Tomography: Design, Analysis and Comparison of Reconstruction Algorithms	breast cancer screening, Electrical Impedance Tomography, COMSOL Multiphysics, finite element analysis, reconstruction, one step Gauss Newton, total variation, K-means clustering	40, 6, 2809-2817	https://doi.org/10.18280/ts.400641	Ganesan, A., Durgamahanthi, V. (2023). Non-invasive breast cancer detection using Electrical Impedance Tomography: Design, analysis and comparison of reconstruction algorithms. Traitement du Signal, Vol. 40, No. 6, pp. 2809-2817. https://doi.org/10.18280/ts.400641
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246	Alshagathrh, F.M., Musleh, S., Alzubaidi, M., Schneider, J., Househ, M.S.	Efficient Detection of Hepatic Steatosis in Ultrasound Images Using Convolutional Neural Networks: A Comparative Study	non-alcoholic fatty liver, hepatic steatosis, EfficientNet-B0, ResNet34, image classification, deep learning, binary classification, convolutional neural network, image transformations, ultrasound images	40, 5, 1781-1794	https://doi.org/10.18280/ts.400501	Alshagathrh, F.M., Musleh, S., Alzubaidi, M., Schneider, J., Househ, M.S. (2023). Efficient detection of hepatic steatosis in ultrasound images using convolutional neural networks: A comparative study. Traitement du Signal, Vol. 40, No. 5, pp. 1781-1794. https://doi.org/10.18280/ts.400501
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292	Wang, Y.C., Sun, J.Y., Wang, F.Y.	Estimation of Forest Diameter-at-Breast-Height: A Fusion of Machine Learning and 3D Image Processing Innovations	machine learning, image processing, tree feature extraction, 3D image data, data preprocessing, RANSAC algorithm, cylindrical shape fitting, CNNs	40, 5, 2291-2297	https://doi.org/10.18280/ts.400547	Wang, Y.C., Sun, J.Y., Wang, F.Y. (2023). Estimation of forest diameter-at-breast-height: A fusion of machine learning and 3D image processing innovations. Traitement du Signal, Vol. 40, No. 5, pp. 2291-2297. https://doi.org/10.18280/ts.400547
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297	Sun, M., Bao, T., Xie, D., Lv, H.Y., Si, G.L.	A Deep Reinforcement Learning Approach for Efficient Image Processing Task Offloading in Edge-Cloud Collaborative Environments	edge computing, task offloading, image processing, multiple users, edge-cloud collaborative, cost efficiency	40, 4, 1329-1339	https://doi.org/10.18280/ts.400403	Sun, M., Bao, T., Xie, D., Lv, H.Y., Si, G.L. (2023). A deep reinforcement learning approach for efficient image processing task offloading in edge-cloud collaborative environments. Traitement du Signal, Vol. 40, No. 4, pp. 1329-1339. https://doi.org/10.18280/ts.400403
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305	Fadhel, A.A., Hasan, H.M.	Enhancing ECG Signal Classification Accuracy Through Gaussian Modeling Method	ECG classification, healthcare system, ECG modeling, Gaussian function, arrhythmia, computer aided detection, deep learning, machine learning	40, 4, 1425-1434	https://doi.org/10.18280/ts.400411	Fadhel, A.A., Hasan, H.M. (2023). Enhancing ECG signal classification accuracy through Gaussian Modeling method. Traitement du Signal, Vol. 40, No. 4, pp. 1425-1434. https://doi.org/10.18280/ts.400411
306	Wang, J., Yun, L.P., Zhang, J.Y.	Deep Image Processing for Lower Limb Rehabilitation Training Action and Effect Recognition: GaitSet Algorithm and Full-Field Optical Flow Approaches	lower limb rehabilitation training, action recognition, original sequence-level features, GaitSet algorithm, full-field optical flow tracking method, rehabilitation effect evaluation	40, 4, 1435-1443	https://doi.org/10.18280/ts.400412	Wang, J., Yun, L.P., Zhang, J.Y. (2023). Deep image processing for lower limb rehabilitation training action and effect recognition: GaitSet algorithm and full-field optical flow approaches. Traitement du Signal, Vol. 40, No. 4, pp. 1425-1434. https://doi.org/10.18280/ts.400412

307	Trinh, T.H., Nguyen, H.H.C.	Implementation of YOLOv5 for Real-Time Maturity Detection and Identification of Pineapples	detect fruit ripening, ripeness estimation, segmentation, pineapples classification, YOLOv5	40, 4, 1445-1455	https://doi.org/10.18280/ts.400413	Trinh, T.H., Nguyen, H.H.C. (2023). Implementation of YOLOv5 for real-time maturity detection and identification of pineapples. Traitement du Signal, Vol. 40, No. 4, pp. 1445-1455. https://doi.org/10.18280/ts.400413
308	Pathak, D., Kashyap, R.	Neural Correlate-Based E-Learning Validation and Classification Using Convolutional and Long Short-Term Memory Networks	automated framework, convolution neural network, deep learning, EEG signals, E-learning, feature extraction, Long Short-Term Memory, neuro headsets	40, 4, 1457-1467	https://doi.org/10.18280/ts.400414	Pathak, D., Kashyap, R. (2023). Neural correlate-based E-learning validation and classification using convolutional and Long Short-Term Memory networks. Traitement du Signal, Vol. 40, No. 4, pp. 1457-1467. https://doi.org/10.18280/ts.400414
309	Hou, M., Tang, Y.P.	The Influence of Visual Features in Product Images on Sales Volume: A Machine Learning Approach to Extract Color and Deep Learning Super Sampling Features	online shopping, product images, sales volume, visual feature extraction, color analysis, target shape, DLSS features, machine learning	40, 4, 1469-1477	https://doi.org/10.18280/ts.400415	Hou, M., Tang, Y.P. (2023). The influence of visual features in product images on sales volume: A machine learning approach to extract color and Deep Learning Super Sampling features. Traitement du Signal, Vol. 40, No. 4, pp. 1469-1477. https://doi.org/10.18280/ts.400415
310	Elumalai, S., Jahir Hussain, F.B.	Utilizing Deep Convolutional Neural Networks for Multi-Classification of Plant Diseases from Image Data	activation function, convolutional neural network, deep learning, feature extraction, image processing, plant disease classification, PlantVillage dataset, segmentation	40, 4, 1479-1490	https://doi.org/10.18280/ts.400416	Elumalai, S., Jahir Hussain, F.B. (2023). Utilizing deep convolutional neural networks for multi-classification of plant diseases from image data. Traitement du Signal, Vol. 40, No. 4, pp. 1479-1490. https://doi.org/10.18280/ts.400416
311	Koyuncu, H., Arab, M.	Optimizing Multi Neural Network Weights for COVID-19 Detection Using Enhanced Artificial Ecosystem Algorithm	COVID-19, multilayer perceptron, convolutional neural network, metaheuristics, optimization, enhanced artificial ecosystem algorithm, segmentation, pneumonia	40, 4, 1491-1500	https://doi.org/10.18280/ts.400417	Koyuncu, H., Arab, M. (2023). Optimizing multi neural network weights for COVID-19 detection using enhanced artificial ecosystem algorithm. Traitement du Signal, Vol. 40, No. 4, pp. 1491-1500. https://doi.org/10.18280/ts.400417
312	Ding, X.Y., Hu, W.J., Hu, G.B., Liu, F.	Mineral Element Identification in Remote Sensing Imagery: A Fusion Approach Using CH-Tucker Decomposition and RFDNet	remote sensing image processing, heterogeneous feature tensor migration, RFDNet network, mineral elements, fine granularity identification, noise suppression	40, 4, 1501-1509	https://doi.org/10.18280/ts.400418	Ding, X.Y., Hu, W.J., Hu, G.B., Liu, F. (2023). Mineral element identification in remote sensing imagery: A fusion approach using CH-Tucker decomposition and RFDNet. Traitement du Signal, Vol. 40, No. 4, pp. 1501-1509. https://doi.org/10.18280/ts.400418
313	Yuksel, A.K., Ar, Y.	A Machine Learning Approach to Malware Detection Using Application Programming Interface Calls (MDAPI)	cyber security, zero-day, malware detection, machine learning	40, 4, 1511-1520	https://doi.org/10.18280/ts.400419	Yuksel, A.K., Ar, Y. (2023). A machine learning approach to malware detection using application programming interface calls (MDAPI). Traitement du Signal, Vol. 40, No. 4, pp. 1511-1520. https://doi.org/10.18280/ts.400419
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315	Wang, Y.C., Sun, J.Y., Wang, F.Y., Li, D.D.	Remote Sensing-Based Estimation of Seedling Density in Nursery Gardens Using YOLOv4 Deep Learning Algorithm	drone, seedling, remote sensing image, target detection, image recognition, deep learning	40, 4, 1533-1541	https://doi.org/10.18280/ts.400421	Wang, Y.C., Sun, J.Y., Wang, F.Y., Li, D.D. (2023). Remote sensing-based estimation of seedling density in nursery gardens using YOLOv4 deep learning algorithm. Traitement du Signal, Vol. 40, No. 4, pp. 1533-1541. https://doi.org/10.18280/ts.400421
316	Goluguri, N.V.R., K, S.D., Gogula, S.D., Chhabra, G.S.	ATRLeNet: A Deep Learning Model for Enhanced Classification of Oryza Sativa Pathologies	LeNet, atrous convolution, artificial fish swarm optimization, Oryza Sativa plant diseases	40, 4, 1543-1552	https://doi.org/10.18280/ts.400422	Goluguri, N.V.R., K, S.D., Gogula, S.D., Chhabra, G.S. (2023). ATRLeNet: A deep learning model for enhanced classification of Oryza Sativa pathologies. Traitement du Signal, Vol. 40, No. 4, pp. 1543-1552. https://doi.org/10.18280/ts.400422
317	Baydogan, M.P., Baybars, S.C., Tuncer, S.A.	Age-Net: An Advanced Hybrid Deep Learning Model for Age Estimation Using Orthopantomograph Images	age estimation, deep learning, dental orthopantomographic image, machine learning	40, 4, 1553-1563	https://doi.org/10.18280/ts.400423	Baydogan, M.P., Baybars, S.C., Tuncer, S.A. (2023). Age-Net: An advanced hybrid deep learning model for age estimation using orthopantomograph images. Traitement du Signal, Vol. 40, No. 4, pp. 1553-1563. https://doi.org/10.18280/ts.400423
318	Zheng, J.H., Wang, D.Y., Geng, Z.X.	Real-Time Detection of Safety Hazards in Coal Mines Utilizing an Enhanced YOLOv3 Algorithm	YOLO algorithm, safety hazards in coal mines, real-time monitoring model	40, 4, 1565-1572	https://doi.org/10.18280/ts.400424	Zheng, J.H., Wang, D.Y., Geng, Z.X. (2023). Real-time detection of safety hazards in coal mines utilizing an enhanced YOLOv3 algorithm. Traitement du Signal, Vol. 40, No. 4, pp. 1565-1572. https://doi.org/10.18280/ts.400424
319	Elaraby, A., Saad, A., Karamti, H., Alruwaili, M.	An Optimized Deep Learning Approach for Robust Image Quality Classification	image quality, deep learning, convolutional neural network, image classification	40, 4, 1573-1579	https://doi.org/10.18280/ts.400425	Elaraby, A., Saad, A., Karamti, H., Alruwaili, M. (2023). An optimized deep learning approach for robust image quality classification. Traitement du Signal, Vol. 40, No. 4, pp. 1573-1579. https://doi.org/10.18280/ts.400425
320	Srinivasarao, G., Rajesh, V., Saikumar, K., Baza, M., Srivastava, G., Alsabaan, M.	Cloud-Based LeNet-5 CNN for MRI Brain Tumor Diagnosis and Recognition	MRI brain image, CNN, LeNet-5, cloud network, brain tumor, DriveHQ	40, 4, 1581-1592	https://doi.org/10.18280/ts.400426	Srinivasarao, G., Rajesh, V., Saikumar, K., Baza, M., Srivastava, G., Alsabaan, M. (2023). Cloud-based LeNet-5 CNN for MRI brain tumor diagnosis and recognition. Traitement du Signal, Vol. 40, No. 4, pp. 1581-1592. https://doi.org/10.18280/ts.400426
321	Lei, H.Q., Li, D.Q., Jiang, H.D.	Enhancement of Sonar Detection in Karst Caves Through Advanced Target Location and Image Fusion Algorithms	sonar detection of caves, target setting, image fusion, deep neural network	40, 4, 1593-1660	https://doi.org/10.18280/ts.400427	Lei, H.Q., Li, D.Q., Jiang, H.D. (2023). Enhancement of sonar detection in karst caves through advanced target location and image fusion algorithms. Traitement du Signal, Vol. 40, No. 4, pp. 1593-1660. https://doi.org/10.18280/ts.400427
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323	Al-Atroshi, S.J.A., Ali, A.M.	Improving Facial Expression Recognition Using HOG with SVM and Modified Datasets Classified by Alexnet	CNN, datasets, facial expression, hog, SVM	40, 4, 1611-1619	https://doi.org/10.18280/ts.400429	Al-Atroshi, S.J.A., Ali, A.M. (2023). Improving facial expression recognition using HOG with SVM and modified datasets classified by Alexnet. Traitement du Signal, Vol. 40, No. 4, pp. 1611-1619. https://doi.org/10.18280/ts.400429
324	Sun, H.	Optimization of Deep Learning Algorithms for Image Segmentation in High-Dimensional Data Environments	high-dimensional data flow, image segmentation, U-Net-inspired architecture, depth skip connections, lightweight modeling, BCE loss, Dice loss, small object precision segmentation	40, 4, 1621-1628	https://doi.org/10.18280/ts.400430	Sun, H. (2023). Optimization of deep learning algorithms for image segmentation in high-dimensional data environments. Traitement du Signal, Vol. 40, No. 4, pp. 1621-1628. https://doi.org/10.18280/ts.400430

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331	Narayana, V.L., Sujatha, V., Sri, K.S., Pavani, V., Prasanna, T.V.N., Ranganarayana, K.	Computer Tomography Image Based Interconnected Antecedence Clustering Model Using Deep Convolution Neural Network for Prediction of COVID-19	COVID-19, CT images, segmentation, feature extraction, clustering, classification, deep convolutional neural network	40, 4, 1689-1696	https://doi.org/10.18280/ts.400437	Narayana, V.L., Sujatha, V., Sri, K.S., Pavani, V., Prasanna, T.V.N., Ranganarayana, K. (2023). Computer tomography image based interconnected antecedence clustering model using deep convolution neural network for prediction of covid-19. Traitement du Signal, Vol. 40, No. 4, pp. 1689-1696. https://doi.org/10.18280/ts.400437
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333	Kanaparthi, T., Yarrabothu, R.S., Sundar, R.	Enhancing 5G Massive MIMO Systems Using a Compressive Sensing-Based Approach	MIMO, PC, CSLSS, FFCNN, interference alignment, BS, TDD	40, 4, 1705-1713	https://doi.org/10.18280/ts.400439	Kanaparthi, T., Yarrabothu, R.S., Sundar, R. (2023). Enhancing 5G massive MIMO systems using a compressive sensing-based approach. Traitement du Signal, Vol. 40, No. 4, pp. 1705-1713. https://doi.org/10.18280/ts.400439
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348	Mokkapati, R., Dasari, V.L.	Embedded Signal Artificial Neural Network Based Intelligent Non-Dependent Feature Selection for Cyber Attack Classification in Signal-Based Networks	signal based cyber attacks, network security, feature extraction, feature selection, redundancy, feature subset	40, 3, 905-914	https://doi.org/10.18280/ts.400307	Mokkapati, R., Dasari, V.L. (2023). Embedded signal artificial neural network based intelligent non-dependent feature selection for cyber attack classification in signal-based networks. Traitement du Signal, Vol. 40, No. 3, pp. 905-914. https://doi.org/10.18280/ts.400307
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350	Yang, X.Y., Zhang, W.L.	Enhanced Detection of Straw Coverage Using a Refined AdaBoost Algorithm and Improved Otsu Method	straw coverage rate, conservation tillage, image processing, Adaboost algorithm, Otsu algorithm	40, 3, 927-937	https://doi.org/10.18280/ts.400309	Yang, X.Y., Zhang, W.L. (2023). Enhanced detection of straw coverage using a refined Adaboost algorithm and improved Otsu method. Traitement du Signal, Vol. 40, No. 3, pp. 927-937. https://doi.org/10.18280/ts.400309
351	Krishna, M.V., Rao, B.S.	An Approach to Classify and Segment Diabetic Retinopathy and Retinopathy of Prematurity	retinal disease, DCGAN, deep learning, DeepLabv3+, diabetic retinopathy, retinopathy of prematurity	40, 3, 939-948	https://doi.org/10.18280/ts.400310	Krishna, M.V., Rao, B.S. (2023). An approach to classify and segment diabetic retinopathy and retinopathy of prematurity. Traitement du Signal, Vol. 40, No. 3, pp. 939-948. https://doi.org/10.18280/ts.400310
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354	Mohan, R., Perumal, S.	Classification and Detection of Cognitive Disorders like Depression and Anxiety Utilizing Deep Convolutional Neural Network (CNN) Centered on EEG Signal	detection, depression, anxiety, EEG signal, CNN, classification, brain, cognitive disorders	40, 3, 971-979	https://doi.org/10.18280/ts.400313	Mohan, R., Perumal, S. (2023). Classification and detection of cognitive disorders like depression and anxiety utilizing deep Convolutional Neural Network (CNN) centered on EEG signal. Traitement du Signal, Vol. 40, No. 3, pp. 971-979. https://doi.org/10.18280/ts.400313
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367	Zhou, H.J., Chen, W., Lin, Z.M., Chen, R.Y.	An Examination Monocular Vision Gaze Point Tracking under the Theory of 'Machines Displacing Workers' in the Philosophy of Technology	machines displacing workers, monocular machine vision, gaze point analysis, CarSim, ambient lighting, lighting-attention quantitative model	40, 3, 1107-1117	https://doi.org/10.18280/ts.400326	Zhou, H.J., Chen, W., Lin, Z.M., Chen, R.Y. (2023). An examination monocular vision gaze point tracking under the theory of 'machines displacing workers' in the philosophy of technology. Traitement du Signal, Vol. 40, No. 3, pp. 1107-1117. https://doi.org/10.18280/ts.400326
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369	Zhou, Y.	A Novel Image Recognition-Based Assessment System for Elderly Independent Living Ability and Its Applications	image processing, the elderly, independent living ability assessment, behavior recognition	40, 3, 1127-1135	https://doi.org/10.18280/ts.400328	Zhou, Y. (2023). A novel image recognition-based assessment system for elderly independent living ability and its applications. Traitement du Signal, Vol. 40, No. 3, pp. 1127-1135. https://doi.org/10.18280/ts.400328
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376	Theera-Ampornpunt, N., Treepong, P.	Optimizing Hyperparameters for Thai Cuisine Recognition via Convolutional Neural Networks	food computing, image recognition, object recognition, Thai food	40, 3, 1187-1193	https://doi.org/10.18280/ts.400335	Theera-Ampornpunt, N., Treepong, P. (2023). Optimizing hyperparameters for Thai cuisine recognition via convolutional neural networks. Traitement du Signal, Vol. 40, No. 3, pp. 1187-1193. https://doi.org/10.18280/ts.400335
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393	Zhou, Y.D., Gong, Z., Li, L.	Deep Learning-Based Multi-Feature Auxiliary Diagnosis Method for Early Detection of Ischemic Stroke	computer-aided diagnosis, ischemic stroke, quantitative electroencephalogram, 3D deep residual network, cascaded U-Net, LSTM neural network	40, 2, 433-443	https://doi.org/10.18280/ts.400203	Zhou, Y.D., Gong, Z., Li, L. (2023). Deep learning-based multi-feature auxiliary diagnosis method for early detection of ischemic stroke. Traitement du Signal, Vol. 40, No. 2, pp. 433-443. https://doi.org/10.18280/ts.400203
394	Battula, K.P., Chandana, B.S.	Multiclass Classification of Cervical Pap Smear Images Using Deep Learning-Based Model	cell segmentation, cervical cancer, features extraction, manual analysis, wrapper filter	40, 2, 445-456	https://doi.org/10.18280/ts.400204	Battula, K.P., Chandana, B.S. (2023). Multiclass classification of cervical pap smear images using deep learning-based model. Traitement du Signal, Vol. 40, No. 2, pp. 445-456. https://doi.org/10.18280/ts.400204
395	Ay, S., Karabatak, M.	A New Automatic Vehicle Tracking and Detection Algorithm for Multi-Traffic Video Cameras	automatic vehicle tracking, automatic vehicle detection, deep learning, object recognition, faster RCNN, YOLO	40, 2, 457-468	https://doi.org/10.18280/ts.400205	Ay, S., Karabatak, M. (2023). A new automatic vehicle tracking and detection algorithm for multi-traffic video cameras. Traitement du Signal, Vol. 40, No. 2, pp. 457-468. https://doi.org/10.18280/ts.400205
396	Wang, Y.J.	Electrical Control Equipment Patrol Inspection Method Based on High Quality Image Recognition Technology	high quality image processing, electrical control equipment, equipment patrol inspection, image enhancement, image reconstruction	40, 2, 469-478	https://doi.org/10.18280/ts.400206	Wang, Y.J. (2023). Electrical control equipment patrol inspection method based on high quality image recognition technology. Traitement du Signal, Vol. 40, No. 2, pp. 469-478. https://doi.org/10.18280/ts.400206

397	Nath, M., Srivastava, S.	4th Order Shannon Energy Envelope Approach for Localization of S1 and S2 for Early-Stage Detection of Heart Valve Dysfunction	empirical mode decomposition (EMD), modified Shannon energy envelope (MSEE), combined component signal, PCG, ECG, cardio vascular diseases (CVD)	40, 2, 479-490	https://doi.org/10.18280/ts.400207	Nath, M., Srivastava, S. (2023). 4th order Shannon energy envelope approach for localization of S1 and S2 for early-stage detection of heart valve dysfunction. Traitement du Signal, Vol. 40, No. 2, pp. 479-490. https://doi.org/10.18280/ts.400207
398	Guendouzi, F., Attari, M.	Premature Ventricular Contraction Detection Based on Chebyshev Polynomials and K Nearest Neighbours Classifier	Chebyshev polynomials, classification, electrocardiogram (ECG), K-nearest neighbour (KNN), premature ventricular contraction (PVC)	40, 2, 491-500	https://doi.org/10.18280/ts.400208	Guendouzi, F., Attari, M. (2023). Premature ventricular contraction detection based on Chebyshev polynomials and k nearest neighbours classifier. Traitement du Signal, Vol. 40, No. 2, pp. 491-500. https://doi.org/10.18280/ts.400208
399	Yan, X.D., Song, X.G.	Large-Scale Civil Engineering Structure Deformation Monitoring Research Based on Image Recognition	geometric consistency, civil engineering, structural deformation, deformation detection and monitoring	40, 2, 501-509	https://doi.org/10.18280/ts.400209	Yan, X.D., Song, X.G. (2023). Large-scale civil engineering structure deformation monitoring research based on image recognition. Traitement du Signal, Vol. 40, No. 2, pp. 501-509. https://doi.org/10.18280/ts.400209
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401	Tatli, U., Budak, C.	Biomedical Image Segmentation with Modified U-Net	image segmentation, deep learning, biomedical image, U-Net	40, 2, 523-531	https://doi.org/10.18280/ts.400211	Tatli, U., Budak, C. (2023). Biomedical image segmentation with modified U-Net. Traitement du Signal, Vol. 40, No. 2, pp. 523-531. https://doi.org/10.18280/ts.400211
402	Wang, S.Y., Zhai, Y., Xu, G.F., Wang, N.	Multi-Modal Affective Computing: An Application in Teaching Evaluation Based on Combined Processing of Texts and Images	text and image processing, multi-modal affective computing (MAC), teaching evaluation	40, 2, 533-541	https://doi.org/10.18280/ts.400212	Wang, S.Y., Zhai, Y., Xu, G.F., Wang, N. (2023). Multi-modal affective computing: An application in teaching evaluation based on combined processing of texts and images. Traitement du Signal, Vol. 40, No. 2, pp. 533-541. https://doi.org/10.18280/ts.400212
403	Yüksel, A.S., Karabıyık, M.A.	TraViQuA: Natural Language Driven Traffic Video Querying Using Deep Learning	natural language processing (NLP), you only look once (YOLO), long short-term memory (LSTM), video query, deep learning	40, 2, 543-553	https://doi.org/10.18280/ts.400213	Yüksel, A.S., Karabıyık, M.A. (2023). TraViQuA: Natural language driven traffic video querying using deep learning. Traitement du Signal, Vol. 40, No. 2, pp. 543-553. https://doi.org/10.18280/ts.400213
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405	Zhang, C., Yu, L., Hu, X.Q., Wu, Q., Wang, J., Xu, Z.	A Novel Visual Positioning Algorithm for Massage Acupoints Based on Image Registration	image registration; massage acupoints; visual positioning; convolution neural network (CNN)	40, 2, 567-575	https://doi.org/10.18280/ts.400215	Zhang, C., Yu, L., Hu, X.Q., Wu, Q., Wang, J., Xu, Z. (2023). A novel visual positioning algorithm for massage acupoints based on image registration. Traitement du Signal, Vol. 40, No. 2, pp. 567-575. https://doi.org/10.18280/ts.400215
406	Dogan, Y.	A New Global Pooling Method for Deep Neural Networks: Global Average of Top-K Max-Pooling	global pooling, convolutional neural network, deep learning, image classification, transfer learning	40, 2, 577-587	https://doi.org/10.18280/ts.400216	Dogan, Y. (2023). A new global pooling method for deep neural networks: Global average of top-k max-pooling. Traitement du Signal, Vol. 40, No. 2, pp. 577-587. https://doi.org/10.18280/ts.400216
407	Cherukuvada, S., Kayalvizhi, R.	Modified Gorilla Troops Optimization with Deep Learning Based Epileptic Seizure Prediction Model on EEG Signals	biomedical data, EEG signals, seizure prediction, feature selection, deep learning	40, 2, 589-599	https://doi.org/10.18280/ts.400217	Cherukuvada, S., Kayalvizhi, R. (2023). Modified gorilla troops optimization with deep learning based epileptic seizure prediction model on EEG signals. Traitement du Signal, Vol. 40, No. 2, pp. 589-599. https://doi.org/10.18280/ts.400217
408	Zhang, S.Y., Wang, X., He, J.B., Lan, S.Q., Pang, B.C., Wang, Y.	A New Visual Image Reconstruction Method of Production Equipment for Industrial Intelligent Terminals	industrial intelligent terminal, visual image of production equipment, image reconstruction, image denoising	40, 2, 601-609	https://doi.org/10.18280/ts.400218	Zhang, S.Y., Wang, X., He, J.B., Lan, S.Q., Pang, B.C., Wang, Y. (2023). A new visual image reconstruction method of production equipment for industrial intelligent terminals. Traitement du Signal, Vol. 40, No. 2, pp. 601-609. https://doi.org/10.18280/ts.400218
409	Ozdemir, C.	Classification of Brain Tumors from MR Images Using a New CNN Architecture	brain tumor, CNN, kernel size, strides	40, 2, 611-618	https://doi.org/10.18280/ts.400219	Ozdemir, C. (2023). Classification of brain tumors from MR images using a new CNN architecture. Traitement du Signal, Vol. 40, No. 2, pp. 611-618. https://doi.org/10.18280/ts.400219
410	Ennehar, B.C., Samra, B.	Master-Slave Convolutional Deep Architecture for Vehicle Identification and Type Classification	intelligent transportation system, vehicle detection, vehicle classification, convolutional neural network, deep learning, master-slave architecture	40, 2, 619-627	https://doi.org/10.18280/ts.400220	Ennehar, B.C., Samra, B. (2023). Master-slave convolutional deep architecture for vehicle identification and type classification. Traitement du Signal, Vol. 40, No. 2, pp. 619-627. https://doi.org/10.18280/ts.400220
411	Xu, L., Zheng, D.C.	Face Mask Segmentation Method Combining Salient Features and Gender Constraints	salient features, gender constraints, face mask segmentation	40, 2, 629-637	https://doi.org/10.18280/ts.400221	Xu, L., Zheng, D.C. (2023). Face mask segmentation method combining salient features and gender constraints. Traitement du Signal, Vol. 40, No. 2, pp. 629-637. https://doi.org/10.18280/ts.400221
412	Perumal, R., Venkatachalam, S.B.	Non Invasive Decay Analysis of Monument Using Deep Learning Techniques	local binary pattern, multi layer neural network, luminance, clustering, non destructive techniques	40, 2, 639-646	https://doi.org/10.18280/ts.400222	Perumal, R., Venkatachalam, S.B. (2023). Non invasive decay analysis of monument using deep learning techniques. Traitement du Signal, Vol. 40, No. 2, pp. 639-646. https://doi.org/10.18280/ts.400222
413	Sundaram, S.M., Narayanan, R.	Human Face and Facial Expression Recognition Using Deep Learning and SNet Architecture Integrated with BottleNeck Attention Module	facial expression recognition, face recognition, SNet architecture, BottleNeck attention module, CNN, thermal images	40, 2, 647-655	https://doi.org/10.18280/ts.400223	Sundaram, S.M., Narayanan, R. (2023). Human face and facial expression recognition using deep learning and SNet architecture integrated with BottleNeck attention module. Traitement du Signal, Vol. 40, No. 2, pp. 647-655. https://doi.org/10.18280/ts.400223
414	Yu, L., Ali, M., Khan, I.A., Maqsood, T., Wang, Y.L., Gao, H.N.	Smart Energy Monitoring and Analysis Method Based on Image Recognition Technology	image recognition, energy monitoring, monitoring instrument reading recognition	40, 2, 657-665	https://doi.org/10.18280/ts.400224	Yu, L., Ali, M., Khan, I.A., Maqsood, T., Wang, Y.L., Gao, H.N. (2023). Smart energy monitoring and analysis method based on image recognition technology. Traitement du Signal, Vol. 40, No. 2, pp. 657-665. https://doi.org/10.18280/ts.400224

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416	Yusuf, A.A., Ay, B., Fidan, G., Aydin, G.	Exploiting JECAM Database for Agriculture Land Cover Classification of Antsirabe Site Using Sentinel 2 Imagery with Deep Learning	land cover, deep learning, convolution neural network, autoencoder, long short-term memory	40, 2, 675-681	https://doi.org/10.18280/ts.400226	Yusuf, A.A., Ay, B., Fidan, G., Aydin, G. (2023). Exploiting JECAM database for agriculture land cover classification of antsirabe site using sentinel 2 imagery with deep learning. Traitement du Signal, Vol. 40, No. 2, pp. 675-681. https://doi.org/10.18280/ts.400226
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419	Hamidia, M., Amrouche, A.	A New Fast Double-Talk Detector Based on the Error Variance for Acoustic Echo Cancellation	acoustic echo cancellation, double-talk detection, normalized least mean squares, Geigel, normalized cross-correlation, zero-crossing rate, error signal variance	40, 2, 701-707	https://doi.org/10.18280/ts.400229	Hamidia, M., Amrouche, A. (2023). A new fast double-talk detector based on the error variance for acoustic echo cancellation. Traitement du Signal, Vol. 40, No. 2, pp. 701-707. https://doi.org/10.18280/ts.400229
420	Jiao, Y.M.	Mechanical Structure Defect Detection after High Temperature Based on Image Processing	high temperature, mechanical structure defects, image legend, feature fusion	40, 2, 709-717	https://doi.org/10.18280/ts.400230	Jiao, Y.M. (2023). Mechanical structure defect detection after high temperature based on image processing. Traitement du Signal, Vol. 40, No. 2, pp. 709-717. https://doi.org/10.18280/ts.400230
421	Sau, P.C., Sharma, P.K., Rao, T.J.V.S., Kumari, E.K., Aswini, T.V.N.L., Jindal, S., Sharma, D.	A Kagome Crest Fractal Optimized Quad-Band Antenna for Wireless Applications	microstrip patch antenna, return loss, RF energy harvesting, fractal, QNO, optimization, Kagome crest	40, 2, 719-726	https://doi.org/10.18280/ts.400231	Sau, P.C., Sharma, P.K., Rao, T.J.V.S., Kumari, E.K., Aswini, T.V.N.L., Jindal, S., Sharma, D. (2023). A kagome crest fractal optimized quad-band antenna for wireless applications. Traitement du Signal, Vol. 40, No. 2, pp. 719-726. https://doi.org/10.18280/ts.400231
422	Mohmed, A.R., Çelik, Y.	Feature Extraction for Medical Image Classification: A Novel Statistical Approach	ASPS approach, classification medical images, diabetic retinopathy, features extraction, features selection, healthcare	40, 2, 727-733	https://doi.org/10.18280/ts.400232	Mohmed, A.R., Çelik, Y. (2023). Feature extraction for medical image classification: A novel statistical approach. Traitement du Signal, Vol. 40, No. 2, pp. 727-733. https://doi.org/10.18280/ts.400232
423	Wang, Q.W., Wang, P.X., Chang, Y.Z.	Deep Learning-Based Intelligent Image Recognition and Its Applications in Financial Technology Services	deep learning, intelligent image recognition, financial technology services	40, 2, 735-742	https://doi.org/10.18280/ts.400233	Wang, Q.W., Wang, P.X., Chang, Y.Z. (2023). Deep learning-based intelligent image recognition and its applications in financial technology services. Traitement du Signal, Vol. 40, No. 2, pp. 735-742. https://doi.org/10.18280/ts.400233
424	Babu, K.N., Manne, S.	An Automatic Student Attendance Monitoring System Using an Integrated HAAR Cascade with CNN for Face Recognition with Mask	linear binary pattern (LBP), HAAR cascade, histogram of oriented gradients (HoG), inception convolutional neural network (CNN)	40, 2, 743-749	https://doi.org/10.18280/ts.400234	Babu, K.N., Manne, S. (2023). An automatic student attendance monitoring system using an Integrated HAAR cascade with CNN for face recognition with mask. Traitement du Signal, Vol. 40, No. 2, pp. 743-749. https://doi.org/10.18280/ts.400234
425	Zhu, Z., Zheng, X.Q., Ke, T.P., Chai, G.F.	Emotion Recognition in Learning Scenes Supported by Smart Classroom and Its Application	smart classroom, learning scene, emotion recognition	40, 2, 751-758	https://doi.org/10.18280/ts.400235	Zhu, Z., Zheng, X.Q., Ke, T.P., Chai, G.F. (2023). Emotion recognition in learning scenes supported by smart classroom and its application. Traitement du Signal, Vol. 40, No. 2, pp. 751-758. https://doi.org/10.18280/ts.400235
426	Bayram, H.Y., Bingol, H., Alatas, B.	Automated Classification of Brain Tumor Disease with a Novel CNN Relief and SVM-Based Deep Hybrid Model	brain tumor, artificial intelligence, CNN, relief, SVM	40, 2, 759-766	https://doi.org/10.18280/ts.400236	Bayram, H.Y., Bingol, H., Alatas, B. (2023). Automated classification of brain tumor disease with a novel CNN relief and SVM-based deep hybrid model. Traitement du Signal, Vol. 40, No. 2, pp. 759-766. https://doi.org/10.18280/ts.400236
427	Ekambaram, D., Ponnusamy, V., Natarajan, S.T., Khan, M.F.S.F.	Artificial Intelligence (AI) Powered Precise Classification of Recuperation Exercises for Musculoskeletal Disorders	Artificial Intelligence (AI), deep neural network, work-related musculoskeletal disorder, home-based recuperation training, upper limb exercise	40, 2, 767-773	https://doi.org/10.18280/ts.400237	Ekambaram, D., Ponnusamy, V., Natarajan, S.T., Khan, M.F.S.F. (2023). Artificial Intelligence (AI) powered precise classification of recuperation exercises for musculoskeletal disorders. Traitement du Signal, Vol. 40, No. 2, pp. 767-773. https://doi.org/10.18280/ts.400237
428	Cai, X.L., Wang, J.C., Seng, D.W., Zhang, X.F.	GCNE: Graph Convolution Networks with Explicitly Influence for Recommendation	collaborative filtering, recommender system, embedding propagation, graph neural network	40, 2, 775-781	https://doi.org/10.18280/ts.400238	Cai, X.L., Wang, J.C., Seng, D.W., Zhang, X.F. (2023). GCNE: Graph convolution networks with explicitly influence for recommendation. Traitement du Signal, Vol. 40, No. 2, pp. 775-781. https://doi.org/10.18280/ts.400238
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431	Zhang, X.Y., Han, X.X., Fu, C.N.	Comparison of Object Region Segmentation Algorithms of PCB Defect Detection	object region segmentation, PCB, color space threshold segmentation algorithm, morphological edge detection segmentation algorithm, K-means clustering segmentation algorithm	40, 2, 797-802	https://doi.org/10.18280/ts.400241	Zhang, X.Y., Han, X.X., Fu, C.N. (2023). Comparison of object region segmentation algorithms of PCB defect detection. Traitement du Signal, Vol. 40, No. 2, pp. 797-802. https://doi.org/10.18280/ts.400241
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434	Hai, B.H.	Eliminate Artifact on ECG Recording Using the Soft Threshold Setting on Wavelet Coefficients at Independent Components of ICA	artifact removal, biomedical signals, ECG recording, independent component analysis, ICA, wavelet transform	40, 2, 819-824	https://doi.org/10.18280/ts.400244	Hai, B.H. (2023). Eliminate artifact on ECG recording using the soft threshold setting on wavelet coefficients at independent components of ICA. Traitement du Signal, Vol. 40, No. 2, pp. 819-824. https://doi.org/10.18280/ts.400244
435	Qin, H.W., Zou, J., He, B.G., Fu, Y., Wang, L.Z.	Damage Identification Method of Wind Turbine Generator System Blades Based on Image Processing Technology	image processing, wind turbine generator system (WTGS) blade, damage identification, sample expansion	40, 2, 825-833	https://doi.org/10.18280/ts.400245	Qin, H.W., Zou, J., He, B.G., Fu, Y., Wang, L.Z. (2023). Damage identification method of wind turbine generator system blades based on image processing technology. Traitement du Signal, Vol. 40, No. 2, pp. 825-833. https://doi.org/10.18280/ts.400245
436	Ngong, I.C., Baykan, N.A.	Different Deep Learning Based Classification Models for COVID-19 CT-Scans and Lesion Segmentation Through the cGAN-UNet Hybrid Method	COVID-19 segmentation, COVID-19 classification, conditional generative adversarial network (cGAN), convolutional neural network (CNN), PatchCNN, capsule neural network (CapsNet)	40, 1, 1-20	https://doi.org/10.18280/ts.400101	Ngong, I.C., Baykan, N.A. (2023). Different deep learning based classification models for COVID-19 CT-scans and lesion segmentation through the cGAN-UNet hybrid method. Traitement du Signal, Vol. 40, No. 1, pp. 1-20. https://doi.org/10.18280/ts.400101
437	Sivapatham, D., Arasakumaran, U., Annappan, B., Chandrasekaran, S.	Analysis of Genetic Face Images with Respect to Reflexology for Prediction of Diseases	3-level DWT, principal component analysis, genetically closer	40, 1, 21-30	https://doi.org/10.18280/ts.400102	Sivapatham, D., Arasakumaran, U., Annappan, B., Chandrasekaran, S. (2023). Analysis of genetic face images with respect to reflexology for prediction of diseases. Traitement du Signal, Vol. 40, No. 1, pp. 21-30. https://doi.org/10.18280/ts.400102
438	Fan, H.Y., Zhao, Y.M., Su, G.A., Zhao, T.S., Jin, S.W.	The Multi-View Deep Visual Adaptive Graph Convolution Network and Its Application in Point Cloud	visual selective attention, graph convolution, multi-view, adaptive, rasterization	40, 1, 31-41	https://doi.org/10.18280/ts.400103	Fan, H.Y., Zhao, Y.M., Su, G.A., Zhao, T.S., Jin, S.W. (2023). The multi-view deep visual adaptive graph convolution network and its application in point cloud. Traitement du Signal, Vol. 40, No. 1, pp. 31-41. https://doi.org/10.18280/ts.400103
439	Al-jumaili, S., Duru, A.D., Ibrahim, A.A., Uçan, O.N.	Investigation of Epileptic Seizure Signatures Classification in EEG Using Supervised Machine Learning Algorithms	electroencephalogram (EEG), fast fourier transform (FFT), K-nearest neighbor (KNN), support vector machine (SVM), classification epileptic seizure	40, 1, 43-54	https://doi.org/10.18280/ts.400104	Al-jumaili, S., Duru, A.D., Ibrahim, A.A., Uçan, O.N. (2023). Investigation of epileptic seizure signatures classification in EEG using supervised machine learning algorithms. Traitement du Signal, Vol. 40, No. 1, pp. 43-54. https://doi.org/10.18280/ts.400104
440	Saeed, J.N., Abdulazeez, A.M., Ibrahim, D.A.	An Ensemble DCNNs-Based Regression Model for Automatic Facial Beauty Prediction and Analyzation	facial beauty prediction, CNN-based regression, facial image attractiveness analysis, ensemble learning, Grad-CAM, attention mechanism	40, 1, 55-63	https://doi.org/10.18280/ts.400105	Saeed, J.N., Abdulazeez, A.M., Ibrahim, D.A. (2023). An ensemble DCNNs-based regression model for automatic facial beauty prediction and analyzation. Traitement du Signal, Vol. 40, No. 1, pp. 55-63. https://doi.org/10.18280/ts.400105
441	Balcı, F.	DM-EEGID: EEG-Based Biometric Authentication System Using Hybrid Attention-Based LSTM and MLP Algorithm	biometric identification, LSTM, deep learning, electroencephalography, machine learning	40, 1, 65-79	https://doi.org/10.18280/ts.400106	Balcı, F. (2023). DM-EEGID: EEG-based biometric authentication system using hybrid attention-based LSTM and MLP algorithm. Traitement du Signal, Vol. 40, No. 1, pp. 65-79. https://doi.org/10.18280/ts.400106
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457	Rasras, R.J., Sara, M.R.A., Alqadi, Z.	Efficient Method to Message-Image Cryptography Using Reordered Image-Key	cryptography, flipping, image_key, MSE, PSNR, resizing	40, 1, 235-240	https://doi.org/10.18280/ts.400122	Rasras, R.J., Sara, M.R.A., Alqadi, Z. (2023). Efficient method to message-image cryptography using reordered image-key. Traitement du Signal, Vol. 40, No. 1, pp. 235-240. https://doi.org/10.18280/ts.400122
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470	Jawdekar, A., Dixit, M.	Deep Learning and Fuzzy Logic Based Intelligent Technique for the Image Enhancement and Edge Detection Framework	CNN, DnCNN, FIS, PSNR, MSE, SSIM, image enhancement, edge detection	40, 1, 351-359	https://doi.org/10.18280/ts.400135	Jawdekar, A., Dixit, M. (2023). Deep learning and fuzzy logic based intelligent technique for the image enhancement and edge detection framework. Traitement du Signal, Vol. 40, No. 1, pp. 351-359. https://doi.org/10.18280/ts.400135
471	Naceur, A.	Initialization of an Iterative Low-Complexity Method for Signal Precoding in MM-Wave Massive MIMO Systems	massive MIMO systems, linear precoding techniques, low complexity, Jacobi method, SSOR	40, 1, 361-366	https://doi.org/10.18280/ts.400136	Naceur, A. (2023). Initialization of an iterative low-complexity method for signal precoding in MM-wave massive MIMO systems. Traitement du Signal, Vol. 40, No. 1, pp. 361-366. https://doi.org/10.18280/ts.400136
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477	Premkumar, M., Sachan, V., Singh, B.R.	Data Transmission and Reception in Spatial Modulation MIMO Wireless Systems and Analysis in Nakagami-m Fading Channels	spatial modulation, multiple input multiple output system, Nakagami-m fading, pairwise error probability	40, 1, 401-406	https://doi.org/10.18280/ts.400142	Premkumar, M., Sachan, V., Singh, B.R. (2023). Data transmission and reception in spatial modulation MIMO wireless systems and analysis in Nakagami-m fading channels. Traitement du Signal, Vol. 40, No. 1, pp. 401-406. https://doi.org/10.18280/ts.400142
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494	Ziani, S.	Contribution to Single-Channel Fetal Electrocardiogram Identification	fetal, electrocardiogram, continuous wavelet, transform, segmentation	39, 6, 2055-2060	https://doi.org/10.18280/ts.390617	Ziani, S. (2022). Contribution to single-channel fetal electrocardiogram identification. Traitement du Signal, Vol. 39, No. 6, pp. 2055-2060. https://doi.org/10.18280/ts.390617
495	Jia, L.M., Wang, Y.	Research on Industrial Production Defect Detection Method Based on Machine Vision Technology in Industrial Internet of Things	industrial internet of things, machine vision, industrial production, product defect detection	39, 6, 2061-2068	https://doi.org/10.18280/ts.390618	Jia, L.M., Wang, Y. (2022). Research on industrial production defect detection method based on machine vision technology in industrial internet of things. Traitement du Signal, Vol. 39, No. 6, pp. 2061-2068. https://doi.org/10.18280/ts.390618
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497	Nergiz, M.	Collaborative Colorectal Cancer Classification on Highly Class Imbalanced Data Setting via Federated Neural Style Transfer Based Data Augmentation	federated learning, neural style transfer, convolutional neural network, colorectal cancer, computational pathology	39, 6, 2077-2086	https://doi.org/10.18280/ts.390620	Nergiz, M. (2022). Collaborative colorectal cancer classification on highly class imbalanced data setting via federated neural style transfer based data augmentation. Traitement du Signal, Vol. 39, No. 6, pp. 2077-2086. https://doi.org/10.18280/ts.390620
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500	Polat, H.	Time-Frequency Complexity Maps for EEG-Based Diagnosis of Alzheimer's Disease Using a Lightweight Deep Neural Network	Alzheimer' disease, EEG, deep learning, entropy, MobileNet, complexity	39, 6, 2103-2113	https://doi.org/10.18280/ts.390623	Polat, H. (2022). Time-frequency complexity maps for EEG-based diagnosis of Alzheimer's disease using a lightweight deep neural network. Traitement du Signal, Vol. 39, No. 6, pp. 2103-2113. https://doi.org/10.18280/ts.390623
501	Zhang, B.W., Wang, T.Q.	Visual Image Recognition of Basketball Turning and Dribbling Based on Feature Extraction	feature extraction, feature fusion, basketball, turning and dribbling, image recognition	39, 6, 2115-2121	https://doi.org/10.18280/ts.390624	Zhang, B.W., Wang, T.Q. (2022). Visual image recognition of basketball turning and dribbling based on feature extraction. Traitement du Signal, Vol. 39, No. 6, pp. 2115-2121. https://doi.org/10.18280/ts.390624
502	Nasip, Ö.F., Zengin, K.	A Hybrid Model: Multiple Feature Selection Approach Using Transfer Learning for Bacteria Classification	bacteria, classification, feature extraction, feature selection, support vector machine	39, 6, 2123-2131	https://doi.org/10.18280/ts.390625	Nasip, Ö.F., Zengin, K. (2022). A hybrid model: Multiple feature selection approach using transfer learning for bacteria classification. Traitement du Signal, Vol. 39, No. 6, pp. 2123-2131. https://doi.org/10.18280/ts.390625
503	He, J.B., Li, C.Q.	Research on Digital Image Intelligent Recognition Method for Industrial Internet of Things Production Data Acquisition	industrial Internet of Things, production images, digital image, image target recognition	39, 6, 2133-2139	https://doi.org/10.18280/ts.390626	He, J.B., Li, C.Q. (2022). Research on digital image intelligent recognition method for industrial Internet of Things production data acquisition. Traitement du Signal, Vol. 39, No. 6, pp. 2133-2139. https://doi.org/10.18280/ts.390626
504	Londhe, G.D., Hendre, V.S.	An Effective Kalman Based Hybrid Beamforming for Millimeter Wave Massive MIMO System by Using 2D Overlapped Partially Connected Sub-Array Structure	5G technology, hybrid beamforming, Kalman filter, millimeter-wave, partial connected subarray	39, 6, 2141-2147	https://doi.org/10.18280/ts.390627	Londhe, G.D., Hendre, V.S. (2022). An effective Kalman based hybrid beamforming for millimeter wave massive MIMO system by using 2D overlapped partially connected sub-array structure. Traitement du Signal, Vol. 39, No. 6, pp. 2141-2147. https://doi.org/10.18280/ts.390627

505	Ural, A.B.	Systematical Analysis and Pathological Classification of Breast Cancer from Mammographic Images with Using Specific Machine Learning Methods	breast cancer, benign tumor, malign tumor, image classification, feature extraction, machine learning	39, 6, 2149-2156	https://doi.org/10.18280/ts.390628	Ural, A.B. (2022). Systematical analysis and pathological classification of breast cancer from mammographic images with using specific machine learning methods. Traitement du Signal, Vol. 39, No. 6, pp. 2149-2156. https://doi.org/10.18280/ts.390628
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509	Çalışır, B.	Effect of DNN Approximation for Channel Estimation and Signal Detection on OFDM Applications	OFDM, DNN, signal detection, modulation system	39, 6, 2181-2185	https://doi.org/10.18280/ts.390632	Çalışır, B. (2022). Effect of DNN approximation for channel estimation and signal detection on OFDM applications. Traitement du Signal, Vol. 39, No. 6, pp. 2181-2185. https://doi.org/10.18280/ts.390632
510	Pan, X.H.	Noise Signal Recognition and Noise Reduction Algorithm of Ships	signal, active control, compensation, PID	39, 6, 2187-2193	https://doi.org/10.18280/ts.390633	Pan, X.H. (2022). Noise signal recognition and noise reduction algorithm of ships. Traitement du Signal, Vol. 39, No. 6, pp. 2187-2193. https://doi.org/10.18280/ts.390633
511	Aslam, C.M., Narayana, D.S., Priya, K.P.	Detection of Breast Cancer Using Modified Markov Model	K-means algorithm, EM algorithm, Gaussian mixture model	39, 6, 2195-2201	https://doi.org/10.18280/ts.390634	Aslam, C.M., Narayana, D.S., Priya, K.P. (2022). Detection of breast cancer using modified Markov model. Traitement du Signal, Vol. 39, No. 6, pp. 2195-2201. https://doi.org/10.18280/ts.390634
512	Jiang, J.W.	Signal Feature Extraction of Music Melody Based on Deep Learning	deep learning, convolution network, music signal, melody feature extraction	39, 6, 2203-2209	https://doi.org/10.18280/ts.390635	Jiang, J.W. (2022). Signal feature extraction of music melody based on deep learning. Traitement du Signal, Vol. 39, No. 6, pp. 2203-2209. https://doi.org/10.18280/ts.390635
513	Solak, A., Ceylan, R.	Pneumonia Detection with Chest-Caps	binary classification, chest X-ray, capsule network, pneumonia	39, 6, 2211-2216	https://doi.org/10.18280/ts.390636	Solak, A., Ceylan, R. (2022). Pneumonia detection with chest-caps. Traitement du Signal, Vol. 39, No. 6, pp. 2211-2216. https://doi.org/10.18280/ts.390636
514	Nakka, S., Komati, T.R., Chekuri, S.S.	A Novel Architecture for Feature Extraction and Convolution for Image Segmentation of Pathology Detection from Chest X-Ray Images	feature extraction, chest x-ray image, neural networks, computer-aided diagnosis, machine learning algorithms	39, 6, 2217-2222	https://doi.org/10.18280/ts.390637	Nakka, S., Komati, T.R., Chekuri, S.S. (2022). A novel architecture for feature extraction and convolution for image segmentation of pathology detection from chest X-ray images. Traitement du Signal, Vol. 39, No. 6, pp. 2217-2222. https://doi.org/10.18280/ts.390637
515	Luo, W.M., Sun, J.H., Liao, Y., Zhang, Z.Y.	Research on the Real-Time Detection Method for Image Processing – Based Civil Structure Crack	image processing, civil structure crack, crack detection	39, 6, 2223-2228	https://doi.org/10.18280/ts.390638	Luo, W.M., Sun, J.H., Liao, Y., Zhang, Z.Y. (2022). Research on the real-time detection method for image processing – based civil structure crack. Traitement du Signal, Vol. 39, No. 6, pp. 2223-2228. https://doi.org/10.18280/ts.390638
516	Pachala, P.K., Bojja, P.	Development of Medical Image Analytics by Deep Learning Model for Prediction and Classification of CT Image Diseases	CNN, CT images, ResNet, computer vision, large cell carcinoma, squamous cell carcinoma	39, 6, 2229-2235	https://doi.org/10.18280/ts.390639	Pachala, P.K., Bojja, P. (2022). Development of medical image analytics by deep learning model for prediction and classification of CT image diseases. Traitement du Signal, Vol. 39, No. 6, pp. 2229-2235. https://doi.org/10.18280/ts.390639
517	Liang, C.H., Ding, C., Li, J.F., Zuo, X.Y.	Research on State Detection Method of Electrical Equipment Based on Wireless Sensor Network Signal Processing	wireless sensor network, signal processing, state detection of electrical equipment	39, 6, 2237-2245	https://doi.org/10.18280/ts.390640	Liang, C.H., Ding, C., Li, J.F., Zuo, X.Y. (2022). Research on state detection method of electrical equipment based on wireless sensor network signal processing. Traitement du Signal, Vol. 39, No. 6, pp. 2237-2245. https://doi.org/10.18280/ts.390640
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519	Nagaraju, M.S., Rao, B.S.	An Outlook of Medical Image Analysis via Transfer Learning Approaches	histopathology images, visualization techniques, GradCam, SmoothGard, deep learning models, image processing techniques	39, 5, 1463-1474	https://doi.org/10.18280/ts.390502	Nagaraju, M.S., Rao, B.S. (2022). An outlook of medical image analysis via transfer learning approaches. Traitement du Signal, Vol. 39, No. 5, pp. 1463-1474. https://doi.org/10.18280/ts.390502
520	Zhu, C.J., Ding, T., Min, X.	Emotion Recognition of College Students Based on Audio and Video Image	audio emotion recognition, video image emotion recognition, deep learning, decision-making layer feature fusion, multimodal emotion recognition	39, 5, 1475-1481	https://doi.org/10.18280/ts.390503	Zhu, C.J., Ding, T., Min, X. (2022). Emotion recognition of college students based on audio and video image. Traitement du Signal, Vol. 39, No. 5, pp. 1475-1481. https://doi.org/10.18280/ts.390503
521	Omer, O.A., Salah, M., Hassan, A.M., Mubarak, A.S.	Beat-by-Beat ECG Monitoring from Photoplythmography Based on Scattering Wavelet Transform	ECG, PPG, scattering wavelet transform (SWT)	39, 5, 1483-1488	https://doi.org/10.18280/ts.390504	Omer, O.A., Salah, M., Hassan, A.M., Mubarak, A.S. (2022). Beat-by-beat ECG monitoring from photoplythmography based on scattering wavelet transform. Traitement du Signal, Vol. 39, No. 5, pp. 1483-1488. https://doi.org/10.18280/ts.390504
522	Jarrah, A., Almomany, A., Alkhafaji, A.	A New Approach of Combining Optical Mapping Algorithm with Adaptive Kalman Filter to Achieve Fast and Early Detection of Cardiac Arrests: A Parallel Implementation	multi-core CPU, parallelization, optimization techniques, multi-threading, optical mapping algorithm, Adaptive Kalman Filter, cardiac arrest	39, 5, 1489-1500	https://doi.org/10.18280/ts.390505	Jarrah, A., Almomany, A., Alkhafaji, A. (2022). A new approach of combining optical mapping algorithm with adaptive Kalman filter to achieve fast and early detection of cardiac arrests: A parallel implementation. Traitement du Signal, Vol. 39, No. 5, pp. 1489-1500. https://doi.org/10.18280/ts.390505

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524	Zhao, Y.M., Su, G.A., Yang, H., Zhao, T.S., Jin, S.W., Yang, J.N.	Graph Convolution Algorithm Based on Visual Selectivity and Point Cloud Analysis Application	visual computing, visual selectivity, graph convolution analysis, receptive field, point cloud topology, support set	39, 5, 1507-1516	https://doi.org/10.18280/ts.390507	Zhao, Y.M., Su, G.A., Yang, H., Zhao, T.S., Jin, S.W., Yang, J.N. (2022). Graph convolution algorithm based on visual selectivity and point cloud analysis application. Traitement du Signal, Vol. 39, No. 5, pp. 1507-1516. https://doi.org/10.18280/ts.390507
525	Karaduman, M., Karci, A.	Deep and Statistical Features Classification Model for Electroencephalography Signals	Electroencephalography (EEG), alcohol use disorder (AUD), support vector machine (SVM), hybrid feature, deep learning, Spectrogram, variation mode decomposition (VMD)	39, 5, 1517-1525	https://doi.org/10.18280/ts.390508	Karaduman, M., Karci, A. (2022). Deep and statistical features classification model for electroencephalography signals. Traitement du Signal, Vol. 39, No. 5, pp. 1517-1525. https://doi.org/10.18280/ts.390508
526	Wicaksono, P., Philip, S., Alam, I.N., Isa, S.M.	Dealing with Imbalanced Sleep Apnea Data Using DCGAN	DCGAN, deep learning, ECG, imbalance data, sleep apnea	39, 5, 1527-1536	https://doi.org/10.18280/ts.390509	Wicaksono, P., Philip, S., Alam, I.N., Isa, S.M. (2022). Dealing with imbalanced sleep apnea data using DCGAN. Traitement du Signal, Vol. 39, No. 5, pp. 1527-1536. https://doi.org/10.18280/ts.390509
527	Chen, Z., Wu, Y.H., Liu, C.	A Lightweight Convolutional Neural Network-Based Method for Cotton Mosaic Disease Identification	cotton leaf disease, ShuffleNet, deep leaning, agriculture, shuffle attention	39, 5, 1537-1543	https://doi.org/10.18280/ts.390510	Chen, Z., Wu, Y.H., Liu, C. (2022). A lightweight convolutional neural network-based method for cotton mosaic disease identification. Traitement du Signal, Vol. 39, No. 5, pp. 1537-1543. https://doi.org/10.18280/ts.390510
528	Akça, E., Tanrıöver, Ö.Ö.	A Deep Transfer Learning Based Visual Complexity Evaluation Approach to Mobile User Interfaces	mobile user interface evaluation, transfer learning, visual complexity analysis	39, 5, 1545-1556	https://doi.org/10.18280/ts.390511	Akça, E., Tanrıöver, Ö.Ö. (2022). A deep transfer learning based visual complexity evaluation approach to mobile user interfaces. Traitement du Signal, Vol. 39, No. 5, pp. 1545-1556. https://doi.org/10.18280/ts.390511
529	Wisaeng, K.	CFLHCF: Simultaneous Detection of the Optic Disc and Exudates Using Color Features, Local Homogeneity and Contextual Features	fundus images, optic disc, exudates detection, local homogeneity, contextual features	39, 5, 1557-1566	https://doi.org/10.18280/ts.390512	Wisaeng, K. (2022). CFLHCF: Simultaneous detection of the optic disc and exudates using color features, local homogeneity and contextual features. Traitement du Signal, Vol. 39, No. 5, pp. 1557-1566. https://doi.org/10.18280/ts.390512
530	Zhang, Y.	Seedlings Supplement Device and Seedling Recognition Based on Convolution Neural Network	plug seedling device, plug seedling identification, convolutional neural network, regularization, data enhancement	39, 5, 1567-1575	https://doi.org/10.18280/ts.390513	Zhang, Y. (2022). Seedlings supplement device and seedling recognition based on convolution neural network. Traitement du Signal, Vol. 39, No. 5, pp. 1567-1575. https://doi.org/10.18280/ts.390513
531	Omar, N.	ResNet and LSTM Based Accurate Approach for License Plate Detection and Recognition	license plate detection and recognition, ResNet, deep features, LSTM classification	39, 5, 1577-1583	https://doi.org/10.18280/ts.390514	Omar, N. (2022). ResNet and LSTM based accurate approach for license plate detection and recognition. Traitement du Signal, Vol. 39, No. 5, pp. 1577-1583. https://doi.org/10.18280/ts.390514
532	Ataş, I.	Human Gender Prediction Based on Deep Transfer Learning from Panoramic Dental Radiograph Images	DenseNet121, deep convolutional neural network, deep transfer learning, gender prediction, panoramic dental radiograph	39, 5, 1585-1595	https://doi.org/10.18280/ts.390515	Ataş, I. (2022). Human gender prediction based on deep transfer learning from panoramic dental radiograph images. Traitement du Signal, Vol. 39, No. 5, pp. 1585-1595. https://doi.org/10.18280/ts.390515
533	Jin, T., Ma, Z., Niu, J.F., Su, P.	Image Segmentation and Target Extraction of Preschool Educational Activity Space for Improving Children's Concentration	children's concentration, preschool education, activity space, image segmentation, object extraction	39, 5, 1597-1603	https://doi.org/10.18280/ts.390516	Jin, T., Ma, Z., Niu, J.F., Su, P. (2022). Image segmentation and target extraction of preschool educational activity space for improving children's concentration. Traitement du Signal, Vol. 39, No. 5, pp. 1597-1603. https://doi.org/10.18280/ts.390516
534	Kanchanapalli, B., Vekata, R.R.P.V., Lanka, R.S.	Analysis and Comparison of Performance of Interline Power Flow Controller with Various Control Algorithms under Various Power Stability Problems	interline power flow controller, adaptive weighted feedback algorithm, gravitational search, BAT, and ANT colony optimization	39, 5, 1605-1613	https://doi.org/10.18280/ts.390517	Kanchanapalli, B., Vekata, R.R.P.V., Lanka, R.S. (2022). Analysis and comparison of performance of interline power flow controller with various control algorithms under various power stability problems. Traitement du Signal, Vol. 39, No. 5, pp. 1605-1613. https://doi.org/10.18280/ts.390517
535	Sevim, Y.	A New Feature Extraction Method for EMG Signals	AR coefficients, classification, feature extraction, ST transform, wavelet transform	39, 5, 1615-1620	https://doi.org/10.18280/ts.390518	Sevim, Y. (2022). A new feature extraction method for EMG signals. Traitement du Signal, Vol. 39, No. 5, pp. 1615-1620. https://doi.org/10.18280/ts.390518
536	Wu, H., Sun, X.Y., Zhong, J., Cao, F.Y.	A Traffic Parameter Detection Algorithm Based on Double Coils	image processing, vehicle speed detection, virtual coils, threshold	39, 5, 1621-1629	https://doi.org/10.18280/ts.390519	Wu, H., Sun, X.Y., Zhong, J., Cao, F.Y. (2022). A traffic parameter detection algorithm based on double coils. Traitement du Signal, Vol. 39, No. 5, pp. 1621-1629. https://doi.org/10.18280/ts.390519
537	Duraisamy, K., Thanarajan, T., Alharbi, M.	Implementation of Omar Pigeon Space-Time (OPST) Algorithm to Mitigate the Interference and Peak-to-Average Power Ratio (PAPR) Using RPR Mobile and HST-HM in the 5G	5G communication, multiple-input, multiple-output, orthogonal frequency-division multiplexing, Omar pigeon space-time, peak -to-average power ratio, bit error rate, hybrid space-time, Hadamard matrix	39, 5, 1631-1638	https://doi.org/10.18280/ts.390520	Duraisamy, K., Thanarajan, T., Alharbi, M. (2022). Implementation of Omar Pigeon Space-Time (OPST) algorithm to mitigate the interference and Peak-to-Average Power Ratio (PAPR) using RPR mobile and HST-HM in the 5G. Traitement du Signal, Vol. 39, No. 5, pp. 1631-1638. https://doi.org/10.18280/ts.390520
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539	İnce, E., Karakaya, B., Türk, M.	Chaos Based Pseudo Random Bit Generator Design and Its Application in Secure Image Encryption	chaotic map, fixed-point conversion, post-processor, random number bit generator, statistical tests	39, 5, 1647-1653	https://doi.org/10.18280/ts.390522	İnce, E., Karakaya, B., Türk, M. (2022). Chaos based pseudo random bit generator design and its application in secure image encryption. Traitement du Signal, Vol. 39, No. 5, pp. 1647-1653. https://doi.org/10.18280/ts.390522
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544	Bhise, S.P., Havaldar, R.	Non-Invasive Machine Learning-Based Classification of Bone Health	Dual Energy X-ray Absorptiometry (DEXA), osteoporosis detection, bone density, deep learning, machine learning	39, 5, 1695-1702	https://doi.org/10.18280/ts.390527	Bhise, S.P., Havaldar, R. (2022). Non-invasive machine learning-based classification of bone health. Traitement du Signal, Vol. 39, No. 5, pp. 1695-1702. https://doi.org/10.18280/ts.390527
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546	Ornek, A.H., Ceylan, M.	HayCAM: A Novel Visual Explanation for Deep Convolutional Neural Networks	classification, class activation mapping, explainable artificial intelligence, visual explanation, weakly-supervised object detection	39, 5, 1711-1719	https://doi.org/10.18280/ts.390529	Ornek, A.H., Ceylan, M. (2022). HayCAM: A novel visual explanation for deep convolutional neural networks. Traitement du Signal, Vol. 39, No. 5, pp. 1711-1719. https://doi.org/10.18280/ts.390529
547	Anitha, K., Srinivasan, S.	Thermal Image Diseases Identification Using Hybrid Genetic Algorithm with Relevance Vector Machine Classification	digital infrared thermal image, hybrid genetic algorithm with relevance vector machine	39, 5, 1721-1728	https://doi.org/10.18280/ts.390530	Anitha, K., Srinivasan, S. (2022). Thermal image diseases identification using hybrid genetic algorithm with relevance vector machine classification. Traitement du Signal, Vol. 39, No. 5, pp. 1721-1728. https://doi.org/10.18280/ts.390530
548	Yao, J., Wang, Y., Feng, D.	Application of Signal Imaging Analysis Technology in Prediction and Treatment of Water Inrush in Diversion Tunnel	ground radar, signal imaging technology, diversion tunnel, water gushing, electron microscope scanning, numerical simulation	39, 5, 1729-1736	https://doi.org/10.18280/ts.390531	Yao, J., Wang, Y., Feng, D. (2022). Application of signal imaging analysis technology in prediction and treatment of water inrush in diversion tunnel. Traitement du Signal, Vol. 39, No. 5, pp. 1729-1736. https://doi.org/10.18280/ts.390531
549	Yao, J., Wang, Y., Feng, D.	A Neighborhood Impact Driven K-Medoid Clustering and Fuzzy Logic Blended Approach for High Density Impulse Noise Detection and Removal	impulse noise removal, salt and pepper noise, random valued impulse noise, k-medoid clustering, fuzzy logic	39, 5, 1737-1749	https://doi.org/10.18280/ts.390532	Bandyopadhyay, A., Deb, K., Chakraborty, A., Das, A., Bag, R. (2022). A neighborhood impact driven K-medoid clustering and fuzzy logic blended approach for high density impulse noise detection and removal. Traitement du Signal, Vol. 39, No. 5, pp. 1737-1749. https://doi.org/10.18280/ts.390532
550	Patsariya, S., Dixit, M.	Entropy Based Secure and Robust Image Watermarking Using Lifting Wavelet Transform and Multi-Level-Multiple Image Scrambling Technique	entropy, integer transform, Arnold cat map, scrambling, correlation, imperceptibility, PSNR	39, 5, 1751-1759	https://doi.org/10.18280/ts.390533	Patsariya, S., Dixit, M. (2022). Entropy based secure and robust image watermarking using lifting wavelet transform and multi-level-multiple image scrambling technique. Traitement du Signal, Vol. 39, No. 5, pp. 1751-1759. https://doi.org/10.18280/ts.390533
551	Dikmen, M.	Investigating Transfer Learning Performances of Deep Learning Models for Classification of GPR B-Scan Images	ground penetrating radar, image classification, deep learning, transfer learning	39, 5, 1761-1766	https://doi.org/10.18280/ts.390534	Dikmen, M. (2022). Investigating transfer learning performances of deep learning models for classification of GPR B-scan images. Traitement du Signal, Vol. 39, No. 5, pp. 1761-1766. https://doi.org/10.18280/ts.390534
552	Wang, S.Y., Cheng, L.M., Liu, D.Y., Qin, J.Q., Hu, G.H.	Classroom Video Image Emotion Analysis Method for Online Teaching Quality Evaluation	classroom emotion, classroom video, online teaching quality evaluation, image emotion analysis	39, 5, 1767-1774	https://doi.org/10.18280/ts.390535	Wang, S.Y., Cheng, L.M., Liu, D.Y., Qin, J.Q., Hu, G.H. (2022). Classroom video image emotion analysis method for online teaching quality evaluation. Traitement du Signal, Vol. 39, No. 5, pp. 1767-1774. https://doi.org/10.18280/ts.390535
553	Avcı, İ.	Threshold Values of Different Classical Edge Detection Algorithms	edge detection, threshold, edge algorithms, Canny	39, 5, 1775-1780	https://doi.org/10.18280/ts.390536	Avcı, İ. (2022). Threshold values of different classical edge detection algorithms. Traitement du Signal, Vol. 39, No. 5, pp. 1775-1780. https://doi.org/10.18280/ts.390536
554	Bayram, H.Y., Bingol, H., Alatas, B.	Hybrid Deep Model for Automated Detection of Tomato Leaf Diseases	NCA, CNN, machine learning, tomato leaf image, classifiers	39, 5, 1781-1787	https://doi.org/10.18280/ts.390537	Bayram, H.Y., Bingol, H., Alatas, B. (2022). Hybrid deep model for automated detection of tomato leaf diseases. Traitement du Signal, Vol. 39, No. 5, pp. 1781-1787. https://doi.org/10.18280/ts.390537
555	Fan, M., Yang, J., Du, C.T., Fang, J., Wang, H.B., Li, C.L.	A Hybrid Iterative Algorithm of Amplitude Weighting and Phase Gradient Descent for Generating Phase-Only Fourier Hologram	computer-generated hologram, phase-only hologram, phase gradient descent, quadratic phase	39, 5, 1789-1796	https://doi.org/10.18280/ts.390538	Fan, M., Yang, J., Du, C.T., Fang, J., Wang, H.B., Li, C.L. (2022). A hybrid iterative algorithm of amplitude weighting and phase gradient descent for generating phase-only fourier hologram. Traitement du Signal, Vol. 39, No. 5, pp. 1789-1796. https://doi.org/10.18280/ts.390538
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557	Gavini, V., Lakshmi, G.R.J.	CT Image Denoising Model Using Image Segmentation for Image Quality Enhancement for Liver Tumor Detection Using CNN	liver tumor, CT images, image denoising, image segmentation, convolution neural networks, edge segmentation	39, 5, 1807-1814	https://doi.org/10.18280/ts.390540	Gavini, V., Lakshmi, G.R.J. (2022). CT image denoising model using image segmentation for image quality enhancement for liver tumor detection using CNN. Traitement du Signal, Vol. 39, No. 5, pp. 1807-1814. https://doi.org/10.18280/ts.390540
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560	Liu, L.J., Guo, X.	Recognizing Chinese Predicate Heads Based on Textual Bounding Boxes	predicate head, textual bounding box, multi-object leaning	39, 5, 1833-1839	https://doi.org/10.18280/ts.390543	Liu, L.J., Guo, X. (2022). Recognizing Chinese predicate heads based on textual bounding boxes. Traitement du Signal, Vol. 39, No. 5, pp. 1833-1839. https://doi.org/10.18280/ts.390543
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562	Laouamer, L.	New Informed Non-Blind Medical Image Watermarking Based on Local Binary Pattern	medical image, image watermarking, Informed watermarking, LBP, robustness	39, 5, 1851-1856	https://doi.org/10.18280/ts.390545	Laouamer, L. (2022). New informed non-blind medical image watermarking based on local binary pattern. Traitement du Signal, Vol. 39, No. 5, pp. 1851-1856. https://doi.org/10.18280/ts.390545
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567	Çetintaş, D., Tuncer, T.	Determining the Type of Document Read Using Eye Movement Properties by Hybrid CNN Method	eye-tracking, fixation, blink, saccade, convolutional neural network	39, 4, 1099-1108	https://doi.org/10.18280/ts.390402	Çetintaş, D., Tuncer, T. (2022). Determining the type of document read using eye movement properties by hybrid CNN method. Traitement du Signal, Vol. 39, No. 4, pp. 1099-1108. https://doi.org/10.18280/ts.390402
568	Jiang, X.P., Wang, Q., Long, Y.K., Zhang, S.L., Fang, Y., Hu, D.	Vibration Signal Features Prediction of GIS Equipment Based on Improved Slime Mold Optimization Algorithm Optimizing CNN-BiLSTM	GIS equipment, feature prediction, slime mold optimization algorithm, differential evolution strategy	39, 4, 1109-1117	https://doi.org/10.18280/ts.390403	Jiang, X.P., Wang, Q., Long, Y.K., Zhang, S.L., Fang, Y., Hu, D. (2022). Vibration signal features prediction of GIS equipment based on improved slime mold optimization algorithm optimizing CNN-BiLSTM. Traitement du Signal, Vol. 39, No. 4, pp. 1109-1117. https://doi.org/10.18280/ts.390403
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570	Mishra, H.K., Kaur, M.	An Approach for Enhancement of MR Images of Brain Tumor	magnetic resonance images, Bi-Histogram equalization with adaptive sigmoid function, elephant herding optimization, comprehensive learning, Friedman's mean rank test	39, 4, 1133-1144	https://doi.org/10.18280/ts.390405	Mishra, H.K., Kaur, M. (2022). An approach for enhancement of MR images of brain tumor. Traitement du Signal, Vol. 39, No. 4, pp. 1133-1144. https://doi.org/10.18280/ts.390405
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572	Zhai, Y., Zeng, W.J., Li, N.	A Novel Detection Method Using YOLOv5 for Vehicle Target under Complex Situation	traffic signs, YOLOv5, haze weather, vehicle detection	39, 4, 1153-1158	https://doi.org/10.18280/ts.390407	Zhai, Y., Zeng, W.J., Li, N. (2022). A novel detection method using YOLOv5 for vehicle target under complex situation. Traitement du Signal, Vol. 39, No. 4, pp. 1153-1158. https://doi.org/10.18280/ts.390407
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574	Tümen, V.	SpiCoNET: A Hybrid Deep Learning Model to Diagnose COVID-19 and Pneumonia Using Chest X-Ray Images	COVID-19, pneumonia, X-ray radiology images, spiking neural network, convolutional neural network	39, 4, 1169-1180	https://doi.org/10.18280/ts.390409	Tümen, V. (2022). SpiCoNET: A hybrid deep learning model to diagnose COVID-19 and pneumonia using chest X-ray images. Traitement du Signal, Vol. 39, No. 4, pp. 1169-1180. https://doi.org/10.18280/ts.390409
575	Qiu, L., He, Q.H., Yu, D.Q., Xie, J.D.	Remote Sensing Image Information Extraction and Application Based on Improved Pixel Exchange Algorithm	remote sensing image, sub-pixel positioning, bank collapse, monitoring	39, 4, 1181-1189	https://doi.org/10.18280/ts.390410	Qiu, L., He, Q.H., Yu, D.Q., Xie, J.D. (2022). Remote sensing image information extraction and application based on improved pixel exchange algorithm. Traitement du Signal, Vol. 39, No. 4, pp. 1181-1189. https://doi.org/10.18280/ts.390410
576	Habchi, Y., Aimer, A.F., Baili, J., Inc, M., Menni, Y., Lorenzini, G.	Improving Medical Video Coding Using Multi Scale Quincunx Lattice: From Low Bitrate to High Quality	healthcare sector, medical images and videos, storage and transmission, multi scale quincunx lattice	39, 4, 1191-1202	https://doi.org/10.18280/ts.390411	Habchi, Y., Aimer, A.F., Baili, J., Inc, M., Menni, Y., Lorenzini, G. (2022). Improving medical video coding using multi scale quincunx lattice: From low bitrate to high quality. Traitement du Signal, Vol. 39, No. 4, pp. 1191-1202. https://doi.org/10.18280/ts.390411

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578	Yao, Z.	Low-Light Image Enhancement and Target Detection Based on Deep Learning	computer vision, low-light images, color correction, image enhancement, object detection	39, 4, 1213-1220	https://doi.org/10.18280/ts.390413	Yao, Z. (2022). Low-light image enhancement and target detection based on deep learning. Traitement du Signal, Vol. 39, No. 4, pp. 1213-1220. https://doi.org/10.18280/ts.390413
579	Shrivastava, Y., Shrivastava, P.K., Nandan, D.	Signal Processing Algorithms Like Ensemble Empirical Mode Decomposition and Statistical Analysis-Based Tool Chatter Severity Prediction	regenerative chatter, signal processing, ensemble empirical mode decomposition, statistical indicators	39, 4, 1221-1227	https://doi.org/10.18280/ts.390414	Shrivastava, Y., Shrivastava, P.K., Nandan, D. (2022). Signal processing algorithms like ensemble empirical mode decomposition and statistical analysis-based tool chatter severity prediction. Traitement du Signal, Vol. 39, No. 4, pp. 1221-1227. https://doi.org/10.18280/ts.390414
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581	Song, X.N., Liu, H.C., Wang, L.J., Wang, S., Cao, Y.Y., Xu, D.L., Zhang, S.F.	A Semantic Segmentation Method for Road Environment Images Based on Hybrid Convolutional Auto-Encoder	semantic segmentation, autonomous vehicles, convolutional auto-encoder, deep learning	39, 4, 1235-1245	https://doi.org/10.18280/ts.390416	Song, X.N., Liu, H.C., Wang, L.J., Wang, S., Cao, Y.Y., Xu, D.L., Zhang, S.F. (2022). A semantic segmentation method for road environment images based on hybrid convolutional auto-encoder. Traitement du Signal, Vol. 39, No. 4, pp. 1235-1245. https://doi.org/10.18280/ts.390416
582	Karadag, K.	Evaluation of PV Panel Power Loss Using Gabor Filter Bank	photovoltaic panels, electroluminescent, Gabor filter, prediction, efficiency	39, 4, 1247-1254	https://doi.org/10.18280/ts.390417	Karadag, K. (2022). Evaluation of PV panel power loss using Gabor filter bank. Traitement du Signal, Vol. 39, No. 4, pp. 1247-1254. https://doi.org/10.18280/ts.390417
583	Singh, A., Pandey, P., Puig, D., Nandi, G.C., Abdel-Nasser, M.	Reliable Scene Recognition Approach for Mobile Robots with Limited Resources Based on Deep Learning and Neuro-Fuzzy Inference	indoor scene recognition, deep learning, CNNs, neuro-fuzzy, transfer learning	39, 4, 1255-1265	https://doi.org/10.18280/ts.390418	Singh, A., Pandey, P., Puig, D., Nandi, G.C., Abdel-Nasser, M. (2022). Reliable scene recognition approach for mobile robots with limited resources based on deep learning and neuro-fuzzy inference. Traitement du Signal, Vol. 39, No. 4, pp. 1255-1265. https://doi.org/10.18280/ts.390418
584	Baskar, C., Govindasamy, G.P., Anbalagan, S., Roomi, S.M.M.	Computer Graphic and Photographic Image Classification Using Transfer Learning Approach	computer graphic images, photographic images, transfer learning, CNN	39, 4, 1267-1273	https://doi.org/10.18280/ts.390419	Baskar, C., Govindasamy, G.P., Anbalagan, S., Roomi, S.M.M. (2022). Computer graphic and photographic image classification using transfer learning approach. Traitement du Signal, Vol. 39, No. 4, pp. 1267-1273. https://doi.org/10.18280/ts.390419
585	He, S.H., Wang, Y., Liu, H.D.	Image Information Recognition and Classification of Warehoused Goods in Intelligent Logistics Based on Machine Vision Technology	machine vision, intelligent logistics, warehoused goods, image information recognition, goods classification	39, 4, 1275-1282	https://doi.org/10.18280/ts.390420	He, S.H., Wang, Y., Liu, H.D. (2022). Image information recognition and classification of warehoused goods in intelligent logistics based on machine vision technology. Traitement du Signal, Vol. 39, No. 4, pp. 1275-1282. https://doi.org/10.18280/ts.390420
586	He, S.H., Wang, Y., Liu, H.D.	Morphological and Otsu's Technique Based Mammography Mass Detection and Deep Neural Network Classifier Based Prediction	Otsu's technique, neural network, MIAS, morphological operation, deep learning	39, 4, 1283-1294	https://doi.org/10.18280/ts.390421	Chugh, S., Goyal, S., Pandey, A., Joshi, S. (2022). Morphological and Otsu's technique based mammography mass detection and deep neural network classifier based prediction. Traitement du Signal, Vol. 39, No. 4, pp. 1283-1294. https://doi.org/10.18280/ts.390421
587	Bingol, H.	Classification of OME with Eardrum Otoendoscopic Images Using Hybrid-Based Deep Models, NCA, and Gaussian Method	CNN, Gaussian method, Otoendoscopic images, NCA, otitis media with effusion	39, 4, 1295-1302	https://doi.org/10.18280/ts.390422	Bingol, H. (2022). Classification of OME with eardrum Otoendoscopic images using hybrid-based deep models, NCA, and Gaussian method. Traitement du Signal, Vol. 39, No. 4, pp. 1295-1302. https://doi.org/10.18280/ts.390422
588	Fang, N.L., Hu, T., Shi, M.D., Liu, Z.H.	Effects of Different Visual Feedback Types on Perception of Online Wait	time perception, cognitive absorption, online wait, music	39, 4, 1303-1312	https://doi.org/10.18280/ts.390423	Fang, N.L., Hu, T., Shi, M.D., Liu, Z.H. (2022). Effects of different visual feedback types on perception of online wait. Traitement du Signal, Vol. 39, No. 4, pp. 1303-1312. https://doi.org/10.18280/ts.390423
589	Reddy, S.P.K., Harikiran, J.	Cast Shadow Angle Detection in Morphological Aerial Images Using Faster R-CNN	shadow detection, shadow angle prediction, image processing, segmentation, multi-layer approach, tagged features	39, 4, 1313-1321	https://doi.org/10.18280/ts.390424	Reddy, S.P.K., Harikiran, J. (2022). Cast Shadow Angle Detection in morphological aerial images using faster R-CNN. Traitement du Signal, Vol. 39, No. 4, pp. 1313-1321. https://doi.org/10.18280/ts.390424
590	Abraham, N.J., Daway, H.G., Ali, R.A.	Enhancement of Images with Very Low Light by Using Modified Brightness Low Lightness Areas Algorithm Based on Sigmoid Function	brightness low lightness areas, image enhancement, sigmoid function, very low lightness, YIQ	39, 4, 1323-1330	https://doi.org/10.18280/ts.390425	Abraham, N.J., Daway, H.G., Ali, R.A. (2022). Enhancement of images with very low light by using modified brightness low lightness areas algorithm based on sigmoid function. Traitement du Signal, Vol. 39, No. 4, pp. 1323-1330. https://doi.org/10.18280/ts.390425
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593	Tao, M.J., Lou, J.S., Wang, L.	MRI Liver Image Assisted Diagnosis Based on Improved Faster R-CNN	MRI images, liver occupancy, image segmentation, deep learning, Faster R-CNN	39, 4, 1347-1355	https://doi.org/10.18280/ts.390428	Tao, M.J., Lou, J.S., Wang, L. (2022). MRI liver image assisted diagnosis based on improved faster R-CNN. Traitement du Signal, Vol. 39, No. 4, pp. 1347-1355. https://doi.org/10.18280/ts.390428
594	Premkumar, M., Sathiyapriya, S., Arun, M., Sachan, V.	Medical Signal Processing via Digital Filter and Transmission Reception Using Cognitive Radio Technology	cognitive radio, digital filter, electro cardiogram, noise cancellation	39, 4, 1357-1362	https://doi.org/10.18280/ts.390429	Premkumar, M., Sathiyapriya, S., Arun, M., Sachan, V. (2022). Medical signal processing via digital filter and transmission reception using cognitive radio technology. Traitement du Signal, Vol. 39, No. 4, pp. 1357-1362. https://doi.org/10.18280/ts.390429

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596	Wang, Y., Wang, Y.F., Zhang, S.Y., Lin, S.M., Chen, C.	Automatic Recognition for IoT Supervision Images Based on Modal Decomposition	modal decomposition, Internet of Things, supervision images, automatic recognition	39, 4, 1371-1377	https://doi.org/10.18280/ts.390431	Wang, Y., Wang, Y.F., Zhang, S.Y., Lin, S.M., Chen, C. (2022). Automatic recognition for IoT supervision images based on modal decomposition. Traitement du Signal, Vol. 39, No. 4, pp. 1371-1377. https://doi.org/10.18280/ts.390431
597	Abdelfatih, B., Ismail, B.H.	An Adaptive Image Fusion Algorithm in the NSST Based on CDF 9/7 for Neurodegenerative Diseases	image fusion, image gradient, non-subsampled shearlet transform (NSST), modified pulse coupled neural network (M-PCNN)	39, 4, 1379-1385	https://doi.org/10.18280/ts.390432	Abdelfatih, B., Ismail, B.H. (2022). An adaptive image fusion algorithm in the NSST based on CDF 9/7 for neurodegenerative diseases. Traitement du Signal, Vol. 39, No. 4, pp. 1379-1385. https://doi.org/10.18280/ts.390432
598	Ojha, M.K., Rai, A., Prakash, A., Tiwari, P., Gupta, D.	Cuckoo Search Constrained Gamma Masking for MRI Image Detail Enhancement	contrast enhancement, cuckoo search algorithm, wavelet transforms, masking, gamma correction, MRI image enhancement	39, 4, 1387-1397	https://doi.org/10.18280/ts.390433	Ojha, M.K., Rai, A., Prakash, A., Tiwari, P., Gupta, D. (2022). Cuckoo search constrained gamma masking for MRI image detail enhancement. Traitement du Signal, Vol. 39, No. 4, pp. 1387-1397. https://doi.org/10.18280/ts.390433
599	Wang, K., An, Y., Li, N., Zhou, J,C., Chen, X.L.	Robust Identification of Subtypes in Non-Small Cell Lung Cancer Using Radiomics	non-small cell lung cancer, radiomics, feature extraction, SOM network, robust identification	39, 4, 1399-1406	https://doi.org/10.18280/ts.390434	Wang, K., An, Y., Li, N., Zhou, J,C., Chen, X.L. (2022). Robust identification of subtypes in non-small cell lung cancer using radiomics. Traitement du Signal, Vol. 39, No. 4, pp. 1399-1406. https://doi.org/10.18280/ts.390434
600	Katamaneni, M., Mayuri, A.V.R.	A Comprehensive Survey on COVID-19 Detection and Classification Using Chest-X-Ray Images	coronavirus disease-2019, bio-optimization algorithms, chest x-ray images, artificial intelligence approaches, deep learning and machine learning models	39, 4, 1407-1419	https://doi.org/10.18280/ts.390435	Katamaneni, M., Mayuri, A.V.R. (2022). A comprehensive survey on COVID-19 detection and classification using chest-X-ray images. Traitement du Signal, Vol. 39, No. 4, pp. 1407-1419. https://doi.org/10.18280/ts.390435
601	Xu, L., Zheng, D.C.	A Novel Sobel Edge Detection Accelerator Based on Reconfigurable Architecture	reconfigurable architecture, Sobel edge detection, accelerator	39, 4, 1421-1427	https://doi.org/10.18280/ts.390436	Xu, L., Zheng, D.C. (2022). A novel Sobel edge detection accelerator based on reconfigurable architecture. Traitement du Signal, Vol. 39, No. 4, pp. 1421-1427. https://doi.org/10.18280/ts.390436
602	Jayaraju, P., Somasundaram, K., Suprakash, A.S., Muthusamy, S.	A Deep Learning- Image Based Approach for Detecting Cracks in Buildings	concrete surface, CNN, cracks, deep neural nets	39, 4, 1429-1434	https://doi.org/10.18280/ts.390437	Jayaraju, P., Somasundaram, K., Suprakash, A.S., Muthusamy, S. (2022). A deep learning- Image based approach for detecting cracks in buildings. Traitement du Signal, Vol. 39, No. 4, pp. 1429-1434. https://doi.org/10.18280/ts.390437
603	Zhao, T., Huang, L.H., Wang, J.P., Cui, B.C., Li, X.H., Zhu, X.C.	Effective Screening and Texture Segmentation of Green Vegetation Cover Based on UAV Images	green vegetation coverage, image texture segmentation, land surface, UAV image	39, 4, 1435-1442	https://doi.org/10.18280/ts.390438	Zhao, T., Huang, L.H., Wang, J.P., Cui, B.C., Li, X.H., Zhu, X.C. (2022). Effective screening and texture segmentation of green vegetation cover based on UAV images. Traitement du Signal, Vol. 39, No. 4, pp. 1435-1442. https://doi.org/10.18280/ts.390438
604	Bhatia, M., Kaur, A., Bhatia, S., Mridula, Dwivedi, P.	Detection of Parkinson's Disease in Alzheimer's Patients Utilizing Brain Imaging	Parkinson's disease, MRI, SPM, MarsBar	39, 4, 1443-1451	https://doi.org/10.18280/ts.390439	Bhatia, M., Kaur, A., Bhatia, S., Mridula, Dwivedi, P. (2022). Detection of Parkinson's disease in Alzheimer's patients utilizing brain imaging. Traitement du Signal, Vol. 39, No. 4, pp. 1443-1451. https://doi.org/10.18280/ts.390439
605	Brahimi, M., Inc, M., Ahmad, H., Menni, Y., Lorenzini, G.	Synthesis of a Radiating Elements for Side Lobe Reduction Using a Hybrid Beamforming Technique Based on Non-Linear Programming and Stochastic Optimization	non-linear programming, stochastic optimization, mathematical modeling, circular antenna elements, side lobe level, particle swarm enhancement	39, 3, 771-780	https://doi.org/10.18280/ts.390301	Brahimi, M., Inc, M., Ahmad, H., Menni, Y., Lorenzini, G. (2022). Synthesis of a radiating elements for side lobe reduction using a hybrid beamforming technique based on non-linear programming and stochastic optimization. Traitement du Signal, Vol. 39, No. 3, pp. 771-780. https://doi.org/10.18280/ts.390301
606	Kumar, A., Singh, K.U., Swarup, C., Singh, T., Raja, L., Kumar, A.	Detection of Copy-Move Forgery Using Euclidean Distance and Texture Features	GLCM, PCA, Haar, Euclidean distance	39, 3, 781-788	https://doi.org/10.18280/ts.390302	Kumar, A., Singh, K.U., Swarup, C., Singh, T., Raja, L., Kumar, A. (2022). Detection of copy-move forgery using Euclidean distance and texture features. Traitement du Signal, Vol. 39, No. 3, pp. 781-788. https://doi.org/10.18280/ts.390302
607	Yang, J.	Image Segmentation of the Continuous Action of Spiking in Volleyball Based on Spatial Neighborhood Information	spatial neighborhood information, the continuous action of spiking in volleyball, image segmentation, fuzzy c-means (FCM) clustering	39, 3, 789-795	https://doi.org/10.18280/ts.390303	Yang, J. (2022). Image segmentation of the continuous action of spiking in volleyball based on spatial neighborhood information. Traitement du Signal, Vol. 39, No. 3, pp. 789-795. https://doi.org/10.18280/ts.390303
608	Abu-Faraj, M., Alqadi, Z., Zubi, M.	Creating Color Image Features Based on Morphology Image Processing	clustering methods, digital images, feature extraction, image recognition, morphology	39, 3, 797-803	https://doi.org/10.18280/ts.390304	Abu-Faraj, M., Alqadi, Z., Zubi, M. (2022). Creating color image features based on morphology image processing. Traitement du Signal, Vol. 39, No. 3, pp. 797-803. https://doi.org/10.18280/ts.390304
609	Mhaouch, A., Elhamzi, W., Abdelali, A.B., Atri, M.	Optimized Piccolo Lightweight Block Cipher: Area Efficient Implementation	piccolo block cipher, serial architectures, hardware implementation, low-resource, VHDL, FPGA, security analysis	39, 3, 805-814	https://doi.org/10.18280/ts.390305	Mhaouch, A., Elhamzi, W., Abdelali, A.B., Atri, M. (2022). Optimized Piccolo lightweight block cipher: Area efficient implementation. Traitement du Signal, Vol. 39, No. 3, pp. 805-814. https://doi.org/10.18280/ts.390305
610	Tang, Y., Xi, C.P., Gong, Z., Li, L.	Scoliosis Detection Based on Feature Extraction from Region-of-Interest	digital image processing, region of interest (ROI), feature extraction, Cobb angle, curve fitting, scoliosis	39, 3, 815-822	https://doi.org/10.18280/ts.390306	Tang, Y., Xi, C.P., Gong, Z., Li, L. (2022). Scoliosis detection based on feature extraction from region-of-interest. Traitement du Signal, Vol. 39, No. 3, pp. 815-822. https://doi.org/10.18280/ts.390306
611	Yilmaz, A.A.	A Novel Hyperparameter Optimization Aided Hand Gesture Recognition Framework Based on Deep Learning Algorithms	hand gesture recognition, deep neural network, transfer learning, deep learning, genetic algorithm	39, 3, 823-833	https://doi.org/10.18280/ts.390307	Yilmaz, A.A. (2022). A novel hyperparameter optimization aided hand gesture recognition framework based on deep learning algorithms. Traitement du Signal, Vol. 39, No. 3, pp. 823-833. https://doi.org/10.18280/ts.390307
612	Khezzar, Z.A., Benzid, R., Saidi, L., Smail, M.K.	Envelope Detection by Shannon Energy Calculation in DCT Domain and DFS-Based Notch Filter for Interference Mitigation in GNSS Receivers	GNSS, satellite navigation, interference mitigation, discrete Fourier series, discrete cosine transform, Shannon energy, envelope detection, notch filter	39, 3, 835-843	https://doi.org/10.18280/ts.390308	Khezzar, Z.A., Benzid, R., Saidi, L., Smail, M.K. (2022). Envelope detection by Shannon energy calculation in DCT domain and DFS-based notch filter for interference mitigation in GNSS receivers. Traitement du Signal, Vol. 39, No. 3, pp. 835-843. https://doi.org/10.18280/ts.390308

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614	Singh, R.K., Gupta, G., Singh, T., Dubey, K., Mehto, A.	Circulate Matrix and Compression Sensing Based Multi-Level Image Encryption	cryptography, sensing matrix, compressive sensing, random matrix, Arnold cat map	39, 3, 853-862	https://doi.org/10.18280/ts.390310	Singh, R.K., Gupta, G., Singh, T., Dubey, K., Mehto, A. (2022). Circulate matrix and compression sensing based multi-level image encryption. Traitement du Signal, Vol. 39, No. 3, pp. 853-862. https://doi.org/10.18280/ts.390310
615	Yiğit, T., Şengöz, N., Özmen, Ö., Hemanth, J., Işık, A.H.	Diagnosis of Paratuberculosis in Histopathological Images Based on Explainable Artificial Intelligence and Deep Learning	paratuberculosis, deep learning, explainable artificial intelligence (XAI), histopathology, medical imaging	39, 3, 863-869	https://doi.org/10.18280/ts.390311	Yiğit, T., Şengöz, N., Özmen, Ö., Hemanth, J., Işık, A.H. (2022). Diagnosis of paratuberculosis in histopathological images based on explainable artificial intelligence and deep learning. Traitement du Signal, Vol. 39, No. 3, pp. 863-869. https://doi.org/10.18280/ts.390311
616	Zheng, X., Wang, L., Zhou, H.J.	Image Feature Extraction and Retrieval Optimization of Book Pages Based on Convolutional Neural Network	convolutional neural network (CNN), image labeling, image page retrieval, VGG-Fast	39, 3, 871-877	https://doi.org/10.18280/ts.390312	Zheng, X., Wang, L., Zhou, H.J. (2022). Image feature extraction and retrieval optimization of book pages based on convolutional neural network. Traitement du Signal, Vol. 39, No. 3, pp. 871-877. https://doi.org/10.18280/ts.390312
617	Unnikrishnan, H., Azad, R.B.	Non-Local Retinex Based Dehazing and Low Light Enhancement of Images	image dehazing, dark channel prior, non-local retinex, low light image, guided filter	39, 3, 879-892	https://doi.org/10.18280/ts.390313	Unnikrishnan, H., Azad, R.B. (2022). Non-local retinex based dehazing and low light enhancement of images. Traitement du Signal, Vol. 39, No. 3, pp. 879-892. https://doi.org/10.18280/ts.390313
618	Thao, L.Q., Cuong, D.D., Nhi, N.N., Tam, N.D.	A Deep Learning Powered System to Lie Detection While Online Study	lie detection, contrastive learning, MobileNetV2, self-supervised learning	39, 3, 893-898	https://doi.org/10.18280/ts.390314	Thao, L.Q., Cuong, D.D., Nhi, N.N., Tam, N.D. (2022). A deep learning powered system to lie detection while online study. Traitement du Signal, Vol. 39, No. 3, pp. 893-898. https://doi.org/10.18280/ts.390314
619	Wang, Z.Y., Yang, M.S., Ren, L.J., Han, J.L., Liu, Y.R., Zhao, X.B., Feng, Y.G.	An Improved BM3D-Canny-Zernike Algorithm for Micro-Size Detection of Electronic Connectors	machine vision, size detection, image denoising, edge detection, block matching and three-dimensional filtering (BM3D)	39, 3, 899-906	https://doi.org/10.18280/ts.390315	Wang, Z.Y., Yang, M.S., Ren, L.J., Han, J.L., Liu, Y.R., Zhao, X.B., Feng, Y.G. (2022). An improved BM3D-Canny-Zernike algorithm for micro-size detection of electronic connectors. Traitement du Signal, Vol. 39, No. 3, pp. 899-906. https://doi.org/10.18280/ts.390315
620	Yildirim, M.	Diagnosis of Heart Diseases Using Heart Sound Signals with the Developed Interpolation, CNN, and Relief Based Model	hearth sound, classifiers, interpolation, relief, Darknet53	39, 3, 907-914	https://doi.org/10.18280/ts.390316	Yildirim, M. (2022). Diagnosis of heart diseases using heart sound signals with the developed interpolation, CNN, and relief based model. Traitement du Signal, Vol. 39, No. 3, pp. 907-914. https://doi.org/10.18280/ts.390316
621	Annamalai, T., Chinnasamy, M., Pandian, M.J.S.S.	A Hybrid Model Particle Swarm Optimization Based Mammogram Classification Using Kernel Support Vector Machine	feature extraction, image classification, mammogram, particle swarm optimization, segmentation, support vector machine	39, 3, 915-922	https://doi.org/10.18280/ts.390317	Annamalai, T., Chinnasamy, M., Pandian, M.J.S.S. (2022). A hybrid model particle swarm optimization based mammogram classification using kernel support vector machine. Traitement du Signal, Vol. 39, No. 3, pp. 915-922. https://doi.org/10.18280/ts.390317
622	Said, Y., Ayachi, R.	Embedded Implementation of Social Distancing Detector Based on One Stage Convolutional Neural Network Detector	COVID-19 prevention, social distance detection, deep learning, convolutional neural networks (CNNs), embedded implementation	39, 3, 923-929	https://doi.org/10.18280/ts.390318	Said, Y., Ayachi, R. (2022). Embedded implementation of social distancing detector based on one stage convolutional neural network detector. Traitement du Signal, Vol. 39, No. 3, pp. 923-929. https://doi.org/10.18280/ts.390318
623	Xu, Y.P.	A Deep Learning-Based Cluster Analysis Method for Large-Scale Multi-Label Images	deep learning, large-scale, multi-label images, cluster analysis	39, 3, 931-937	https://doi.org/10.18280/ts.390319	Xu, Y.P. (2022). A deep learning-based cluster analysis method for large-scale multi-label images. Traitement du Signal, Vol. 39, No. 3, pp. 931-937. https://doi.org/10.18280/ts.390319
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627	Albayrak, A.	Artificial Intelligence Based Social Distance Monitoring in Public Areas	social distancing, pedestrian detection, COVID-19, artificial intelligence, deep learning	39, 3, 961-967	https://doi.org/10.18280/ts.390323	Albayrak, A. (2022). Artificial intelligence based social distance monitoring in public areas. Traitement du Signal, Vol. 39, No. 3, pp. 961-967. https://doi.org/10.18280/ts.390323
628	Zhang, J.H., Zhu, Q., Song, F., Zhang, L.C., Wang, J., Liu, C.J.	Hybrid Transform Based Speech Band Width Enhancement Using Data Hiding	speech quality, speech enhancement, discrete wavelet trans form-discrete cosine transform- based data hiding	39, 3, 969-975	https://doi.org/10.18280/ts.390324	Koduri, S.K., T, K.K. (2022). Hybrid transform based speech band width enhancement using data hiding. Traitement du Signal, Vol. 39, No. 3, pp. 969-975. https://doi.org/10.18280/ts.390324
629	Zhang, J.H., Zhu, Q., Song, F., Zhang, L.C., Wang, J., Liu, C.J.	Multi-Scale Edge Detection of Crack in Extra-High Arch Dam Based on Orthogonal Wavelet Construction	wavelet construction, image edge detection based on wavelet modulus maxima, biorthogonal wavelet, constant-length compactly supported biorthogonal wavelet, ultra-high arch dam, concrete crack	39, 3, 977-989	https://doi.org/10.18280/ts.390325	Zhang, J.H., Zhu, Q., Song, F., Zhang, L.C., Wang, J., Liu, C.J. (2022). Multi-scale edge detection of crack in extra-high arch dam based on orthogonal wavelet construction. Traitement du Signal, Vol. 39, No. 3, pp. 977-989. https://doi.org/10.18280/ts.390325
630	Naeem, H., Alsirhani, A., Alshahrani, M.M., Alomari, A.	Android Device Malware Classification Framework Using Multistep Image Feature Extraction and Multihead Deep Neural Ensemble	cybersecurity, android image, multihead ensemble, malware visualization, threat detection	39, 3, 991-1003	https://doi.org/10.18280/ts.390326	Naeem, H., Alsirhani, A., Alshahrani, M.M., Alomari, A. (2022). Android device malware classification framework using multistep image feature extraction and multihead deep neural ensemble. Traitement du Signal, Vol. 39, No. 3, pp. 991-1003. https://doi.org/10.18280/ts.390326

631	Radhakrishnan, M., Boruah, S., Ramamurthy, K.	EEG-Based Anamoly Detection for Autistic Kids – A Pilot Study	anomaly detection, PyCaret, ASD, ABOD	39, 3, 1005-1012	https://doi.org/10.18280/ts.390327	Radhakrishnan, M., Boruah, S., Ramamurthy, K. (2022). EEG-based anamoly detection for autistic kids – a pilot study. Traitement du Signal, Vol. 39, No. 3, pp. 1005-1012. https://doi.org/10.18280/ts.390327
632	Arasakumaran, U., Johnson, S.D., Sara, D., Kothandaraman, R.	An Enhanced Identification and Classification Algorithm for Plant Leaf Diseases Based on Deep Learning	image processing, progressive neural architecture search (PNAS), gray level co-occurrence matrix (GLCM), Mendeley dataset, fuzzy c-means clustering (FCM), leaf disease identification	39, 3, 1013-1018	https://doi.org/10.18280/ts.390328	Arasakumaran, U., Johnson, S.D., Sara, D., Kothandaraman, R. (2022). An enhanced identification and classification algorithm for plant leaf diseases based on deep learning. Traitement du Signal, Vol. 39, No. 3, pp. 1013-1018. https://doi.org/10.18280/ts.390328
633	Zhu, L., Sheng, X.	On Image-Processing-Based Identification Method of Express Logistics Information	image processing, express shipments, text information identification	39, 3, 1019-1025	https://doi.org/10.18280/ts.390329	Zhu, L., Sheng, X. (2022). On image-processing-based identification method of express logistics information. Traitement du Signal, Vol. 39, No. 3, pp. 1019-1025. https://doi.org/10.18280/ts.390329
634	Sharma, J., Sharma, S., Kumar, V., Hussein, H.S., Alshazly, H.	Deepfakes Classification of Faces Using Convolutional Neural Networks	deep learning, fake faces, deepfakes, transfer learning, deep neural networks	39, 3, 1027-1037	https://doi.org/10.18280/ts.390330	Sharma, J., Sharma, S., Kumar, V., Hussein, H.S., Alshazly, H. (2022). Deepfakes classification of faces using convolutional neural networks. Traitement du Signal, Vol. 39, No. 3, pp. 1027-1037. https://doi.org/10.18280/ts.390330
635	S, S.S., Gopakumar, K.	Hand Gesture Recognizing Model Using Optimized Capsule Neural Network	hand gestures, human-computer interface (HCI), deep learning, SoftMax layer, capsule neural network (CapsNet)	39, 3, 1039-1050	https://doi.org/10.18280/ts.390331	S, S.S., Gopakumar, K. (2022). Hand gesture recognizing model using optimized capsule neural network. Traitement du Signal, Vol. 39, No. 3, pp. 1039-1050. https://doi.org/10.18280/ts.390331
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637	Xu, S.H., Qi, M.M., Wang, X.M., Zhao, H.L., Hu, Z.Y., Sun, H.Y.	A Positive-Unlabeled Generative Adversarial Network for Super-Resolution Image Reconstruction Using a Charbonnier Loss	positive-unlabeled generative adversarial network (PUGAN), super-resolution reconstruction, charbonnier loss, robustness	39, 3, 1061-1069	https://doi.org/10.18280/ts.390333	Xu, S.H., Qi, M.M., Wang, X.M., Zhao, H.L., Hu, Z.Y., Sun, H.Y. (2022). A positive-unlabeled generative adversarial network for super-resolution image reconstruction using a Charbonnier loss. Traitement du Signal, Vol. 39, No. 3, pp. 1061-1069. https://doi.org/10.18280/ts.390333
638	Rajpoot, V., Dubey, R., Mannepalli, P.K., Kalyani, P., Maheshwari, S., Dixit, A., Saxena, A.	Mango Plant Disease Detection System Using Hybrid BBHE and CNN Approach	image processing, plant disease, mango leaf diseases, convolutional neural network, BBHE	39, 3, 1071-1078	https://doi.org/10.18280/ts.390334	Rajpoot, V., Dubey, R., Mannepalli, P.K., Kalyani, P., Maheshwari, S., Dixit, A., Saxena, A. (2022). Mango plant disease detection system using hybrid BBHE and CNN approach. Traitement du Signal, Vol. 39, No. 3, pp. 1071-1078. https://doi.org/10.18280/ts.390334
639	Naim, F., Mustafa, M., Sulaiman, N., Zahari, Z.L.	Dual-Layer Ranking Feature Selection Method Based on Statistical Formula for Driver Fatigue Detection of EMG Signals	feature selection, electromyography, driver drowsiness, time-domain features, frequency-domain features, statistical rank	39, 3, 1079-1088	https://doi.org/10.18280/ts.390335	Naim, F., Mustafa, M., Sulaiman, N., Zahari, Z.L. (2022). Dual-layer ranking feature selection method based on statistical formula for driver fatigue detection of EMG signals. Traitement du Signal, Vol. 39, No. 3, pp. 1079-1088. https://doi.org/10.18280/ts.390335
640	Mehanović, D., Zejnilović, E., Husukić, E., Mašetić, Z.	Prediction of Human Movement in Open Public Spaces: Case Study of Sarajevo	COVID-19, human movement prediction, linear regression, open public space, space syntax, video processing	39, 2, 399-406	https://doi.org/10.18280/ts.390201	Mehanović, D., Zejnilović, E., Husukić, E., Mašetić, Z. (2022). Prediction of human movement in open public spaces: Case study of Sarajevo. Traitement du Signal, Vol. 39, No. 2, pp. 399-406. https://doi.org/10.18280/ts.390201
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642	Eali, S.N.J., Bhattacharyya, D., Nakka, T.R., Hong, S.P.	A Novel Approach in Bio-Medical Image Segmentation for Analyzing Brain Cancer Images with U-NET Semantic Segmentation and TPLD Models Using SVM	probability density function, U-Net, medical image decathlon, deep learning, supervised learning, brain cancer segmentation, support vector machine, expectation maximization (EM) algorithm	39, 2, 419-430	https://doi.org/10.18280/ts.390203	Eali, S.N.J., Bhattacharyya, D., Nakka, T.R., Hong, S.P. (2022). A novel approach in bio-medical image segmentation for analyzing brain cancer images with U-NET semantic segmentation and TPLD models using SVM. Traitement du Signal, Vol. 39, No. 2, pp. 419-430. https://doi.org/10.18280/ts.390203
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644	Gao, H.B., Wang, Z.J., Sun, X.L.	Biological Image Identity Detection and Authentication in the Field of Financial Payment Security	financial payment security, biological features, identity detection, image processing	39, 2, 441-447	https://doi.org/10.18280/ts.390205	Gao, H.B., Wang, Z.J., Sun, X.L. (2022). Biological image identity detection and authentication in the field of financial payment security. Traitement du Signal, Vol. 39, No. 2, pp. 441-447. https://doi.org/10.18280/ts.390205
645	Ayyıldız, H., Kalaycı, M., Tuncer, S.A., Çınar, A., Tuncer, T.	Automated COVID-19 Detection from WBC-DIFF Scattergram Images with Hybrid CNN Model Using Feature Selection	HSV, CIE-1931, scattergram, COVID-19, feature selection algorithm	39, 2, 449-458	https://doi.org/10.18280/ts.390206	Ayyıldız, H., Kalaycı, M., Tuncer, S.A., Çınar, A., Tuncer, T. (2022). Automated COVID-19 detection from WBC-DIFF scattergram images with hybrid CNN model using feature selection. Traitement du Signal, Vol. 39, No. 2, pp. 449-458. https://doi.org/10.18280/ts.390206
646	Tikar, S.S., Patil, R.A.	A Novel Fast Responding Driver Assistance Technique with Efficient Lane Detection and Collision Avoidance Using Dynamic Feature Extraction in Any Environment	driver assistance system, lane detection, collision avoidance, real time application	39, 2, 459-468	https://doi.org/10.18280/ts.390207	Tikar, S.S., Patil, R.A. (2022). A novel fast responding driver assistance technique with efficient lane detection and collision avoidance using dynamic feature extraction in any environment. Traitement du Signal, Vol. 39, No. 2, pp. 459-468. https://doi.org/10.18280/ts.390207
647	Rizal, A., Siregar, F.D.A.A., Fauzi, H.T.	Obstructive Sleep Apnea (OSA) Classification Based on Heart Rate Variability (HRV) on Electrocardiogram (ECG) Signal Using Support Vector Machine (SVM)	obstructive sleep apnea, ECG signal, heart-rate variability, support vector machine	39, 2, 469-474	https://doi.org/10.18280/ts.390208	Rizal, A., Siregar, F.D.A.A., Fauzi, H.T. (2022). Obstructive sleep apnea (OSA) classification based on heart rate variability (HRV) on electrocardiogram (ECG) signal using support vector machine (SVM). Traitement du Signal, Vol. 39, No. 2, pp. 469-474. https://doi.org/10.18280/ts.390208
648	Shi, M.D., Hu, T., Yu, J.W.	Pointing Cursor Interaction in Virtual Reality from the Perspective of Distance Perception	virtual reality (VR), perception of absolute distance, man-machine interaction, pointing cursor	39, 2, 475-483	https://doi.org/10.18280/ts.390209	Shi, M.D., Hu, T., Yu, J.W. (2022). Pointing cursor interaction in virtual reality from the perspective of distance perception. Traitement du Signal, Vol. 39, No. 2, pp. 475-483. https://doi.org/10.18280/ts.390209

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650	Wu, J.D., Chang, C.H.	Driver Drowsiness Detection and Alert System Development Using Object Detection	fatigue driving, driver drowsiness detection, object detection, advanced driver assistance system	39, 2, 493-499	https://doi.org/10.18280/ts.390211	Wu, J.D., Chang, C.H. (2022). Driver drowsiness detection and alert system development using object detection. Traitement du Signal, Vol. 39, No. 2, pp. 493-499. https://doi.org/10.18280/ts.390211
651	Yetiş, H., Karaköse, M.	A New Framework Containing Convolution and Pooling Circuits for Image Processing and Deep Learning Applications with Quantum Computing Implementation	quantum computing, quantum deep learning, quantum information processing	39, 2, 501-512	https://doi.org/10.18280/ts.390212	Yetiş, H., Karaköse, M. (2022). A new framework containing convolution and pooling circuits for image processing and deep learning applications with quantum computing implementation. Traitement du Signal, Vol. 39, No. 2, pp. 501-512. https://doi.org/10.18280/ts.390212
652	Lu, Q.J., Gan, P.P.	Low-Light Face Recognition and Identity Verification Based on Image Enhancement	low-light image, face recognition, image enhancement, identity verification	39, 2, 513-519	https://doi.org/10.18280/ts.390213	Lu, Q.J., Gan, P.P. (2022). Low-light face recognition and identity verification based on image enhancement. Traitement du Signal, Vol. 39, No. 2, pp. 513-519. https://doi.org/10.18280/ts.390213
653	Burçak, K.C., Uğuz, K.	A New Hybrid Breast Cancer Diagnosis Model Using Deep Learning Model and ReliefF	breast cancer, convolutional neural network, deep learning, feature selection, ReliefF, transfer learning	39, 2, 521-529	https://doi.org/10.18280/ts.390214	Burçak, K.C., Uğuz, K. (2022). A new hybrid breast cancer diagnosis model using deep learning model and ReliefF. Traitement du Signal, Vol. 39, No. 2, pp. 521-529. https://doi.org/10.18280/ts.390214
654	Pugazhendhi, L.T., Kothandaraman, R., Karnan, B.	Implementation of Visual Clustering Strategy in Self-Organizing Map for Wear Studies Samples Printed Using FDM	fused deposition modeling, linear regression, neural network, self-organizing map, wear study	39, 2, 531-539	https://doi.org/10.18280/ts.390215	Pugazhendhi, L.T., Kothandaraman, R., Karnan, B. (2022). Implementation of visual clustering strategy in self-organizing map for wear studies samples printed using FDM. Traitement du Signal, Vol. 39, No. 2, pp. 531-539. https://doi.org/10.18280/ts.390215
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656	Feng, L., Wu, P., Zheng, L.H.	Roll Rate Estimation for Cylindrical Spinning Vehicle Based on Pseudorange Observations	Global Navigation Satellite System (GNSS), spinning vehicle, baseband signal processing, pseudorange observations, roll rate estimation	39, 2, 559-566	https://doi.org/10.18280/ts.390217	Feng, L., Wu, P., Zheng, L.H. (2022). Roll rate estimation for cylindrical spinning vehicle based on pseudorange observations. Traitement du Signal, Vol. 39, No. 2, pp. 559-566. https://doi.org/10.18280/ts.390217
657	Feng, L., Wu, P., Zheng, L.H.	A Hybrid System for Handwritten Character Recognition with High Robustness	text recognition, pattern recognition, shape analysis, machine learning, FDCT, PCA, LDA, LS-SVM, RF	39, 2, 567-576	https://doi.org/10.18280/ts.390218	Sethy, A., Patra, P.K., Nayak, S.R. (2022). A hybrid system for handwritten character recognition with high robustness. Traitement du Signal, Vol. 39, No. 2, pp. 567-576. https://doi.org/10.18280/ts.390218
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659	Gündoğdu, S., Çolak, Ö.H., Polat, Ö.	Investigation of the Effect of eSport on HRV Signal by Using Poincaré Plot Analysis	heart rate variability, Poincaré plot analysis, eSport	39, 2, 589-594	https://doi.org/10.18280/ts.390220	Gündoğdu, S., Çolak, Ö.H., Polat, Ö. (2022). Investigation of the effect of eSport on HRV signal by using Poincaré plot analysis. Traitement du Signal, Vol. 39, No. 2, pp. 589-594. https://doi.org/10.18280/ts.390220
660	Zhao, H.	Image Target Recognition Based on Multiregional Features under Hybrid Attention Mechanism	hybrid attention, multiregional features, image target recognition	39, 2, 595-601	https://doi.org/10.18280/ts.390221	Zhao, H. (2022). Image target recognition based on multiregional features under hybrid attention mechanism. Traitement du Signal, Vol. 39, No. 2, pp. 595-601. https://doi.org/10.18280/ts.390221
661	Raghu, K., Sadanandam, M.	Emotion Recognition from Speech Utterances with Hybrid Spectral Features Using Machine Learning Algorithms	SER, speech prosody, feature extraction, SVM, MLP	39, 2, 603-609	https://doi.org/10.18280/ts.390222	Raghu, K., Sadanandam, M. (2022). Emotion recognition from speech utterances with hybrid spectral features using machine learning algorithms. Traitement du Signal, Vol. 39, No. 2, pp. 603-609. https://doi.org/10.18280/ts.390222
662	Maalmi, R., Slama, A.B., Sahli, H., Trabelsi, H.	Auditory Evoked Potential-Based Hearing Loss Level Recognition Using Fully Convolutional Neural Networks	computer vision, hearing perception loss, auditory evoked potential (AEP), auditory brainstem responses (ABRs), fully-convolutional neural networks	39, 2, 611-616	https://doi.org/10.18280/ts.390223	Maalmi, R., Slama, A.B., Sahli, H., Trabelsi, H. (2022). Auditory evoked potential-based hearing loss level recognition using fully convolutional neural networks. Traitement du Signal, Vol. 39, No. 2, pp. 611-616. https://doi.org/10.18280/ts.390223
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666	Özyurt, F., Mira, A., Çoban, A.	Face Mask Detection Using Lightweight Deep Learning Architecture and Raspberry Pi Hardware: An Approach to Reduce Risk of Coronavirus Spread While Entrance to Indoor Spaces	COVID-19, face-mask detection, raspberry pi, automatic door system	39, 2, 645-650	https://doi.org/10.18280/ts.390227	Özyurt, F., Mira, A., Çoban, A. (2022). Face mask detection using lightweight deep learning architecture and raspberry Pi hardware: An approach to reduce risk of coronavirus spread while entrance to indoor spaces. Traitement du Signal, Vol. 39, No. 2, pp. 645-650. https://doi.org/10.18280/ts.390227

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668	Tung, H., Tekin, R.	New Feature Extraction Approaches Based on Spatial Points for Visual-Only Lip-Reading	lip reading, image processing, feature extraction, spatial features, deep learning	39, 2, 659-668	https://doi.org/10.18280/ts.390229	Tung, H., Tekin, R. (2022). New feature extraction approaches based on spatial points for visual-only lip-reading. Traitement du Signal, Vol. 39, No. 2, pp. 659-668. https://doi.org/10.18280/ts.390229
669	Rajyalakshmi, C., Rao, K.R.M., Rao, R.R.	Compressed High Resolution Satellite Image Processing to Detect Water Bodies with Combined Bilateral Filtering and Threshold Techniques	multi sensor, high resolution, water body, bilateral filter, threshold	39, 2, 669-675	https://doi.org/10.18280/ts.390230	Rajyalakshmi, C., Rao, K.R.M., Rao, R.R. (2022). Compressed high resolution satellite image processing to detect water bodies with combined bilateral filtering and threshold techniques. Traitement du Signal, Vol. 39, No. 2, pp. 669-675. https://doi.org/10.18280/ts.390230
670	Cao, F.Y., Lu, S.J., Zhong, J.	Recognition of Cheating Behaviors Based on Finetuning of Model Parameters	behavior recognition, transfer learning, parameter finetuning, pretrained network model	39, 2, 677-682	https://doi.org/10.18280/ts.390231	Cao, F.Y., Lu, S.J., Zhong, J. (2022). Recognition of cheating behaviors based on finetuning of model parameters. Traitement du Signal, Vol. 39, No. 2, pp. 677-682. https://doi.org/10.18280/ts.390231
671	Yadav, J.K.P.S., Singh, L., Jaffrey, Z.A.	A Robust Automatic Fingerprint Recognition System Using Multi-Connection Hopfield Neural Network	biometrics, Hopfield neural network, Fingerprint, multi-connection Hopfield neural network, FVC-2004, NIST-4	39, 2, 683-694	https://doi.org/10.18280/ts.390232	Yadav, J.K.P.S., Singh, L., Jaffrey, Z.A. (2022). A robust automatic fingerprint recognition system using multi-connection hopfield neural network. Traitement du Signal, Vol. 39, No. 2, pp. 683-694. https://doi.org/10.18280/ts.390232
672	Choubey, H., Sharma, S., Singh, R.B., Ray, V.K.	HFD and MCFET Based Feature Extraction Technique for Detection of Epilepsy Using ANN Classifier	Higuchi fractal dimension (HFD), electroencephalogram (EEG) signal, Levenberg Marquardt (LM), k-Nearest neighbour (kNN), least fitting square (LS)	39, 2, 695-700	https://doi.org/10.18280/ts.390233	Choubey, H., Sharma, S., Singh, R.B., Ray, V.K. (2022). HFD and MCFET based feature extraction technique for detection of epilepsy using ANN classifier. Traitement du Signal, Vol. 39, No. 2, pp. 695-700. https://doi.org/10.18280/ts.390233
673	Chen, W., Zheng, X., Zhou, H.J., Li, Z.	Automatic Classification and Identification of Road Garbage Images and Evaluation of Environmental Health Based on UNet++	semantic segmentation, UNet++, garbage classification, eye tracking analyzer, attention mechanism, evaluation method of environmental health	39, 2, 701-710	https://doi.org/10.18280/ts.390234	Chen, W., Zheng, X., Zhou, H.J., Li, Z. (2022). Automatic classification and identification of road garbage images and evaluation of environmental health based on UNet++. Traitement du Signal, Vol. 39, No. 2, pp. 701-710. https://doi.org/10.18280/ts.390234
674	Nandan, D., Singh, M.K., Kumar, S.K., Yadav, H.K.	Speaker Identification Based on Physical Variation of Speech Signal	acoustic feature, classifier, disguised voice, speaker identification	39, 2, 711-716	https://doi.org/10.18280/ts.390235	Nandan, D., Singh, M.K., Kumar, S.K., Yadav, H.K. (2020). Speaker identification based on physical variation of speech signal. Traitement du Signal, Vol. 39, No. 2, pp. 711-716. https://doi.org/10.18280/ts.390235
675	Babu, V.S., Ram, N.V.	Deep Residual CNN with Contrast Limited Adaptive Histogram Equalization for Weed Detection in Soybean Crops	CLAHE, classification, CNN, data augmentation, deep residual weed and crop	39, 2, 717-722	https://doi.org/10.18280/ts.390236	Babu, V.S., Ram, N.V. (2020). Deep residual CNN with contrast limited adaptive histogram equalization for weed detection in soybean crops. Traitement du Signal, Vol. 39, No. 2, pp. 717-722. https://doi.org/10.18280/ts.390236
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677	Sari, F., Ulas, A.B.	Deep Learning Application in Detecting Glass Defects with Color Space Conversion and Adaptive Histogram Equalization	adaptive histogram equalization, color space conversion, glass defect detection, deep learning	39, 2, 731-736	https://doi.org/10.18280/ts.390238	Sari, F., Ulas, A.B. (2022). Deep learning application in detecting glass defects with color space conversion and adaptive histogram equalization. Traitement du Signal, Vol. 39, No. 2, pp. 731-736. https://doi.org/10.18280/ts.390238
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680	Kumar, M.V., Sharma, D.	Enhancement of Gain and Reduction of Backward Radiation Using Metasurface Antenna for Energy Harvesting Applications	reflective metasurface, rectifier, conventional CPW, electromagnetic energy	39, 2, 755-762	https://doi.org/10.18280/ts.390241	Kumar, M.V., Sharma, D. (2022). Enhancement of gain and reduction of backward radiation using metasurface antenna for energy harvesting applications. Traitement du Signal, Vol. 39, No. 2, pp. 755-762. https://doi.org/10.18280/ts.390241
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682	Liu, S., Tan, Y., Wu, C.Y.	Interaction Model of the Cabin of Combined Sugarcane Harvesters	Human-machine interface (HMI), interaction mode, harvester cabin, physiological feedback, eye movement	39, 1, 1-9	https://doi.org/10.18280/ts.390101	Liu, S., Tan, Y., Wu, C.Y. (2020). Interaction model of the cabin of combined sugarcane harvesters. Traitement du Signal, Vol. 39, No. 1, pp. 1-9. https://doi.org/10.18280/ts.390101
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686	Hammad, D.A., Monkaresi, H.	ECG - Based Emotion Detection via Parallel - Extraction of Temporal and Spatial Features Using Convolutional Neural Network	emotion detection, convolutional neural network (CNN), ECG signal, grid search optimization (GSO), DNN	39, 1, 43-57	https://doi.org/10.18280/ts.390105	Hammad, D.A., Monkaresi, H. (2022). ECG - based emotion detection via parallel - extraction of temporal and spatial features using convolutional neural network. Traitement du Signal, Vol. 39, No. 1, pp. 43-57. https://doi.org/10.18280/ts.390105
687	Feng, L., Li, H,B., Cheng, D.F., Zhang, W.M., Xiao, C.J.	An Improved Saliency Detection Algorithm Based on Edge Boxes and Bayesian Model	saliency detection, edge boxes, Bayesian model	39, 1, 59-70	https://doi.org/10.18280/ts.390106	Feng, L., Li, H,B., Cheng, D.F., Zhang, W.M., Xiao, C.J. (2022). An improved saliency detection algorithm based on edge boxes and Bayesian model. Traitement du Signal, Vol. 39, No. 1, pp. 59-70. https://doi.org/10.18280/ts.390106
688	Özyurt, F., Sert, E., Avci, D.	Ensemble Residual Network Features and Cubic-SVM Based Tomato Leaves Disease Classification System	residual network, NCA, tomato leaf disease, deep learning	39, 1, 71-77	https://doi.org/10.18280/ts.390107	Özyurt, F., Sert, E., Avci, D. (2022). Ensemble residual network features and cubic-SVM based tomato leaves disease classification system. Traitement du Signal, Vol. 39, No. 1, pp. 71-77. https://doi.org/10.18280/ts.390107
689	Noureddine, A., Boussif, M., Adnane, C.	A Modified Ultraspherical Window and Its Application for Speech Enhancement	ultraspherical window, quadrature mirror filters banks, speech enhancement, discrete wavelet transforms	39, 1, 79-86	https://doi.org/10.18280/ts.390108	Noureddine, A., Boussif, M., Adnane, C. (2022). A modified ultraspherical window and its application for speech enhancement. Traitement du Signal, Vol. 39, No. 1, pp. 79-86. https://doi.org/10.18280/ts.390108
690	Janardhan, N., Kumaresh, N.	Improving Depression Prediction Accuracy Using Fisher Score-Based Feature Selection and Dynamic Ensemble Selection Approach Based on Acoustic Features of Speech	acoustic features, depression, dynamic ensemble selection, feature selection, fisher score, METADES, openSMILE, KNORAU	39, 1, 87-107	https://doi.org/10.18280/ts.390109	Janardhan, N., Kumaresh, N. (2022). Improving depression prediction accuracy using fisher score-based feature selection and dynamic ensemble selection approach based on acoustic features of speech. Traitement du Signal, Vol. 39, No. 1, pp. 87-107. https://doi.org/10.18280/ts.390109
691	Jiang, F.C., Zhang, H.Y., Feng, C.W., Zhu, C.	A Closed-Loop Detection Algorithm for Indoor Simultaneous Localization and Mapping Based on You Only Look Once v3	simultaneous localization and mapping (SLAM), you only look once (YOLO) v3, closed-loop detection	39, 1, 109-117	https://doi.org/10.18280/ts.390110	Jiang, F.C., Zhang, H.Y., Feng, C.W., Zhu, C. (2022). A closed-loop detection algorithm for indoor simultaneous localization and mapping based on you only look once v3. Traitement du Signal, Vol. 39, No. 1, pp. 109-117. https://doi.org/10.18280/ts.390110
692	Jo, B., Kim, S.	Comparative Analysis of OpenPose, PoseNet, and MoveNet Models for Pose Estimation in Mobile Devices	mobile devices, MoveNet, OpenPose, pose estimation, PoseNet	39, 1, 119-124	https://doi.org/10.18280/ts.390111	Jo, B., Kim, S. (2022). Comparative analysis of OpenPose, PoseNet, and MoveNet models for pose estimation in mobile devices. Traitement du Signal, Vol. 39, No. 1, pp. 119-124. https://doi.org/10.18280/ts.390111
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694	Bhardwaj, L., Mishra, R.K.	Downlink Processing of Massive MIMO-NOMA Networks Using Cell Sectored Approach for 5G Communication	cell sectoring, channel state information, massive multiple-input multiple-output, non-orthogonal multiple access, pilot contamination, spectral efficiency	39, 1, 133-144	https://doi.org/10.18280/ts.390113	Bhardwaj, L., Mishra, R.K. (2022). Downlink processing of massive MIMO-NOMA networks using cell sectored approach for 5G communication. Traitement du Signal, Vol. 39, No. 1, pp. 133-144. https://doi.org/10.18280/ts.390113
695	Zhang, Z., Xie, X.	Application of Image Processing and Identification Technology for Digital Archive Information Management	digital archive, archive information management, image processing	39, 1, 145-152	https://doi.org/10.18280/ts.390114	Zhang, Z., Xie, X. (2022). Application of image processing and identification technology for digital archive information management. Traitement du Signal, Vol. 39, No. 1, pp. 145-152. https://doi.org/10.18280/ts.390114
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698	Abu-Faraj, M.M., Aldebei, K., Alqadi, Z.A.	Simple, Efficient, Highly Secure, and Multiple Purposed Method on Data Cryptography	cryptography, throughput, speed up, data quality, MSE, PSNR	39, 1, 173-178	https://doi.org/10.18280/ts.390117	Abu-Faraj, M.M., Aldebei, K., Alqadi, Z.A. (2022). Simple, efficient, highly secure, and multiple purposed method on data cryptography. Traitement du Signal, Vol. 39, No. 1, pp. 173-178. https://doi.org/10.18280/ts.390117
699	Jia, D.R., Yang, J.J.	A Multi-Scale Image Enhancement Algorithm Based on Deep Learning and Illumination Compensation	deep learning, illumination compensation, multi-scale image enhancement	39, 1, 179-185	https://doi.org/10.18280/ts.390118	Jia, D.R., Yang, J.J. (2022). A multi-scale image enhancement algorithm based on deep learning and illumination compensation. Traitement du Signal, Vol. 39, No. 1, pp. 179-185. https://doi.org/10.18280/ts.390118
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701	Manikyam, N.R.H., Devi, M.S.	An Image Decompression Model with Reversible Pixel Interchange Decryption Model Using Data Deduplication	data deduplication, image decompression, reversible pixel interchange, storage provider, decryption	39, 1, 195-203	https://doi.org/10.18280/ts.390120	Manikyam, N.R.H., Devi, M.S. (2022). An image decompression model with reversible pixel interchange decryption model using data deduplication. Traitement du Signal, Vol. 39, No. 1, pp. 195-203. https://doi.org/10.18280/ts.390120
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703	Li, Z.X., Kong, D.G., Zheng, Y.C.	Artificial Intelligence Registration of Image Series Based on Multiple Features	multi-source image series, image registration, image feature extraction	39, 1, 221-227	https://doi.org/10.18280/ts.390122	Li, Z.X., Kong, D.G., Zheng, Y.C. (2022). Artificial intelligence registration of image series based on multiple features. Traitement du Signal, Vol. 39, No. 1, pp. 221-227. https://doi.org/10.18280/ts.390122
704	Ponnaganti, N.D., Anitha, R.	A Novel Ensemble Bagging Classification Method for Breast Cancer Classification Using Machine Learning Techniques	breast cancer, ensemble bagging, weighted voting, ensemble bagging weighted voting classification	39, 1, 229-237	https://doi.org/10.18280/ts.390123	Ponnaganti, N.D., Anitha, R. (2022). A novel ensemble bagging classification method for breast cancer classification using machine learning techniques. Traitement du Signal, Vol. 39, No. 1, pp. 229-237. https://doi.org/10.18280/ts.390123
705	Sivasankaran, P., Dhanaraj, K.	A Rapid Advancing Image Segmentation Approach in Dental to Predict Cryst	CAD, X-ray images, maximal IsoCenters, Fastly marching methodology, image processing, detection of dentistry cysts, radiologists	39, 1, 239-246	https://doi.org/10.18280/ts.390124	Sivasankaran, P., Dhanaraj, K. (2022). A rapid advancing image segmentation approach in dental to predict cryst. Traitement du Signal, Vol. 39, No. 1, pp. 239-246. https://doi.org/10.18280/ts.390124280/ts.380624
706	Liu, Y., Zhang, Q., Lu, S., Liu, L., Zhang, J., Ma, S.	Emotional Analysis and Annotation of Tourism Landscape Images Based on Tourist Experience	tourist experience, tourism landscape images (TLIs), emotional information, emotion annotation	39, 1, 247-253	https://doi.org/10.18280/ts.390125	Liu, Y., Zhang, Q., Lu, S., Liu, L., Zhang, J., Ma, S. (2022). Emotional analysis and annotation of tourism landscape images based on tourist experience. Traitement du Signal, Vol. 39, No. 1, pp. 247-253. https://doi.org/10.18280/ts.390125
707	Kareem, O.S., Al-Sulaifanie, A.K.	Classification of COVID-19 Cases from X-Ray Images Based on a Modified VGG-16 Model	Convolutional Neural Network, COVID-19, deep learning, VGG-16, computer-aided diagnosis, transfer learning, X-ray images, artificial neural network	39, 1, 255-263	https://doi.org/10.18280/ts.390126	Kareem, O.S., Al-Sulaifanie, A.K. (2022). Classification of COVID-19 cases from X-ray images based on a modified VGG-16 model. Traitement du Signal, Vol. 39, No. 1, pp. 255-263. https://doi.org/10.18280/ts.390126
708	Singh, K.U., Hsieh, S.Y., Swarup, C., Singh, T.	Authentication of NIfTI Neuroimages Using Lifting Wavelet Transform, Arnold Cat Map, Z-Transform, and Hessenberg Decomposition	watermarking, NIfTI, lifting wavelet transform (LWT), image, Z-transform	39, 1, 265-274	https://doi.org/10.18280/ts.390127	Singh, K.U., Hsieh, S.Y., Swarup, C., Singh, T. (2022). Authentication of NIfTI neuroimages using lifting wavelet transform, Arnold cat map, Z-transform, and Hessenberg decomposition. Traitement du Signal, Vol. 39, No. 1, pp. 265-274. https://doi.org/10.18280/ts.390127
709	M S, M., R, A.C., S S, S.R.	Optimal Squeeze Net with Deep Neural Network-Based Arial Image Classification Model in Unmanned Aerial Vehicles	unmanned aerial vehicles, aerial image classification, deep learning, SqueezeNet, hyperparameter tuning	39, 1, 275-281	https://doi.org/10.18280/ts.390128	M S, M., R, A.C., S S, S.R. (2022). Optimal squeeze net with deep neural network-based arial image classification model in unmanned aerial vehicles. Traitement du Signal, Vol. 39, No. 1, pp. 275-281. https://doi.org/10.18280/ts.390128
710	Bhyrapuneni, S., Rajendran, A.	A Comparative Analysis for Optical Character Recognition for Text Extraction from Images Using Artificial Neural Network Fuzzy Inference System	text extraction, fuzzy rules, fuzzy structures, pattern identification, artificial neural networks	39, 1, 283-289	https://doi.org/10.18280/ts.390129	Bhyrapuneni, S., Rajendran, A. (2022). A comparative analysis for optical character recognition for text extraction from images using artificial neural network fuzzy inference system. Traitement du Signal, Vol. 39, No. 1, pp. 283-289. https://doi.org/10.18280/ts.390129
711	Gao, G.H., Wang, S.Y., Shuai, C.Y., Zhang, Z.H., Zhang, S., Feng, Y.B.	Recognition and Detection of Greenhouse Tomatoes in Complex Environment	you only look once v5 (YOLO v5), recognition and detection, tomato, deep learning	39, 1, 291-298	https://doi.org/10.18280/ts.390130	Gao, G.H., Wang, S.Y., Shuai, C.Y., Zhang, Z.H., Zhang, S., Feng, Y.B. (2022). Recognition and detection of greenhouse tomatoes in complex environment. Traitement du Signal, Vol. 39, No. 1, pp. 291-298. https://doi.org/10.18280/ts.390130
712	Shrivastava, Y., Neha, E., Singh, B., Shrivastava, P.K., Murthy, K.V.S.R., Nandan, D.	Analysis of Regenerative Raw Signals Using Variational Mode Decomposition	regenerative chatter, signal processing, variational mode decomposition, chatter index	39, 1, 299-304	https://doi.org/10.18280/ts.390131	Shrivastava, Y., Neha, E., Singh, B., Shrivastava, P.K., Murthy, K.V.S.R., Nandan, D. (2022). Analysis of regenerative raw signals using variational mode decomposition. Traitement du Signal, Vol. 39, No. 1, pp. 299-304. https://doi.org/10.18280/ts.390131
713	Rakesh, G., Rajamanickam, V.	A Novel Deep Learning Algorithm for Optical Disc Segmentation for Glaucoma Diagnosis	glaucoma, deep learning, modified U-net	39, 1, 305-311	https://doi.org/10.18280/ts.390132	Rakesh, G., Rajamanickam, V. (2022). A novel deep learning algorithm for optical disc segmentation for glaucoma diagnosis. Traitement du Signal, Vol. 39, No. 1, pp. 305-311. https://doi.org/10.18280/ts.390132
714	Zheng, X., Chen, W., Zhou, H.J., Li, Z., Zhang, T.F., Yuan, Q.	Emoji-Integrated Polyseme Probabilistic Analysis Model: Sentiment Analysis of Short Review Texts on Library Service Quality	framework for emotional classification of library service quality (FECLSQ), short text, polyseme, emoji, probabilistic linguistic term sets (PLTS)	39, 1, 313-322	https://doi.org/10.18280/ts.390133	Zheng, X., Chen, W., Zhou, H.J., Li, Z., Zhang, T.F., Yuan, Q. (2022). Emoji-integrated polyseme probabilistic analysis model: Sentiment analysis of short review texts on library service quality. Traitement du Signal, Vol. 39, No. 1, pp. 313-322. https://doi.org/10.18280/ts.390133
715	Sathyan, N.M., Karthikeyan, S.R.	Infrared Thermal Image Enhancement in Cold Spot Detection of Condenser Air Ingress	thermal imaging, IR, canny edge detection, high-resolution autoencoder, condenser image, SNR, MSE, structural similarity index measure	39, 1, 323-329	https://doi.org/10.18280/ts.390134	Sathyan, N.M., Karthikeyan, S.R. (2022). Infrared thermal image enhancement in cold spot detection of condenser air ingress. Traitement du Signal, Vol. 39, No. 1, pp. 323-329. https://doi.org/10.18280/ts.390134
716	Muthusamy, T., Eswaran, G.	Detection of Sugarcane Mosaic Diseases Using Deep Learning Architecture to Avoid Annealing Temperature of PCR Primer in Laboratory Testing	sugarcane leaf diseases detection, convolution neural network, pretrained models, sugarcane mosaic disease and sugarcane streak, mosaic disease	39, 1, 331-339	https://doi.org/10.18280/ts.390135	Muthusamy, T., Eswaran, G. (2022). Detection of sugarcane mosaic diseases using deep learning architecture to avoid annealing temperature of PCR primer in laboratory testing. Traitement du Signal, Vol. 39, No. 1, pp. 331-339. https://doi.org/10.18280/ts.390135
717	Benghenia, H.A., Zine-Eddine, H.S., Alexandre, A.	Automated Recognition of Sleep Apnea-Hypopnea Syndrome Using Continuous Wavelet Transform-Based Multiscale Dispersion Entropy of Single-Lead ECG Signal	electrocardiogram (ECG), sleep apnea-hypopnea events (SAHE), continuous wavelet transform (CWT), multiscal dispersion entropy (MDE), classifiers	39, 1, 341-353	https://doi.org/10.18280/ts.390136	Benghenia, H.A., Zine-Eddine, H.S., Alexandre, A. (2022). Automated recognition of sleep apnea-hypopnea syndrome using continuous wavelet transform-based multiscale dispersion entropy of single-lead ECG signal. Traitement du Signal, Vol. 39, No. 1, pp. 341-353. https://doi.org/10.18280/ts.390136
718	Shu, J.F., Ding, R.T., Jin, A.X., Zhu, H., Chen, S.	Acupoint Selection for Autonomous Massage Based on Infrared Thermography	infrared thermography, temperature specificity, image preprocessing, edge detection, acupoint positioning	39, 1, 355-362	https://doi.org/10.18280/ts.390137	Shu, J.F., Ding, R.T., Jin, A.X., Zhu, H., Chen, S. (2022). Acupoint selection for autonomous massage based on infrared thermography. Traitement du Signal, Vol. 39, No. 1, pp. 355-362. https://doi.org/10.18280/ts.390137
719	Metlapalli, A.C., Muthusamy, T., Battula, B.P.	Classification of Image Spam Using Convolution Neural Network	spam data, convolutional neural network (CNN), deep learning (DL), classification, Dredze dataset	39, 1, 363-369	https://doi.org/10.18280/ts.390138	Metlapalli, A.C., Muthusamy, T., Battula, B.P. (2022). Classification of image spam using convolution neural network. Traitement du Signal, Vol. 39, No. 1, pp. 363-369. https://doi.org/10.18280/ts.390138
720	Shoaib, M., Sayed, N.	YOLO Object Detector and Inception-V3 Convolutional Neural Network for Improved Brain Tumor Segmentation	brain tumor, magnetic resonance imaging, YOLO detector, inception-V3, segmentation	39, 1, 371-380	https://doi.org/10.18280/ts.390139	Shoaib, M., Sayed, N. (2022). YOLO object detector and inception-V3 convolutional neural network for improved brain tumor segmentation. Traitement du Signal, Vol. 39, No. 1, pp. 371-380. https://doi.org/10.18280/ts.390139

721	Song, Y.F., Li, S.W., Liu, Z.G., Zhang, Y.K., Shen, N.	Analysis on Chlorophyll Diagnosis of Wheat Leaves Based on Digital Image Processing and Feature Selection	image processing, color feature selection, SPAD 502 plus chlorophyll meter, machine learning	39, 1, 381-38	https://doi.org/10.18280/ts.390140	Song, Y.F., Li, S.W., Liu, Z.G., Zhang, Y.K., Shen, N. (2022). Analysis on chlorophyll diagnosis of wheat leaves based on digital image processing and feature selection. Traitement du Signal, Vol. 39, No. 1, pp. 381-387. https://doi.org/10.18280/ts.390140
722	Morab, F., Hegde, R., Hegde, V.N.	Detection, Estimation and Radiation Formation Using Smart Antennas for the Spatial Location	smart antennas, DoA, beamforming, phased antenna array, 5G, adaptive array antennas, array signal processing	39, 1, 389-398	https://doi.org/10.18280/ts.390141	Morab, F., Hegde, R., Hegde, V.N. (2022). Detection, estimation and radiation formation using smart antennas for the spatial location. Traitement du Signal, Vol. 39, No. 1, pp. 389-398. https://doi.org/10.18280/ts.390141
723	Ozdemir, C., Gedik, M.A., Kaya, Y.	Age Estimation from Left-Hand Radiographs with Deep Learning Methods	bone age estimation, CNN, computer-aided diagnosis, deep learning	38, 6, 1565-1574	https://doi.org/10.18280/ts.380601	Ozdemir, C., Gedik, M.A., Kaya, Y. (2021). Age estimation from left-hand radiographs with deep learning methods. Traitement du Signal, Vol. 38, No. 6, pp. 1565-1574. https://doi.org/10.18280/ts.380601
724	Ayeche, F., Alti, A.	Facial Expressions Recognition Based on Delaunay Triangulation of Landmark and Machine Learning	facial image, Delaunay triangulation, shape features, facial expressions, QDA, emotion	38, 6, 1575-1586	https://doi.org/10.18280/ts.380602	Ayeche, F., Alti, A. (2021). Facial expressions recognition based on Delaunay triangulation of landmark and machine learning. Traitement du Signal, Vol. 38, No. 6, pp. 1575-1586. https://doi.org/10.18280/ts.380602
725	Ariyapadath, S.	Plant Leaf Classification and Comparative Analysis of Combined Feature Set Using Machine Learning Techniques	plant classification, optimal feature set, GIST, local binary pattern, pyramid histogram oriented gradient, machine learning, neighbourhood component analysis, artificial neural network	38, 6, 1587-1598	https://doi.org/10.18280/ts.380603	Ariyapadath, S. (2021). Plant leaf classification and comparative analysis of combined feature set using machine learning techniques. Traitement du Signal, Vol. 38, No. 6, pp. 1587-1598. https://doi.org/10.18280/ts.380603
726	Yang, H., Zhao, Y.M., Su, G.A., Liu, X.Y., Jin, S.W., Fan, H.Y., Shang, Y.H.	Slow Feature Extraction Algorithm Based on Visual Selection Consistency Continuity and Its Application	visual invariance, visual selection consistency continuity, natural image, slow feature, Lipschitz consistency	38, 6, 1599-1611	https://doi.org/10.18280/ts.380604	Yang, H., Zhao, Y.M., Su, G.A., Liu, X.Y., Jin, S.W., Fan, H.Y., Shang, Y.H. (2021). Slow feature extraction algorithm based on visual selection consistency continuity and its application. Traitement du Signal, Vol. 38, No. 6, pp. 1599-1611. https://doi.org/10.18280/ts.380604
727	Moussa, M., Douik, A.	Synthesis and Comparison of Improved Edge Detection Technique Based on Metaheuristic and Intelligent Algorithm Optimization	edge detection, neural network, fuzzy logic, Shannon entropy, conditional entropy, joint entropy, metaheuristic algorithm	38, 6, 1613-1622	https://doi.org/10.18280/ts.380605	Moussa, M., Douik, A. (2021). Synthesis and comparison of improved edge detection technique based on metaheuristic and intelligent algorithm optimization. Traitement du Signal, Vol. 38, No. 6, pp. 1613-1622. https://doi.org/10.18280/ts.380605
728	Shoaib, M., Sayed, N.	A Deep Learning Based System for the Detection of Human Violence in Video Data	violence detection, deep learning, convolutional neural network, image classification object localization	38, 6, 1623-1635	https://doi.org/10.18280/ts.380606	Shoaib, M., Sayed, N. (2021). A deep learning based system for the detection of human violence in video data. Traitement du Signal, Vol. 38, No. 6, pp. 1623-1635. https://doi.org/10.18280/ts.380606
729	Reddy, K.T., Reddy, S.N.	An Improved Medical Image Watermarking Technique Based on Weber's Law Descriptors	watermarking, embedding capacity, medical image, blind watermarking, Weber's Local Descriptor (WLD), Arnold chaotic map	38, 6, 1637-1646	https://doi.org/10.18280/ts.380607	Reddy, K.T., Reddy, S.N. (2021). An improved medical image watermarking technique based on Weber's law descriptors. Traitement du Signal, Vol. 38, No. 6, pp. 1637-1646. https://doi.org/10.18280/ts.380607
730	Bi, Q.L., Lai, M.L., Tang, H.L., Guo, Y.Y., Li, J.Y., Zeng, X.H., Liu, Z.J.	Precise Inspection of Geometric Parameters for Polyvinyl Chloride Pipe Section Based on Computer Vision	polyvinyl chloride (PVC) pipe, geometric parameters, visual inspection, region of interest (ROI), edge operator	38, 6, 1647-1655	https://doi.org/10.18280/ts.380608	Bi, Q.L., Lai, M.L., Tang, H.L., Guo, Y.Y., Li, J.Y., Zeng, X.H., Liu, Z.J. (2021). Precise inspection of geometric parameters for polyvinyl chloride pipe section based on computer vision. Traitement du Signal, Vol. 38, No. 6, pp. 1647-1655. https://doi.org/10.18280/ts.380608
731	Wagle, S.A., R, H., Sampe, J., Mohammad, F., Md Ali, S.H.	Effect of Data Augmentation in the Classification and Validation of Tomato Plant Disease with Deep Learning Methods	classification, data augmentation, ResNet models, validation	38, 6, 1657-1670	https://doi.org/10.18280/ts.380609	Wagle, S.A., R, H., Sampe, J., Mohammad, F., Md Ali, S.H. (2021). Effect of data augmentation in the classification and validation of tomato plant disease with deep learning methods. Traitement du Signal, Vol. 38, No. 6, pp. 1657-1670. https://doi.org/10.18280/ts.380609
732	Elaraby, A., Taha, A.	A Framework for Cross-Modality Guided Contrast Enhancement of CT Liver Using MRI	medical image, multimodal, image enhancement, liver, CT, MRI	38, 6, 1671-1675	https://doi.org/10.18280/ts.380610	Elaraby, A., Taha, A. (2021). A framework for cross-modality guided contrast enhancement of CT liver using MRI. Traitement du Signal, Vol. 38, No. 6, pp. 1671-1675. https://doi.org/10.18280/ts.380610
733	Liu, C., Yang, J., Zhang, Y.N., Zhang, X., Zhao, W.N., Miao, F.J., Shao, Y.K.	Non-Global Privacy Protection Facing Sensitive Areas in Face Images	differential privacy, interactive framework, non-globality, landmark positioning, regional growth	38, 6, 1677-1687	https://doi.org/10.18280/ts.380611	Liu, C., Yang, J., Zhang, Y.N., Zhang, X., Zhao, W.N., Miao, F.J., Shao, Y.K. (2021). Non-global privacy protection facing sensitive areas in face images. Traitement du Signal, Vol. 38, No. 6, pp. 1677-1687. https://doi.org/10.18280/ts.380611
734	Toraman, S., Dursun, Ö.O.	GameEmo-CapsNet: Emotion Recognition from Single-Channel EEG Signals Using the 1D Capsule Networks	emotion estimation, EEG, fusion, deep learning, capsule networks	38, 6, 1689-1698	https://doi.org/10.18280/ts.380612	Toraman, S., Dursun, Ö.O. (2021). GameEmo-CapsNet: Emotion recognition from single-channel EEG signals using the 1D capsule networks. Traitement du Signal, Vol. 38, No. 6, pp. 1689-1698. https://doi.org/10.18280/ts.380612
735	Tiwari, D., Dixit, M., Gupta, K.	Deep Multi-View Breast Cancer Detection: A Multi-View Concatenated Infrared Thermal Images Based Breast Cancer Detection System Using Deep Transfer Learning	thermal infrared images, multi-view, breast cancer, VGG16, VGG19, ResNet50, Inception Net, augmentation	38, 6, 1699-1711	https://doi.org/10.18280/ts.380613	Tiwari, D., Dixit, M., Gupta, K. (2021). Deep multi-view breast cancer detection: A multi-view concatenated infrared thermal images based breast cancer detection system using deep transfer learning. Traitement du Signal, Vol. 38, No. 6, pp. 1699-1711. https://doi.org/10.18280/ts.380613
736	Manda, M.P., Hyun, D.	Double Thresholding with Sine Entropy for Thermal Image Segmentation	image segmentation, thermal images, long-range correlations, sine entropy, double thresholding	38, 6, 1713-1718	https://doi.org/10.18280/ts.380614	Manda, M.P., Hyun, D. (2021). Double thresholding with sine entropy for thermal image segmentation. Traitement du Signal, Vol. 38, No. 6, pp. 1713-1718. https://doi.org/10.18280/ts.380614
737	Zhu, T.B., Wang, D., Li, Y.H., Dong, W.J.	Three-Dimensional Image Reconstruction for Virtual Talent Training Scene	virtual training, three-dimensional (3D) image, image reconstruction	38, 6, 1719-1726	https://doi.org/10.18280/ts.380615	Zhu, T.B., Wang, D., Li, Y.H., Dong, W.J. (2021). Three-dimensional image reconstruction for virtual talent training scene. Traitement du Signal, Vol. 38, No. 6, pp. 1719-1726. https://doi.org/10.18280/ts.380615
738	Vamsi, B., Bhattacharyya, D., Midhunchakkravarthy, D., Kim, J.	Early Detection of Hemorrhagic Stroke Using a Lightweight Deep Learning Neural Network Model	Convolution Neural Network (CNN), computed tomographic, deep learning, hemorrhagic stroke, light weight model, medical image segmentation	38, 6, 1727-1736	https://doi.org/10.18280/ts.380616	Vamsi, B., Bhattacharyya, D., Midhunchakkravarthy, D., Kim, J. (2021). Early detection of hemorrhagic stroke using a lightweight deep learning neural network model. Traitement du Signal, Vol. 38, No. 6, pp. 1727-1736. https://doi.org/10.18280/ts.380616

739	Ben Slama, A., Sahli, H., Maalmi, R., Trabelsi, H.	ConvNet: 1D-Convolutional Neural Networks for Cardiac Arrhythmia Recognition Using ECG Signals	cardiac arrhythmia disease, ECG data, QRS complex signals, classification, conventional neural network	38, 6, 1737-1745	https://doi.org/10.18280/ts.380617	Ben Slama, A., Sahli, H., Maalmi, R., Trabelsi, H. (2021). ConvNet: 1D-convolutional neural networks for cardiac arrhythmia recognition using ECG signals. Traitement du Signal, Vol. 38, No. 6, pp. 1737-1745. https://doi.org/10.18280/ts.380617
740	Zhang, Q., Lu, S., Liu, L., Liu, Y., Zhang, J., Shi, D.Y.	Color Enhancement of Low Illumination Garden Landscape Images	low illumination, garden landscape images (GLIs), color enhancement, convolutional neural network (CNN)	38, 6, 1747-1754	https://doi.org/10.18280/ts.380618	Zhang, Q., Lu, S., Liu, L., Liu, Y., Zhang, J., Shi, D.Y. (2021). Color enhancement of low illumination garden landscape images. Traitement du Signal, Vol. 38, No. 6, pp. 1747-1754. https://doi.org/10.18280/ts.380618
741	Upadhyay, S.K., Kumar, A.	Early-Stage Brown Spot Disease Recognition in Paddy Using Image Processing and Deep Learning Techniques	brown spot, disease recognition, rice, plants, CNN, infection severity	38, 6, 1755-1766	https://doi.org/10.18280/ts.380619	Upadhyay, S.K., Kumar, A. (2021). Early-stage brown spot disease recognition in paddy using image processing and deep learning techniques. Traitement du Signal, Vol. 38, No. 6, pp. 1755-1766. https://doi.org/10.18280/ts.380619
742	Korkmaz, O.E., Aydemir, O., Oral, E.A., Ozbek, I.Y.	Investigating the Effect of COVID-19 Infection on P300 Based BCI Application Performance	COVID-19, brain computer interface, event related potentials, P300, classification, EEG	38, 6, 1767-1773	https://doi.org/10.18280/ts.380620	Korkmaz, O.E., Aydemir, O., Oral, E.A., Ozbek, I.Y. (2021). Investigating the effect of COVID-19 infection on P300 based BCI application performance. Traitement du Signal, Vol. 38, No. 6, pp. 1767-1773. https://doi.org/10.18280/ts.380620
743	Jiang, N.	Image Segmentation for Review of Cerebral Apoplexy	cerebral apoplexy, review, image segmentation, lesion change features	38, 6, 1775-1782	https://doi.org/10.18280/ts.380621	Jiang, N. (2021). Image segmentation for review of cerebral apoplexy. Traitement du Signal, Vol. 38, No. 6, pp. 1775-1782. https://doi.org/10.18280/ts.380621
744	Arshaghi, A., Ashourin, M., Ghabeli, L.	Detection and Classification of Potato Diseases Potato Using a New Convolution Neural Network Architecture	convolutional neural networks, deep learning, defect detection, potato diseases	38, 6, 1783-1791	https://doi.org/10.18280/ts.380622	Arshaghi, A., Ashourin, M., Ghabeli, L. (2021). Detection and classification of potato diseases potato using a new convolution neural network architecture. Traitement du Signal, Vol. 38, No. 6, pp. 1783-1791. https://doi.org/10.18280/ts.380622
745	Satla, S., Manchala, S.	Dialect Identification in Telugu Language Speech Utterance Using Modified Features with Deep Neural Network	DNN, Telugu language, dialects, multilayer perceptron, HMM, GMM, MFCC	38, 6, 1793-1799	https://doi.org/10.18280/ts.380623	Satla, S., Manchala, S. (2021). Dialect identification in Telugu language speech utterance using modified features with deep neural network. Traitement du Signal, Vol. 38, No. 6, pp. 1793-1799. https://doi.org/10.18280/ts.380623
746	Wu, S.J.	Image Recognition of Standard Actions in Sports Videos Based on Feature Fusion	sports, action recognition, local feature extraction, time-space feature fusion	38, 6, 1801-1807	https://doi.org/10.18280/ts.380624	Wu, S.J. (2021). Image recognition of standard actions in sports videos based on feature fusion. Traitement du Signal, Vol. 38, No. 6, pp. 1801-1807. https://doi.org/10.18280/ts.380624
747	Yechuri, P.K., Ramadass, S.	Classification of Image and Text Data Using Deep Learning-Based LSTM Model	LSTM, IMDB, Sentiment Analysis (SA), Natural Language Processing (NLP)	38, 6, 1809-1817	https://doi.org/10.18280/ts.380625	Yechuri, P.K., Ramadass, S. (2021). Classification of image and text data using deep learning-based LSTM model. Traitement du Signal, Vol. 38, No. 6, pp. 1809-1817. https://doi.org/10.18280/ts.380625
748	Wu, J.D., Hsieh, C.Y., Luo, W.J.	Sound Visualization and Convolutional Neural Network in Fault Diagnosis of Electric Motorbike	fault diagnosis, convolutional neural network, sound visualization, spectrogram picture recognition, electric motorbike	38, 6, 1819-1827	https://doi.org/10.18280/ts.380626	Wu, J.D., Hsieh, C.Y., Luo, W.J. (2021). Sound visualization and convolutional neural network in fault diagnosis of electric motorbike. Traitement du Signal, Vol. 38, No. 6, pp. 1819-1827. https://doi.org/10.18280/ts.380626
749	Zou, J., Zhang, C., Ma, Z.J., Yu, L., Sun, K.W., Liu, T.F.	Image Feature Analysis and Dynamic Measurement of Plantar Pressure Based on Fusion Feature Extraction	fusion feature extraction, plantar pressure, feature analysis, dynamic parameter measurement	38, 6, 1829-1835	https://doi.org/10.18280/ts.380627	Zou, J., Zhang, C., Ma, Z.J., Yu, L., Sun, K.W., Liu, T.F. (2021). Image feature analysis and dynamic measurement of plantar pressure based on fusion feature extraction. Traitement du Signal, Vol. 38, No. 6, pp. 1829-1835. https://doi.org/10.18280/ts.380627
750	Kumar, M.S., Rao, K.V., Kumar, G.A.	MRI Image Based Classification Model for Lung Tumor Detection Using Convolutional Neural Networks	lung tumor, pre-processing, feature selection, classification, tumor detection, machine learning	38, 6, 1837-1842	https://doi.org/10.18280/ts.380628	Kumar, M.S., Rao, K.V., Kumar, G.A. (2021). MRI image based classification model for lung tumor detection using convolutional neural networks. Traitement du Signal, Vol. 38, No. 6, pp. 1837-1842. https://doi.org/10.18280/ts.380628
751	Soltani, O., Benabdelkader, S.	Euclidean Distance Versus Manhattan Distance for New Representative SFA Skin Samples for Human Skin Segmentation	face detection, skin segmentation, skin samples, Euclidean distance, Manhattan distance	38, 6, 1843-1851	https://doi.org/10.18280/ts.380629	Soltani, O., Benabdelkader, S. (2021). Euclidean distance versus Manhattan distance for new representative SFA skin samples for human skin segmentation. Traitement du Signal, Vol. 38, No. 6, pp. 1843-1851. https://doi.org/10.18280/ts.380629
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753	Raghu, K., Sadanandam, M.	A Perspective Study on Speech Emotion Recognition: Databases, Features and Classification Models	ASR, HCI, SER, Telugu emotional speech, acoustic, SVM, MLP, CNN	38, 6, 1861-1873	https://doi.org/10.18280/ts.380631	Raghu, K., Sadanandam, M. (2021). A perspective study on speech emotion recognition: Databases, features and classification models. Traitement du Signal, Vol. 38, No. 6, pp. 1861-1873. https://doi.org/10.18280/ts.380631
754	Jayaswal, R., Dixit, M.	Detection of Hidden Facial Surface Masking in Stored and Real Time Captured Images: A Deep Learning Perspective in Covid Time	COVID-19, face mask detection, DNN models, optimizers, CLAHE-SSD_IV3 model, RTFMD dataset	38, 6, 1875-1885	https://doi.org/10.18280/ts.380632	Jayaswal, R., Dixit, M. (2021). Detection of hidden facial surface masking in stored and real time captured images: A deep learning perspective in COVID time. Traitement du Signal, Vol. 38, No. 6, pp. 1875-1885. https://doi.org/10.18280/ts.380632
755	Zhang, C., Zou, J., Ma, Z.J., Wu, Q., Sheng, Z.G., Yan, Z.	Upper Limb Action Identification Based on Physiological Signals and Its Application in Limb Rehabilitation Training	physiological signals, upper limb motor function, upper limb action identification, limb rehabilitation	38, 6, 1887-1894	https://doi.org/10.18280/ts.380633	Zhang, C., Zou, J., Ma, Z.J., Wu, Q., Sheng, Z.G., Yan, Z. (2021). Upper limb action identification based on physiological signals and its application in limb rehabilitation training. Traitement du Signal, Vol. 38, No. 6, pp. 1887-1894. https://doi.org/10.18280/ts.380633
756	Rashid, M., Mustafa, M., Sulaiman, N., Abdullah, N.R.H., Samad, R.	Random Subspace K-NN Based Ensemble Classifier for Driver Fatigue Detection Utilizing Selected EEG Channels	electroencephalogram (EEG), driver fatigue, channel selection, ensemble classifier, correlation coefficient, random subspace k-NN	38, 5, 1259-1270	https://doi.org/10.18280/ts.380501	Rashid, M., Mustafa, M., Sulaiman, N., Abdullah, N.R.H., Samad, R. (2021). Random subspace K-NN based ensemble classifier for driver fatigue detection utilizing selected EEG channels. Traitement du Signal, Vol. 38, No. 5, pp. 1259-1270. https://doi.org/10.18280/ts.380501

757	Ornek, A.H., Ceylan, M.	Explainable Artificial Intelligence (XAI): Classification of Medical Thermal Images of Neonates Using Class Activation Maps	class activation maps, deep learning, explainable artificial intelligence, medicine, neonates, thermography, visualization	38, 5, 1271-1279	https://doi.org/10.18280/ts.380502	Ornek, A.H., Ceylan, M. (2021). Explainable artificial intelligence (XAI): Classification of medical thermal images of neonates using class activation maps. Traitement du Signal, Vol. 38, No. 5, pp. 1271-1279. https://doi.org/10.18280/ts.380502
758	Obeidat, Y., Alqudah, A.M.	A Hybrid Lightweight 1D CNN-LSTM Architecture for Automated ECG Beat-Wise Classification	convolutional neural network (CNN), electrocardiogram (ECG), long short-term memory (LSTM), deep learning (DL), classification, arrhythmia, cardiovascular disease (CVD)	38, 5, 1281-1291	https://doi.org/10.18280/ts.380503	Obeidat, Y., Alqudah, A.M. (2021). A hybrid lightweight 1D CNN-LSTM architecture for automated ECG beat-wise classification. Traitement du Signal, Vol. 38, No. 5, pp. 1281-1291. https://doi.org/10.18280/ts.380503
759	Hamdini, R., Diffellah, N., Namane, A.	Color Based Object Categorization Using Histograms of Oriented Hue and Saturation	categorization, descriptor, HOG, HSL, KNN, recognition, robots, SVM	38, 5, 1293-1307	https://doi.org/10.18280/ts.380504	Hamdini, R., Diffellah, N., Namane, A. (2021). Color based object categorization using histograms of oriented hue and saturation. Traitement du Signal, Vol. 38, No. 5, pp. 1293-1307. https://doi.org/10.18280/ts.380504
760	Zhao, J., Feng, Q.J.	Deep Att-ResGAN: A Retinal Vessel Segmentation Network for Color Fundus Images	retinal vessel segmentation, generative adversarial networks (GANs), attention module	38, 5, 1309-1317	https://doi.org/10.18280/ts.380505	Zhao, J., Feng, Q.J. (2021). Deep Att-ResGAN: A retinal vessel segmentation network for color fundus images. Traitement du Signal, Vol. 38, No. 5, pp. 1309-1317. https://doi.org/10.18280/ts.380505
761	Nogay, H.S.	Comparative Experimental Investigation of Deep Convolutional Neural Networks for Latent Fingerprint Pattern Classification	fingerprint, deep learning, transfer learning, DCNN, pattern recognition	38, 5, 1319-1326	https://doi.org/10.18280/ts.380506	Nogay, H.S. (2021). Comparative experimental investigation of deep convolutional neural networks for latent fingerprint pattern classification. Traitement du Signal, Vol. 38, No. 5, pp. 1319-1326. https://doi.org/10.18280/ts.380506
762	Banerjee, S., Singh, S.K., Chakraborty, A., Basu, S., Das, A., Bag, R.	Diagnosis of Melanoma Lesion Using Neutrosophic and Deep Learning	skin cancer, melanoma, skin lesion segmentation, Keras, deep learning, neutrosophic	38, 5, 1327-1338	https://doi.org/10.18280/ts.380507	Banerjee, S., Singh, S.K., Chakraborty, A., Basu, S., Das, A., Bag, R. (2021). Diagnosis of melanoma lesion using neutrosophic and deep learning. Traitement du Signal, Vol. 38, No. 5, pp. 1327-1338. https://doi.org/10.18280/ts.380507
763	Kabache, M., Guerti, M.	Acoustic Analysis of Voice Signal of Patients with Unilateral Laryngeal Paralysis a View to Objective Evaluation after Rehabilitation	acoustic analysis, vocal signal, speech pathology, unilateral laryngeal paralysis	38, 5, 1339-1344	https://doi.org/10.18280/ts.380508	Kabache, M., Guerti, M. (2021). Acoustic analysis of voice signal of patients with unilateral laryngeal paralysis a view to objective evaluation after rehabilitation. Traitement du Signal, Vol. 38, No. 5, pp. 1339-1344. https://doi.org/10.18280/ts.380508
764	Prakash, S.J., Chetty, M.S.R., A, J.	Contrast Enhancement of Images Using Meta-Heuristic Algorithm	image processing, contrast enhancement, meta-heuristic, chaotic crow search, optimization	38, 5, 1345-1351	https://doi.org/10.18280/ts.380509	Prakash, S.J., Chetty, M.S.R., A, J. (2021). Contrast enhancement of images using meta-heuristic algorithm. Traitement du Signal, Vol. 38, No. 5, pp. 1345-1351. https://doi.org/10.18280/ts.380509
765	Cao, F.Y.	Depth Estimation of Single Defocused Images Based on Multi-Feature Fusion	single defocused images, depth estimation, multi-feature fusion, edge sparse blur	38, 5, 1353-1360	https://doi.org/10.18280/ts.380510	Cao, F.Y. (2021). Depth estimation of single defocused images based on multi-feature fusion. Traitement du Signal, Vol. 38, No. 5, pp. 1353-1360. https://doi.org/10.18280/ts.380510
766	Senalp, F.M., Ceylan, M.	Deep Learning Based Super Resolution and Classification Applications for Neonatal Thermal Images	classification, datasets, deep learning, super-resolution, thermal imaging	38, 5, 1361-1368	https://doi.org/10.18280/ts.380511	Senalp, F.M., Ceylan, M. (2021). Deep learning based super resolution and classification applications for neonatal thermal images. Traitement du Signal, Vol. 38, No. 5, pp. 1361-1368. https://doi.org/10.18280/ts.380511
767	Lalitha, A., Reddy, G.H.	An Integrated Signal Allocation Model with Effective Collision Resolution Model for Performance Enhancement of Wireless Sensor Networks	signal allocation, collision reduction, performance enhancement, integrated model, labelled weighted model	38, 5, 1369-1375	https://doi.org/10.18280/ts.380512	Lalitha, A., Reddy, G.H. (2021). An integrated signal allocation model with effective collision resolution model for performance enhancement of wireless sensor networks. Traitement du Signal, Vol. 38, No. 5, pp. 1369-1375. https://doi.org/10.18280/ts.380512
768	Vankayalapati, R., Muddana, A.L.	Accurate Brain Tumor Recognition Using Double-Weighted Feature Extraction Labelling Model with Priority Weighted Feature Selection	brain tumor, feature extraction, feature selection, MRI images, classification, tumor cells, double weighted labelling, priority weights, tumor detection	38, 5, 1377-1383	https://doi.org/10.18280/ts.380513	Vankayalapati, R., Muddana, A.L. (2021). Accurate brain tumor recognition using double-weighted feature extraction labelling model with priority weighted feature selection. Traitement du Signal, Vol. 38, No. 5, pp. 1377-1383. https://doi.org/10.18280/ts.380513
769	Liu, C., Yang, J., Zhao, W.N., Zhang, Y.N., Shi, C.P., Miao, F.J., Zhang, J.S.	Differential Privacy Protection of Face Images Based on Region Growing	face image publication, interactive framework, differential privacy, region growing, growth rule	38, 5, 1385-1401	https://doi.org/10.18280/ts.380514	Liu, C., Yang, J., Zhao, W.N., Zhang, Y.N., Shi, C.P., Miao, F.J., Zhang, J.S. (2021). Differential privacy protection of face images based on region growing. Traitement du Signal, Vol. 38, No. 5, pp. 1385-1401. https://doi.org/10.18280/ts.380514
770	Othman, N.A., Aydin, I.	Challenges and Limitations in Human Action Recognition on Unmanned Aerial Vehicles: A Comprehensive Survey	human action recognition, human detection, unmanned aerial vehicle, image processing, smart city	38, 5, 1403-1411	https://doi.org/10.18280/ts.380515	Othman, N.A., Aydin, I. (2021). Challenges and limitations in human action recognition on unmanned aerial vehicles: A comprehensive survey. Traitement du Signal, Vol. 38, No. 5, pp. 1403-1411. https://doi.org/10.18280/ts.380515
771	Sreenivasulu, V., Wajeed, M.A.	Image Based Classification of Rumor Information from the Social Network Platform	image spam data, text spam data, internet sources, fake emails, fake information, image classification, text classification, security	38, 5, 1413-1421	https://doi.org/10.18280/ts.380516	Sreenivasulu, V., Wajeed, M.A. (2021). Image based classification of rumor information from the social network platform. Traitement du Signal, Vol. 38, No. 5, pp. 1413-1421. https://doi.org/10.18280/ts.380516
772	Efe, E., Özşen, S.	A New Approach for Automatic Sleep Staging: Siamese Neural Networks	electroencephalogram (EEG), Siamese neural networks (SNNs), automatic sleep staging, convolutional neural networks (CNNs), classification, data augmentation	38, 5, 1423-1430	https://doi.org/10.18280/ts.380517	Efe, E., Özşen, S. (2021). A new approach for automatic sleep staging: Siamese neural networks. Traitement du Signal, Vol. 38, No. 5, pp. 1423-1430. https://doi.org/10.18280/ts.380517
773	Jiang, Y.	Application of Deep Learning and Brain Images in Diagnosis of Alzheimer's Patients	deep learning, brain image recognition, Alzheimer's disease	38, 5, 1431-1438	https://doi.org/10.18280/ts.380518	Jiang, Y. (2021). Application of deep learning and brain images in diagnosis of Alzheimer's patients. Traitement du Signal, Vol. 38, No. 5, pp. 1431-1438. https://doi.org/10.18280/ts.380518
774	Zahari, Z.L., Mustafa, M., Zain, Z.M., Abdubrani, R., Naim, F.	The Enhancement on Stress Levels Based on Physiological Signal and Self-Stress Assessment	stress, EEG, MCCA, multimodal, indices, accuracy	38, 5, 1439-1447	https://doi.org/10.18280/ts.380519	Zahari, Z.L., Mustafa, M., Zain, Z.M., Abdubrani, R., Naim, F. (2021). The enhancement on stress levels based on physiological signal and self-stress assessment. Traitement du Signal, Vol. 38, No. 5, pp. 1439-1447. https://doi.org/10.18280/ts.380519

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776	Guler, H.	Development of Real-Time Fuzzy Synchronization of Chaos Based System for Image Encryption	chaotic circuit, synchronization, fuzzy, image encryption	38, 5, 1461-1467	https://doi.org/10.18280/ts.380521	Guler, H. (2021). Development of real-time fuzzy synchronization of chaos based system for image encryption. Traitement du Signal, Vol. 38, No. 5, pp. 1461-1467. https://doi.org/10.18280/ts.380521
777	Zhang, G.H., Ogihara, A., Zhou, S.Y., Yang, X.T., Wang, Y.J., Ma, X.W., Li, S.W., Li, K.	A Home Efficacy Multi-Modal Intelligent Evaluation System for Wearable Treatment Equipment of Insomnia Through Integration Between Traditional Chinese Medicine and Modern Medicine	home treatment, multi-modal intelligent evaluation system (MIES), traditional Chinese medicine (TCM), wearable TCM treatment equipment, insomnia	38, 5, 1469-1476	https://doi.org/10.18280/ts.380522	Zhang, G.H., Ogihara, A., Zhou, S.Y., Yang, X.T., Wang, Y.J., Ma, X.W., Li, S.W., Li, K. (2021). A home efficacy multi-modal intelligent evaluation system for wearable treatment equipment of insomnia through integration between traditional Chinese medicine and modern medicine. Traitement du Signal, Vol. 38, No. 5, pp. 1469-1476. https://doi.org/10.18280/ts.380522
778	Yilmaz, M.	Wavelet Based and Statistical EEG Analysis in Patients with Schizophrenia	EEG data, schizophrenia, wavelet analysis, statistics	38, 5, 1477-1483	https://doi.org/10.18280/ts.380523	Yilmaz, M. (2021). Wavelet based and statistical EEG analysis in patients with schizophrenia. Traitement du Signal, Vol. 38, No. 5, pp. 1477-1483. https://doi.org/10.18280/ts.380523
779	Tadepalli, Y., Kollati, M., Kuraparthi, S., Kora, P.	EfficientNet-B0 Based Monocular Dense-Depth Map Estimation	depth maps, monocular images, efficient net, up-sampling, Jaccard score, validation loss, mean actual error	38, 5, 1485-1493	https://doi.org/10.18280/ts.380524	Tadepalli, Y., Kollati, M., Kuraparthi, S., Kora, P. (2021). EfficientNet-B0 based monocular dense-depth map estimation. Traitement du Signal, Vol. 38, No. 5, pp. 1485-1493. https://doi.org/10.18280/ts.380524
780	Huang, H., Li, Z.	FAFNet: A False Alarm Filter Algorithm for License Plate Detection Based on Deep Neural Network	YOLOv5, FAFNet, false alarm filter, model generalization, embedded device	38, 5, 1495-1501	https://doi.org/10.18280/ts.380525	Huang, H., Li, Z. (2021). FAFNet: A false alarm filter algorithm for license plate detection based on deep neural network. Traitement du Signal, Vol. 38, No. 5, pp. 1495-1501. https://doi.org/10.18280/ts.380525
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782	Khrisat, M.S., Zaini, H.G., Alqadi, Z.A.	Simple, Flexible Method to Extract Digital Image Features	features vector, classification, speedup, throughput, k means clustering, WPT, composite vector	38, 5, 1509-1514	https://doi.org/10.18280/ts.380527	Khrisat, M.S., Zaini, H.G., Alqadi, Z.A. (2021). Simple, flexible method to extract digital image features. Traitement du Signal, Vol. 38, No. 5, pp. 1509-1514. https://doi.org/10.18280/ts.380527
783	Radhakrishnan, M., Ramamurthy, K., Kothandaraman, A., Madaan, G., Machavaram, H.	Investigating EEG Signals of Autistic Individuals Using Detrended Fluctuation Analysis	detrended fluctuation analysis, hurst parameter, self-similarity, typically developing, autism spectrum disorder	38, 5, 1515-1520	https://doi.org/10.18280/ts.380528	Radhakrishnan, M., Ramamurthy, K., Kothandaraman, A., Madaan, G., Machavaram, H. (2021). Investigating EEG signals of autistic individuals using detrended fluctuation analysis. Traitement du Signal, Vol. 38, No. 5, pp. 1515-1520. https://doi.org/10.18280/ts.380528
784	Zhao, Y.M., Yang, H., Su, G.A.	Design and Application of a Slow Feature Algorithm Coupling Visual Selectivity and Multiple Long Short-Term Memory Networks	slow features, long short-term memory network (LSTM), Lipshitz condition, visual selectivity, Gabor, visual computing	38, 5, 1521-1530	https://doi.org/10.18280/ts.380529	Zhao, Y.M., Yang, H., Su, G.A. (2021). Design and application of a slow feature algorithm coupling visual selectivity and multiple long short-term memory networks. Traitement du Signal, Vol. 38, No. 5, pp. 1521-1530. https://doi.org/10.18280/ts.380529
785	Sridhar, B.	Investigations of Medical Image Segmentation Methods with Inclusion Mathematical Morphological Operations	image segmentation, medical images, watershed transform, fuzzy logic based techniques, MRF and mathematical morphology	38, 5, 1531-1540	https://doi.org/10.18280/ts.380530	Sridhar, B. (2021). Investigations of medical image segmentation methods with inclusion mathematical morphological operations. Traitement du Signal, Vol. 38, No. 5, pp. 1531-1540. https://doi.org/10.18280/ts.380530
786	Liu, C., Antypenko, R., Sushko, I., Zakharchenko, O., Wang, J.	Marine Distributed Radar Signal Identification and Classification Based on Deep Learning	distributed radar, deep learning, marine environment monitoring, radar signal identification	38, 5, 1541-1548	https://doi.org/10.18280/ts.380531	Liu, C., Antypenko, R., Sushko, I., Zakharchenko, O., Wang, J. (2021). Marine distributed radar signal identification and classification based on deep learning. Traitement du Signal, Vol. 38, No. 5, pp. 1541-1548. https://doi.org/10.18280/ts.380531
787	Vigil, A., Bharathi, S.	Diagnosis of Pulpitis from Dental Panoramic Radiograph Using Histogram of Gradients with Discrete Wavelet Transform and Multilevel Neural Network Techniques	dental panoramic radiograph, modified k-means, pulpitis, discrete wavelet transform, multi-level neural network	38, 5, 1549-1555	https://doi.org/10.18280/ts.380532	Vigil, A., Bharathi, S. (2021). Diagnosis of pulpitis from dental panoramic radiograph using histogram of gradients with discrete wavelet transform and multilevel neural network techniques. Traitement du Signal, Vol. 38, No. 5, pp. 1549-1555. https://doi.org/10.18280/ts.380532
788	Chen, Y.	An Alzheimer's Disease Identification and Classification Model Based on the Convolutional Neural Network with Attention Mechanisms	Alzheimer's disease, identification and classification, attention mechanism, convolutional neural network	38, 5, 1557-1564	https://doi.org/10.18280/ts.380533	Chen, Y. (2021). An Alzheimer's disease identification and classification model based on the convolutional neural network with attention mechanisms. Traitement du Signal, Vol. 38, No. 5, pp. 1557-1564. https://doi.org/10.18280/ts.380533
789	Benabdallah, H., Kerai, S.	Respiratory and Motion Artefacts Removal from ICG Signal Using Denoising Techniques for Hemodynamic Parameters Monitoring	impedance cardiography, orthogonal wavelet, thresholding technique, linear filter, adaptive filter, biosignal denoising	38, 4, 919-928	https://doi.org/10.18280/ts.380401	Benabdallah, H., Kerai, S. (2021). Respiratory and motion artefacts removal from ICG signal using denoising techniques for hemodynamic parameters monitoring. Traitement du Signal, Vol. 38, No. 4, pp. 919-928. https://doi.org/10.18280/ts.380401
790	Salgado, M.C., Elias, R.P., Salazar, A.M.	Function to Flatten Gesture Data for Specific Feature Selection Methods to Improve Classification	Bayesian networks, chronologically linked data, feature selection methods, gesture classification, Logical Combinatorial to Pattern Recognition, Markov blanket	38, 4, 929-935	https://doi.org/10.18280/ts.380402	Salgado, M.C., Elias, R.P., Salazar, A.M. (2021). Function to flatten gesture data for specific feature selection methods to improve classification. Traitement du Signal, Vol. 38, No. 4, pp. 929-935. https://doi.org/10.18280/ts.380402
791	Tian, W.J., Hu, Y.Z.	Label Importance Ranking with Entropy Variation Complex Networks for Structured Video Captioning	video captioning, label importance, complex networks, entropy variation	38, 4, 937-946	https://doi.org/10.18280/ts.380403	Tian, W.J., Hu, Y.Z. (2021). Label importance ranking with entropy variation complex networks for structured video captioning. Traitement du Signal, Vol. 38, No. 4, pp. 937-946. https://doi.org/10.18280/ts.380403
792	Gedik, O., Demirhan, A.	Comparison of the Effectiveness of Deep Learning Methods for Face Mask Detection	CNN, deep learning, face mask detection, transfer learning	38, 4, 947-953	https://doi.org/10.18280/ts.380404	Gedik, O., Demirhan, A. (2021). Comparison of the effectiveness of deep learning methods for face mask detection. Traitement du Signal, Vol. 38, No. 4, pp. 947-953. https://doi.org/10.18280/ts.380404

793	Slama, A.B., Mbarki, Z., Seddik, H., Marrakchi, J., Boukriba, S., Labidi, S.	Improving Parotid Gland Tumor Segmentation and Classification Using Geometric Active Contour Model and Deep Neural Network Framework	active contours, filtering system, boundary modeling, deep neural networks, classification scheme	38, 4, 955-965	https://doi.org/10.18280/ts.380405	Slama, A.B., Mbarki, Z., Seddik, H., Marrakchi, J., Boukriba, S., Labidi, S. (2021). Improving parotid gland tumor segmentation and classification using geometric active contour model and deep neural network framework. Traitement du Signal, Vol. 38, No. 4, pp. 955-965. https://doi.org/10.18280/ts.380405
794	Mütevelli, M.H., Ergin, S.	The Detection of Brain Tumors Using Chan-Vese Active Contour Without Edges Method in Magnetic Resonance (MR) Images	brain tumor, computer aided detection, skull removal, suspicious region detection	38, 4, 967-978	https://doi.org/10.18280/ts.380406	Mütevelli, M.H., Ergin, S. (2021). The detection of brain tumors using Chan-Vese active contour without edges method in magnetic resonance (MR) images. Traitement du Signal, Vol. 38, No. 4, pp. 967-978. https://doi.org/10.18280/ts.380406
795	Bo, Q.Y., Cheng, W.Q.	Design of a Groundwater Level Monitoring System Based on Internet of Things and Image Recognition	image recognition, internet of things (IoT), groundwater level monitoring, edge detection algorithm	38, 4, 979-984	https://doi.org/10.18280/ts.380407	Bo, Q.Y., Cheng, W.Q. (2021). Design of a groundwater level monitoring system based on Internet of Things and image recognition. Traitement du Signal, Vol. 38, No. 4, pp. 979-984. https://doi.org/10.18280/ts.380407
796	Hadiyoso, S., Zakaria, H., Ong, P.A., Mengko, T.L.E.R.	Hemispheric Coherence Analysis of Wide Band EEG Signals for Characterization of Post-Stroke Patients with Dementia	post-stroke, dementia, EEG, coherence	38, 4, 985-992	https://doi.org/10.18280/ts.380408	Hadiyoso, S., Zakaria, H., Ong, P.A., Mengko, T.L.E.R. (2021). Hemispheric coherence analysis of wide band EEG signals for characterization of post-stroke patients with dementia. Traitement du Signal, Vol. 38, No. 4, pp. 985-992. https://doi.org/10.18280/ts.380408
797	Gollu, V.K., Sravani, G.U., Prakash, M.S., Srikanth, G.	Pipeline of Optimization Techniques for Multi-Level Thresholding in Medical Image Compression Using 2D Histogram	genetic algorithm (GA), image compression, image thresholding, particle swarm optimization (PSO), symbiotic organisms search (SOS), 2-D histogram	38, 4, 993-1006	https://doi.org/10.18280/ts.380409	Gollu, V.K., Sravani, G.U., Prakash, M.S., Srikanth, G. (2021). Pipeline of optimization techniques for multi-level thresholding in medical image compression using 2D histogram. Traitement du Signal, Vol. 38, No. 4, pp. 993-1006. https://doi.org/10.18280/ts.380409
798	Ahmadimehr, S., Moridani, M.K.	Identify Attractive and Unattractive Individuals Based on Geometric Features Using Neural Network	attractive, landmarks, geometric feature, classification, neural network	38, 4, 1007-1012	https://doi.org/10.18280/ts.380410	Ahmadimehr, S., Moridani, M.K. (2021). Identify attractive and unattractive individuals based on geometric features using neural network. Traitement du Signal, Vol. 38, No. 4, pp. 1007-1012. https://doi.org/10.18280/ts.380410
799	Zhang, Q., Xiao, L.Y., Shi, Y.F.	Extraction and Classification of Mouth Shape Features in Oral English Teaching Based on Image Processing	oral English teaching, mouth shape feature extraction, mouth shape classification, image processing	38, 4, 1013-121	https://doi.org/10.18280/ts.380411	Zhang, Q., Xiao, L.Y., Shi, Y.F. (2021). Extraction and classification of mouth shape features in oral English teaching based on image processing. Traitement du Signal, Vol. 38, No. 4, pp. 1013-1021. https://doi.org/10.18280/ts.380411
800	Aggarwal, S., Bhatia, M., Madaan, R., Pandey, H.M.	SVM Prediction Model Interface for Plant Contaminates	pollution, plants, prediction, classification, air quality index, GUI	38, 4, 1023-1032	https://doi.org/10.18280/ts.380412	Aggarwal, S., Bhatia, M., Madaan, R., Pandey, H.M. (2021). SVM prediction model interface for plant contaminates. Traitement du Signal, Vol. 38, No. 4, pp. 1023-1032. https://doi.org/10.18280/ts.380412
801	Singh, A.K., Kim, Y.H.	Classification of Drones Using Edge-Enhanced Micro-Doppler Image Based on CNN	classification, radar signal processing, W-band, micro-Doppler imaging, deep learning	38, 4, 1033-1039	https://doi.org/10.18280/ts.380413	Singh, A.K., Kim, Y.H. (2021). Classification of drones using edge-enhanced micro-doppler image based on CNN. Traitement du Signal, Vol. 38, No. 4, pp. 1033-1039. https://doi.org/10.18280/ts.380413
802	Luo, X.J.	Three-Dimensional Image Quality Evaluation and Optimization Based on Convolutional Neural Network	convolutional neural network (CNN), three-dimensional (3D) image, quality evaluation, quality optimization	38, 4, 1041-1049	https://doi.org/10.18280/ts.380414	Luo, X.J. (2021). Three-dimensional image quality evaluation and optimization based on convolutional neural network. Traitement du Signal, Vol. 38, No. 4, pp. 1041-1049. https://doi.org/10.18280/ts.380414
803	Lakra, M., Kumar, S.	Disparity Computation Through PDE and Data-Driven CeNN Technique	belief propagation, cellular neural network, distance regularization term, energy minimization	38, 4, 1051-1059	https://doi.org/10.18280/ts.380415	Lakra, M., Kumar, S. (2021). Disparity computation through PDE and data-driven CeNN technique. Traitement du Signal, Vol. 38, No. 4, pp. 1051-1059. https://doi.org/10.18280/ts.380415
804	Challab, J.M., Mardukhi, F.	A Hybrid Method Based on LSTM and Optimized SVM for Diagnosis of Novel Coronavirus (COVID-19)	ant colony optimization (ACO), COVID-19, ant lion optimization (ALO), support vector machine (SVM), RNN	38, 4, 1061-1069	https://doi.org/10.18280/ts.380416	Challab, J.M., Mardukhi, F. (2021). A hybrid method based on LSTM and optimized SVM for diagnosis of novel coronavirus (COVID-19). Traitement du Signal, Vol. 38, No. 4, pp. 1061-1069. https://doi.org/10.18280/ts.380416
805	Xue, P., Jiang, C.H., Pang, H.L.	Detection of Various Types of Metal Surface Defects Based on Image Processing	image processing, metal surface, defect detection, EfficientNet	38, 4, 1071-1078	https://doi.org/10.18280/ts.380417	Xue, P., Jiang, C.H., Pang, H.L. (2021). Detection of various types of metal surface defects based on image processing. Traitement du Signal, Vol. 38, No. 4, pp. 1071-1078. https://doi.org/10.18280/ts.380417
806	Pardhu, T., Kumar, V.	Novel Implementations of Clutter and Target Discrimination Using Threshold Skewness Method	SVD, TS, clutter, target	38, 4, 1079-1085	https://doi.org/10.18280/ts.380418	Pardhu, T., Kumar, V. (2021). Novel implementations of clutter and target discrimination using threshold skewness method. Traitement du Signal, Vol. 38, No. 4, pp. 1079-1085. https://doi.org/10.18280/ts.380418
807	Wu, J.D., Chen, B.Y., Shyr, W.J., Shih, F.Y.	Vehicle Classification and Counting System Using YOLO Object Detection Technology	vehicle classification system, convolution neural network, traffic flow, intelligent transportation system	38, 4, 1087-1093	https://doi.org/10.18280/ts.380419	Wu, J.D., Chen, B.Y., Shyr, W.J., Shih, F.Y. (2021). Vehicle classification and counting system using YOLO object detection technology. Traitement du Signal, Vol. 38, No. 4, pp. 1087-1093. https://doi.org/10.18280/ts.380419
808	Lu, M.S., Liu, H.Y., Yuan, X.P.	Thermal Fault Diagnosis of Electrical Equipment in Substations Based on Image Fusion	infrared thermal imaging, electrical equipment, substation, thermal fault diagnosis	38, 4, 1095-1102	https://doi.org/10.18280/ts.380420	Lu, M.S., Liu, H.Y., Yuan, X.P. (2021). Thermal fault diagnosis of electrical equipment in substations based on image fusion. Traitement du Signal, Vol. 38, No. 4, pp. 1095-1102. https://doi.org/10.18280/ts.380420
809	Joshua, E.S.N., Bhattacharyya, D., Chakkravarthy, M., Kim, H.J.	Lung Cancer Classification Using Squeeze and Excitation Convolutional Neural Networks with Grad Cam++ Class Activation Function	lung cancer, (SENET) squeeze and excite network, class activation, Grad-Cam++, deep learning, CNN, Luna-16, nodule	38, 4, 1103-1112	https://doi.org/10.18280/ts.380421	Joshua, E.S.N., Bhattacharyya, D., Chakkravarthy, M., Kim, H.J. (2021). Lung cancer classification using squeeze and excitation convolutional neural networks with Grad Cam++ class activation function. Traitement du Signal, Vol. 38, No. 4, pp. 1103-1112. https://doi.org/10.18280/ts.380421
810	Chaudhary, S., Hiranwal, S., Gupta, C.P.	Spectral Graph Wavelet Based Image Steganography Using SVD and Arnold Transform	graph signal processing, steganography, spectral graph wavelet, SVD, Arnold transform	38, 4, 1113-1121	https://doi.org/10.18280/ts.380422	Chaudhary, S., Hiranwal, S., Gupta, C.P. (2021). Spectral graph wavelet based image steganography using SVD and Arnold transform. Traitement du Signal, Vol. 38, No. 4, pp. 1113-1121. https://doi.org/10.18280/ts.380422

811	Huang, W.	Elderly Depression Recognition Based on Facial Micro-Expression Extraction	micro-expression, expression feature extraction, elderly depression recognition, deep learning (DL)	38, 4, 1123-1130	https://doi.org/10.18280/ts.380423	Huang, W. (2021). Elderly depression recognition based on facial micro-expression extraction. Traitement du Signal, Vol. 38, No. 4, pp. 1123-1130. https://doi.org/10.18280/ts.380423
812	Virnodkar, S.S., Pachghare, V.K., Patil, V.C., Jha, S.K.	DenseResUNet: An Architecture to Assess Water-Stressed Sugarcane Crops from Sentinel-2 Satellite Imagery	sugarcane crop, Sentinel-2, deep learning, crop water stress, DenseResUNet	38, 4, 1131-1139	https://doi.org/10.18280/ts.380424	Virnodkar, S.S., Pachghare, V.K., Patil, V.C., Jha, S.K. (2021). DenseResUNet: An architecture to assess water-stressed sugarcane crops from Sentinel-2 satellite imagery. Traitement du Signal, Vol. 38, No. 4, pp. 1131-1139. https://doi.org/10.18280/ts.380424
813	Ahmed, M.Z., Mahesh, C.	An Efficient Image Based Feature Extraction and Feature Selection Model for Medical Data Clustering Using Deep Neural Networks	feature extraction, feature selection, medical data clustering, deep neural networks, deep convolution neural network, content based image retrieval	38, 4, 1141-1148	https://doi.org/10.18280/ts.380425	Ahmed, M.Z., Mahesh, C. (2021). An efficient image based feature extraction and feature selection model for medical data clustering using deep neural networks. Traitement du Signal, Vol. 38, No. 4, pp. 1141-1148. https://doi.org/10.18280/ts.380425
814	Sun, H.Y., Qi, Y.R., Tian, W.L., Chen, G., Wang, Y.N.	Propagation Features of Channel Wave Signal in Coal Seam with Scouring Zone	channel wave signal propagation, scouring zone, finite-element method	38, 4, 1149-1160	https://doi.org/10.18280/ts.380426	Sun, H.Y., Qi, Y.R., Tian, W.L., Chen, G., Wang, Y.N. (2021). Propagation features of channel wave signal in coal seam with scouring zone. Traitement du Signal, Vol. 38, No. 4, pp. 1149-1160. https://doi.org/10.18280/ts.380426
815	Brahmaiah, V.P., Sai, Y.P., Prasad, M.N.G.	Accurate and Efficient Differentiation Between Normal and Epileptic Seizure of Eyes Using 13 Layer Convolution Neural Network	background noise, dynamic time wrapping, hidden Markov model, blink features, optimal feature selection, thirteen layer neural network	38, 4, 1161-1169	https://doi.org/10.18280/ts.380427	Brahmaiah, V.P., Sai, Y.P., Prasad, M.N.G. (2021). Accurate and efficient differentiation between normal and epileptic seizure of eyes using 13 layer convolution neural network. Traitement du Signal, Vol. 38, No. 4, pp. 1161-1169. https://doi.org/10.18280/ts.380427
816	Kuraparthi, S., Reddy, M.K., Sujatha, C.N., Valiveti, H., Duggineni, C., Kollati, M., Kora, P., V, S.	Brain Tumor Classification of MRI Images Using Deep Convolutional Neural Network	brain tumor, data augmentation, deep convolutional neural networks, magnetic resonance images, transfer learning, support vector machine	38, 4, 1171-1179	https://doi.org/10.18280/ts.380428	Kuraparthi, S., Reddy, M.K., Sujatha, C.N., Valiveti, H., Duggineni, C., Kollati, M., Kora, P., V, S. (2021). Brain tumor classification of MRI images using deep convolutional neural network. Traitement du Signal, Vol. 38, No. 4, pp. 1171-1179. https://doi.org/10.18280/ts.380428
817	Gao, Z.T., Cai, J.X., Shi, Y.N., Hong, L., Yan, F.F., Zhang, M.Y.	Integration of Two-Dimensional Kernel Principal Component Analysis Plus Two-Dimensional Linear Discriminant Analysis with Convolutional Neural Network for Finger Vein Recognition	finger vein recognition, subspace learning, convolutional neural network (CNN)	38, 4, 1181-1187	https://doi.org/10.18280/ts.380429	Gao, Z.T., Cai, J.X., Shi, Y.N., Hong, L., Yan, F.F., Zhang, M.Y. (2021). Integration of two-dimensional kernel principal component analysis plus two-dimensional linear discriminant analysis with convolutional neural network for finger vein recognition. Traitement du Signal, Vol. 38, No. 4, pp. 1181-1187. https://doi.org/10.18280/ts.380429
818	Abdulrahman, A., Baykara, M.	A Comprehensive Review for Emotion Detection Based on EEG Signals: Challenges, Applications, and Open Issues	electroencephalogram, classification, emotion recognition, features extraction, EEG, FFT, DWT	38, 4, 1189-1200	https://doi.org/10.18280/ts.380430	Abdulrahman, A., Baykara, M. (2021). A comprehensive review for emotion detection based on EEG signals: Challenges, applications, and open issues. Traitement du Signal, Vol. 38, No. 4, pp. 1189-1200. https://doi.org/10.18280/ts.380430
819	Aswini, T.V.N.L., Raju, K.P., Kumari, B.L.	Subsampled Circulant Matrix Based Wideband Spectrum Sensing Using Fusion Based Recovery Algorithm	modulated wideband converter, circulant matrix, deterministic sequence, compressive sensing, orthogonal matching pursuit	38, 4, 1201-1208	https://doi.org/10.18280/ts.380431	Aswini, T.V.N.L., Raju, K.P., Kumari, B.L. (2021). Subsampled circulant matrix based wideband spectrum sensing using fusion based recovery algorithm. Traitement du Signal, Vol. 38, No. 4, pp. 1201-1208. https://doi.org/10.18280/ts.380431
820	Han, X., Jiang, S., Yu, J., Zhang, F.	A Visual Tracking Algorithm Based on Estimation of Regression Probability Distribution	target tracking, Siamese network, regression probability distribution, quality assessment	38, 4, 1209-1215	https://doi.org/10.18280/ts.380432	Han, X., Jiang, S., Yu, J., Zhang, F. (2021). A visual tracking algorithm based on estimation of regression probability distribution. Traitement du Signal, Vol. 38, No. 4, pp. 1209-1215. https://doi.org/10.18280/ts.380432
821	Choubey, S.B., Choubey, A., Nandan, D., Mahajan, A.	Polycystic Ovarian Syndrome Detection by Using Two-Stage Image Denoising	denoising, Discrete Wavelet Transform (DWT), neural network, Polycystic Ovarian Syndrome (PCOS) detection, PSNR, MSE, SSIM	38, 4, 1217-1227	https://doi.org/10.18280/ts.380433	Choubey, S.B., Choubey, A., Nandan, D., Mahajan, A. (2021). Polycystic ovarian syndrome detection by using two-stage image denoising. Traitement du Signal, Vol. 38, No. 4, pp. 1217-1227. https://doi.org/10.18280/ts.380433
822	Avci, D., Sert, E.	An Effective Turkey Marble Classification System: Convolutional Neural Network with Genetic Algorithm -Wavelet Kernel - Extreme Learning Machine	CNN, genetic algorithm, wavelet kernel-extreme learning machine, marble classification	38, 4, 1229-1235	https://doi.org/10.18280/ts.380434	Avci, D., Sert, E. (2021). An effective turkey marble classification system: Convolutional neural network with genetic algorithm -wavelet kernel - extreme learning machine. Traitement du Signal, Vol. 38, No. 4, pp. 1229-1235. https://doi.org/10.18280/ts.380434
823	Chen, D., Tang, J.L., Xi, H.X., Zhao, X.R.	Image Recognition of Modern Agricultural Fruit Maturity Based on Internet of Things	internet of things (IoT), image processing, modern agriculture, fruit maturity	38, 4, 1237-1244	https://doi.org/10.18280/ts.380435	Chen, D., Tang, J.L., Xi, H.X., Zhao, X.R. (2021). Image recognition of modern agricultural fruit maturity based on internet of things. Traitement du Signal, Vol. 38, No. 4, pp. 1237-1244. https://doi.org/10.18280/ts.380435
824	Alaoui, N., Mashat, A., Adamou-Mitiche, A.B.H., Mitiche, L., Djalab, A., Daoudi, S., Bouhamla, L.	Impulse Noise Removal Based on Hybrid Genetic Algorithm	image denosing, noise removal, impulse noise, salt and pepper noise, genetic algorithm	38, 4, 1245-1251	https://doi.org/10.18280/ts.380436	Alaoui, N., Mashat, A., Adamou-Mitiche, A.B.H., Mitiche, L., Djalab, A., Daoudi, S., Bouhamla, L. (2021). Impulse noise removal based on hybrid genetic algorithm. Traitement du Signal, Vol. 38, No. 4, pp. 1245-1251. https://doi.org/10.18280/ts.380436
825	Zhong, L.H., Li, J., Zhou, F.F., Bao, X.A., Xing, W.Y., Han, Z.Y., Luo, J.S.	Integration Between Cascade Region-Based Convolutional Neural Network and Bi-Directional Feature Pyramid Network for Live Object Tracking and Detection	cascade region-based convolutional neural network (R-CNN), bi-directional feature pyramid network (BiFPN), live object tracking and detection	38, 4, 1253-1257	https://doi.org/10.18280/ts.380437	Zhong, L.H., Li, J., Zhou, F.F., Bao, X.A., Xing, W.Y., Han, Z.Y., Luo, J.S. (2021). Integration between cascade region-based convolutional neural network and bi-directional feature pyramid network for live object tracking and detection. Traitement du Signal, Vol. 38, No. 4, pp. 1253-1257. https://doi.org/10.18280/ts.380437
826	Telli, H., Sbaa, S., Bekhouche, S.E., Dornaika, F., Taleb-Ahmed, A., López, M.B.	A Novel Multi-Level Pyramid Co-Variance Operators for Estimation of Personality Traits and Job Screening Scores	APA2016 dataset, Big-Five personality traits, job candidate screening, PML-COV descriptor, regression	38, 3, 539-546	https://doi.org/10.18280/ts.380301	Telli, H., Sbaa, S., Bekhouche, S.E., Dornaika, F., Taleb-Ahmed, A., Ló pez, M.B. (2021). A novel multi-level Pyramid Co-Variance operators for estimation of personality traits and job screening scores. Traitement du Signal, Vol. 38, No. 3, pp. 539-546. https://doi.org/10.18280/ts.380301
827	Papageorgiou, V.	Brain Tumor Detection Based on Features Extracted and Classified Using a Low-Complexity Neural Network	artificial intelligence, brain MRI, convolutional neural networks, cross-entropy, Jensen-Shannon divergence, loss functions, tumor detection	38, 3, 547-554	https://doi.org/10.18280/ts.380302	Papageorgiou, V. (2021). Brain tumor detection based on features extracted and classified using a low-complexity neural network. Traitement du Signal, Vol. 38, No. 3, pp. 547-554. https://doi.org/10.18280/ts.380302
828	Benaissa, B.E., Lahfa, F., Naima, K., Lorenzini, G., Inc, M., Menni, Y.	Detection and Cooperative Communications for Deployment Sensor Networks	Wireless Sensor Network (WSN), clustering, Received Signal Strength Indicator (RSSI), IoT routing protocol	38, 3, 555-564	https://doi.org/10.18280/ts.380303	Benaissa, B.E., Lahfa, F., Naima, K., Lorenzini, G., Inc, M., Menni, Y. (2021). Detection and cooperative communications for deployment sensor networks. Traitement du Signal, Vol. 38, No. 3, pp. 555-564. https://doi.org/10.18280/ts.380303

829	Jia, Y.K., Ding, R.T., Ren, W., Shu, J.F., Jin, A.X.	Gesture Recognition of Somatosensory Interactive Acupoint Massage Based on Image Feature Deep Learning Model	image feature, deep learning, somatosensory interaction, gesture recognition, acupoint massage	38, 3, 565-572	https://doi.org/10.18280/ts.380304	Jia, Y.K., Ding, R.T., Ren, W., Shu, J.F., Jin, A.X. (2021). Gesture recognition of somatosensory interactive acupoint massage based on image feature deep learning model. Traitement du Signal, Vol. 38, No. 3, pp. 565-572. https://doi.org/10.18280/ts.380304
830	Ouannes, L., Ben Khalifa, A., Essoukri Ben Amara, N.	Comparative Study Based on De-Occlusion and Reconstruction of Face Images in Degraded Conditions	face recognition, degraded conditions, face detection, face de-occlusion, face reconstruction, Laplacian pyramid blending, CycleGANs	38, 3, 573-585	https://doi.org/10.18280/ts.380305	Ouannes, L., Ben Khalifa, A., Essoukri Ben Amara, N. (2021). Comparative study based on de-occlusion and reconstruction of face images in degraded conditions. Traitement du Signal, Vol. 38, No. 3, pp. 573-585. https://doi.org/10.18280/ts.380305
831	Özel, E., Tekin, R., Kaya, Y.	Implementation of Artifact Removal Algorithms in Gait Signals for Diagnosis of Parkinson Disease	filtering and noise reduction, Parkinson disease, feature extraction, signal processing	38, 3, 587-597	https://doi.org/10.18280/ts.380306	Özel, E., Tekin, R., Kaya, Y. (2021). Implementation of artifact removal algorithms in gait signals for diagnosis of Parkinson disease. Traitement du Signal, Vol. 38, No. 3, pp. 587-597. https://doi.org/10.18280/ts.380306
832	Liu, Y.G., Wu, Y.	A Multi-Feature Motion Posture Recognition Model Based on Genetic Algorithm	motion posture recognition, multi-feature, genetic algorithm (GA), visual background extractor (ViBe) algorithm	38, 3, 599-605	https://doi.org/10.18280/ts.380307	Liu, Y.G., Wu, Y. (2021). A multi-feature motion posture recognition model based on genetic algorithm. Traitement du Signal, Vol. 38, No. 3, pp. 599-605. https://doi.org/10.18280/ts.380307
833	Panguluri, S.K., Mohan, L.	A DWT Based Novel Multimodal Image Fusion Method	infrared image, visible image, DWT, IDWT, Filters based mean-weighted fusion rule, Filters based max-weighted fusion rule	38, 3, 607-617	https://doi.org/10.18280/ts.380308	Panguluri, S.K., Mohan, L. (2021). A DWT based novel multimodal image fusion method. Traitement du Signal, Vol. 38, No. 3, pp. 607-617. https://doi.org/10.18280/ts.380308
834	Firildak, K., Talu, M.F.	A Hybrid Capsule Network for Pneumonia Detection Using Image Augmentation Based on Generative Adversarial Network	pneumonia, capsule network, deep convolutional generative adversarial network (DCGAN), chest X-ray, data augmentation, classification	38, 3, 619-627	https://doi.org/10.18280/ts.380309	Firildak, K., Talu, M.F. (2021). A hybrid capsule network for pneumonia detection using image augmentation based on generative adversarial network. Traitement du Signal, Vol. 38, No. 3, pp. 619-627. https://doi.org/10.18280/ts.380309
835	Chen, Y., Wang, Y.Y., Cai, Z.H., Jiang, M.	Predictions for Central Lymph Node Metastasis of Papillary Thyroid Carcinoma via CNN-Based Fusion Modeling of Ultrasound Images	papillary thyroid carcinoma, central lymph node metastasis, ultrasound images, radiomic feature, deep learning, convolutional neural network	38, 3, 629-638	https://doi.org/10.18280/ts.380310	Chen, Y., Wang, Y.Y., Cai, Z.H., Jiang, M. (2021). Predictions for central lymph node metastasis of papillary thyroid carcinoma via CNN-based fusion modeling of ultrasound images. Traitement du Signal, Vol. 38, No. 3, pp. 629-638. https://doi.org/10.18280/ts.380310
836	Ismael, A.A., Baykara, M.	Digital Image Denoising Techniques Based on Multi-Resolution Wavelet Domain with Spatial Filters: A Review	digital image denoising, hybrid denoising, multi-resolution wavelet domain, spatial domain filtering, thresholding techniques	38, 3, 639-651	https://doi.org/10.18280/ts.380311	Ismael, A.A., Baykara, M. (2021). Digital image denoising techniques based on multi-resolution wavelet domain with spatial filters: A review. Traitement du Signal, Vol. 38, No. 3, pp. 639-651. https://doi.org/10.18280/ts.380311
837	Hassan, L., Saleh, A., Abdel-Nasser, M., Omer, O.A., Puig, D.	Efficient Multi-Organ Multi-Center Cell Nuclei Segmentation Method Based on Deep Learnable Aggregation Network	computer-aided diagnosis, deep learning, digital pathology, nuclei segmentation, whole slide imaging	38, 3, 653-661	https://doi.org/10.18280/ts.380312	Hassan, L., Saleh, A., Abdel-Nasser, M., Omer, O.A., Puig, D. (2021). Efficient multi-organ multi-center cell nuclei segmentation method based on deep learnable aggregation network. Traitement du Signal, Vol. 38, No. 3, pp. 653-661. https://doi.org/10.18280/ts.380312
838	Quan, X.Z., Chen, J.	Multi-Source Data Fusion and Target Tracking of Heterogeneous Network Based on Data Mining	data mining, heterogeneous network, multi-source data fusion and target tracking, millimeter wave heterogeneous network	38, 3, 663-671	https://doi.org/10.18280/ts.380313	Quan, X.Z., Chen, J. (2021). Multi-source data fusion and target tracking of heterogeneous network based on data mining. Traitement du Signal, Vol. 38, No. 3, pp. 663-671. https://doi.org/10.18280/ts.380313
839	Tuncer, S.A., Çınar, A., Fırat, M.	Hybrid CNN Based Computer-Aided Diagnosis System for Choroidal Neovascularization, Diabetic Macular Edema, Drusen Disease Detection from OCT Images	choroidal neovascularization, drusen, diabetic macular edema, CNN-SVM	38, 3, 673-679	https://doi.org/10.18280/ts.380314	Tuncer, S.A., Çınar, A., Fırat, M. (2021). Hybrid CNN based computer-aided diagnosis system for choroidal neovascularization, diabetic macular edema, drusen disease detection from OCT images. Traitement du Signal, Vol. 38, No. 3, pp. 673-679. https://doi.org/10.18280/ts.380314
840	Kathi, M.G., Shaik, J.H.	An Approach of Detecting the Age of a Human by Extracting the Face Parts and Applying the Hierarchical Methods	age prediction, CNN, face parts extraction, Hierarchical method	38, 3, 681-688	https://doi.org/10.18280/ts.380315	Kathi, M.G., Shaik, J.H. (2021). An approach of detecting the age of a human by extracting the face parts and applying the hierarchical methods. Traitement du Signal, Vol. 38, No. 3, pp. 681-688. https://doi.org/10.18280/ts.380315
841	Zhang, C., Zou, J., Ma, Z.J.	Identification and Analysis of Limb Rehabilitation Signal Based on Wavelet Transform	wavelet thresholding, limb rehabilitation, electromyography (EMG) signal, pattern recognition	38, 3, 689-697	https://doi.org/10.18280/ts.380316	Zhang, C., Zou, J., Ma, Z.J. (2021). Identification and analysis of limb rehabilitation signal based on wavelet transform. Traitement du Signal, Vol. 38, No. 3, pp. 689-697. https://doi.org/10.18280/ts.380316
842	Wagle, S.A., R, H.	A Deep Learning-Based Approach in Classification and Validation of Tomato Leaf Disease	AlexNet, classification of plant disease, data augmentation, GoogLeNet, MobileNetv2, SqueezeNet, validation, VGG16	38, 3, 699-709	https://doi.org/10.18280/ts.380317	Wagle, S.A., R, H. (2021). A deep learning-based approach in classification and validation of tomato leaf disease. Traitement du Signal, Vol. 38, No. 3, pp. 699-709. https://doi.org/10.18280/ts.380317
843	Khrisat, M.S., Zneit, R.S.A., Zaini, H.G., Alqadi, Z.A.	Analysis Methods Used to Extract Fingerprints Features	fingerprint, histogram, MLBP, K_means, WPT, minutiae, features, rotation	38, 3, 711-717	https://doi.org/10.18280/ts.380318	Khrisat, M.S., Zneit, R.S.A., Zaini, H.G., Alqadi, Z.A. (2021). Analysis methods used to extract fingerprints features. Traitement du Signal, Vol. 38, No. 3, pp. 711-717. https://doi.org/10.18280/ts.380318
844	Guan, Y.R., Aamir, M., Hu, Z.H., Dayo, Z.A., Rahman, Z., Abro, W.A., Soothar, P.	An Object Detection Framework Based on Deep Features and High-Quality Object Locations	object detection, high-quality proposals, convolutional neural network (CNN), deep features	38, 3, 719-730	https://doi.org/10.18280/ts.380319	Guan, Y.R., Aamir, M., Hu, Z.H., Dayo, Z.A., Rahman, Z., Abro, W.A., Soothar, P. (2021). An object detection framework based on deep features and high-quality object locations. Traitement du Signal, Vol. 38, No. 3, pp. 719-730. https://doi.org/10.18280/ts.380319
845	Khan, S.I., Kumar, G.G., Naishadkumar, P.V., Rao, S.P.V.S.	Analysis of Normal and Adventitious Lung Sound Signals Using Empirical Mode Decomposition and Central Tendency Measure	chronic obstructive pulmonary disease (COPD), adventitious lung sounds (ALS), electronic stethoscope, intrinsic mode functions (IMFs)	38, 3, 731-738	https://doi.org/10.18280/ts.380320	Khan, S.I., Kumar, G.G., Naishadkumar, P.V., Rao, S.P.V.S. (2021). Analysis of normal and adventitious lung sound signals using empirical mode decomposition and central tendency measure. Traitement du Signal, Vol. 38, No. 3, pp. 731-738. https://doi.org/10.18280/ts.380320
846	Bujunuru, A., Tadisetty, S.	Throughput Optimization of Parallel Sensing and Energy Harvesting Cognitive Radio Network	cognitive radio, energy harvesting cognitive radio network (EHCRN), PEHCRN, spectrum sensing, throughput optimization	38, 3, 739-745	https://doi.org/10.18280/ts.380321	Bujunuru, A., Tadisetty, S. (2021). Throughput optimization of parallel sensing and energy harvesting cognitive radio network. Traitement du Signal, Vol. 38, No. 3, pp. 739-745. https://doi.org/10.18280/ts.380321

847	Tan, C., Yang, S.Y.	Automatic Extraction of Color Features from Landscape Images Based on Image Processing	image processing, landscape colors, color feature extraction, color constancy	38, 3, 747-755	https://doi.org/10.18280/ts.380322	Tan, C., Yang, S.Y. (2021). Automatic extraction of color features from landscape images based on image processing. Traitement du Signal, Vol. 38, No. 3, pp. 747-755. https://doi.org/10.18280/ts.380322
848	Yildirim, S., Kocer, H.E., Ekmekci, A.H.	Quantitative Analysis of EEG Slow Wave Activity Based on MinPeakProminence Method	electroencephalogram, slow wave, peak, minpeakprominence, epilepsy, neurologic disorder	38, 3, 757-773	https://doi.org/10.18280/ts.380323	Yildirim, S., Kocer, H.E., Ekmekci, A.H. (2021). Quantitative analysis of EEG slow wave activity based on minpeakprominence method. Traitement du Signal, Vol. 38, No. 3, pp. 757-773. https://doi.org/10.18280/ts.380323
849	Wu, D., Zhang, C.J., Ji, L., Ran, R., Wu, H.Y., Xu, Y.M.	Forest Fire Recognition Based on Feature Extraction from Multi-View Images	forest fire recognition, multi-view images, graph neural network (GNN), convolutional neural network (CNN), feature extraction	38, 3, 775-783	https://doi.org/10.18280/ts.380324	Wu, D., Zhang, C.J., Ji, L., Ran, R., Wu, H.Y., Xu, Y.M. (2021). Forest fire recognition based on feature extraction from multi-view images. Traitement du Signal, Vol. 38, No. 3, pp. 775-783. https://doi.org/10.18280/ts.380324
850	S, S.P., T, K.K.	Signed Convex Combination of Fast Convergence Algorithm to Generalized Sidelobe Canceller Beamformer for Multi-Channel Speech Enhancement	multi-channel speech enhancement, generalized sidelobe canceller (GSC) beamforming, adaptive filters, fast convergence normalized least mean square (FCNLMS), signed convex combination of fast convergence (SCCFC)	38, 3, 785-795	https://doi.org/10.18280/ts.380325	S, S.P., T, K.K. (2021). Signed convex combination of fast convergence algorithm to generalized sidelobe canceller beamformer for multi-channel speech enhancement. Traitement du Signal, Vol. 38, No. 3, pp. 785-795. https://doi.org/10.18280/ts.380325
851	Yu, J.H., Miao, W.J., Zhang, G.B., Li, K., Shi, Y.G., Liu, L.	Target Positioning and Sorting Strategy of Fruit Sorting Robot Based on Image Processing	three-dimensional (3D) scene object recognition, fruit sorting, industrial robot, recognition of fruit maturity	38, 3, 797-805	https://doi.org/10.18280/ts.380326	Yu, J.H., Miao, W.J., Zhang, G.B., Li, K., Shi, Y.G., Liu, L. (2021). Target positioning and sorting strategy of fruit sorting robot based on image processing. Traitement du Signal, Vol. 38, No. 3, pp. 797-805. https://doi.org/10.18280/ts.380326
852	Özcan, F., Alkan, A.	Frontal Cortex Neuron Type Classification with Deep Learning and Recurrence Plot	classification, deep learning, excitator, inhibitor, neuroscience, point processing, recurrence plot, spike, excitatory units	38, 3, 807-819	https://doi.org/10.18280/ts.380327	Özcan, F., Alkan, A. (2021). Frontal cortex neuron type classification with deep learning and recurrence plot. Traitement du Signal,Vol. 38, No. 3, pp. 807-819. https://doi.org/10.18280/ts.380327
853	Rao, G.S., Srikrishna, A.	Contrast Enhancement of Poor-Quality Satellite Images Through Morphological Operations	morphological operations, satellite images, image segmentation, contrast enhancement, pixel-by-pixel identification, dull pixels, bright pixels	38, 3, 821-827	https://doi.org/10.18280/ts.380328	Rao, G.S., Srikrishna, A. (2021). Contrast enhancement of poor-quality satellite images through morphological operations. Traitement du Signal, Vol. 38, No. 3, pp. 821-827. https://doi.org/10.18280/ts.380328
854	Ma, W.Y.	Single Sample Discriminant Analysis Based on Gabor Transform	Gabor transform, KPCA-RBF (kernel principal component analysis-radial basis function), classifier, pixel-level fusion, single-sample discriminant analysis	38, 3, 829-835	https://doi.org/10.18280/ts.380329	Ma, W.Y. (2021). Single sample discriminant analysis based on Gabor transform. Traitement du Signal, Vol. 38, No. 3, pp. 829-835. https://doi.org/10.18280/ts.380329
855	Alapati, Y.K., Ravichandran, S.	An Efficient Signal Processing Model for Malicious Signal Identification and Energy Consumption Reduction for Improving Data Transmission Rate	malicious signal, data transfer, routing, data loss, congestion control, signal behavior, data delivery rate, energy consumption	38, 3, 837-843	https://doi.org/10.18280/ts.380330	Alapati, Y.K., Ravichandran, S. (2021). An efficient signal processing model for malicious signal identification and energy consumption reduction for improving data transmission rate. Traitement du Signal, Vol. 38, No. 3, pp. 837-843. https://doi.org/10.18280/ts.380330
856	Yu, J.Y., Bai, X.J.	Analysis of Classroom Learning Behaviors Based on Internet of Things and Image Processing	bimodal emotion identification, Internet of things (IoT), countenances, electroencephalogram (EEG)	38, 3, 845-851	https://doi.org/10.18280/ts.380331	Yu, J.Y., Bai, X.J. (2021). Analysis of classroom learning behaviors based on internet of things and image processing. Traitement du Signal, Vol. 38, No. 3, pp. 845-851. https://doi.org/10.18280/ts.380331
857	Radhakrishnan, M., Ramamurthy, K., Choudhury, K.K., Won, D., Manoharan, T.A.	Performance Analysis of Deep Learning Models for Detection of Autism Spectrum Disorder from EEG Signals	ASD, EEG, spectrogram, deep learning, CNN, accuracy	38, 3, 853-863	https://doi.org/10.18280/ts.380332	Radhakrishnan, M., Ramamurthy, K., Choudhury, K.K., Won, D., Manoharan, T.A. (2021). Performance analysis of deep learning models for detection of autism spectrum disorder from EEG signals. Traitement du Signal, Vol. 38, No. 3, pp. 853-863. https://doi.org/10.18280/ts.380332
858	Wang, S.Y.	Online Learning Behavior Analysis Based on Image Emotion Recognition	image emotion recognition, online learning, learning behavior analysis, learning emotion recognition	38, 3, 865-873	https://doi.org/10.18280/ts.380333	Wang, S.Y. (2021). Online learning behavior analysis based on image emotion recognition. Traitement du Signal, Vol. 38, No. 3, pp. 865-873. https://doi.org/10.18280/ts.380333
859	Bodile, R.M., Talari, V.K.H.R.	Removal of Power-Line Interference from ECG Using Decomposition Methodologies and Kalman Filter Framework: A Comparative Study	electrocardiogram, discrete wavelet transform, power-line interference, empirical mode decomposition, Kalman filter framework	38, 3, 875-881	https://doi.org/10.18280/ts.380334	Bodile, R.M., Talari, V.K.H.R. (2021). Removal of power-line interference from ECG using decomposition methodologies and Kalman filter framework: A comparative study. Traitement du Signal, Vol. 38, No. 3, pp. 875-881. https://doi.org/10.18280/ts.380334
860	Janga, V., Edara, S.R.	Epilepsy and Seizure Detection Using JLTM Based ICFFA and Multiclass SVM Classifier	MSVM, firefly optimization, seizure prediction, EEG, discrete wavelet transform (DWT), chaotic maps, JLTM	38, 3, 883-893	https://doi.org/10.18280/ts.380335	Janga, V., Edara, S.R. (2021). Epilepsy and seizure detection using JLTM based ICFFA and multiclass SVM classifier. Traitement du Signal, Vol. 38, No. 3, pp. 883-893. https://doi.org/10.18280/ts.380335
861	Qi, R.Q., Liu, Z.Q.	Extraction and Classification of Image Features for Fire Recognition Based on Convolutional Neural Network	fire recognition, convolutional neural network (CNN), flame feature extraction, smoke feature extraction	38, 3, 895-902	https://doi.org/10.18280/ts.380336	Qi, R.Q., Liu, Z.Q. (2021). Extraction and classification of image features for fire recognition based on convolutional neural network. Traitement du Signal, Vol. 38, No. 3, pp. 895-902. https://doi.org/10.18280/ts.380336
862	Naralasetti, V., Shaik, R.K., Katepalli, G., Bodapati, J.D.	Deep Learning Models for Pneumonia Identification and Classification Based on X-Ray Images	Convolutional Neural Network, Pneumonia Prediction, RELU, Sigmoid, Softmax, Deep Neural Network	38, 3, 903-909	https://doi.org/10.18280/ts.380337	Naralasetti, V., Shaik, R.K., Katepalli, G., Bodapati, J.D. (2021). Deep learning models for pneumonia identification and classification based on X-ray images. Traitement du Signal, Vol. 38, No. 3, pp. 903-909. https://doi.org/10.18280/ts.380337
863	Zhao, N.Y., Jiang, Y., Song, Y.	Recognition and Classification of Concrete Cracks under Strong Interference Based on Convolutional Neural Network	concrete cracks, image classification, convolutional neural network (CNN), block attention module	38, 3, 911-917	https://doi.org/10.18280/ts.380338	Zhao, N.Y., Jiang, Y., Song, Y. (2021). Recognition and classification of concrete cracks under strong interference based on convolutional neural network. Traitement du Signal, Vol. 38, No. 3, pp. 911-917. https://doi.org/10.18280/ts.380338
864	Abas, A.I., Baykan, N.A.	Multi-Focus Image Fusion with Multi-Scale Transform Optimized by Metaheuristic Algorithms	particle swarm optimization, bat algorithm, Laplacian pyramid, curvelet transform, image fusion	38, 2, 247-259	https://doi.org/10.18280/ts.380201	Abas, A.I., Baykan, N.A. (2021). Multi-focus image fusion with multi-scale transform optimized by metaheuristic algorithms. Traitement du Signal, Vol. 38, No. 2, pp. 247-259. https://doi.org/10.18280/ts.380201

865	Hrisca-Eva, O.D., Lazar, A.M.	Multi-Sessions Outcome for EEG Feature Extraction and Classification Methods in a Motor Imagery Task	electroencephalogram, motor imagery, features extraction, autoregressive process, amplitude modulation, phase synchronization, classification algorithms	38, 2, 261-268	https://doi.org/10.18280/ts.380202	Hrisca-Eva, O.D., Lazar, A.M. (2021). Multi-sessions outcome for EEG feature extraction and classification methods in a motor imagery task. Traitement du Signal, Vol. 38, No. 2, pp. 261-268. https://doi.org/10.18280/ts.380202
866	Özbay, E., Çınar, A., Özbay, F.A.	3D Human Activity Classification with 3D Zernike Moment Based Convolutional, LSTM-Deep Neural Networks	classification, CNN, DNN, LSTM, 3D human activity, 3D Zernike moment	38, 2, 269-280	https://doi.org/10.18280/ts.380203	Özbay, E., Çınar, A., Özbay, F.A. (2021). 3D human activity classification with 3D Zernike Moment based convolutional, LSTM-deep neural networks. Traitement du Signal, Vol. 38, No. 2, pp. 269-280. https://doi.org/10.18280/ts.380203
867	Bouida, A., Khelifi, M., Beladgham, M., Hamlili, F.Z.	Monte Carlo Optimization of a Combined Image Quality Assessment for Compressed Images Evaluation	image quality assessment, combined FR-IQA, texture analysis, edge evaluation, image wavelet compression	38, 2, 281-289	https://doi.org/10.18280/ts.380204	Bouida, A., Khelifi, M., Beladgham, M., Hamlili, F.Z. (2021). Monte Carlo optimization of a combined image quality assessment for compressed images evaluation. Traitement du Signal, Vol. 38, No. 2, pp. 281-289. https://doi.org/10.18280/ts.380204
868	Zhang, H.Y., Xu, D.Y., Qin, Y.B.	A Logarithmic Function-Based Novel Representation Algorithm for Image Classification	image classification, sparse representation, image representation, fusion method	38, 2, 291-297	https://doi.org/10.18280/ts.380205	Zhang, H.Y., Xu, D.Y., Qin, Y.B. (2021). A logarithmic function-based novel representation algorithm for image classification. Traitement du Signal, Vol. 38, No. 2, pp. 291-297. https://doi.org/10.18280/ts.380205
869	Verma, A., Gupta, V.K., Goel, S., Akbar, Yadav, A.K., Yadav, D.	Modeling Fingerprint Presentation Attack Detection Through Transient Liveness Factor-A Person Specific Approach	transient liveness factor (TLF), presentation attack detection (PAD), open-set approach	38, 2, 299-307	https://doi.org/10.18280/ts.380206	Verma, A., Gupta, V.K., Goel, S., Akbar, Yadav, A.K., Yadav, D. (2021). Modeling fingerprint presentation attack detection through Transient Liveness Factor-A person specific approach. Traitement du Signal, Vol. 38, No. 2, pp. 299-307. https://doi.org/10.18280/ts.380206
870	Elaraby, A., Elansary, I.	A Framework for Multi-Threshold Image Segmentation of Low Contrast Medical Images	medical image, segmentation, fuzzy hill entropy, differential evolution	38, 2, 309-314	https://doi.org/10.18280/ts.380207	Elaraby, A., Elansary, I. (2021). A framework for multi-threshold image segmentation of low contrast medical images. Traitement du Signal, Vol. 38, No. 2, pp. 309-314. https://doi.org/10.18280/ts.380207
871	Jiang, F.C., Zhang, H.Y., Zhu, C.	Three-Dimensional Target Detection Based on RGB-D Data	indoor RGB-D data, target detection, detection accuracy, frustum PointNet (F-PointNet)	38, 2, 315-320	https://doi.org/10.18280/ts.380208	Jiang, F.C., Zhang, H.Y., Zhu, C. (2021). Three-dimensional target detection based on RGB-D data. Traitement du Signal, Vol. 38, No. 2, pp. 315-320. https://doi.org/10.18280/ts.380208
872	Trimech, I.H., Maalej, A., Amara, N.E.B.	Facial Expression Recognition Using 3D Points Aware Deep Neural Network	3D facial expression recognition (3D FER), facial expression synthesis, facial surface representation, 3D point-based deep neural network (DNN)	38, 2, 321-330	https://doi.org/10.18280/ts.380209	Trimech, I.H., Maalej, A., Amara, N.E.B. (2021). Facial expression recognition using 3D points aware deep neural network. Traitement du Signal, Vol. 38, No. 2, pp. 321-330. https://doi.org/10.18280/ts.380209
873	Baykara, M., Abdulrahman, A.	Seizure Detection Based on Adaptive Feature Extraction by Applying Extreme Learning Machines	adaptive feature, EEG, extreme learning machines, pattern recognition, seizure detection	38, 2, 331-340	https://doi.org/10.18280/ts.380210	Baykara, M., Abdulrahman, A. (2021). Seizure detection based on adaptive feature extraction by applying extreme learning machines. Traitement du Signal, Vol. 38, No. 2, pp. 331-340. https://doi.org/10.18280/ts.380210
874	Ying, B.Y., Xu, Y.C., Zhang, S., Shi, Y.G., Liu, L.	Weed Detection in Images of Carrot Fields Based on Improved YOLO v4	YOLO v4, weed detection, carrot seedlings, attention mechanism	38, 2, 341-348	https://doi.org/10.18280/ts.380211	Ying, B.Y., Xu, Y.C., Zhang, S., Shi, Y.G., Liu, L. (2021). Weed detection in images of carrot fields based on improved YOLO v4. Traitement du Signal, Vol. 38, No. 2, pp. 341-348. https://doi.org/10.18280/ts.380211
875	Dendani, B., Bahi, H., Sari, T.	Self-Supervised Speech Enhancement for Arabic Speech Recognition in Real-World Environments	Arabic language, deep autoencoder, deep learning, self-supervised speech enhancement, speech recognition, ubiquitous systems	38, 2, 349-358	https://doi.org/10.18280/ts.380212	Dendani, B., Bahi, H., Sari, T. (2021). Self-supervised speech enhancement for Arabic speech recognition in real-world environments. Traitement du Signal, Vol. 38, No. 2, pp. 349-358. https://doi.org/10.18280/ts.380212
876	Li, P., Zhou, Z.J., Liu, Q.J., Sun, X.Y., Chen, F.M., Xue, W.	Machine Learning-Based Emotional Recognition in Surveillance Video Images in the Context of Smart City Safety	machine learning (ML), convolutional neural network (CNN), face expression identification, emotional identification, smart city safety	38, 2, 359-368	https://doi.org/10.18280/ts.380213	Li, P., Zhou, Z.J., Liu, Q.J., Sun, X.Y., Chen, F.M., Xue, W. (2021). Machine learning-based emotional recognition in surveillance video images in the context of smart city safety. Traitement du Signal, Vol. 38, No. 2, pp. 359-368. https://doi.org/10.18280/ts.380213
877	Ekim, G., Atasoy, A., İkizler, N.	A New Approach for Eye-Blink to Speech Conversion by Dynamic Time Warping	amyotrophic lateral sclerosis, dynamic time warping, eye-blink detection, eye-blink to speech	38, 2, 369-377	https://doi.org/10.18280/ts.380214	Ekim, G., Atasoy, A., İkizler, N. (2021). A new approach for eye-blink to speech conversion by dynamic time warping. Traitement du Signal, Vol. 38, No. 2, pp. 369-377. https://doi.org/10.18280/ts.380214
878	Darapureddy, N., Karatapu, N., Battula, T.K.	Comparative Analysis of Texture Patterns on Mammograms for Classification	texture patterns, classification, machine learning algorithms, accuracy, local binary pattern variants, mammograms, local directional order pattern, local wavelet pattern	38, 2, 379-386	https://doi.org/10.18280/ts.380215	Darapureddy, N., Karatapu, N., Battula, T.K. (2021). Comparative analysis of texture patterns on mammograms for classification. Traitement du Signal, Vol. 38, No. 2, pp. 379-386. https://doi.org/10.18280/ts.380215
879	Hua, J., Xiao, Q.K., Wang, L., Liu, Y.X., Ning, X.H.	Recognition of Electromyographic Signal Time Series on Daily Hand Motions Based on Long Short-Term Memory Network	surface electromyographic (sEMG) signals, EMG signal analysis, long short-term memory (LSTM), action recognition	38, 2, 387-394	https://doi.org/10.18280/ts.380216	Hua, J., Xiao, Q.K., Wang, L., Liu, Y.X., Ning, X.H. (2021). Recognition of electromyographic signal time series on daily hand motions based on long short-term memory network. Traitement du Signal, Vol. 38, No. 2, pp. 387-394. https://doi.org/10.18280/ts.380216
880	Wang, H.L., Wu, F., Zhang, L.	Fault Diagnosis of Rolling Bearings Based on Improved Empirical Mode Decomposition and Fuzzy C-Means Algorithm	rolling bearings, variational modal decomposition (VMD), fuzzy C-means (FCM) algorithm, fault identification	38, 2, 395-400	https://doi.org/10.18280/ts.380217	Wang, H.L., Wu, F., Zhang, L. (2021). Fault diagnosis of rolling bearings based on improved empirical mode decomposition and fuzzy C-means algorithm. Traitement du Signal, Vol. 38, No. 2, pp. 395-400. https://doi.org/10.18280/ts.380217
881	Ekmen, Ş., Karadoğan, C., Şeker, Ş.S.	Investigation of Timbral Qualities of Guitar Using Wavelet Analysis	wavelet analysis, digital signal processing, continuous wavelet transform, wavelet packet transform, guitar analysis, timbre, piezo-film sensors	38, 2, 401-411	https://doi.org/10.18280/ts.380218	Ekmen, Ş., Karadoğan, C., Şeker, Ş.S. (2021). Investigation of timbral qualities of guitar using wavelet analysis. Traitement du Signal, Vol. 38, No. 2, pp. 401-411. https://doi.org/10.18280/ts.380218
882	Patchala, S., Maruvada, S.	Filter Bank Multi Carrier Signal System for Frequency Selective Channels	FBMC, MIMO, OFDM, multicarrier regulation frameworks, noise aggravations, spectrum	38, 2, 413-420	https://doi.org/10.18280/ts.380219	Patchala, S., Maruvada, S. (2021). Filter bank multi carrier signal system for frequency selective channels. Traitement du Signal, Vol. 38, No. 2, pp. 413-420. https://doi.org/10.18280/ts.380219

883	He, Y.J.	Fast Job Recognition and Sorting Based on Image Processing	image processing, fast job recognition, job sorting, echo state network (ESN)	38, 2, 421-429	https://doi.org/10.18280/ts.380220	He, Y.J. (2021). Fast job recognition and sorting based on image processing. Traitement du Signal, Vol. 38, No. 2, pp. 421-429. https://doi.org/10.18280/ts.380220
884	Gurrala, V., Yarlagadda, P., Koppireddi, P.	Detection of Sleep Apnea Based on the Analysis of Sleep Stages Data Using Single Channel EEG	electroencephalogram (EEG), sleep stages, sleep disorders, sleep apnea, machine learning classifiers	38, 2, 431-436	https://doi.org/10.18280/ts.380221	Gurrala, V., Yarlagadda, P., Koppireddi, P. (2021). Detection of sleep apnea based on the analysis of sleep stages data using single channel EEG. Traitement du Signal, Vol. 38, No. 2, pp. 431-436. https://doi.org/10.18280/ts.380221
885	Ervural, S., Ceylan, M.	Convolutional Neural Networks-Based Approach to Detect Neonatal Respiratory System Anomalies with Limited Thermal Image	convolutional neural networks, data augmentation. infrared thermography, neonatal disease classification. pre-diagnosis system, respiratory system anomalies	38, 2, 437-442	https://doi.org/10.18280/ts.380222	Ervural, S., Ceylan, M. (2021). Convolutional neural networks-based approach to detect neonatal respiratory system anomalies with limited thermal image. Traitement du Signal, Vol. 38, No. 2, pp. 437-442. https://doi.org/10.18280/ts.380222
886	Raju, M.N., Natarajan, K., Vasamsetty, C.S.	Object Recognition in Remote Sensing Images Based on Modified Backpropagation Neural Network	remote sensing, object detection, neural network, deep learning, image data	38, 2, 451-459	https://doi.org/10.18280/ts.380224	Raju, M.N., Natarajan, K., Vasamsetty, C.S. (2021). Object recognition in remote sensing images based on modified backpropagation neural network. Traitement du Signal, Vol. 38, No. 2, pp. 451-459. https://doi.org/10.18280/ts.380224
887	Padhee, S., Nandan, D.	Design of Automated Visual Inspection System for Beverage Industry Production Line	automated visual inspection system, coverage industry production line, visual inspection, image processing	38, 2, 461-466	https://doi.org/10.18280/ts.380225	Padhee, S., Nandan, D. (2021). Design of automated visual inspection system for beverage industry production line. Traitement du Signal, Vol. 38, No. 2, pp. 461-466. https://doi.org/10.18280/ts.380225
888	Wang, X.	Recognition and Positioning of Container Lock Holes for Intelligent Handling Terminal Based on Convolutional Neural Network	convolutional neural network (CNN), feature extraction, target detection, sliding window, automated terminal	38, 2, 467-472	https://doi.org/10.18280/ts.380226	Wang, X. (2021). Recognition and positioning of container lock holes for intelligent handling terminal based on convolutional neural network. Traitement du Signal, Vol. 38, No. 2, pp. 467-472. https://doi.org/10.18280/ts.380226
889	Gupta, A.K., Chakraborty, C., Gupta, B.	Secure Transmission of EEG Data Using Watermarking Algorithm for the Detection of Epileptical Seizures	DWT-DCT-BFO, EEG, healthcare, Internet of Things, patients monitoring, short time Fourier transform, watermarking	38, 2, 473-479	https://doi.org/10.18280/ts.380227	Gupta, A.K., Chakraborty, C., Gupta, B. (2021). Secure transmission of EEG data using watermarking algorithm for the detection of epileptical seizures. Traitement du Signal, Vol. 38, No. 2, pp. 473-479. https://doi.org/10.18280/ts.380227
890	Guan, Y.R., Aamir, M., Hu, Z.H., Abro, W.A., Rahman, Z., Dayo, Z.A., Akram, S.	A Region-Based Efficient Network for Accurate Object Detection	object detection, object classification, proposal generation, proposal refinement, proposal classification	38, 2, 481-494	https://doi.org/10.18280/ts.380228	Guan, Y.R., Aamir, M., Hu, Z.H., Abro, W.A., Rahman, Z., Dayo, Z.A., Akram, S. (2021). A region-based efficient network for accurate object detection. Traitement du Signal, Vol. 38, No. 2, pp. 481-494. https://doi.org/10.18280/ts.380228
891	Kumar, I., Mishra, R.K.	An Investigation of Spectral Efficiency in Linear MRC and MMSE Detectors with Perfect and Imperfect CSI for Massive MIMO Systems	channel capacity, maximum-ratio combining, minimum mean square error, MU multiple input multiple output, spectral efficiency, massive multiple input multiple output	38, 2, 495-501	https://doi.org/10.18280/ts.380229	Kumar, I., Mishra, R.K. (2021). An investigation of spectral efficiency in linear MRC and MMSE detectors with perfect and imperfect CSI for massive MIMO systems. Traitement du Signal, Vol. 38, No. 2, pp. 495-501. https://doi.org/10.18280/ts.380229
892	Zou, J., Zhang, C., Ma, Z.J.	An Image Classification Algorithm for Plantar Pressure Based on Convolutional Neural Network	plantar pressure (PP) analysis, convolutional neural network (CNN), feature selection, feature extraction	38, 2, 503-511	https://doi.org/10.18280/ts.380230	Zou, J., Zhang, C., Ma, Z.J. (2021). An image classification algorithm for plantar pressure based on convolutional neural network. Traitement du Signal, Vol. 38, No. 2, pp. 503-511. https://doi.org/10.18280/ts.380230
893	Huang, Q.H.	An Image Sharpness Enhancement Algorithm Based on Green Function	image enhancement, green function, Poisson equation, gradient domain	38, 2, 513-519	https://doi.org/10.18280/ts.380231	Huang, Q.H. (2021). An image sharpness enhancement algorithm based on green function. Traitement du Signal, Vol. 38, No. 2, pp. 513-519. https://doi.org/10.18280/ts.380231
894	Sadanandam, M.	HMM Based Language Identification from Speech Utterances of Popular Indic Languages Using Spectral and Prosodic Features	Language Identification System (LID), acoustic features, prosodic features, HMM, Indian spoken languages, pitch and MFCC	38, 2, 521-528	https://doi.org/10.18280/ts.380232	Sadanandam, M. (2021). HMM based language identification from speech utterances of popular Indic languages using spectral and prosodic features. Traitement du Signal, Vol. 38, No. 2, pp. 521-528. https://doi.org/10.18280/ts.380232
895	Zhu, F.L., Zhu, R.C.	Dance Action Recognition and Pose Estimation Based on Deep Convolutional Neural Network	Language Identification System (LID), acoustic features, prosodic features, HMM, Indian spoken languages, pitch and MFCC	38, 2, 529-538	https://doi.org/10.18280/ts.380233	Zhu, F.L., Zhu, R.C. (2021). Dance action recognition and pose estimation based on deep convolutional neural network. Traitement du Signal, Vol. 38, No. 2, pp. 529-538. https://doi.org/10.18280/ts.380233
896	İş, H., Tuncer, T.	A Profile Analysis of User Interaction in Social Media Using Deep Learning	social media analysis, interaction evaluation, deep learning, profile analysis	38, 1, 1-11	https://doi.org/10.18280/ts.380101	İş, H., Tuncer, T. (2021). A profile analysis of user interaction in social media using deep learning. Traitement du Signal, Vol. 38, No. 1, pp. 1-11. https://doi.org/10.18280/ts.380101
897	Akbari, H., Sadiq, M.T., Payan, M., Esmaili, S.S., Baghri, H., Bagheri, H.	Depression Detection Based on Geometrical Features Extracted from SODP Shape of EEG Signals and Binary PSO	electroencephalogram signal, depression, second-order differential plot, geometrical features, EEG classification	38, 1, 13-26	https://doi.org/10.18280/ts.380102	Akbari, H., Sadiq, M.T., Payan, M., Esmaili, S.S., Baghri, H., Bagheri, H. (2021). Depression detection based on geometrical features extracted from SODP shape of EEG signals and binary PSO. Traitement du Signal, Vol. 38, No. 1, pp. 13-26. https://doi.org/10.18280/ts.380102
898	Zhu, J.C., Zhao, S.J., Wu, D.	Classification of Remote Sensing Images Through Reweighted Sparse Subspace Representation Using Compressed Data	coherence-based coded aperture, reweighted sparse subspace clustering (RSSC), spectral image clustering	38, 1, 27-37	https://doi.org/10.18280/ts.380103	Zhu, J.C., Zhao, S.J., Wu, D. (2021). Classification of remote sensing images through reweighted sparse subspace representation using compressed data. Traitement du Signal, Vol. 38, No. 1, pp. 27-37. https://doi.org/10.18280/ts.380103
899	Al-Ameen, Z.	Contrast Enhancement of Digital Images Using an Improved Type-II Fuzzy Set-Based Algorithm	contrast enhancement, type-II fuzzy, color image, image enhancement, grayscale image, image processing	38, 1, 39-50	https://doi.org/10.18280/ts.380104	Al-Ameen, Z. (2021). Contrast enhancement of digital images using an improved type-II fuzzy set-based algorithm. Traitement du Signal, Vol. 38, No. 1, pp. 39-50. https://doi.org/10.18280/ts.380104
900	Ergin, S., Isik, S., Gulmezoglu, M.B.	Face Recognition by Using 2D Orthogonal Subspace Projections	face recognition, common matrix approach, support vector machine, convolutional neural networks, 2D feature extraction	38, 1, 51-60	https://doi.org/10.18280/ts.380105	Ergin, S., Isik, S., Gulmezoglu, M.B. (2021). Face recognition by using 2D orthogonal subspace projections. Traitement du Signal, Vol. 38, No. 1, pp. 51-60. https://doi.org/10.18280/ts.380105

901	Zhang, X.R., Chen, G.	Detection of Dense Small Rigid Targets Based on Convolutional Neural Network and Synthetic Images	target recognition, artificial data, rice planthoppers, deep learning (DL), convolutional neural network (CNN), faster region-based CNN (Faster-RCNN)	38, 1, 61-71	https://doi.org/10.18280/ts.380106	Zhang, X.R., Chen, G. (2021). Detection of dense small rigid targets based on convolutional neural network and synthetic images. Traitement du Signal, Vol. 38, No. 1, pp. 61-71. https://doi.org/10.18280/ts.380106
902	Hadiyoso, S., Wijayanto, I., Humairani, A.	Signal Dynamics Analysis for Epileptic Seizure Classification on EEG Signals	epilepsy, EEG, dynamics, entropy, fractal, Naïve Bayes	38, 1, 73-78	https://doi.org/10.18280/ts.380107	Hadiyoso, S., Wijayanto, I., Humairani, A. (2021). Signal dynamics analysis for epileptic seizure classification on EEG signals. Traitement du Signal, Vol. 38, No. 1, pp. 73-78. https://doi.org/10.18280/ts.380107
903	Wagle, S.A., R, H.	Comparison of Plant Leaf Classification Using Modified AlexNet and Support Vector Machine	AlexNet, convolutional neural network, support vector machine	38, 1, 79-87	https://doi.org/10.18280/ts.380108	Wagle, S.A., R, H. (2021). Comparison of plant leaf classification using modified AlexNet and support vector machine. Traitement du Signal, Vol. 38, No. 1, pp. 79-87. https://doi.org/10.18280/ts.380108
904	Xie, Y.F., Zhang, S., Liu, Y.D.	Abnormal Behavior Recognition in Classroom Pose Estimation of College Students Based on Spatiotemporal Representation Learning	artificial intelligence, college students, pose estimation, spatiotemporal representation learning, k-means clustering (KMC), convolutional neural network (CNN)	38, 1, 89-95	https://doi.org/10.18280/ts.380109	Xie, Y.F., Zhang, S., Liu, Y.D. (2021). Abnormal behavior recognition in classroom pose estimation of college students based on spatiotemporal representation learning. Traitement du Signal, Vol. 38, No. 1, pp. 89-95. https://doi.org/10.18280/ts.380109
905	Amrane, R., Brik, Y., Zeghlache, S., Ladjal, M., Chicouche, D.	Sampling Rate Optimization for Improving the Cascaded Integrator Comb Filter Characteristics	CIC filter, FIR, frequency response, optimization, sampling rate, filter sharpening	38, 1, 97-103	https://doi.org/10.18280/ts.380110	Amrane, R., Brik, Y., Zeghlache, S., Ladjal, M., Chicouche, D. (2021). Sampling rate optimization for improving the cascaded integrator comb filter characteristics. Traitement du Signal, Vol. 38, No. 1, pp. 97-103. https://doi.org/10.18280/ts.380110
906	Xiao, L.Q.	Design and Optimization of a Finite Element Model for Electrical Resistance Tomography of Human Lungs	human lungs, electrical resistance tomography (ERT), finite element model, forward problem, sensitivity matrix, image reconstruction	38, 1, 105-113	https://doi.org/10.18280/ts.380111	Xiao, L.Q. (2021). Design and optimization of a finite element model for electrical resistance tomography of human lungs. Traitement du Signal, Vol. 38, No. 1, pp. 105-113. https://doi.org/10.18280/ts.380111
907	Dikmen, O., Kulaç, S.	Investigation of Ideal Number User Terminals with Spectrum Efficiency in Next Generation Wireless Communication Systems	massive MIMO, spectrum efficiency, multicellular system, user equipment, pilot reuse factor, 6G	38, 1, 115-126	https://doi.org/10.18280/ts.380112	Dikmen, O., Kulaç, S. (2021). Investigation of ideal number user terminals with spectrum efficiency in next generation wireless communication systems. Traitement du Signal, Vol. 38, No. 1, pp. 115-126. https://doi.org/10.18280/ts.380112
908	Lin, C., Xu, X.P.	An Electronic Bill Encryption Algorithm Based on Multiple Watermark Encryption	digital image watermarking, multiple watermark encryption, electronic bill	38, 1, 127-133	https://doi.org/10.18280/ts.380113	Lin, C., Xu, X.P. (2021). An electronic bill encryption algorithm based on multiple watermark encryption. Traitement du Signal, Vol. 38, No. 1, pp. 127-133. https://doi.org/10.18280/ts.380113
909	Thazeen, S., Mallikarjunaswamy, S., Siddesh, G.K., Sharmila, N.	Conventional and Subspace Algorithms for Mobile Source Detection and Radiation Formation	the direction of arrival, beamforming, mobile source detection, radiation formation	38, 1, 135-145	https://doi.org/10.18280/ts.380114	Thazeen, S., Mallikarjunaswamy, S., Siddesh, G.K., Sharmila, N. (2021). Conventional and subspace algorithms for mobile source detection and radiation formation. Traitement du Signal, Vol. 38, No. 1, pp. 135-145. https://doi.org/10.18280/ts.380114
910	Özyurt, F.	Automatic Detection of COVID-19 Disease by Using Transfer Learning of Light Weight Deep Learning Model	COVID-19, deep learning, Shufflenet, transfer learning, feature reduction	38, 1, 147-153	https://doi.org/10.18280/ts.380115	Özyurt, F. (2021). Automatic detection of COVID-19 disease by using transfer learning of light weight deep learning model. Traitement du Signal, Vol. 38, No. 1, pp. 147-153. https://doi.org/10.18280/ts.380115
911	Li, S.L., Chai, H.Q.	Recognition of Teaching Features and Behaviors in Online Open Courses Based on Image Processing	image processing, online open courses, teaching features, teaching behavior recognition	38, 1, 155-164	https://doi.org/10.18280/ts.380116	Li, S.L., Chai, H.Q. (2021). Recognition of teaching features and behaviors in online open courses based on image processing. Traitement du Signal, Vol. 38, No. 1, pp. 155-164. https://doi.org/10.18280/ts.380116
912	Çınar, A., Yıldırım, M., Eroğlu, Y.	Classification of Pneumonia Cell Images Using Improved ResNet50 Model	CNN, deep learning, machine learning, Pneumonia, transfer learning	38, 1, 165-173	https://doi.org/10.18280/ts.380117	Çınar, A., Yıldırım, M., Eroğlu, Y. (2021). Classification of pneumonia cell images using improved ResNet50 model. Traitement du Signal, Vol. 38, No. 1, pp. 165-173. https://doi.org/10.18280/ts.380117
913	Hadiyoso, S., Rizal, A.	Empirical Mode Decomposition and Grey Level Difference for Lung Sound Classification	lung sound, EMD, GLD, MLP	38, 1, 175-179	https://doi.org/10.18280/ts.380118	Hadiyoso, S., Rizal, A. (2021). Empirical mode decomposition and grey level difference for lung sound classification. Traitement du Signal, Vol. 38, No. 1, pp. 175-179. https://doi.org/10.18280/ts.380118
914	Wei, Z.F., Zhang, X.H.	Feature Extraction and Retrieval of Ecommerce Product Images Based on Image Processing	image processing, ecommerce, image feature extraction, image retrieval	38, 1, 181-190	https://doi.org/10.18280/ts.380119	Wei, Z.F., Zhang, X.H. (2021). Feature extraction and retrieval of ecommerce product images based on image processing. Traitement du Signal, Vol. 38, No. 1, pp. 181-190. https://doi.org/10.18280/ts.380119
915	Pendyala, G.K.V., Kalluri, H.K., Rao, V.C.	An Efficient Multi-stage Object-Based Classification to Extract Urban Building Footprints from HR Satellite Images	nDSM, NDVI, object-based classification, thresholding, urban building classification	38, 1, 191-196	https://doi.org/10.18280/ts.380120	Pendyala, G.K.V., Kalluri, H.K., Rao, V.C. (2021). An efficient multi-stage object-based classification to extract urban building footprints from HR satellite images. Traitement du Signal, Vol. 38, No. 1, pp. 191-196. https://doi.org/10.18280/ts.380120
916	Zhang, Q., Liu, Y., Liu, L., Lu, S., Feng, Y.X., Yu, X.	Location Identification and Personalized Recommendation of Tourist Attractions Based on Image Processing	image processing, tourist attractions, location identification, personalized recommendation	38, 1, 197-205	https://doi.org/10.18280/ts.380121	Zhang, Q., Liu, Y., Liu, L., Lu, S., Feng, Y.X., Yu, X. (2021). Location identification and personalized recommendation of tourist attractions based on image processing. Traitement du Signal, Vol. 38, No. 1, pp. 197-205. https://doi.org/10.18280/ts.380121
917	Şüyun, S.B., Taşdemir, Ş., Biliş, S., Milea, A.	Using a Deep Learning System That Classifies Hypertensive Retinopathy Based on the Fundus Images of Patients of Wide Age	hypertensive retinopathy, convolutional neural networks, deep learning, fundus images, eye diseases, macular degeneration	38, 1, 207-213	https://doi.org/10.18280/ts.380122	Şüyun, S.B., Taşdemir, Ş., Biliş, S., Milea, A. (2021). Using a deep learning system that classifies hypertensive retinopathy based on the fundus images of patients of wide age. Traitement du Signal, Vol. 38, No. 1, pp. 207-213. https://doi.org/10.18280/ts.380122
918	Wu, B., Wang, C.M., Huang, W., Huang, D., Peng, H.	Recognition of Student Classroom Behaviors Based on Moving Target Detection	image processing, behavior recognition, moving target detection, image segmentation, student classroom behaviors	38, 1, 215-220	https://doi.org/10.18280/ts.380123	Wu, B., Wang, C.M., Huang, W., Huang, D., Peng, H. (2021). Recognition of student classroom behaviors based on moving target detection. Traitement du Signal, Vol. 38, No. 1, pp. 215-220. https://doi.org/10.18280/ts.380123

919	Nair, A.M.S.U., Savithri, S.P.	Classification of Pitch and Gender of Speakers for Forensic Speaker Recognition from Disguised Voices Using Novel Features Learned by Deep Convolutional Neural Networks	deep convolutional neural network, FASR, Mel-spectrogram, MFCC, pitch disguise	38, 1, 221-230	https://doi.org/10.18280/ts.380124	Nair, A.M.S.U., Savithri, S.P. (2021). Classification of pitch and gender of speakers for forensic speaker recognition from disguised voices using novel features learned by deep convolutional neural networks. Traitement du Signal, Vol. 38, No. 1, pp. 221-230. https://doi.org/10.18280/ts.380124
920	Chen, L., Ding, J.F.	Analysis on Food Crispness Based on Time and Frequency Domain Features of Acoustic Signal	food crispness, acoustic signal, wavelet denoising, backpropagation (BP) neural network	38, 1, 231-238	https://doi.org/10.18280/ts.380125	Chen, L., Ding, J.F. (2021). Analysis on food crispness based on time and frequency domain features of acoustic signal. Traitement du Signal, Vol. 38, No. 1, pp. 231-238. https://doi.org/10.18280/ts.380125
921	Krishna, K.V.S.S.R., Chaitanya, K., Subhashini, P.P.S., Yamparala, R., Kanumalli, S.S.	Classification of Glaucoma Optical Coherence Tomography (OCT) Images Based on Blood Vessel Identification Using CNN and Firefly Optimization	convolutional neural network (CNN), firefly optimization, glaucoma, blood vessel	38, 1, 239-245	https://doi.org/10.18280/ts.380126	Krishna, K.V.S.S.R., Chaitanya, K., Subhashini, P.P.S., Yamparala, R., Kanumalli, S.S. (2021). Classification of glaucoma Optical Coherence Tomography (OCT) images based on blood vessel identification using CNN and firefly optimization. Traitement du Signal, Vol. 38, No. 1, pp. 239-245. https://doi.org/10.18280/ts.380126
922	Rabah, C.B., Coatrieux, G., Abdelfattah, R.	Boosting up source scanner identification using wavelets and convolutional neural networks	conventional neural networks, digital content forensics, image wavelet analysis, source scanner identification	37, 6, 881-888	https://doi.org/10.18280/ts.370601	Rabah, C.B., Coatrieux, G., Abdelfattah, R. (2020). Boosting up source scanner identification using wavelets and convolutional neural networks. Traitement du Signal, Vol. 37, No. 6, pp. 881-888. https://doi.org/10.18280/ts.370601
923	Herbadji, A., Guermat, N., Ziet, L., Akhtar, Z., Cheniti, M., Herbadji, D.	Contactless multi-biometric system using fingerprint and palmprint selfies	COVID-19, multi-biometrics, score fusion, contactless fingerprint, contactless palmprint, BSIF, person authentication	37, 6, 889-897	https://doi.org/10.18280/ts.370602	Herbadji, A., Guermat, N., Ziet, L., Akhtar, Z., Cheniti, M., Herbadji, D. (2020). Contactless multi-biometric system using fingerprint and palmprint selfies. Traitement du Signal, Vol. 37, No. 6, pp. 889-897. https://doi.org/10.18280/ts.370602
924	Vrtagić, S., Softić, E., Ponjavić, M., Stević, Ž., Subotić, M., Gmanjunath, A., Kevric, J.	Video data extraction and processing for investigation of vehicles' impact on the asphalt deformation through the prism of computational algorithms	Histogram of Oriented Gradients (HOG), machine learning, Support Vector Machines (SVM), video processing, asphalt deformation	37, 6, 899-906	https://doi.org/10.18280/ts.370603	Vrtagić, S., Softić, E., Ponjavić, M., Stević, Ž., Subotić, M., Gmanjunath, A., Kevric, J. (2020). Video data extraction and processing for investigation of vehicles' impact on the asphalt deformation through the prism of computational algorithms. Traitement du Signal, Vol. 37, No. 6, pp. 899-906. https://doi.org/10.18280/ts.370603
925	Aydin, I., Kaner, S.	A new hybrid diagnosis of bearing faults based on time-frequency images and sparse representation	bearing faults, classification, extreme learning machine with sparse classifier, fault diagnosis, feature extraction, time-frequency images	37, 6, 907-918	https://doi.org/10.18280/ts.370604	Aydin, I., Kaner, S. (2020). A new hybrid diagnosis of bearing faults based on time-frequency images and sparse representation. Traitement du Signal, Vol. 37, No. 6, pp. 907-918. https://doi.org/10.18280/ts.370604
926	Liu, S.H., Shi, L.L., Xu, W.Y.	Projected Wirtinger gradient descent for digital waves reconstruction	signal recovery, Hankel Matrix Completion (HMC), feasible-point algorithm, fast iterative shrinkage-thresholding (FIST) algorithm	37, 6, 919-927	https://doi.org/10.18280/ts.370605	Liu, S.H., Shi, L.L., Xu, W.Y. (2020). Projected Wirtinger gradient descent for digital waves reconstruction. Traitement du Signal, Vol. 37, No. 6, pp. 919-927. https://doi.org/10.18280/ts.370605
927	Yang, X.Y., Liang, N.N., Zhou, W., Lu, H.M.	A face detection method based on skin color model and improved AdaBoost algorithm	face detection, image processing, skin color model, AdaBoost algorithm	37, 6, 929-937	https://doi.org/10.18280/ts.370606	Yang, X.Y., Liang, N.N., Zhou, W., Lu, H.M. (2020). A face detection method based on skin color model and improved AdaBoost algorithm. Traitement du Signal, Vol. 37, No. 6, pp. 929-937. https://doi.org/10.18280/ts.370606
928	Sahin, M.E., Guler, H., Hamamci, S.E.	Design and realization of a hyperchaotic memristive system for communication system on FPGA	chaos, circuit implementation, communication systems, FPGA, memristor, optimization	37, 6, 939-953	https://doi.org/10.18280/ts.370607	Sahin, M.E., Guler, H., Hamamci, S.E. (2020). Design and realization of a hyperchaotic memristive system for communication system on FPGA. Traitement du Signal, Vol. 37, No. 6, pp. 939-953. https://doi.org/10.18280/ts.370607
929	Nouioua, N., Seddiki, A., Ghaz, A.	Blind digital watermarking framework based on DTCWT and NSCT for telemedicine application	blind watermarking, DTCWT, NSCT, quantization, robust, telemedicine	37, 6, 955-964	https://doi.org/10.18280/ts.370608	Nouioua, N., Seddiki, A., Ghaz, A. (2020). Blind digital watermarking framework based on DTCWT and NSCT for telemedicine application. Traitement du Signal, Vol. 37, No. 6, pp. 955-964. https://doi.org/10.18280/ts.370608
930	Chen, D.	Multiple linear regression of multi-class images in devices of internet of things	internet of things (IoT), multiple classes, image recognition, multiple linear regression (MLR), convolutional neural network (CNN)	37, 6, 965-973	https://doi.org/10.18280/ts.370609	Chen, D. (2020). Multiple linear regression of multi-class images in devices of internet of things. Traitement du Signal, Vol. 37, No. 6, pp. 965-973. https://doi.org/10.18280/ts.370609
931	Mousavi, S., Kara, D.B., Seker, S.S.	Integrated fault evaluation through fusion algorithm supported by Kalman filter	Kalman filter, vibration signal, aging process, sensor validation, data fusion, fault detection, health information	37, 6, 975-987	https://doi.org/10.18280/ts.370610	Mousavi, S., Kara, D.B., Seker, S.S. (2020). Integrated fault evaluation through fusion algorithm supported by Kalman filter. Traitement du Signal, Vol. 37, No. 6, pp. 975-987. https://doi.org/10.18280/ts.370610
932	Bhatele, K.R., Bhadauria, S.S.	Glioma segmentation and classification system based on proposed texture features extraction method and hybrid ensemble learning	Thresholding, High Grade Glioma (HGG), Low Grade Glioma (LGG), DWT (Discrete wavelet transform), LBP (Local Binary pattern), GLRLM (Gray level run length Matrix) Enhanced wavelet binary pattern run length matrix method (EWBPRL), XGBoost with Random forest (XBGRF)	37, 6, 989-1001	https://doi.org/10.18280/ts.370611	Bhatele, K.R., Bhadauria, S.S. (2020). Glioma segmentation and classification system based on proposed texture features extraction method and hybrid ensemble learning. Traitement du Signal, Vol. 37, No. 6, pp. 989-1001. https://doi.org/10.18280/ts.370611
933	Yu, L., Zhang, B.L., Li, R.	Detection of unusual targets in traffic images based on one-class extreme machine learning	traffic images, multiple levels, extreme learning machine (ELM), semi-supervised learning	37, 6, 1003-1008	https://doi.org/10.18280/ts.370612	Yu, L., Zhang, B.L., Li, R. (2020). Detection of unusual targets in traffic images based on one-class extreme machine learning. Traitement du Signal, Vol. 37, No. 6, pp. 1003-1008. https://doi.org/10.18280/ts.370612
934	Li, Z., Han, X., Wang, L.Y., Zhu, T.Y., Yuan, F.T.	Feature extraction and image retrieval of landscape images based on image processing	landscape image, color feature extraction, image retrieval, image processing	37, 6, 1009-1018	https://doi.org/10.18280/ts.370613	Li, Z., Han, X., Wang, L.Y., Zhu, T.Y., Yuan, F.T. (2020). Feature extraction and image retrieval of landscape images based on image processing. Traitement du Signal, Vol. 37, No. 6, pp. 1009-1018. https://doi.org/10.18280/ts.370613
935	Saglam, A., Makineci, H.B., Baykan, Ö.K., Baykan, N.A.	Clustering-based plane refitting of non-planar patches for voxel-based 3D point cloud segmentation using k-means clustering	plane fitting, plane refitting, point cloud segmentation, plane clustering, k-means clustering, standard deviation thresholding	37, 6, 1019-1027	https://doi.org/10.18280/ts.370614	Saglam, A., Makineci, H.B., Baykan, Ö.K., Baykan, N.A. (2020). Clustering-based plane refitting of non-planar patches for voxel-based 3D point cloud segmentation using k-means clustering. Traitement du Signal, Vol. 37, No. 6, pp. 1019-1027. https://doi.org/10.18280/ts.370614
936	Shafiei, F., Fekri-Ershad, S.	Detection of lung cancer tumor in CT scan images using novel combination of super pixel and active contour algorithms	lung cancer tumor, CT scan images, super pixel algorithm, morphological operations, active contour	37, 6, 1029-1035	https://doi.org/10.18280/ts.370615	Shafiei, F., Fekri-Ershad, S. (2020). Detection of lung cancer tumor in CT scan images using novel combination of super pixel and active contour algorithms. Traitement du Signal, Vol. 37, No. 6, pp. 1029-1035. https://doi.org/10.18280/ts.370615

937	Zhang, J., Feng, M.Q., Wang, Y.	Automatic segmentation of remote sensing images on water bodies based on image enhancement	image enhancement, remote sensing image, water bodies, image segmentation, adaptive morphology	37, 6, 1037-143	https://doi.org/10.18280/ts.370616	Zhang, J., Feng, M.Q., Wang, Y. (2020). Automatic segmentation of remote sensing images on water bodies based on image enhancement. Traitement du Signal, Vol. 37, No. 6, pp. 1037-1043. https://doi.org/10.18280/ts.370616
938	Toraman, S.	Preictal and interictal recognition for epileptic seizure prediction using pre-trained 2D-CNN models	biomedical image processing, EEG, epilepsy, preictal, convolutional neural network, deep learning	37, 6, 1045-1054	https://doi.org/10.18280/ts.370617	Toraman, S. (2020). Preictal and interictal recognition for epileptic seizure prediction using pre-trained 2D-CNN models. Traitement du Signal, Vol. 37, No. 6, pp. 1045-1054. https://doi.org/10.18280/ts.370617
939	Dong, J.F., Li, X.	An image classification algorithm of financial instruments based on convolutional neural network	financial instruments, convolutional neural network (CNN), image classification, momentum weight update, weight attenuation	37, 6, 1055-1060	https://doi.org/10.18280/ts.370618	Dong, J.F., Li, X. (2020). An image classification algorithm of financial instruments based on convolutional neural network. Traitement du Signal, Vol. 37, No. 6, pp. 1055-1060. https://doi.org/10.18280/ts.370618
940	Bhardwaj, L., Mishra, R.K.	Mitigating the interference caused by pilot contamination in multi-cell massive multiple input multiple output systems using low density parity check codes in uplink scenario	massive MIMO, Multi Cell MIMO, low density parity check codes (LDPC), pilot contamination, channel estimation, channel vector	37, 6, 1061-1074	https://doi.org/10.18280/ts.370619	Bhardwaj, L., Mishra, R.K. (2020). Mitigating the interference caused by pilot contamination in multi-cell massive multiple input multiple output systems using low density parity check codes in uplink scenario. Traitement du Signal, Vol. 37, No. 6, pp. 1061-1074. https://doi.org/10.18280/ts.370619
941	Msonda, P., Uymaz, S.A., Karaağaç, S.S.	Spatial pyramid pooling in deep convolutional networks for automatic tuberculosis diagnosis	automated diagnosis, deep convolutional neural networks, image classification, spatial pyramid pooling, tuberculosis	37, 6, 1075-1084	https://doi.org/10.18280/ts.370620	Msonda, P., Uymaz, S.A., Karaağaç, S.S. (2020). Spatial pyramid pooling in deep convolutional networks for automatic tuberculosis diagnosis. Traitement du Signal, Vol. 37, No. 6, pp. 1075-1084. https://doi.org/10.18280/ts.370620
942	Wang, Y.N., Yang, Y.M., Li, Y.	Recognition and difference analysis of human walking gaits based on intelligent processing of video images	gait recognition, lower limb motions, residual network, gait difference	37, 6, 1085-1091	https://doi.org/10.18280/ts.370621	Wang, Y.N., Yang, Y.M., Li, Y. (2020). Recognition and difference analysis of human walking gaits based on intelligent processing of video images. Traitement du Signal, Vol. 37, No. 6, pp. 1085-1091. https://doi.org/10.18280/ts.370621
943	Yadav, D., Akanksha, Yadav, A.K.	A novel convolutional neural network based model for recognition and classification of apple leaf diseases	plants, apple, contrast stretching, fuzzy c-means, CNN, disease diagnosis	37, 6, 1093-1101	https://doi.org/10.18280/ts.370622	Yadav, D., Akanksha, Yadav, A.K. (2020). A novel convolutional neural network based model for recognition and classification of apple leaf diseases. Traitement du Signal, Vol. 37, No. 6, pp. 1093-1101. https://doi.org/10.18280/ts.370622
944	Wang, S.W., Yuan, B., Wu, D.	A hybrid classifier for handwriting recognition on multi-domain financial bills based on DCNN and SVM	financial bill, handwriting recognition, deep convolutional neural network (DCNN), support vector machine (SVM)	37, 6, 1103-1110	https://doi.org/10.18280/ts.370623	Wang, S.W., Yuan, B., Wu, D. (2020). A hybrid classifier for handwriting recognition on multi-domain financial bills based on DCNN and SVM. Traitement du Signal, Vol. 37, No. 6, pp. 1103-1110. https://doi.org/10.18280/ts.370623
945	Lejmi, W., Khalifa, A.B., Mahjoub, M.A.	A novel spatio-temporal violence classification framework based on material derivative and LSTM neural network	challenges, classification, derivative, LSTM, motion, recognition, material, violence	37, 5, 687-701	https://doi.org/10.18280/ts.370501	Lejmi, W., Khalifa, A.B., Mahjoub, M.A. (2020). A novel spatio-temporal violence classification framework based on material derivative and LSTM neural network. Traitement du Signal, Vol. 37, No. 5, pp. 687-701. https://doi.org/10.18280/ts.370501
946	Rahmani, A.I., Almasi, M., Saleh, N., Katouli, M.	Image fusion of noisy images based on simultaneous empirical wavelet transform	simultaneous empirical wavelet transform, merge rules, coefficients, layers	37, 5, 703-710	https://doi.org/10.18280/ts.370502	Rahmani, A.I., Almasi, M., Saleh, N., Katouli, M. (2020). Image fusion of noisy images based on simultaneous empirical wavelet transform. Traitement du Signal, Vol. 37, No. 5, pp. 703-710. https://doi.org/10.18280/ts.370502
947	Mohammedhasan, M., Uğuz, H.	A new early stage diabetic retinopathy diagnosis model using deep convolutional neural networks and principal component analysis	diabetic retinopathy, deep learning, convolutional neural network, principal component analysis, edge-preserving guided image filtering, U-network, data augmentation	37, 5, 711-722	https://doi.org/10.18280/ts.370503	Mohammedhasan, M., Uğuz, H. (2020). A new early stage diabetic retinopathy diagnosis model using deep convolutional neural networks and principal component analysis. Traitement du Signal, Vol. 37, No. 5, pp. 711-722. https://doi.org/10.18280/ts.370503
948	Zhao, S.J., Zhu, J.C., Wu, D.	Design and application of a greedy pursuit algorithm adapted to overcomplete dictionary for sparse signal recovery	overcomplete dictionary, hard thresholding pursuit, projections	37, 5, 723-732	https://doi.org/10.18280/ts.370504	Zhao, S.J., Zhu, J.C., Wu, D. (2020). Design and application of a greedy pursuit algorithm adapted to overcomplete dictionary for sparse signal recovery. Traitement du Signal, Vol. 37, No. 5, pp. 723-732. https://doi.org/10.18280/ts.370504
949	Al-Hashim, M.A., Al-Ameen, Z.	Retinex-based multiphase algorithm for low-light image enhancement	image enhancement, image processing, low-light images, retinex-based multiphase algorithm	37, 5, 733-743	https://doi.org/10.18280/ts.370505	Al-Hashim, M.A., Al-Ameen, Z. (2020). Retinex-based multiphase algorithm for low-light image enhancement. Traitement du Signal, Vol. 37, No. 5, pp. 733-743. https://doi.org/10.18280/ts.370505
950	Fang, Q.Z., Liu, Y.X., Zhang, L.L.	Design and implementation of a lossless compression system for hyperspectral images	field programmable gate array (FPGA), hyperspectral image, lossless compression, forward prediction, full-pipeline construction	37, 5, 745-752	https://doi.org/10.18280/ts.370506	Fang, Q.Z., Liu, Y.X., Zhang, L.L. (2020). Design and implementation of a lossless compression system for hyperspectral images. Traitement du Signal, Vol. 37, No. 5, pp. 745-752. https://doi.org/10.18280/ts.370506
951	Bouida, A., Beladgham, M., Bassou, A., Benyahia, I., Ahmed-Taleb, A., Haouam, I., Kamline, M.	Evaluation of textural degradation in compressed medical and biometric images by analyzing image texture features and edges	image quality assessment, image texture analysis, image edge detection, wavelet-based compression, medical and biometric images	37, 5, 753-762	https://doi.org/10.18280/ts.370507	Bouida, A., Beladgham, M., Bassou, A., Benyahia, I., Ahmed-Taleb, A., Haouam, I., Kamline, M. (2020). Evaluation of textural degradation in compressed medical and biometric images by analyzing image texture features and edges. Traitement du Signal, Vol. 37, No. 5, pp. 753-762. https://doi.org/10.18280/ts.370507
952	Sun, H.Y., Wang, L., Song, Z., Chen, G.	Three-dimensional mirror surface measurement based on local blur analysis of phase measuring deflectometry system	three-dimensional (3D) imaging, phase measuring deflectometry (PMD), local blur, integral reconstruction	37, 5, 763-771	https://doi.org/10.18280/ts.370508	Sun, H.Y., Wang, L., Song, Z., Chen, G. (2020). Three-dimensional mirror surface measurement based on local blur analysis of phase measuring deflectometry system. Traitement du Signal, Vol. 37, No. 5, pp. 763-771. https://doi.org/10.18280/ts.370508
953	Kalakoti, G., G, P.	Key-frame detection and video retrieval based on DC coefficient-based cosine orthogonality and multivariate statistical tests	key-frame, background scenes, forefront objects, DC-coefficients, cosine orthogonality test, multivariate statistical parametric test	37, 5, 773-784	https://doi.org/10.18280/ts.370509	Kalakoti, G., G, P. (2020). Key-frame detection and video retrieval based on DC coefficient-based cosine orthogonality and multivariate statistical tests. Traitement du Signal, Vol. 37, No. 5, pp. 773-784. https://doi.org/10.18280/ts.370509
954	Ghorbanian, A., Maghsoudi, Y., Mohammadzadeh, A.	Clustering-based band selection using structural similarity index and entropy for hyperspectral image classification	band selection, dimension reduction, hyperspectral image, entropy, structural similarity, support vector machine (SVM)	37, 5, 785-791	https://doi.org/10.18280/ts.370510	Ghorbanian, A., Maghsoudi, Y., Mohammadzadeh, A. (2020). Clustering-based band selection using structural similarity index and entropy for hyperspectral image classification. Traitement du Signal, Vol. 37, No. 5, pp. 785-791. https://doi.org/10.18280/ts.370510

955	Zhang, X.R., Chen, G.	An automatic insect recognition algorithm in complex background based on convolution neural network	convolutional neural network (CNN), edgeless active contour, insect image recognition, complex background, narrow-band fast method	37, 5, 793-798	https://doi.org/10.18280/ts.370511	Zhang, X.R., Chen, G. (2020). An automatic insect recognition algorithm in complex background based on convolution neural network. Traitement du Signal, Vol. 37, No. 5, pp. 793-798. https://doi.org/10.18280/ts.370511
956	Aydemir, O.	Odor and subject identification using electroencephalography reaction to olfactory	electroencephalogram, brain response, odor, subject identification, multi-class classification, feature extraction	37, 5, 799-805	https://doi.org/10.18280/ts.370512	Aydemir, O. (2020). Odor and subject identification using electroencephalography reaction to olfactory. Traitement du Signal, Vol. 37, No. 5, pp. 799-805. https://doi.org/10.18280/ts.370512
957	Jin, D.B., Xu, S.Q., Tong, L.J., Wu, L.Y., Liu, S.M.	End image defect detection of float glass based on faster region-based convolutional neural network	float glass, defect detection, faster region-based convolutional neural network (Faster RCNN), target detection, end image	37, 5, 807-813	https://doi.org/10.18280/ts.370513	Jin, D.B., Xu, S.Q., Tong, L.J., Wu, L.Y., Liu, S.M. (2020). End image defect detection of float glass based on faster region-based convolutional neural network. Traitement du Signal, Vol. 37, No. 5, pp. 807-813. https://doi.org/10.18280/ts.370513
958	Beirami, B.A., Mokhtarzade, M.	Superpixel-based minimum noise fraction feature extraction for classification of hyperspectral images	minimum noise fraction, superpixel, feature extraction, hyperspectral classification, SuperMNF	37, 5, 815-822	https://doi.org/10.18280/ts.370514	Beirami, B.A., Mokhtarzade, M. (2020). Superpixel-based minimum noise fraction feature extraction for classification of hyperspectral images. Traitement du Signal, Vol. 37, No. 5, pp. 815-822. https://doi.org/10.18280/ts.370514
959	Guo, Q.	Detection of head raising rate of students in classroom based on head posture recognition	head posture recognition, head raising rate (HRR), convolutional neural network (CNN), human organ model	37, 5, 823-830	https://doi.org/10.18280/ts.370515	Guo, Q. (2020). Detection of head raising rate of students in classroom based on head posture recognition. Traitement du Signal, Vol. 37, No. 5, pp. 823-830. https://doi.org/10.18280/ts.370515
960	Melek, M., Manshouri, N., Kayikcioglu, T.	Low-cost brain-computer interface using the Emotiv Epoc headset based on rotating vanes	EEG, Emotiv Epoc headset, brain-computer interface, rotating vanes, information transfer rate	37, 5, 831-837	https://doi.org/10.18280/ts.370516	Melek, M., Manshouri, N., Kayikcioglu, T. (2020). Low-cost brain-computer interface using the Emotiv Epoc headset based on rotating vanes. Traitement du Signal, Vol. 37, No. 5, pp. 831-837. https://doi.org/10.18280/ts.370516
961	Keivani, M., Sazdar, A.M., Mazloum, J., Rahmani, A.E.	Application of empirical wavelet transform in digital image watermarking	digital watermarking, empirical wavelet transform, copyright, alpha blending	37, 5, 839-845	https://doi.org/10.18280/ts.370517	Keivani, M., Sazdar, A.M., Mazloum, J., Rahmani, A.E. (2020). Application of empirical wavelet transform in digital image watermarking. Traitement du Signal, Vol. 37, No. 5, pp. 839-845. https://doi.org/10.18280/ts.370517
962	Lu, S., Zhang, Q., Liu, Y., Liu, L., Zhu, Q., Jing, K.	Retrieval of multiple spatiotemporally correlated images on tourist attractions based on image processing	image processing, tourist attractions, multiple spatiotemporally correlated images (MSCIs), image retrieval	37, 5, 847-854	https://doi.org/10.18280/ts.370518	Lu, S., Zhang, Q., Liu, Y., Liu, L., Zhu, Q., Jing, K. (2020). Retrieval of multiple spatiotemporally correlated images on tourist attractions based on image processing. Traitement du Signal, Vol. 37, No. 5, pp. 847-854. https://doi.org/10.18280/ts.370518
963	Singh, N.P., Singh, V.P.	Efficient segmentation and registration of retinal image using gumble probability distribution and brisk feature	retinal image, feature descriptor, segmentation, registration, probability distribution functions	37, 5, 855-864	https://doi.org/10.18280/ts.370519	Singh, N.P., Singh, V.P. (2020). Efficient segmentation and registration of retinal image using gumble probability distribution and brisk feature. Traitement du Signal, Vol. 37, No. 5, pp. 855-864. https://doi.org/10.18280/ts.370519
964	Krishnaveni, P.R., Kishore, G.N.	Image based group classifier for brain tumor detection using machine learning technique	malignant tumor, feature extraction, classification, segmentation	37, 5, 865-871	https://doi.org/10.18280/ts.370520	Krishnaveni, P.R., Kishore, G.N. (2020). Image based group classifier for brain tumor detection using machine learning technique. Traitement du Signal, Vol. 37, No. 5, pp. 865-871. https://doi.org/10.18280/ts.370520
965	Wang, Y.N., Yang, Y.M., Zhang, P.Y.	Gesture feature extraction and recognition based on image processing	image processing, gesture feature extraction, gesture recognition, convolutional neural network (CNN)	37, 5, 873-880	https://doi.org/10.18280/ts.370521	Wang, Y.N., Yang, Y.M., Zhang, P.Y. (2020). Gesture feature extraction and recognition based on image processing. Traitement du Signal, Vol. 37, No. 5, pp. 873-880. https://doi.org/10.18280/ts.370521
966	Ouali, M.A., Ghanai, M., Chafaa, K.	TLBO optimization algorithm based-type2 fuzzy adaptive filter for ECG signals denoising	ECG signal, ECG denoising, type-2 fuzzy logic, optimization algorithm, TLBO	37, 4, 541-553	https://doi.org/10.18280/ts.370401	Ouali, M.A., Ghanai, M., Chafaa, K. (2020). TLBO optimization algorithm based-type2 fuzzy adaptive filter for ECG signals denoising. Traitement du Signal, Vol. 37, No. 4, pp. 541-553. https://doi.org/10.18280/ts.370401
967	Al-Qaisi, A., AlTarawneh, M.S., ElSaid, A., Alqadi, Z.	A hybrid method of face feature extraction, classification based on MLBP and layered-recurrent network	feature extraction, MLBP, classification, L-RNN, Quasi-Newton Back propagation	37, 4, 555-561	https://doi.org/10.18280/ts.370402	Al-Qaisi, A., AlTarawneh, M.S., ElSaid, A., Alqadi, Z. (2020). A hybrid method of face feature extraction, classification based on MLBP and layered-recurrent network. Traitement du Signal, Vol. 37, No. 4, pp. 555-561. https://doi.org/10.18280/ts.370402
968	Mehanović, D., Kevrić, J.	Phishing website detection using machine learning classifiers optimized by feature selection	classification, Decision Tree, feature selection, K-Nearest Neighbors, phishing website detection, Random Forest	37, 4, 563-569	https://doi.org/10.18280/ts.370403	Mehanović, D., Kevrić, J. (2020). Phishing website detection using machine learning classifiers optimized by feature selection. Traitement du Signal, Vol. 37, No. 4, pp. 563-569. https://doi.org/10.18280/ts.370403
969	Akgun, O.	Determination of the appropriate kernel structure in electroencephalography analysis of alcoholic subjects	alcoholic, EEG, ambiguity function, Wigner Ville distribution, nonseparable kernel, separable kernel, Doppler independent kernel, lag independent kernel	37, 4, 571-577	https://doi.org/10.18280/ts.370404	Akgun, O. (2020). Determination of the appropriate kernel structure in electroencephalography analysis of alcoholic subjects. Traitement du Signal, Vol. 37, No. 4, pp. 571-577. https://doi.org/10.18280/ts.370404
970	Wang, H.D.	A synchronous transmission method for array signals of sensor network under resonance technology	resonance technology, wavelet transform, sensor network, array signals, three-node collaboration	37, 4, 579-584	https://doi.org/10.18280/ts.370405	Wang, H.D. (2020). A synchronous transmission method for array signals of sensor network under resonance technology. Traitement du Signal, Vol. 37, No. 4, pp. 579-584. https://doi.org/10.18280/ts.370405
971	Benziane, M., Bouamar, M., Makdir, M.	Simple and efficient double-talk-detector for acoustic echo cancellation	AEC, DTD, RLS, Geigel algorithm, NCC, recursive estimation	37, 4, 585-592	https://doi.org/10.18280/ts.370406	Benziane, M., Bouamar, M., Makdir, M. (2020). Simple and efficient double-talk-detector for acoustic echo cancellation. Traitement du Signal, Vol. 37, No. 4, pp. 585-592. https://doi.org/10.18280/ts.370406
972	Bulla, P., Anantha, L., Peram, S.	Deep neural networks with transfer learning model for brain tumors classification	brain tumor, deep learning, inceptionV3, MR imaging, multi-class classification, transfer learning	37, 4, 593-601	https://doi.org/10.18280/ts.370407	Bulla, P., Anantha, L., Peram, S. (2020). Deep neural networks with transfer learning model for brain tumors classification. Traitement du Signal, Vol. 37, No. 4, pp. 593-601. https://doi.org/10.18280/ts.370407

973	Wang, Z.	Recognition and analysis of behavior features of school-age children based on video image processing	video image processing, school-age children, behavior features, behavior recognition	37, 4, 603-610	https://doi.org/10.18280/ts.370408	Wang, Z. (2020). Recognition and analysis of behavior features of school-age children based on video image processing. Traitement du Signal, Vol. 37, No. 4, pp. 603-610. https://doi.org/10.18280/ts.370408
974	Ornek, A.H., Ervural, S., Ceylan, M., Konak, M., Soylu, H., Savasci, D.	Classification of medical thermograms belonging neonates by using segmentation, feature engineering and machine learning algorithms	fast correlation-based filter, local binary pattern, machine learning, neonate, thermography	37, 4, 611-617	https://doi.org/10.18280/ts.370409	Ornek, A.H., Ervural, S., Ceylan, M., Konak, M., Soylu, H., Savasci, D. (2020). Classification of medical thermograms belonging neonates by using segmentation, feature engineering and machine learning algorithms. Traitement du Signal, Vol. 37, No. 4, pp. 611-617. https://doi.org/10.18280/ts.370409
975	Bai, S.Z., Han, F.L.	Tourist behavior recognition through scenic spot image retrieval based on image processing	image processing, scenic spot image retrieval, tourist behavior recognition, scale invariant feature transform (SIFT)	37, 4, 619-626	https://doi.org/10.18280/ts.370410	Bai, S.Z., Han, F.L. (2020). Tourist behavior recognition through scenic spot image retrieval based on image processing. Traitement du Signal, Vol. 37, No. 4, pp. 619-626. https://doi.org/10.18280/ts.370410
976	Li, A.H., An, L., Che, Z.H.	A Facial expression recognition model based on texture and shape features	Facial expression recognition, texture features, shape features, Gaussian Markov random field (GMRF) model, support vector machine (SVM) classifier	37, 4, 627-632	https://doi.org/10.18280/ts.370411	Li, A.H., An, L., Che, Z.H. (2020). A Facial expression recognition model based on texture and shape features. Traitement du Signal, Vol. 37, No. 4, pp. 627-632. https://doi.org/10.18280/ts.370411
977	El Yassini, A., Jallal, M.A., Ibnyaich, S., Zeroual, A., Chabaa, S.	A miniaturized CPW-fed reconfigurable antenna with a single-dual band and an asymmetric ground plane for switchable band wireless applications	reconfigurable antenna, CPW-fed antenna, compact antenna, pin diode, hexagonal slot, WLAN/WiMAX applications	37, 4, 633-638	https://doi.org/10.18280/ts.370412	El Yassini, A., Jallal, M.A., Ibnyaich, S., Zeroual, A., Chabaa, S. (2020). A miniaturized CPW-fed reconfigurable antenna with a single-dual band and an asymmetric ground plane for switchable band wireless applications. Traitement du Signal, Vol. 37, No. 4, pp. 633-638. https://doi.org/10.18280/ts.370412
978	Bulut, G.G., Çatalbaş, M.C., Güler, H.	Chaotic systems based real-time implementation of visual cryptography using LabVIEW	chaotic circuit, chaotic system, real-time application, image encryption	37, 4, 639-645	https://doi.org/10.18280/ts.370413	Bulut, G.G., Çatalbaş, M.C., Güler, H. (2020). Chaotic systems based real-time implementation of visual cryptography using LabVIEW. Traitement du Signal, Vol. 37, No. 4, pp. 639-645. https://doi.org/10.18280/ts.370413
979	Yang, Y.	A vehicle recognition algorithm based on deep convolution neural network	Convolution Neural Network (CNN), deep learning (DL), vehicle recognition algorithm, image classification	37, 4, 647-653	https://doi.org/10.18280/ts.370414	Yang, Y. (2020). A vehicle recognition algorithm based on deep convolution neural network. Traitement du Signal, Vol. 37, No. 4, pp. 647-653. https://doi.org/10.18280/ts.370414
980	Zhang, H., Lu, X.X., Yin, X.Y.	Reverse synchronous transmission of electrical signals based on parallel injection and series pickup	parallel injection, series pickup, electrical signal, reverse synchronous transmission (RST), alternative current (AC) impedance	37, 4, 655-660	https://doi.org/10.18280/ts.370415	Zhang, H., Lu, X.X., Yin, X.Y. (2020). Reverse synchronous transmission of electrical signals based on parallel injection and series pickup. Traitement du Signal, Vol. 37, No. 4, pp. 655-660. https://doi.org/10.18280/ts.370415
981	Singh, G., Agrawal, S., Sohi, B.S.	Handwritten Gurmukhi digit recognition system for small datasets	DCT, DWT, support vector machine, deep convolutional neural networks, Gurmukhi handwritten digit recognition	37, 4, 661-669	https://doi.org/10.18280/ts.370416	Singh, G., Agrawal, S., Sohi, B.S. (2020). Handwritten Gurmukhi digit recognition system for small datasets. Traitement du Signal, Vol. 37, No. 4, pp. 661-669. https://doi.org/10.18280/ts.370416
982	Rashid, A., Salamat, N., Surya Prasath, V.B.	Dynamic increased capacity approach steganography in spatial domain	Gray Level Modification (GLM), information security, Least Significant Bit (LSB), spatial domain, steganography	37, 4, 671-678	https://doi.org/10.18280/ts.370417	Rashid, A., Salamat, N., Surya Prasath, V.B. (2020). Dynamic increased capacity approach steganography in spatial domain. Traitement du Signal, Vol. 37, No. 4, pp. 671-678. https://doi.org/10.18280/ts.370417
983	Yan, X.D., Song, X.G.	An image recognition algorithm of bolt loss in underground pipelines based on local binary pattern operator	image recognition, local binary pattern (LBP) operator, feature extraction, support vector machine (SVM), underground pipelines	37, 4, 679-685	https://doi.org/10.18280/ts.370418	Yan, X.D., Song, X.G. (2020). An image recognition algorithm of bolt loss in underground pipelines based on local binary pattern operator. Traitement du Signal, Vol. 37, No. 4, pp. 679-685. https://doi.org/10.18280/ts.370418
984	Özyurt, F., Avcı, E., Sert, E.	UC-Merced image classification with CNN feature reduction using wavelet entropy optimized with genetic algorithm	CNN, feature reduction, entropy, genetic algorithm, UC Merced dataset	37, 3, 347-353	https://doi.org/10.18280/ts.370301	Özyurt, F., Avcı, E., Sert, E. (2020). UC-Merced image classification with CNN feature reduction using wavelet entropy optimized with genetic algorithm. Traitement du Signal, Vol. 37, No. 3, pp. 347-353. https://doi.org/10.18280/ts.370301
985	Shah, S.A.A., Habib, N., Nadeem, M.S.A., Alshdadi, A.A., Alqarni, M., Aziz, W.	Extraction of dynamical information and classification of heart rate variability signals using scale based permutation entropy measures	classification, complexity analysis, heart rate variability, improved multiscale permutation entropy, multiscale permutation entropy	37, 3, 355-365	https://doi.org/10.18280/ts.370302	Shah, S.A.A., Habib, N., Nadeem, M.S.A., Alshdadi, A.A., Alqarni, M., Aziz, W. (2020). Extraction of dynamical information and classification of heart rate variability signals using scale based permutation entropy measures. Traitement du Signal, Vol. 37, No. 3, pp. 355-365. https://doi.org/10.18280/ts.370302
986	Zhang, L.Q., Li, M., Qiu, X.H., Zhu, Y.	Infrared small target detection based on four-direction overlapping group sparse total variation	infrared small target detection, robust principal component analysis (RPCA), total variation (TV), four-direction overlapping group	37, 3, 367-377	https://doi.org/10.18280/ts.370303	Zhang, L.Q., Li, M., Qiu, X.H., Zhu, Y. (2020). Infrared small target detection based on four-direction overlapping group sparse total variation. Traitement du Signal, Vol. 37, No. 3, pp. 367-377. https://doi.org/10.18280/ts.370303
987	Said, Z., El Hassouani, Y.	A new approach for extracting and characterizing fetal electrocardiogram	wavelet transform, source separation time–scale, electrocardiogram characterization	37, 3, 379-386	https://doi.org/10.18280/ts.370304	Said, Z., El Hassouani, Y. (2020). A new approach for extracting and characterizing fetal electrocardiogram. Traitement du Signal, Vol. 37, No. 3, pp. 379-386. https://doi.org/10.18280/ts.370304
988	Maddumala, V.R., Arunkumar, R.	Big data-driven feature extraction and clustering based on statistical methods	big data-driven, feature extraction, video retrieval, background scenes, foreground objects	37, 3, 387-394	https://doi.org/10.18280/ts.370305	Maddumala, V.R., Arunkumar, R. (2020). Big data-driven feature extraction and clustering based on statistical methods. Traitement du Signal, Vol. 37, No. 3, pp. 387-394. https://doi.org/10.18280/ts.370305
989	Zhang, W.L., Li, X.W., Song, Q.X., Lu, W.	A face detection method based on image processing and improved adaptive boosting algorithm	face detection, image processing, adaptive boosting (AdaBoost) algorithm, weak classifier	37, 3, 395-403	https://doi.org/10.18280/ts.370306	Zhang, W.L., Li, X.W., Song, Q.X., Lu, W. (2020). A face detection method based on image processing and improved adaptive boosting algorithm. Traitement du Signal, Vol. 37, No. 3, pp. 395-403. https://doi.org/10.18280/ts.370306
990	Moussa, M., Guedri, W., Douik, A.	A novel metaheuristic algorithm for edge detection based on artificial bee colony technique	edge detection, meta-heuristic methods, artificial bee colony (ABC) optimization, Otsu's method, multilevel thresholds, color space	37, 3, 405-412	https://doi.org/10.18280/ts.370307	Moussa, M., Guedri, W., Douik, A. (2020). A novel metaheuristic algorithm for edge detection based on artificial bee colony technique. Traitement du Signal, Vol. 37, No. 3, pp. 405-412. https://doi.org/10.18280/ts.370307

991	Houari, H., Guerti, M.	Study the influence of gender and age in recognition of emotions from algerian dialect speech	ADED, emotion, HNR, KNN, LDA, recognition, speech, SVM	37, 3, 413-423	https://doi.org/10.18280/ts.370308	Houari, H., Guerti, M. (2020). Study the influence of gender and age in recognition of emotions from algerian dialect speech. Traitement du Signal, Vol. 37, No. 3, pp. 413-423. https://doi.org/10.18280/ts.370308
992	Song, X.R., Gao, S., Chen, C.B., Wang, S.L.	A novel face recognition algorithm for imbalanced small samples	feature extraction, face recognition, convolutional neural network (CNN), imbalanced small samples	37, 3, 425-432	https://doi.org/10.18280/ts.370309	Song, X.R., Gao, S., Chen, C.B., Wang, S.L. (2020). A novel face recognition algorithm for imbalanced small samples. Traitement du Signal, Vol. 37, No. 3, pp. 425-432. https://doi.org/10.18280/ts.370309
993	Titrek, F., Baykan, Ö.K.	Finger vein recognition by combining anisotropic diffusion and a new feature extraction method	anisotropic diffusion, biometrics, feature extraction, finger vein recognition, HVTP features	37, 3, 433-441	https://doi.org/10.18280/ts.370310	Titrek, F., Baykan, Ö.K. (2020). Finger vein recognition by combining anisotropic diffusion and a new feature extraction method. Traitement du Signal, Vol. 37, No. 3, pp. 433-441. https://doi.org/10.18280/ts.370310
994	Yu, G.C.	A computationally efficient estimation algorithm for direction of arrival in double parallel linear array	direction of arrival (DOA), double parallel linear array (DPLA), joint cross-covariance matrix (JCCM), root-multiple signal classification (MUSIC) algorithm	37, 3, 443-449	https://doi.org/10.18280/ts.370311	Yu, G.C. (2020). A computationally efficient estimation algorithm for direction of arrival in double parallel linear array. Traitement du Signal, Vol. 37, No. 3, pp. 443-449. https://doi.org/10.18280/ts.370311
995	Bala, A., Rani, A., Kumar, S.	An illumination insensitive normalization approach to face recognition using locality sensitive discriminant analysis	face recognition, image gradients, illumination normalization, reflectance model, LSDA	37, 3, 451-460	https://doi.org/10.18280/ts.370312	Bala, A., Rani, A., Kumar, S. (2020). An illumination insensitive normalization approach to face recognition using locality sensitive discriminant analysis. Traitement du Signal, Vol. 37, No. 3, pp. 451-460. https://doi.org/10.18280/ts.370312
996	Yildirim, M., Cinar, A.	A deep learning based hybrid approach for COVID-19 disease detections	Covid-19, deep learning, image processing, Resnet50, hybrid model	37, 3, 461-468	https://doi.org/10.18280/ts.370313	Yildirim, M., Cinar, A. (2020). A deep learning based hybrid approach for COVID-19 disease detections. Traitement du Signal, Vol. 37, No. 3, pp. 461-468. https://doi.org/10.18280/ts.370313
997	Xiao, N., Zhang, X.Y.	A target positioning method for industrial robot based on multiple visual sensors	industrial robot, multiple visual sensors (MVSs), target positioning, feature point matching	37, 3, 469-475	https://doi.org/10.18280/ts.370314	Xiao, N., Zhang, X.Y. (2020). A target positioning method for industrial robot based on multiple visual sensors. Traitement du Signal, Vol. 37, No. 3, pp. 469-475. https://doi.org/10.18280/ts.370314
998	Bhatt, T.D.	Sequences with perfect periodic auto and cross correlation properties	periodic autocorrelation, cross-correlation, periodic ambiguity function, zero-correlation zone (ZCZ), synthesized sequences	37, 3, 477-484	https://doi.org/10.18280/ts.370315	Bhatt, T.D. (2020). Sequences with perfect periodic auto and cross correlation properties. Traitement du Signal, Vol. 37, No. 3, pp. 477-484. https://doi.org/10.18280/ts.370315
999	Wang, H.D.	A novel detection method for weak harmonic signal with chaotic noise	chaotic noise, wireless network, weak signal, harmonic signals, signal detection, bit error rate (BER)	37, 3, 485-491	https://doi.org/10.18280/ts.370316	Wang, H.D. (2020). A novel detection method for weak harmonic signal with chaotic noise. Traitement du Signal, Vol. 37, No. 3, pp. 485-491. https://doi.org/10.18280/ts.370316
1000	Brahmaiah, V.P., Sai, Y.P., Giriprasad, M.N.	A new framework for recognizing normal and epileptic seizure from eye movement signals using genetic based convolutional neural network	epileptic seizure, feature extraction, genetic algorithm, wiener filter	37, 3, 493-501	https://doi.org/10.18280/ts.370317	Brahmaiah, V.P., Sai, Y.P., Giriprasad, M.N. (2020). A new framework for recognizing normal and epileptic seizure from eye movement signals using genetic based convolutional neural network. Traitement du Signal, Vol. 37, No. 3, pp. 493-501. https://doi.org/10.18280/ts.370317
1001	Huang, W., Li, N., Qiu, Z.J., Jiang, N., Wu, B., Liu, B.	An automatic recognition method for students' classroom behaviors based on image processing	classroom behavior analysis, head pose, facial expression, image processing	37, 3, 503-509	https://doi.org/10.18280/ts.370318	Huang, W., Li, N., Qiu, Z.J., Jiang, N., Wu, B., Liu, B. (2020). An automatic recognition method for students' classroom behaviors based on image processing. Traitement du Signal, Vol. 37, No. 3, pp. 503-509. https://doi.org/10.18280/ts.370318
1002	Ponnam, H., Shaik, J.H.	An improved R-peaks marking method using Fourier decomposition and Teager Energy Operator	Fourier decomposition method, Hilbert Transform, Teager Energy Operator, Zero Cross Detector, R-peaks	37, 3, 511-518	https://doi.org/10.18280/ts.370319	Ponnam, H., Shaik, J.H. (2020). An improved R-peaks marking method using Fourier decomposition and Teager Energy Operator. Traitement du Signal, Vol. 37, No. 3, pp. 511-518. https://doi.org/10.18280/ts.370319
1003	Cao, X.P., Li, T., Bai, J.W., Wei, Z.K.	Identification and classification of surface cracks on concrete members based on image processing	surface cracks on concrete members, image processing, image segmentation, crack identification and classification	37, 3, 519-525	https://doi.org/10.18280/ts.370320	Cao, X.P., Li, T., Bai, J.W., Wei, Z.K. (2020). Identification and classification of surface cracks on concrete members based on image processing. Traitement du Signal, Vol. 37, No. 3, pp. 519-525. https://doi.org/10.18280/ts.370320
1004	Satish, P., Srikantaswamy, M., Ramaswamy, N.K.	A comprehensive review of blind deconvolution techniques for image deblurring	blind deconvolution, Maximum A Posteriori Estimation (MAP)	37, 3, 527-539	https://doi.org/10.18280/ts.370321	Satish, P., Srikantaswamy, M., Ramaswamy, N.K. (2020). A comprehensive review of blind deconvolution techniques for image deblurring. Traitement du Signal, Vol. 37, No. 3, pp. 527-539. https://doi.org/10.18280/ts.370321
1005	Göğüş, F.Z., Tezel, G., Özşen, S., Küççüktürk, S., Vatansev, H., Koca, Y.	Identification of apnea-hypopnea index subgroups based on multifractal detrended fluctuation analysis and nasal cannula airflow signals	obstructive sleep apnea hypopnea syndrome (OSAHS), positive airway pressure (pap), apnea-hypopnea index (AHI), multifractal detrended fluctuation analysis, nasal cannula airflow signals, feature extraction, feature selection, random forest	37, 2, 145-156	https://doi.org/10.18280/ts.370201	Göğüş, F.Z., Tezel, G., Özşen, S., Küççüktürk, S., Vatansev, H., Koca, Y. (2020). Identification of apnea-hypopnea index subgroups based on multifractal detrended fluctuation analysis and nasal cannula airflow signals. Traitement du Signal, Vol. 37, No. 2, pp. 145-156. https://doi.org/10.18280/ts.370201
1006	Li, N.N., Yue, S.Y., Jiang, B.	Adaptive and feature-preserving bilateral filters for three-dimensional models	bilateral filtering, mesh denoising, scale parameters, feature preservation	37, 2, 157-168	https://doi.org/10.18280/ts.370202	Li, N.N., Yue, S.Y., Jiang, B. (2020). Adaptive and feature-preserving bilateral filters for three-dimensional models. Traitement du Signal, Vol. 37, No. 2, pp. 157-168. https://doi.org/10.18280/ts.370202
1007	Khezzar, Z.A., Benzid, R., Saidi, L.	New thresholding technique in DCT domain for interference mitigation in GNSS receivers	GNSS interference mitigation, DSSS, Discrete cosine transform, Universal threshold, statistical sampling theory, Tukey window, narraw band interference (NBI)	37, 2, 169-180	https://doi.org/10.18280/ts.370203	Khezzar, Z.A., Benzid, R., Saidi, L. (2020). New thresholding technique in DCT domain for interference mitigation in GNSS receivers. Traitement du Signal, Vol. 37, No. 2, pp. 169-180. https://doi.org/10.18280/ts.370203
1008	Arshaghi, A., Ashourian, M., Ghabeli, L.	Detection of skin cancer image by feature selection methods using new buzzard optimization (BUZO) algorithm	skin cancer, skin lesion, Dermoscopy images, shape and color features, Buzzard Optimization (BUZO) algorithm, feature selection	37, 2, 181-194	https://doi.org/10.18280/ts.370204	Arshaghi, A., Ashourian, M., Ghabeli, L. (2020). Detection of skin cancer image by feature selection methods using new buzzard optimization (BUZO) algorithm. Traitement du Signal, Vol. 37, No. 2, pp. 181-194. https://doi.org/10.18280/ts.370204

1009	Xiao, X.H., Xie, J.G., Niu, J.P., Cao, W.	A novel image fusion method for water body extraction based on optimal band combination	water body extraction, Enhanced Thematic Mapper Plus (ETM+), Phased Array type L-band Synthetic Aperture Radar (PALSAR), optimal band combination (OBC)	37, 2, 195-207	https://doi.org/10.18280/ts.370205	Xiao, X.H., Xie, J.G., Niu, J.P., Cao, W. (2020). A novel image fusion method for water body extraction based on optimal band combination. Traitement du Signal, Vol. 37, No. 2, pp. 195-207. https://doi.org/10.18280/ts.370205
1010	Tarchoun, B., Khalifa, A.B., Dhifallah, S., Jegham, I., Mahjoub, M.A.	Hand-crafted features vs deep learning for pedestrian detection in moving camera	deep learning, handcrafted features, intelligent transport systems, moving camera, pedestrian detection	37, 2, 209-216	https://doi.org/10.18280/ts.370206	Tarchoun, B., Khalifa, A.B., Dhifallah, S., Jegham, I., Mahjoub, M.A. (2020). Hand-crafted features vs deep learning for pedestrian detection in moving camera. Traitement du Signal, Vol. 37, No. 2, pp. 209-216. https://doi.org/10.18280/ts.370206
1011	Kishore, D., Rao, C.S.	A multi-class SVM based content based image retrieval system using hybrid optimization techniques	CBIT, CS-SCHT, exact Legendre moments, HSV color quantization, differential evolution, multi-class SVM, firefly algorithm	37, 2, 217-225	https://doi.org/10.18280/ts.370207	Kishore, D., Rao, C.S. (2020). A multi-class SVM based content based image retrieval system using hybrid optimization techniques. Traitement du Signal, Vol. 37, No. 2, pp. 217-226. https://doi.org/10.18280/ts.370207
1012	Liu, Z.H., Lyu, J., Zhao, H.L., Liu, J.	Prediction of graphic interaction time of virtual reality system based on improved Fitts' law	virtual reality (VR), human computer interaction (HCI), Fitts' law, arbitrary shape	37, 2, 227-234	https://doi.org/10.18280/ts.370208	Liu, Z.H., Lyu, J., Zhao, H.L., Liu, J. (2020). Prediction of graphic interaction time of virtual reality system based on improved Fitts' law. Traitement du Signal, Vol. 37, No. 2, pp. 227-234. https://doi.org/10.18280/ts.370208
1013	Aslan, Z., Akin, M.	Automatic detection of schizophrenia by applying deep learning over spectrogram images of EEG signals	schizophrenia, CNN, deep learning, spectrogram	37, 2, 235-244	https://doi.org/10.18280/ts.370209	Aslan, Z., Akin, M. (2020). Automatic detection of schizophrenia by applying deep learning over spectrogram images of EEG signals. Traitement du Signal, Vol. 37, No. 2, pp. 235-244. https://doi.org/10.18280/ts.370209
1014	Al-Ameen, Z.	Satellite image enhancement using an ameliorated balance contrast enhancement technique	ABCETP, contrast enhancement, image enhancement, satellite imaging	37, 2, 245-254	https://doi.org/10.18280/ts.370210	Al-Ameen, Z. (2020). Satellite image enhancement using an ameliorated balance contrast enhancement technique. Traitement du Signal, Vol. 37, No. 2, pp. 245-254. https://doi.org/10.18280/ts.370210
1015	Wu, H., Sun, X.Y., Liu, Y.N., Wang, D.G., Wei, B.	Fusion between shape prior and graph cut for vehicle image segmentation	shape prior, graph cut, image segmentation, vehicle images	37, 2, 255-262	https://doi.org/10.18280/ts.370211	Wu, H., Sun, X.Y., Liu, Y.N., Wang, D.G., Wei, B. (2020). Fusion between shape prior and graph cut for vehicle image segmentation. Traitement du Signal, Vol. 37, No. 2, pp. 255-262. https://doi.org/10.18280/ts.370211
1016	Khiter, A., Mitiche, A.B.H.A., Mitiche, L.	Muscle noise cancellation from ECG signal using self correcting leaky normalized least mean square adaptive filter under varied step size and leakage coefficient	ECG signal, EMG noise, noise canceller, step size, leakage coefficient, normalized least square, self correcting filter	37, 2, 263-269	https://doi.org/10.18280/ts.370212	Khiter, A., Mitiche, A.B.H.A., Mitiche, L. (2020). Muscle noise cancellation from ECG signal using self correcting leaky normalized least mean square adaptive filter under varied step size and leakage coefficient. Traitement du Signal, Vol. 37, No. 2, pp. 263-269. https://doi.org/10.18280/ts.370212
1017	Jiang, N., Li, J.Y.	An improved semantic segmentation method for remote sensing images based on neural network	remote sensing images, pixel-level method, residual network (ResNet), dilated spatial pyramid pooling (SPP), sub-pixel up-sampling, semantic segmentation	37, 2, 271-278	https://doi.org/10.18280/ts.370213	Jiang, N., Li, J.Y. (2020). An improved semantic segmentation method for remote sensing images based on neural network. Traitement du Signal, Vol. 37, No. 2, pp. 271-278. https://doi.org/10.18280/ts.370213
1018	Kaur, A., Verma, K., Bhondekar, A.P., Shashvat, K.	Comparison of classification models using entropy based features from sub-bands of EEG	EEG classification, approximate entropy, sample entropy, fuzzy approximate entropy, random forest, AdaBoost, gradient boosting, naïve Bayes, linear discriminant analysis, quadratic discriminant analysis	37, 2, 279-289	https://doi.org/10.18280/ts.370214	Kaur, A., Verma, K., Bhondekar, A.P., Shashvat, K. (2020). Comparison of classification models using entropy based features from sub-bands of EEG. Traitement du Signal, Vol. 37, No. 2, pp. 279-289. https://doi.org/10.18280/ts.370214
1019	Katouli, M., Rahmani, A.E.	Brain tumor diagnosis in MRI images using image processing techniques and pixel-based clustering	brain tumor, super pixel, spectral clustering, filter Gabor	37, 2, 291-300	https://doi.org/10.18280/ts.370215	Katouli, M., Rahmani, A.E. (2020). Brain tumor diagnosis in MRI images using image processing techniques and pixel-based clustering. Treatment du Signal, Vol. 37, No. 2, pp. 291-300. https://doi.org/10.18280/ts.370215
1020	Li, Y.B.	Key technologies for dynamic imaging of disaster-causing concealed water bodies in underground coalmines based on transient electromagnetic method	underground coal mine, high power, transient electromagnetic method (TEM), dynamic imaging	37, 2, 301-306	https://doi.org/10.18280/ts.370216	Li, Y.B. (2020). Key technologies for dynamic imaging of disaster-causing concealed water bodies in underground coalmines based on transient electromagnetic method. Traitement du Signal, Vol. 37, No. 2, pp. 301-306. https://doi.org/10.18280/ts.370216
1021	Dahmani, M., Guerti, M.	Cross-recurrence plots and quantification of glottal signal for pathological voice assessment	assessment, cross recurrence quantification analysis, glottal signal, vocal folds	37, 2, 307-317	https://doi.org/10.18280/ts.370217	Dahmani, M., Guerti, M. (2020). Cross-recurrence plots and quantification of glottal signal for pathological voice assessment. Traitement du Signal, Vol. 37, No. 2, pp. 307-317. https://doi.org/10.18280/ts.370217
1022	Beirami, B.A., Mokhtarzade, M.	An automatic method for unsupervised feature selection of hyperspectral images based on fuzzy clustering of bands	hyperspectral classification, band selection; statistical attributes, fuzzy c-means clustering, virtual dimensionality, principal component analysis	37, 2, 319-324	https://doi.org/10.18280/ts.370218	Beirami, B.A., Mokhtarzade, M. (2020). An automatic method for unsupervised feature selection of hyperspectral images based on fuzzy clustering of bands. Traitement du Signal, Vol. 37, No. 2, pp. 319-324. https://doi.org/10.18280/ts.370218
1023	Wang, Y.	Moving vehicle detection and tracking based on video sequences	video sequence, vehicle tracking algorithm, vehicle detection algorithm, intelligent transportation	37, 2, 325-331	https://doi.org/10.18280/ts.370219	Wang, Y. (2020). Moving vehicle detection and tracking based on video sequences. Traitement du Signal, Vol. 37, No. 2, pp. 325-331. https://doi.org/10.18280/ts.370219
1024	Alphonse, P.J.A., Sriharsha, K.V.	Depth perception in a single RGB camera using body dimensions and centroid property	stereo imaging, anthropometric, perspective errors, body dimensions, centroid, surveillance, vision	37, 2, 333-340	https://doi.org/10.18280/ts.370220	Alphonse, P.J.A., Sriharsha, K.V. (2020). Depth perception in a single RGB camera using body dimensions and centroid property. Traitement du Signal, Vol. 37, No. 2, pp. 333-340. https://doi.org/10.18280/ts.370220
1025	Mao, C.Z., Meng, W.L., Shi, C,Y., Wu, C.C., Zhang, J.	A crop disease image recognition algorithm based on feature extraction and image segmentation	image recognition, image segmentation, feature extraction, crop diseases	37, 2, 341-346	https://doi.org/10.18280/ts.370221	Mao, C.Z., Meng, W.L., Shi, C,Y., Wu, C.C., Zhang, J. (2020). A crop disease image recognition algorithm based on feature extraction and image segmentation. Traitement du Signal, Vol. 37, No. 2, pp. 341-346. https://doi.org/10.18280/ts.370221
1026	Chergui, A., Ouchtati, S., Mavromatis, S., Bekhouche, S.E., Lashab, M., Sequeira, J.	Kinship verification through facial images using CNN-based features	kinship verification, deep learning, VGG-Face, fisher score, SVM	37, 1, 1-8	https://doi.org/10.18280/ts.370101	Chergui, A., Ouchtati, S., Mavromatis, S., Bekhouche, S.E., Lashab, M., Sequeira, J. (2020). Kinship verification through facial images using CNN-based features. Traitement du Signal, Vol. 37, No. 1, pp. 1-8. https://doi.org/10.18280/ts.370101

1027	Akgun, O.	Spectral and statistical analysis for damage detection in ceramic materials	ceramic materials, crack analysis, impulse noise method, Wigner Ville distribution, bispectrum, trispectrum, mean value, Peak to RMS	37, 1, 9-16	https://doi.org/10.18280/ts.370102	Akgun, O. (2020). Spectral and statistical analysis for damage detection in ceramic materials. Traitement du Signal, Vol. 37, No. 1, pp. 9-16. https://doi.org/10.18280/ts.370102
1028	Keivani, M., Mazloum, J., Sedaghatfar, E., Tavakoli, M.B.	Automated analysis of leaf shape, texture, and color features for plant classification	plants, GIST, best-guide binary particle swarm optimization, geometrics, machine learning	37, 1, 17-28	https://doi.org/10.18280/ts.370103	Keivani, M., Mazloum, J., Sedaghatfar, E., Tavakoli, M.B. (2020). Automated analysis of leaf shape, texture, and color features for plant classification. Traitement du Signal, Vol. 37, No. 1, pp. 17-28. https://doi.org/10.18280/ts.370103
1029	Tang, X., Zeng, T., Ding, B.X., Tan, Y.	A salient object detection algorithm based on hierarchical cognitive mechanism	cognitive mechanism, salient object detection, RGB-D image, saliency map	37, 1, 29-35	https://doi.org/10.18280/ts.370104	Tang, X., Zeng, T., Ding, B.X., Tan, Y. (2020). A salient object detection algorithm based on hierarchical cognitive mechanism. Traitement du Signal, Vol. 37, No. 1, pp. 29-35. https://doi.org/10.18280/ts.370104
1030	Abdellaoui, M., Douik, A.	Human action recognition in video sequences using deep belief networks	human action recognition, deep belief network, restricted Boltzmann machine, deep learning	37, 1, 37-44	https://doi.org/10.18280/ts.370105	Abdellaoui, M., Douik, A. (2020). Human action recognition in video sequences using deep belief networks. Traitement du Signal, Vol. 37, No. 1, pp. 37-44. https://doi.org/10.18280/ts.370105
1031	Yan, X.D., Song, X.G.	An image recognition algorithm for defect detection of underground pipelines based on convolutional neural network	image recognition, convolution neural network (CNN), cost function, recursive neural network (RNN), underground pipelines	37, 1, 45-50	https://doi.org/10.18280/ts.370106	Yan, X.D., Song, X.G. (2020). An image recognition algorithm for defect detection of underground pipelines based on convolutional neural network. Traitement du Signal, Vol. 37, No. 1, pp. 45-50. https://doi.org/10.18280/ts.370106
1032	Demircan, S., Örnek, H.K.	Comparison of the effects of Mel coefficients and spectrogram images via deep learning in emotion classification	speech emotion recognition, Deep Neural Network (DNN), Convolutional Neural Network (CNN), deep learning algorithm, Mel-Frequency Cepstrum Coefficients (MFCC)	37, 1, 51-57	https://doi.org/10.18280/ts.370107	Demircan, S., Örnek, H.K. (2020). Comparison of the effects of Mel coefficients and spectrogram images via deep learning in emotion classification. Traitement du Signal, Vol. 37, No. 1, pp. 51-57. https://doi.org/10.18280/ts.370107
1033	Akbari, H., Esmaili, S.S.	A novel geometrical method for discrimination of normal, interictal and ictal EEG signals	ictal EEG signal, geometrical features, computer-aided diagnosis, SVM, KNN	37, 1, 59-68	https://doi.org/10.18280/ts.370108	Akbari, H., Esmaili, S.S. (2020). A novel geometrical method for discrimination of normal, interictal and ictal EEG signals. Traitement du Signal, Vol. 37, No. 1, pp. 59-68. https://doi.org/10.18280/ts.370108
1034	Yang, B.H.	An adaptive filtering algorithm for non-Gaussian signals in alpha-stable distribution	Alpha (α)-stable distribution, non-Gaussian distribution, fractional lower-order statistics (FLOS), adaptive filtering algorithm, least mean square (LMS), subspace minimum norm (SMN) algorithm	37, 1, 69-75	https://doi.org/10.18280/ts.370109	Yang, B.H. (2020). An adaptive filtering algorithm for non-Gaussian signals in alpha-stable distribution. Traitement du Signal, Vol. 37, No. 1, pp. 69-75. https://doi.org/10.18280/ts.370109
1035	Nandan, D.	An efficient antilogarithmic converter by using correction scheme for DSP processor	antilogarithmic converter, computer arithmetic, DSP processor, error analysis, FIR filter, logarithmic converter, logarithmic multiplication	37, 1, 77-83	https://doi.org/10.18280/ts.370110	Nandan, D. (2020). An efficient antilogarithmic converter by using correction scheme for DSP processor. Traitement du Signal, Vol. 37, No. 1, pp. 77-83. https://doi.org/10.18280/ts.370110
1036	Jin, D.B., Xu, S.Q., Tong, L.J., Wu, L.Y., Liu, S.M.	A deep learning model for striae identification in end images of float glass	striae identification, end image, float glass, deep learning (DL), liquid layers, U-Net	37, 1, 85-93	https://doi.org/10.18280/ts.370111	Jin, D.B., Xu, S.Q., Tong, L.J., Wu, L.Y., Liu, S.M. (2020). A deep learning model for striae identification in end images of float glass. Traitement du Signal, Vol. 37, No. 1, pp. 85-93. https://doi.org/10.18280/ts.370111
1037	Mokhnache, A., Ziet, L.	Cryptanalysis of a pixel permutation based image encryption technique using chaotic map	chaos, chosen-plaintext attack, brute-force attack, image encryption	37, 1, 95-100	https://doi.org/10.18280/ts.370112	Mokhnache, A., Ziet, L. (2020). Cryptanalysis of a pixel permutation based image encryption technique using chaotic map. Traitement du Signal, Vol. 37, No. 1, pp. 95-100. https://doi.org/10.18280/ts.370112
1038	Jia, B.X., Meng, B., Zhang, W.N., Liu, J.	Query rewriting and semantic annotation in semantic-based image retrieval under heterogeneous ontologies of big data	semantic web, ontology mapping, query rewriting, big data, semantic annotation	37, 1, 101-105	https://doi.org/10.18280/ts.370113	Jia, B.X., Meng, B., Zhang, W.N., Liu, J. (2020). Query rewriting and semantic annotation in semantic-based image retrieval under heterogeneous ontologies of big data. Traitement du Signal, Vol. 37, No. 1, pp. 101-105. https://doi.org/10.18280/ts.370113
1039	Bhange, D., Dethe, C.	Performance optimization of LS/LMMSE using swarm intelligence in 3D MIMO-OFDM systems	bit error rate, 3D-PACE, multi input multi output, orthogonal frequency division multiplexing, particle swarm optimization	37, 1, 107-112	https://doi.org/10.18280/ts.370114	Bhange, D., Dethe, C. (2020). Performance optimization of LS/LMMSE using swarm intelligence in 3D MIMO-OFDM systems. Traitement du Signal, Vol. 37, No. 1, pp. 107-112. https://doi.org/10.18280/ts.370114
1040	Li, X.J., Li, S.F., Liu, S.N., Liu, L.F., He, D.J.	A malicious webpage detection algorithm based on image semantics	deep learning, malicious attack, image semantics, backpropagation neural network (BPNN)	37, 1, 113-118	https://doi.org/10.18280/ts.370115	Li, X.J., Li, S.F., Liu, S.N., Liu, L.F., He, D.J. (2020). A malicious webpage detection algorithm based on image semantics. Traitement du Signal, Vol. 37, No. 1, pp. 113-118. https://doi.org/10.18280/ts.370115
1041	Das, M., Kumar, R., Sahana, B.C.	Implementation of effective hybrid window function for E.C.G signal denoising	additive white gaussian noise, electrocardiogram denoising, finite impulse response low pass filter, window functions	37, 1, 119-128	https://doi.org/10.18280/ts.370116	Das, M., Kumar, R., Sahana, B.C. (2020). Implementation of effective hybrid window function for E.C.G signal denoising. Traitement du Signal, Vol. 37, No. 1, pp. 119-128. https://doi.org/10.18280/ts.370116
1042	Aslam, L., Saeed, A., Qureshi, I.M., Amir, M., Khan, W.	Novel image steganography based on preprocessing of secrete messages to attain enhanced data security and improved payload capacity	data security, hidden communication, Steganography	37, 1, 129-136	https://doi.org/10.18280/ts.370117	Aslam, L., Saeed, A., Qureshi, I.M., Amir, M., Khan, W. (2020). Novel image steganography based on preprocessing of secrete messages to attain enhanced data security and improved payload capacity. Traitement du Signal, Vol. 37, No. 1, pp. 129-136. https://doi.org/10.18280/ts.370117
1043	Chen, X.B., Zhao, L., Hao, Y., Yu, L.H., Lv, C.C.	An evaluation algorithm for the interoperability of global navigation satellite systems	global navigation satellite systems (GNSSs), Compass/BeiDou Navigation Satellite System (Compass), interoperability, evaluation, service performance	37, 1, 137-144	https://doi.org/10.18280/ts.370118	Chen, X.B., Zhao, L., Hao, Y., Yu, L.H., Lv, C.C. (2020). An evaluation algorithm for the interoperability of global navigation satellite systems. Traitement du Signal, Vol. 37, No. 1, pp. 137-144. https://doi.org/10.18280/ts.370118
1044	Hamdini, R., Diffellah, N., Namane, A.	Robust local descriptor for color object recognition	color object recognition, hue, oriented descriptor, SVM, visual information	36, 6, 471-482	https://doi.org/10.18280/ts.360601	Hamdini, R., Diffellah, N., Namane, A. (2019). Robust local descriptor for color object recognition. Traitement du Signal, Vol. 36, No. 6, pp. 471-482. https://doi.org/10.18280/ts.360601

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1046	Gündoğdu, S., Doğan, E.A., Gülbetekin, E., Çolak, Ö.H., Polat, Ö.	Evaluation of the EEG signals and eye tracker data for working different N-back modes	electroencephalography, eye tracking, wavelet transforms, n-back test	36, 6, 493-500	https://doi.org/10.18280/ts.360603	Gündoğdu, S., Doğan, E.A., Gülbetekin, E., Çolak, Ö.H., Polat, Ö. (2019). Evaluation of the EEG signals and eye tracker data for working different N-back modes. Traitement du Signal, Vol. 36, No. 6, pp. 493-500. https://doi.org/10.18280/ts.360603
1047	Ye, Z.X., Chen, Q., Zhang, Y., Zou, J.F., Zheng, Y.	Identification of vortex structures in flow field images based on convolutional neural network and dynamic mode decomposition	image processing, vortex identification, Convolutional Neural Network (CNN), Dynamic Mode Decomposition (DMD)	36, 6, 501-506	https://doi.org/10.18280/ts.360604	Ye, Z.X., Chen, Q., Zhang, Y., Zou, J.F., Zheng, Y. (2019). Identification of vortex structures in flow field images based on convolutional neural network and dynamic mode decomposition. Traitement du Signal, Vol. 36, No. 6, pp. 501-506. https://doi.org/10.18280/ts.360604
1048	Fekri-Ershad, S.	Gender classification in human face images for smart phone applications based on local texture information and evaluated Kullback-Leibler divergence	gender classification, human recognition, improved local binary patterns, facial images, kullback-leibler divergence ratio, smart phone applications	36, 6, 507-514	https://doi.org/10.18280/ts.360605	Fekri-Ershad, S. (2019). Gender classification in human face images for smart phone applications based on local texture information and evaluated Kullback-Leibler divergence. Traitement du Signal, Vol. 36, No. 6, pp. 507-514. https://doi.org/10.18280/ts.360605
1049	Xiu, G.Y., Yuan, C.Y., Chen, X.H., Li, X.S.	An innovative beam hardening correction method for computed tomography systems	Computed Tomography (CT), equivalent tissue length, trinomial fitting, water, bone	36, 6, 515-520	https://doi.org/10.18280/ts.360606	Xiu, G.Y., Yuan, C.Y., Chen, X.H., Li, X.S. (2019). An innovative beam hardening correction method for computed tomography systems. Traitement du Signal, Vol. 36, No. 6, pp. 515-520. https://doi.org/10.18280/ts.360606
1050	Tuncer, S.A., Alkan, A.	Spinal cord based kidney segmentation using connected component labeling and K-means clustering algorithm	biomedical imaging, clustering algorithms, image processing, image segmentation	36, 6, 521-527	https://doi.org/10.18280/ts.360607	Tuncer, S.A., Alkan, A. (2019). Spinal cord based kidney segmentation using connected component labeling and K-means clustering algorithm. Traitement du Signal, Vol. 36, No. 6, pp. 521-527. https://doi.org/10.18280/ts.360607
1051	Ganguly, S., Ghosh, J., Srinivas, K., Kumar, P.K., Mukhopadhyay, M.	Compressive sensing based two-dimensional DOA estimation using L-shaped array in a hostile environment	compressive sensing, l-shaped array antenna, orthogonal matching pursuit algorithm, sparse sampling, two-dimensional DOA estimation	36, 6, 529-538	https://doi.org/10.18280/ts.360608	Ganguly, S., Ghosh, J., Srinivas, K., Kumar, P.K., Mukhopadhyay, M. (2019). Compressive sensing based two-dimensional DOA estimation using L-shaped array in a hostile environment. Traitement du Signal, Vol. 36, No. 6, pp. 529-538. https://doi.org/10.18280/ts.360608
1052	Zhang, J.H., Zhu, Q., Song, L.	A wavelet-based self-adaptive hierarchical thresholding algorithm and its application in image denoising	wavelet analysis, image denoising, parametric construction of biorthogonal wavelet, self-adaptive hierarchal thresholding	36, 6, 539-547	https://doi.org/10.18280/ts.360609	Zhang, J.H., Zhu, Q., Song, L. (2019). A wavelet-based self-adaptive hierarchical thresholding algorithm and its application in image denoising. Traitement du Signal, Vol. 36, No. 6, pp. 539-547. https://doi.org/10.18280/ts.360609
1053	Özbay, E., Çınar, A.	A comparative study of object classification methods using 3D Zernike moment on 3D point clouds	3D, classification, machine learning, point cloud, pointnet, zernike moment	36, 6, 549-555	https://doi.org/10.18280/ts.360610	Özbay, E., Çınar, A. (2019). A comparative study of object classification methods using 3D Zernike moment on 3D point clouds. Traitement du Signal, Vol. 36, No. 6, pp. 549-555. https://doi.org/10.18280/ts.360610
1054	Pei, J.Y., Shan, P.	A micro-expression recognition algorithm for students in classroom learning based on convolutional neural network	convolutional neural network (CNN), micro-expression recognition, deep learning, face detection, classroom learning	36, 6, 557-563	https://doi.org/10.18280/ts.360611	Pei, J.Y., Shan, P. (2019). A micro-expression recognition algorithm for students in classroom learning based on convolutional neural network. Traitement du Signal, Vol. 36, No. 6, pp. 557-563. https://doi.org/10.18280/ts.360611
1055	Kuraparthi, S., Kollati, M., Kora, P.	Robust optimized discrete wavelet transform-singular value decomposition based video watermarking	ABC, DWT, imperceptibility, robustness, SVD transform	36, 6, 565-573	https://doi.org/10.18280/ts.360612	Kuraparthi, S., Kollati, M., Kora, P. (2019). Robust optimized discrete wavelet transform-singular value decomposition based video watermarking. Traitement du Signal, Vol. 36, No. 6, pp. 565-573. https://doi.org/10.18280/ts.360612
1056	Meng, W.L., Mao, C.Z., Zhang, J., Wen, J., Wu, D.H.	A fast recognition algorithm of online social network images based on deep learning	online social network (OSN), image recognition, deep learning, image classification, support vector machine (SVM)	36, 6, 575-580	https://doi.org/10.18280/ts.360613	Meng, W.L., Mao, C.Z., Zhang, J., Wen, J., Wu, D.H. (2019). A fast recognition algorithm of online social network images based on deep learning. Traitement du Signal, Vol. 36, No. 6, pp. 575-580. https://doi.org/10.18280/ts.360613
1057	Özdemir, H., Sever, R., Polat, Ö.	GA-based optimization of SURF algorithm and realization based on Vivado-HLS	speeded-up robust features, high-level synthesis, genetic algorithm, optimization, character recognition	36, 5, 377-382	https://doi.org/10.18280/ts.360501	Özdemir, H., Sever, R., Polat, Ö. (2019). GA-based optimization of SURF algorithm and realization based on Vivado-HLS. Traitement du Signal, Vol. 36, No. 5, pp. 377-382. https://doi.org/10.18280/ts.360501
1058	Sbargoud, F., Djeha, M., Guiatni, M., Ababou, N.	WPT-ANN and belief theory based EEG/EMG data fusion for movement identification	wavelet packet transform, artificial neural networks, belief theory, data fusion, hand movement identification, electro-physiological signals, electromyography, electroencephalography	36, 5, 383-391	https://doi.org/10.18280/ts.360502	Sbargoud, F., Djeha, M., Guiatni, M., Ababou, N. (2019). WPT-ANN and belief theory based EEG/EMG data fusion for movement identification. Traitement du Signal, Vol. 36, No. 5, pp. 383-391. https://doi.org/10.18280/ts.360502
1059	Zhang, F., Zhang, C., Yang, H.M., Zhao, L.	Point cloud denoising with principal component analysis and a novel bilateral filter	point cloud, 3D scanner, principal component analysis (PCA), bilateral filter	36, 5, 393-398	https://doi.org/10.18280/ts.360503	Zhang, F., Zhang, C., Yang, H.M., Zhao, L. (2019). Point cloud denoising with principal component analysis and a novel bilateral filter. Traitement du Signal, Vol. 36, No. 5, pp. 393-398. https://doi.org/10.18280/ts.360503
1060	Beirami, B.A.,Mokhtarzade, M.	Spatial-spectral random patches network for classification of hyperspectral images	hyperspectral classification, random patches network, Gabor filter, support vector machine	36, 5, 399-406	https://doi.org/10.18280/ts.360504	Beirami, B.A.,Mokhtarzade, M. (2019). Spatial-spectral random patches network for classification of hyperspectral images. Traitement du Signal, Vol. 36, No. 5, pp. 399-406. https://doi.org/10.18280/ts.360504
1061	Herbadji, D., Derouiche, N., Belmeguenai, A., Herbadji, A., Boumerdassi, S.	A tweakable image encryption algorithm using an improved logistic chaotic map	image encryption, chaos, logistic map, tweakable	36, 5, 407-417	https://doi.org/10.18280/ts.360505	Herbadji, D., Derouiche, N., Belmeguenai, A., Herbadji, A., Boumerdassi, S. (2019). A tweakable image encryption algorithm using an improved logistic chaotic map. Traitement du Signal, Vol. 36, No. 5, pp. 407-417. https://doi.org/10.18280/ts.360505
1062	Zhang, C., Pan, S., Qi, Y.W., Yang, Y.D.	A footprint extraction and recognition algorithm based on plantar pressure	footprint recognition, plantar pressure, clustering, image segmentation	36, 5, 419-424	https://doi.org/10.18280/ts.360506	Zhang, C., Pan, S., Qi, Y.W., Yang, Y.D. (2019). A footprint extraction and recognition algorithm based on plantar pressure. Traitement du Signal, Vol. 36, No. 5, pp. 419-424. https://doi.org/10.18280/ts.360506

1063	Gupta, A.K., Chakraborty, C., Gupta, B.	Monitoring of epileptical patients using cloud-enabled health-IoT system	DWT-SVD, EEG monitoring, epilepsy, health-IOT, STFT, watermarking	36, 5, 425-431	https://doi.org/10.18280/ts.360507	Gupta, A.K., Chakraborty, C., Gupta, B. (2019). Monitoring of epileptical patients using cloud-enabled health-IoT system. Traitement du Signal, Vol. 36, No. 5, pp. 425-431. https://doi.org/10.18280/ts.360507
1064	Farooq, U., Rather, G.M.	Design and analysis of rectangular microstrip antenna (RMSA) for millimeter wave communication applications	millimeter wave, microstrip antenna, equivalent circuit, VSWR, next generation networks, 5G	36, 5, 433-438	https://doi.org/10.18280/ts.360508	Farooq, U., Rather, G.M. (2019). Design and analysis of rectangular microstrip antenna (RMSA) for millimeter wave communication applications. Traitement du Signal, Vol. 36, No. 5, pp. 433-438. https://doi.org/10.18280/ts.360508
1065	Li, H., Ge, X.	Design and application of an image classification algorithm based on semantic discrimination	image classification, distance metric learning (DML), maximum-margin criterion (mmc), semantic discrimination	36, 5, 439-444	https://doi.org/10.18280/ts.360509	Li, H., Ge, X. (2019). Design and application of an image classification algorithm based on semantic discrimination. Traitement du Signal, Vol. 36, No. 5, pp. 439-444. https://doi.org/10.18280/ts.360509
1066	Wajeed, M.A., Sreenivasulu, V.	Image based tumor cells identification using convolutional neural network and auto encoders	convolutional neural network, region-convolutional neural network, tumor cells, pre processing, clustering, classification, tumor prediction	36, 5, 445-453	https://doi.org/10.18280/ts.360510	Wajeed, M.A., Sreenivasulu, V. (2019). Image based tumor cells identification using convolutional neural network and auto encoders. Traitement du Signal, Vol. 36, No. 5, pp. 445-453. https://doi.org/10.18280/ts.360510
1067	Singh, M.K., Nandan, D., Kumar, S.	Statistical analysis of lower and raised pitch voice signal and its efficiency calculation	acoustic feature, statistical analysis, feature extraction, SVM classifier, speaker identification	36, 5, 455-461	https://doi.org/10.18280/ts.360511	Singh, M.K., Nandan, D., Kumar, S. (2019). Statistical analysis of lower and raised pitch voice signal and its efficiency calculation. Traitement du Signal, Vol. 36, No. 5, pp. 455-461. https://doi.org/10.18280/ts.360511
1068	Li, Y., Shi, D.L., Bu, F.J.	Automatic recognition of rock images based on convolutional neural network and discrete cosine transform	deep learning, image classification, convolutional neural network (CNN), discrete cosine transform (DCT)	36, 5, 463-469	https://doi.org/10.18280/ts.360512	Li, Y., Shi, D.L., Bu, F.J. (2019). Automatic recognition of rock images based on convolutional neural network and discrete cosine transform. Traitement du Signal, Vol. 36, No. 5, pp. 463-469. https://doi.org/10.18280/ts.360512
1069	Moezzi R., Hlava J., Vu T.M.	Implementation of X-parameters principle for non-linear vibroacoustic membrane using two-port measurement	x-parameters, poly-harmonic distortion (PHD), s-parameters, lumped model, nonlinear acoustics, scattering matrix	36, 4, 297-301	https://doi.org/10.18280/ts.360401	Moezzi, R., Hlava, J., Vu, T.M. (2019). Implementation of X-parameters principle for non-linear vibroacoustic membrane using two-port measurement. Traitement du Signal, Vol. 36, No. 4, pp. 297-301. https://doi.org/10.18280/ts.360401
1070	Kaya, D., Tuncer, S.A.	Generating random numbers from biological signals in labVIEW environment and statistical analysis	True Random Number Generator (TRNG), Biological Signal, Electromyographic (EMG) Signal, LabVIEW, statistical test	36, 4, 303-310	https://doi.org/10.18280/ts.360402	Kaya, D., Tuncer, S.A. (2019). Generating random numbers from biological signals in LabVIEW environment and statistical analysis. Traitement du Signal, Vol. 36, No. 4, pp. 303-310. https://doi.org/10.18280/ts.360402
1071	Liu, Q., He, X., Guan, F.W., Zhao, Y.C., Jiang, F., Tian, F.X., Wang, S.X.	Method and implementation of improving the pointing accuracy of an optical remote sensor using a star sensor	Star Sensor, Spatial Optical Remote Sensor, External Orientation Element, Pointing Accuracy	36, 4, 311-317	https://doi.org/10.18280/ts.360403	Liu, Q., He, X., Guan, F.W., Zhao, Y.C., Jiang, F., Tian, F.X., Wang, S.X. (2019). Method and implementation of improving the pointing accuracy of an optical remote sensor using a star sensor. Traitement du Signal, Vol. 36, No. 4, pp. 311-317. https://doi.org/10.18280/ts.360403
1072	Gorur, K., Bozkurt, M.R., Bascil, M.S., Temurtas, F.	GKP signal processing using deep CNN and svm for tongue-machine interface	Glossokinetic Potential Signals (GKPs), Tongue-Machine Interface (TMI), Convolutional Neural Network (CNN), Support Vector Machine (SVM), Brain-Computer Interface (BCI)	36, 4, 319-329	https://doi.org/10.18280/ts.360404	Gorur, K., Bozkurt, M.R., Bascil, M.S., Temurtas, F. (2019). GKP signal processing using deep CNN and SVM for tongue-machine interface. Traitement du Signal, Vol. 36, No. 4, pp. 319-329. https://doi.org/10.18280/ts.360404
1073	Yang, K., Yang, Z.T., Yan, W.N., Zhao, J.K., Du, Y., Liu, S., Liu, K.	Reconstruction algorithm for polychromatic computed tomography images based on equivalent tissue length	Beam Hardening, Computed Tomography (CT), equivalent tissue length, proportional guidance	36, 4, 331-338	https://doi.org/10.18280/ts.360405	Yang, K., Yang, Z.T., Yan, W.N., Zhao, J.K., Du, Y., Liu, S., Liu, K. (2019). Reconstruction algorithm for polychromatic computed tomography images based on equivalent tissue length. Traitement du Signal, Vol. 36, No. 4, pp. 331-338. https://doi.org/10.18280/ts.360405
1074	Sajja, T.K., Devarapalli, R.M., Kalluri, H.K.	Lung cancer detection based on ct scan images by using deep transfer learning	Convolutional Neural Network (CNN), lung cancer, transfer learning, alexnet, googlenet, resnet50	36, 4, 339-344	https://doi.org/10.18280/ts.360406	Sajja, T.K., Devarapalli, R.M., Kalluri, H.K. (2019). Lung cancer detection based on CT scan images by using deep transfer learning. Traitement du Signal, Vol. 36, No. 4, pp. 339-344. https://doi.org/10.18280/ts.360406
1075	Qin, Z., Zhang, Y., Zhang, S., Zhao, J.W., Wang, T.F., Shen, K.	Identification of microscopic damage law of rocks through digital image processing of computed tomography images	Digital Image Processing (DIP), Geotechnical Engineering, Computed Tomography (CT) Scanning, Representative Elementary Volume (REV), microscopic damages	36, 4, 345-352	https://doi.org/10.18280/ts.360407	Qin, Z., Zhang, Y., Zhang, S., Zhao, J.W., Wang, T.F., Shen, K. (2019). Identification of microscopic damage law of rocks through digital image processing of computed tomography images. Traitement du Signal, Vol. 36, No. 4, pp. 345-352. https://doi.org/10.18280/ts.360407
1076	Teki, S.M., Varma, M.K., Yadav, A.K.	Brain tumour segmentation using U-net based adversarial networks	image segmentation, brain tumour, deep learning, adversarial network, neural networks	36, 4, 353-359	https://doi.org/10.18280/ts.360408	Teki, S.M., Varma, M.K., Yadav, A.K. (2019). Brain tumour segmentation using U-net based adversarial networks. Traitement du Signal, Vol. 36, No. 4, pp. 353-359. https://doi.org/10.18280/ts.360408
1077	Sheikh, T.A., Bora, J., Hussain, A.	Performance analysis of massive multi-input and multi-output with imperfect channel state information	massive multi-input and multi-output (MIMO), 5G, user scheduling, antenna selection, scale fading, channel estimation error	36, 4, 361-368	https://doi.org/10.18280/ts.360409	Sheikh, T.A., Bora, J., Hussain, A. (2019). Performance analysis of massive multi-input and multi-output with imperfect channel state information. Traitement du Signal, Vol. 36, No. 4, pp. 361-368. https://doi.org/10.18280/ts.360409
1078	Li, X., Lin, C., Xu, X.P.	A target tracking model for enterprise production monitoring system based on spatial information and appearance model	target tracking, appearance features, spatial information, multi-plane projection	36, 4, 369-375	https://doi.org/10.18280/ts.360410	Li, X., Lin, C., Xu, X.P. (2019). A target tracking model for enterprise production monitoring system based on spatial information and appearance model. Traitement du Signal, Vol. 36, No. 4, pp. 369-375. https://doi.org/10.18280/ts.360410
1079	Eva, O.D., Lazar, A.M.	Amplitude modulation index as feature in a brain computer interface	classification algorithms, EEG rhythms electroencephalography, features extraction, hilbert transform, motor imagery, modulation bands, temporal envelope	36, 3, 201-207	https://doi.org/10.18280/ts.360301	Eva, O.D., Lazar, A.M. (2019). Amplitude modulation index as feature in a brain computer interface. Traitement du Signal, Vol. 36, No. 3, pp. 201-207. https://doi.org/10.18280/ts.360301
1080	Zhao Y.M.Zhao, Y.M.	Design and application of an adaptive slow feature extraction algorithm for natural images based on visual invariance	invariant, slow feature (SF), visual computing, receptive field, topology	36, 3, 209-216	https://doi.org/10.18280/ts.360302	Zhao, Y.M. (2019). Design and application of an adaptive slow feature extraction algorithm for natural images based on visual invariance. Traitement du Signal, Vol. 36, No. 3, pp. 209-216. https://doi.org/10.18280/ts.360302

1081	Fatima, B., Réda, A.	Multi-modal biometric protection system using surf filter with biohashing algorithm	multi-biometric, security, fusion, biohashing, revocable	36, 3, 217-225	https://doi.org/10.18280/ts.360303	Fatima, B., Réda, A. (2019). Multi-modal biometric protection system using SURF Filter with BioHashing algorithm. Traitement du Signal, Vol. 36, No. 3, pp. 217-225. https://doi.org/10.18280/ts.360303
1082	Lu, X.M., Wu, Q., Zhou, Y., Ma, Y., Song, C.C., Ma, C.	A dynamic swarm firefly algorithm based on chaos theory and max-min distance algorithm	K-means clustering (KMC), max-min distance algorithm (MM), firefly algorithm (FA), chaos theory	36, 3, 227-231	https://doi.org/10.18280/ts.360304	Lu, X.M., Wu, Q., Zhou, Y., Ma, Y., Song, C.C., Ma, C. (2019). A dynamic swarm firefly algorithm based on chaos theory and Max-Min distance algorithm. Traitement du Signal, Vol. 36, No. 3, pp. 227-231. https://doi.org/10.18280/ts.360304
1083	Kumar, S.K., Reddy, P.D.K., Ramesh, G., Maddumala, V.R.	Image transformation technique using steganography methods using LWT technique	embedding, steganography, extraction, texturization, watermarking	36, 3, 233-237	https://doi.org/10.18280/ts.360305	Kumar, S.K., Reddy, P.D.K., Ramesh, G., Maddumala, V.R. (2019). Image transformation technique using steganography methods using LWT technique. Traitement du Signal, Vol. 36, No. 3, pp. 233-237. https://doi.org/10.18280/ts.360305
1084	Li, Z.L., Zhou, Y., Bao, R.	An image classification method based on optimized fuzzy bag-of-words model	fuzzy bag-of-words (FBOW) model, image description, fuzzy system with positive and negative rules, particle swarm optimization (PSO), recursive least squares (RLS) algorithm	36, 3, 239-244	https://doi.org/10.18280/ts.360306	Li, Z.L., Zhou, Y., Bao, R. (2019). An image classification method based on optimized fuzzy bag-of-words model. Traitement du Signal, Vol. 36, No. 3, pp. 239-244. https://doi.org/10.18280/ts.360306
1085	Chergui, L., Bouguezel, S.	A new post-whitening transform domain LMS algorithm	eigen-value spread, orthogonal transforms, post-whitening, predictive decorrelation, system identification, TDLMS	36, 3, 245-252	https://doi.org/10.18280/ts.360307	Chergui, L., Bouguezel, S. (2019). A new post-whitening transform domain LMS algorithm. Traitement du Signal, Vol. 36, No. 3, pp. 245-252. https://doi.org/10.18280/ts.360307
1086	Gao, Y.H., Lu, H.L.	A novel co-planar waveguide-fed direct current wide band printed dipole antenna	dipole antenna, coplanar waveguide (CPW), base station, radio frequency identification (RFID)	36, 3, 253-257	https://doi.org/10.18280/ts.360308	Gao, Y.H., Lu, H.L. (2019). A novel co-planar waveguide-fed direct current wide band printed dipole antenna. Traitement du Signal, Vol. 36, No. 3, pp. 253-257. https://doi.org/10.18280/ts.360308
1087	Shafieian, M., Zavar, M., Rahmanian, M.	Simulation and control of surge phenomenon in centrifugal compressors	centrifugal compressor, surge modeling, nonlinear function, close-coupled valve, Lyapunov, surge protection, control valve, stability	36, 3, 259-264	https://doi.org/10.18280/ts.360309	Shafieian, M., Zavar, M., Rahmanian, M. (2019). Simulation and control of surge phenomenon in centrifugal compressors. Traitement du Signal, Vol. 36, No. 3, pp. 259-264. https://doi.org/10.18280/ts.360309
1088	Luo, Z.L., Jia, Y.B., He, J.Z.	An optic disc segmentation method based on active contour tracking	optic disc segmentation, retinal image, active contour tracking, least squares method	36, 3, 265-271	https://doi.org/10.18280/ts.360310	Luo, Z.L., Jia, Y.B., He, J.Z. (2019). An optic disc segmentation method based on active contour tracking. Traitement du Signal, Vol. 36, No. 3, pp. 265-271. https://doi.org/10.18280/ts.360310
1089	Rafik, D., Larbi, B.	Autoregressive modeling based empirical mode decomposition (EMD) for epileptic seizures detection using eeg signals	epilepsy, epileptic EEG signals, EMD, autoregressive modeling, classification, seizures	36, 3, 273-279	https://doi.org/10.18280/ts.360311	Rafik, D., Larbi, B. (2019). Autoregressive modeling based empirical mode decomposition (EMD) for epileptic seizures detection using EEG signals. Traitement du Signal, Vol. 36, No. 3, pp. 273-279. https://doi.org/10.18280/ts.360311
1090	Shankar, R., Kumar, I., Mishra, R.K.	Pairwise error probability analysis of dual hop relaying network over time selective nakagami-m fading channel with imperfect csi and node mobility	selective decode-and-forward, multiple- input multiple-output, channel state information, diversity order, signal to noise ratio	36, 3, 281-295	https://doi.org/10.18280/ts.360312	Shankar, R., Kumar, I., Mishra, R.K. (2019). Pairwise error probability analysis of dual hop relaying network over time selective Nakagami-m fading channel with imperfect CSI and node mobility. Traitement du Signal, Vol. 36, No. 3, pp. 281-295. https://doi.org/10.18280/ts.360312
1091	Eddine Cherif, B.D., Bendiabdellah, A.,Tabbakh, M.	Diagnosis of an inverter IGBT open-circuit fault by hilbert-huang transform application	inverter, IGBT, open-circuit, HHT, EMD, CEEMDAN, IMF, spectral envelope, rms	36, 2, 137-132	https://doi.org/10.18280/ts.360201	Eddine Cherif, B.D., Bendiabdellah, A.,Tabbakh, M. (2019). Diagnosis of an inverter IGBT open-circuit fault by hilbert-huang transform application. Traitement du Signal, Vol. 36, No. 2, pp. 127-132. https://doi.org/10.18280/ts.360201
1092	Rad, S.M., Nejad, M.B.	New analog processing technique in multichannel neural signal recording with reduce data rate and reduce power consumption	analog processor, compressive sampling, spike detection, multi-channel neural recording system, reduce power consumption	36, 2, 133-137	https://doi.org/10.18280/ts.360202	Rad, S.M., Nejad, M.B. (2019). New analog processing technique in multichannel neural signal recording with reduce data rate and reduce power consumption. Traitement du Signal, Vol. 36, No. 2, pp. 133-137. https://doi.org/10.18280/ts.360202
1093	Zhu, Y.L., Xu, C.G., Xiao, D.G.	Denoising ultrasonic echo signals with generalized s transform and singular value decomposition	echo signals, Generalized S Transform (GST), Singular value Decomposition (SVD), C-scan image	36, 2, 139-145	https://doi.org/10.18280/ts.360203	Zhu, Y.L., Xu, C.G., Xiao, D.G. (2019). Denoising ultrasonic echo signals with generalized s transform and singular value decomposition. Traitement du Signal, Vol. 36, No. 2, pp. 139-145. https://doi.org/10.18280/ts.360203
1094	Zou, H.D., Jia, R.Q.	Visual positioning and recognition of gangues based on scratch feature detection	gangue, raw coal, grey level co-occurrence matrix (GLCM), texture feature, scratch feature	36, 2, 147-153	https://doi.org/10.18280/ts.360204	Zou, H.D., Jia, R.Q. (2019). Visual positioning and recognition of gangues based on scratch feature detection. Traitement du Signal, Vol. 36, No. 2, pp. 147-153. https://doi.org/10.18280/ts.360204
1095	Sachan, V., Mishra, R.K.	Uplink sum rate and capacity of hybrid precoding mmwave massive MIMO system	MIMO, massive MIMO, millimeter wave, hybrid precoding and combining	36, 2, 155-160	https://doi.org/10.18280/ts.360205	Sachan, V., Mishra, R.K. (2019). Uplink sum rate and capacity of hybrid precoding mmWave massive MIMO system. Traitement du Signal, Vol. 36, No. 2, pp. 155-160. https://doi.org/10.18280/ts.360205
1096	Xie, J.B., Li, R.T., Lv, S.W., Wang, Y.J., Wang, Q.Y., Vorotnitsky, Y.I.	Chinese alt text writing based on deep learning	Chinese image captioning, deep convolutional neural network (DCNN), feature extraction, gated recurrent unit (GRU) network	36, 2, 161-170	https://doi.org/10.18280/ts.360206	Xie, J.B., Li, R.T., Lv, S.W., Wang, Y.J., Wang, Q.Y., Vorotnitsky, Y.I. (2019). Chinese alt text writing based on deep learning. Traitement du Signal, Vol. 36, No. 2, pp. 161-170. https://doi.org/10.18280/ts.360206
1097	Chouidira, I., Khodja, D.E., Chakroune, S.	Continuous wavelet technique for detection of broken bar faults in induction machine	continuous wavelet (cwt), induction machine diagnosis, signal processing, faults signatures, indicator values	36, 2, 171-176	https://doi.org/10.18280/ts.360207	Chouidira, I., Khodja, D.E., Chakroune, S. (2019). Continuous wavelet technique for detection of broken bar faults in induction machine. Traitement du Signal, Vol. 36, No. 2, pp. 171-176. https://doi.org/10.18280/ts.360207
1098	Zhang, J.H., Zhu, Q., Song, L.	Self-adaptive hierarchical threshold denoising based on parametric construction of fixed-length tight-supported biorthogonal wavelets	fixed-length tight-supported (FLTS) biorthogonal wavelet, parametric construction, self-adaptive hierarchical threshold denoising (SAHTD), scale factor, sign function	36, 2, 177-184	https://doi.org/10.18280/ts.360208	Zhang, J.H., Zhu, Q., Song, L. (2019). Self-adaptive hierarchical threshold denoising based on parametric construction of fixed-length tight-supported biorthogonal wavelets. Traitement du Signal, Vol. 36, No. 2, pp. 177-184. https://doi.org/10.18280/ts.360208

1099	Chinnam, S.K.R., Sistla, V., Kolli, V.K.K.	SVM-PUK kernel based MRI-brain tumor identification using texture and gabor wavelets	brain tumor, statistical features, principle component analysis, Gabor, support vector machine, Puk kernel	36, 2, 185-191	https://doi.org/10.18280/ts.360209	Chinnam, S.K.R., Sistla, V., Kolli, V.K.K. (2019). SVM-PUK kernel based MRI-brain tumor identification using texture and Gabor wavelets. Traitement du Signal, Vol. 36, No. 2, pp. 185-191. https://doi.org/10.18280/ts.360209
1100	HimaBindu, G., Anuradha, C., Chandra Murty, P.S.R.	Assessment of combined shape, color and textural features for video duplication	video, shape, color, Grey-Level Co-Occurrence Matrix (GLCM), Grey-Level Run Length Matrix (GLRLM)	36, 2, 193-199	https://doi.org/10.18280/ts.360210	HimaBindu, G., Anuradha, C., Chandra Murty, P.S.R. (2019). Assessment of combined shape, color and textural features for video duplication. Traitement du Signal, Vol., 36 No. 2, pp. 193-199. https://doi.org/10.18280/ts.360210
1101	Loutfi, B., Samir, Z., Ali, D., Zinelaabidine, G.M.	Real time implementation of type-2 fuzzy backstepping sliding mode controller for twin rotor MIMO system (TRMs)	TRMS model, interval type-2 fuzzy logic, sliding mode, backstepping, T2FBSMC	36, 1, 1-11	https://doi.org/10.18280/ts.360101	Loutfi, B., Samir, Z., Ali, D., Zinelaabidine, G.M. (2019). Real time implementation of type-2 fuzzy backstepping sliding mode controller for twin rotor MIMO system (TRMS). Traitement du Signal, Vol. 36, No. 1, pp. 1-11. https://doi.org/10.18280/ts.360101
1102	Reddy, C.V.R., Reddy, U.S., Kishore, K.V.K.	Facial emotion recognition using NLPCA and SVM	gabor wavelet, HAAR wavelet, PCA, NLPCA, SVM	36, 1, 13-22	https://doi.org/10.18280/ts.360102	Reddy, C.V.R., Reddy, U.S., Kishore, K.V.K. (2019). Facial emotion recognition using NLPCA and SVM. Traitement du Signal, Vol. 36, No. 1, pp. 13-22. https://doi.org/10.18280/ts.360102
1103	Huang, F., Zheng, N.N.	A novel frequent pattern mining algorithm for real-time radar data stream	frequent pattern, data mining, radar data, data stream, index pattern tree (IPT)	36, 1, 23-30	https://doi.org/10.18280/ts.360103	Huang, F., Zheng, N.N. (2019). A novel frequent pattern mining algorithm for real-time radar data stream. Traitement du Signal, Vol. 36, No. 1, pp. 23-30. https://doi.org/10.18280/ts.360103
1104	Cai, Q.R.	A secure image encryption algorithm based on composite chaos theory	image encryption, permutation, diffusion, composite chaotic system	36, 1, 31-36	https://doi.org/10.18280/ts.360104	Cai, Q.R. (2019). A secure image encryption algorithm based on composite chaos theory. Traitement du Signal, Vol. 36, No. 1, pp. 31-36. https://doi.org/10.18280/ts.360104
1105	Loutfi, B.	Faults detection and diagnosis of multilevel inverter based on signal processing	active power filter, multilevel inverter, PWM-controlled, open transistor fault, THD, mean values	36, 1, 37-44	https://doi.org/10.18280/ts.360105	Loutfi, B. (2019). Faults detection and diagnosis of multilevel inverter based on signal processing. Traitement du Signal, Vol. 6, No. 1, pp. 37-44. https://doi.org/10.18280/ts.360105
1106	Oulaya, B., Aissa, B., Salim, O.	Secure transfer of color images using horizontal and vertical scan	image, encryption, decryption, scan pattern, stream cipher, keystream generator, permutation, NLFSR	36, 1, 45-51	https://doi.org/10.18280/ts.360106	Oulaya, B., Aissa, B., Salim, O. (2019). Secure transfer of color images using horizontal and vertical scan. Traitement du Signal, Vol. 36, No. 1, pp. 45-51. https://doi.org/10.18280/ts.360106
1107	Liang, H., Zhang, Q., Fu, C., Liang, F., Sun, Y.S.	Surface modelling of jun ware based on ordinary differential equations	ordinary differential equation (ODE), shape modelling, digital modelling, JUN ware	36, 1, 53-58	https://doi.org/10.18280/ts.360107	Liang, H., Zhang, Q., Fu, C., Liang, F., Sun, Y.S. (2019). Surface modelling of Jun ware based on ordinary differential equations. Traitement du Signal, Vol. 1, No. 1, pp. 53-58. https://doi.org/10.18280/ts.360107
1108	Shankar, R., Kumar, I., Mishra, R.K.	Outage probability analysis of MIMO-OSTBC relaying network over nakagami-m fading channel conditions	cooperative communication, outage probability, pairwise error probability, channel state information, convex optimization	36, 1, 59-64	https://doi.org/10.18280/ts.360108	Shankar, R., Kumar, I., Mishra, R.K. (2019). Outage probability analysis of MIMO-OSTBC relaying network over Nakagami-m fading channel conditions. Traitement du Signal, Vol. 36, No. 1, pp. 59-64. https://doi.org/10.18280/ts.360108
1109	Wang, S., Hu, Y.Z., Liu, N.	Signal separation of phase-sensitive optical time-domain reflectometry considering thermo-mechanical coupling and 3D data matching	Phase-Sensitive Optical Time-Domain Reflectometry (Φ-OTDR), Thermo-Mechanical Coupling (TMC), 3D data matching	36, 1, 65-77	https://doi.org/10.18280/ts.360109	Wang, S., Hu, Y.Z., Liu, N. (2019). Signal separation of phase-sensitive optical time-domain reflectometry considering thermo-mechanical coupling and 3D data matching. Traitement du Signal, Vol. 36, No. 1, pp. 65-77. https://doi.org/10.18280/ts.360109
1110	Kumar K., Mishra R.K.Kumar, K., Mishra, R.K.	A robust mRMR based pedestrian detection approach using shape descriptor	classifier, feature selection, hog, hsg, pedestrian detection, SVM	36, 1, 79-85	https://doi.org/10.18280/ts.360110	Kumar, K., Mishra, R.K. (2019). A robust mRMR based pedestrian detection approach using shape descriptor. Traitement du Signal, Vol. 36, No. 1, pp. 79-85. https://doi.org/10.18280/ts.360110
1111	Reddy, U.J., Reddy, B.R.V.R., Reddy, B.E.	Recognition of lung cancer using machine learning mechanisms with fuzzy neural networks	pre-processing, Binarizotion, segmentation, feature extraction, neural network, lung cancer detection	36, 1, 87-91	https://doi.org/10.18280/ts.360111	Reddy, U.J., Reddy, B.R.V.R., Reddy, B.E. (2019). Recognition of lung cancer using machine learning mechanisms with fuzzy neural networks. Traitement du Signal, Vol. 36, No. 1, pp. 87-91. https://doi.org/10.18280/ts.360111
1112	Qin, J.L., Shang, S.P.	Design and application of ultrasonic measurement systems for akashiwo sanguinea	ultrasonic measurement, akashiwo sanguinea (a. sanguinea), acoustic doppler velocimenter (ADV), development board (DB), integrated backscattered strength (IBS), algea cell concentration	36, 1, 93-101	https://doi.org/10.18280/ts.360112	Qin, J.L., Shang, S.P. (2019). Design and application of ultrasonic measurement systems for Akashiwo Sanguinea. Traitement du Signal, Vol. 36, No. 1, pp. 93-101. https://doi.org/10.18280/ts.360112
1113	Ren, J., Huang, S.Y., Song, W., Han, J.	A novel indoor positioning algorithm for wireless sensor network based on received signal strength indicator filtering and improved taylor series expansion	wireless sensor network (WSN), received signal strength indicator (RSSI), indoor positioning, taylor series expansion (TSE), positioning accuracy	36, 1, 103-108	https://doi.org/10.18280/ts.360113	Ren, J., Huang, S.Y., Song, W., Han, J. (2019). A novel indoor positioning algorithm for wireless sensor network based on received signal strength indicator filtering and improved Taylor series expansion. Traitement du Signal, Vol. 36, No. 1, pp. 103-108. https://doi.org/10.18280/ts.360113
1114	Bikku, T., Paturi, R.	Frequency domain steganography with reversible texture combination	texture combination, steganography, embedding, steganalysis, discrete cosine transform	36, 1, 109-117	https://doi.org/10.18280/ts.360114	Bikku, T., Paturi, R. (2019). Frequency domain steganography with reversible texture combination. Traitement du Signal, Vol. 36, No. 1, pp. 109-117. https://doi.org/10.18280/ts.360114
1115	Babu, K.S., Vemuru, S.	Spectrum signals handoff inLTE cognitive radio networks using reinforcement learning	cognitive radio network, long-term evolution, spectrum handoff, galactic swarm optimization, reinforcement learning	36, 1, 119-125	https://doi.org/10.18280/ts.360115	Babu, K.S., Vemuru, S. (2019). Spectrum signals handoff in LTE cognitive radio networks using reinforcement learning. Traitement du Signal, Vol. 36, No. 1, pp. 119-125. https://doi.org/10.18280/ts.360115
1116	Dai, C.Q., Lv, Y.L., Long, Y.X., Sui, H.T.	A novel image enhancement technique for tunnel leakage image detection	tunnel leakage image, wavelet transform, image enhancement	35, 3-4, 209-222	https://doi.org/10.3166/TS.35.209-222	Dai, C.Q., Lv, Y.L., Long, Y.X., Sui, H.T. (2018). A novel image enhancement technique for tunnel leakage image detection. Traitement du Signal, Vol. 35, No. 3-4, pp. 209-222. https://doi.org/ 10.3166/TS.35.209-222

1117	Song, X.R., Gao, S., Chen, C.B.	A novel vehicle feature extraction algorithm based on wavelet moment	feature extraction, modified hu invariant moment, wavelet moment, target recognition	35, 3-4, 223-242	https://doi.org/10.3166/TS.35.223-242	Song, X.R., Gao, S., Chen, C.B. (2018). A novel vehicle feature extraction algorithm based on wavelet moment. Traitement du Signal, Vol. 35, No. 3-4, pp. 223-242. https://doi.org/ 10.3166/TS.35.223-242
1118	Jian, C.F., Lu, T., Xiang, X.Y., Zhang, M.Y.	An improved mixed gaussian-based background modelling method for fast gesture segmentation of mobile terminals	mixed gaussian model, background modelling, learning rate, gesture segmentation	35, 3-4, 243-252	https://doi.org/10.3166/TS.35.243-252	Jian, C.F., Lu, T., Xiang, X.Y., Zhang, M.Y. (2018). An improved mixed gaussian-based background modelling method for fast gesture segmentation of mobile terminals. Traitement du Signal, Vol. 35, No. 3-4, pp. 243-252. https://doi.org/ 10.3166/TS.35.243-252
1119	Wang, S., Hu, Y.Z.	Binocular visual positioning under inhomogeneous, transforming and fluctuating media	inhomogeneous media, transforming media, media fluctuation, binocular visual positioning, uncertainty, kalman filter, cloud model	35, 3-4, 253-276	https://doi.org/10.3166/TS.35.253-276	Wang, S., Hu, Y.Z. (2018). Binocular visual positioning under inhomogeneous, transforming and fluctuating media. Traitement du Signal, Vol. 35, No. 3-4, pp. 253-276. https://doi.org/10.3166/TS.35.253-276
1120	Zeng, X.X., Shao, Z.H., Lin, W.Z., Luo, H.B.	Orientation holes positioning of printed board based on LS-Power spectrum density algorithm	orientation holes positioning, ls-power spectrum density(LS-PSD), image processing technology, region of interest (ROI)	35, 3-4, 277-288	https://doi.org/10.3166/TS.35.277-288	Zeng, X.X., Shao, Z.H., Lin, W.Z., Luo, H.B. (2018). Orientation holes positioning of printed board based on LS-Power spectrum density algorithm, Traitement du Signal, Vol. 35, No. 3-4, pp. 277-288. https://doi.org/10.3166/TS.35.277-288
1121	He, L.L., Zhu, H., Gao, Z.X.	A novel asphalt pavement crack detection algorithm based on multi-feature test of cross-section image	asphalt pavement, crack detection, multi-feature test, cross-section image	35, 3-4, 289-302	https://doi.org/10.3166/TS.35.289-302	He, L.L., Zhu, H., Gao, Z.X. (2018). A novel asphalt pavement crack detection algorithm based on multi-feature test of cross-section image. Traitement du Signal, Vol. 35, No. 3-4, pp. 289-302. https://doi.org/ 10.3166/TS.35.289-302
1122	Wu, Q.S., Meng, P., Liu, G.	Reconstruction of 3D building model based on the information in floor plan	floor plan, building components, space subdivision, 3D model reconstruction	35, 3-4, 303-316	https://doi.org/10.3166/TS.35.303-316	Wu, Q.S., Meng, P., Liu, G. (2018). Reconstruction of 3D building model based on the information in floor plan. Traitement du Signal, Vol. 35, No. 3-4, pp. 303-316. https://doi.org/10.3166/TS.35.303-316
1123	Peng, L.	A brain nuclear magnetic resonance image segmentation algorithm based on non-rigid registration	non-rigid registration, brain NMR image, atlas prior, shape knowledge	35, 3-4, 317-330	https://doi.org/10.3166/TS.35.317-330	Peng, L. (2018). A brain nuclear magnetic resonance image segmentation algorithm based on non-rigid registration. Traitement du Signal, Vol. 35, No. 3-4, pp. 317-330. https://doi.org/10.3166/TS.35.317-330
1124	Fu, H.H., Xu, J., Zhang, H., Zhang, M., Xu, X.X.	A novel video target tracking method based on lie group manifold	target tracking, lie group, Riemannian manifold, particle filtering (PF)	35, 3-4, 331-340	https://doi.org/10.3166/TS.35.331-340	Fu, H.H., Xu, J., Zhang, H., Zhang, M., Xu, X.X. (2018). A novel video target tracking method based on lie group manifold. Traitement du Signal, Vol. 35, No. 3-4, pp. 331-340. https://doi.org/ 10.3166/TS.35.331-340
1125	Seng, D.W., Zhang, H.Q., Fang, XJ., Zhang, X.F., Chen, J.	An improved fingerprint image matching and multi-view fingerprint recognition algorithm	fingerprint recognition, fingerprint image, direction field, matching, multi-view	35, 3-4, 341-354	https://doi.org/10.3166/TS.35.341-354	Seng, D.W., Zhang, H.Q., Fang, XJ., Zhang, X.F., Chen, J. (2018). An improved fingerprint image matching and multi-view fingerprint recognition algorithm. Traitement du Signal, Vol. 35, No. 3-4, pp. 341-354. https://doi.org/ 10.3166/TS.35.341-354
1126	Kumar, I., Sachan, V., Shankar, R., Mishra, R.K.	An investigation of wireless S-DF hybrid satellite terrestrial relaying network over time selective fading channel	node mobility, selective decode-forward, space-time block code, hybrid satellite network, pairwise error probability	35, 2, 103-120	https://doi.org/10.3166/ TS.35.103-120	Kumar, I., Sachan, V., Shankar, R., Mishra, R.K. (2018). An investigation of wireless S-DF hybrid satellite terrestrial relaying network over time selective fading channel. Traitement du Signal, Vol. 35, No. 2, pp. 103-120. https://doi.org/ 10.3166/ TS.35.103-120
1127	Panigrahi, S.K., Gupta, S.	Automatic ranking of image thresholding techniques using consensus of ground truth	consensus ground truth, edge mismatch error (EMM), f-measure (FM), modified hausdorff distance (HD), object level consistency error (OCE), relative area error (RAE)	35, 2, 121-136	https://doi.org/10.3166/TS.35.121-136	Panigrahi, S.K., Gupta, S. (2018). Automatic ranking of image thresholding techniques using consensus of ground truth. Traitement du Signal, Vol. 35, No. 2, pp. 121-136. https://doi.org/ 10.3166/TS.35.121-136
1128	Huang, Y.L., Meng, S.Y., Li, X.S., Fan, W.Y.	A classification method for wood vibration signals of Chinese musical instruments based on GMM and SVM	gaussian mixture model (GMM), Gabor, Chinese musical instruments, support vector machine (SVM)	35, 2, 137-151	https://doi.org/10.3166/TS.35.137-151	Huang, Y.L., Meng, S.Y., Li, X.S., Fan, W.Y. (2018). A classification method for wood vibration signals of Chinese musical instruments based on GMM and SVM. Traitement du Signal, Vol. 35, No. 2, pp. 137-151. https://doi.org/ 10.3166/TS.35.137-151
1129	Kadam, R.S., Kulkarni, A.	Radiation pattern of reconfigurable antenna design for portable device applications	reconfigurable antenna, radiation pattern, portable device	35, 2, 153-168	https://doi.org/10.3166/TS.35.153-168	Kadam, R.S., Kulkarni, A. (2018). Radiation pattern of reconfigurable antenna design for portable device applications. Traitement du Signal, Vol. 35, No. 2, pp. 153-168. https://doi.org/ 10.3166/TS.35.153-168
1130	Neelapu, R., Devi, G.L., Rao, K.S.	Deep learning based conventional neural network architecture for medical image classification	deep learning, neural networks, medical image classification, processing, CNN, SVM	35, 2, 169-182	https://doi.org/10.3166/TS.35.169-182	Neelapu, R., Devi, G.L., Rao, K.S. (2018). Deep learning based conventional neural network architecture for medical image classification. Traitement du Signal, Vol. 35, No. 2, pp. 169-182. https://doi.org/ 10.3166/TS.35.169-182
1131	Zhang, J., Li, Y.B., Liu, B.X., Wu, Y.Q., Yi, H.C.	Forward modelling of circular loop source and calculation of whole area apparent resistivity based on TEM	circular loop source, forward modelling, whole area apparent resistivity, geo-electric model, numerical calculation, electrical characteristic response	35, 2, 183-198	https://doi.org/10.3166/TS.35.183-198	Zhang, J., Li, Y.B., Liu, B.X., Wu, Y.Q., Yi, H.C. (2018). Forward modelling of circular loop source and calculation of whole area apparent resistivity based on TEM. Traitement du Signal, Vol. 35, No. 2, pp. 183-198. https://doi.org/ 10.3166/TS.35.183-198
1132	Mostefa, T., Tarak, B., Hachemi, G.	An automatic diagnosis method for an open switch fault in unified power quality conditioner based on artificial neural network	UPQC, active power filter, ANN, fault detection, open switch fault, FFT, skewness	35, 1, 7-21	https://doi.org/10.3166/TS.35.7-21	Mostefa, T., Tarak, B., Hachemi, G. (2018). An automatic diagnosis method for an open switch fault in unified power quality conditioner based on artificial neural network. Traitement du Signal, Vol. 35, No. 1, pp. 7-21. https://doi.org/ 10.3166/TS.35.7-21
1133	Devi, B.R.	Texture feature-based image searching system using wavelet transform approach	feature extraction, image searching, pyramid structure wavelet transform model (PSWTM), wavelet transform, feature-based image searching system (FBISS), precision, recall, similarity matching	35, 1, 23-33	https://doi.org/10.3166/TS.35.23-33	Devi, B.R. (2018). Texture feature-based image searching system using wavelet transform approach. Traitement du Signal, Vol. 35, No. 1, pp. 23-33. https://doi.org/ 10.3166/TS.35.23-33
1134	Song, J.B., Song, R., Xiong, Z.	Acoustic radiation features and structural-acoustic sensitivity of channel beam	channel beam, indirect boundary element, structural noise, structural-acoustic sensitivity	35, 1, 35-45	https://doi.org/10.3166/TS.35.35-45	Song, J.B., Song, R., Xiong, Z. (2018). Acoustic radiation features and structural-acoustic sensitivity of channel beam. Traitement du Signal, Vol. 35, No. 1, pp. 35-45. https://doi.org/10.3166/TS.35.35-45

1135	Sachan, V., Kumar, I., Shankar, R., Mishra, R.K.	Analysis of transmit antenna selection based selective decode forward cooperative communication protocol	multiple input multiple output, space- time-block-code, selective decode and forward, pairwise error probability	35, 1, 47-60	https://doi.org/10.3166/TS.35.47-60	Sachan, V., Kumar, I., Shankar, R., Mishra, R.K. (2018). Analysis of transmit antenna selection based selective decode forward cooperative communication protocol. Traitement du Signal, Vol. 35, No. 1, pp. 47-60.https://doi.org/10.3166/TS.35.47-60
1136	Huang, X.L., Zhang, T.F., Deng, Z.H., Li, Z.	Design of moving target detection and tracking system based on cortex-A7 and openCV	behavior analysis, camshift, cortex-A7, embedded system, target tracking, opencv	35, 1, 61-73	https://doi.org/10.3166/TS.35.61-73	Huang, X.L., Zhang, T.F., Deng, Z.H., Li, Z. (2018). Design of moving target detection and tracking system based on cortex-A7 and OpenCV. Traitement du Signal, Vol. 35, No. 1, pp. 61-73. https://doi.org/10.3166/TS.35.61-73
1137	Choubey, H., Pandey, A.	Classification of healthy, inter-ictal and seizure signal using various classification techniques	electroencephalogram (EEG) signal, levenberg marquardt (LM) classifier, epileptic seizure detection, k-nearest neighbour (KNN), artificial neural network (ANN), and variance	35, 1,75-84	https://doi.org/10.3166/TS.35.75-84	Choubey, H., Pandey, A. (2018). Classification of healthy, inter-ictal and seizure signal using various classification techniques. Traitement du Signal, Vol. 35, No. 1, pp. 75-84. https://doi.org/ 10.3166/TS.35.75-84
1138	Lu, M., Li, H., Zhang, Y.F., Xie, Q., Cai, X.H.	Vector control of brushless double fed generator based on control winding orientation on smooth switch from stand-alone mode to grid-tied mode	brushless double fed induction generator (BDFIG), power winding (PW), control winding (CW), field-orientation	35, 1, 85-95	https://doi.org/10.3166/TS.35.85-95	Lu, M., Li, H., Zhang, Y.F., Xie, Q., Cai, X.H. (2018). Vector control of brushless double fed generator based on control winding orientation on smooth switch from stand-alone mode to grid-tied mode. Traitement du Signal, Vol. 35, No. 1, pp. 85-95. https://doi.org/ 10.3166/TS.35.85-95
1139	Rao, D.K., Srinivas, K.	An analysis of feature identification for tool wear monitoring by using acoustic emission	hardturning, tool condition monitoring, dominant features, acoustic emission, grey relation analysis	34, 3-4, 117-135	https://doi.org/10.3166/TS.35.117-135	Rao, D.K., Srinivas, K. (2017). An analysis of feature identification for tool wear monitoring by using acoustic emission. Traitement du Signal, Vol. 34, No. 3-4, pp. 117-135. https://doi.org/10.3166/TS.35.117-135
1140	Raguram, L.S.B., Shanmugam, V.M.	Deep belief networks for phoneme recognition in continuous Tamil speech–an analysis	deep belief networks, phoneme recognition, speech recognition, artificial neural networks, deep learning, tamil speech, acoustic model, continuous speech, bernoulli-bernoulli, gaussian-bernoulli	34, 3-4, 137-151	https://doi.org/10.3166/TS.35.137-151	Raguram, L.S.B., Shanmugam, V.M. (2017). Deep belief networks for phoneme recognition in continuous Tamil speech–an analysis. Traitement du Signal, Vol. 34, No. 3-4, pp. 137-151. https://doi.org/10.3166/TS.35.137-151
1141	Hu, T., Lv, J., Xie, Q.S., Sun, H., Yuan, Q.N.	A novel human behaviour information coding method based on eye-tracking technology	information identification, information coding, motion capture, fixation duration, virtual reality	34, 3-4, 153-173	https://doi.org/10.3166/TS.35.153-173	Hu, T., Lv, J., Xie, Q.S., Sun, H., Yuan, Q.N. (2017). A novel human behaviour information coding method based on eye-tracking technology. Traitement du Signal, Vol. 34, No. 3-4, pp. 153-173. https://doi.org/10.3166/TS.35.153-173
1142	Gopil, A.P., Narayana, V.L.	Protected strength approach for image steganography	steganography, cryptography, protected strength, embedding, decomposing, stegoimage	34, 3-4, 175-181	https://doi.org/10.3166/TS.35.175-181	Gopil, A.P., Narayana, V.L. (2017). Protected strength approach for image steganography. Traitement du Signal, Vol. 34, No. 3-4, pp. 175-181. https://doi.org/10.3166/TS.35.175-181
1143	Wang, J., Ding, R., Yang, Y.D., Pan, S.	A novel signal processing technique for travelling detection pulse radar in 3D geographic scene	pulse radar, traveling detection, geographic scene, signal processing, speed compensation	34, 3-4, 183-196	https://doi.org/10.3166/TS.35.183-196	Wang, J., Ding, R., Yang, Y.D., Pan, S. (2017). A novel signal processing technique for travelling detection pulse radar in 3D geographic scene. Traitement du Signal, Vol. 34, No. 3-4, pp. 183-196. https://doi.org/10.3166/TS.35.183-196
1144	Narayana, V.L., Gopi, A.P.	Visual cryptography for gray scale images with enhanced security mechanisms	visual cryptography, dwt, digital watermarking	34, 3-4, 197-208	https://doi.org/10.3166/TS.35.197-208	Narayana, V.L., Gopi, A.P. (2017). Visual cryptography for gray scale images with enhanced security mechanisms. Traitement du Signal, Vol. 34, No. 3-4, pp. 197-208. https://doi.org/10.3166/TS.35.197-208
1145	Bi, Q.L., Liu, Z.J., Wang, M.H., Lai, M.L., Xiao, L.M., Yan, Y.P., Liu, X.G.	An automatic camera calibration method based on checkerboard	computer vision, camera calibration, checkerboard, corner recognition, corner matching	34, 3-4, 209-226	https://doi.org/10.3166/TS.35.209-226	Bi, Q.L., Liu, Z.J., Wang, M.H., Lai, M.L., Xiao, L.M., Yan, Y.P., Liu, X.G. (2017). An automatic camera calibration method based on checkerboard. Traitement du Signal, Vol. 34, No. 3-4, pp. 197-208. https://doi.org/10.3166/TS.35.209-226
1146	Deore, S. P., Pravin, A.	Ensembling: Model of histogram of oriented gradient based handwritten devanagari character recognition system	devanagari character, K-NN, SVM, NN, HWCR	34, 1-2, 7-20	https://doi.org/10.3166/TS.34.7-20	Deore, S. P., Pravin, A. (2017). Ensembling: Model of histogram of oriented gradient based handwritten devanagari character recognition system. Traitement du Signal, Vol. 34, No. 1-2, pp. 7-20. https://doi.org/10.3166/TS.34.7-20
1147	Rout, G., Roy, J.S.	A new student-teacher mentoring algorithm for online feedback using statistical signal processing	online feedback, student-teacher mentoring, mentoring algorithm, statistical signal processing	34, 1-2, 21-32	https://doi.org/10.3166/TS.34.21-32	Rout, G., Roy, J.S. (2017). A new student-teacher mentoring algorithm for online feedback using statistical signal processing. Traitement du Signal, Vol. 34, No. 1-2, pp. 21-32. https://doi.org/10.3166/TS.34.21-32
1148	Yang, K., Xue, L.Y., Yin, K., Liu, S., Meng, J.	Microbubble generation and trapping induced by femtosecond laser and acoustic signal analysis	femtosecond laser, microbubble, self-focusing, laser-induced optical breakdown (LIOB), high-speed camera, high-frequency ultrasonic imager	34, 1-2, 33-44	https://doi.org/10.3166/TS.34.33-44	Yang, K., Xue, L.Y., Yin, K., Liu, S., Meng, J. (2017). Microbubble generation and trapping induced by femtosecond laser and acoustic signal analysis. Traitement du Signal, Vol. 34, No. 1-2, pp. 33-44. https://doi.org/10.3166/TS.34.33-44
1149	Sailaja, R., Rupa, C., Chakravarthy, A.S.N.	Robust and indiscernible multimedia watermarking using light weight mutational methodology	three lines maximum, lifting wavelet transform, singular value decomposition, peak signal to noise ratio, normalized Correlatio	34, 1-2, 45-55	https://doi.org/10.3166/TS.34.45-55	Sailaja, R., Rupa, C., Chakravarthy, A.S.N. (2017). Robust and indiscernible multimedia watermarking using light weight mutational methodology. Traitement du Signal, Vol. 34, No. 1-2, pp. 45-55. https://doi.org/10.3166/TS.34.45-55
1150	Tian, H.Q., Dang, X.Q., Wang, J.H., Wu, D.M.	Registration method for three-dimensional point cloud in rough and fine registrations based on principal component analysis and iterative closest point algorithm	intraoperative registration, principal component analysis (PCA), iterative closest point (ICP) algorithm, point cloud, gaussian noise	34, 1-2, 57-75	https://doi.org/10.3166/TS.34.57-75	Tian, H.Q., Dang, X.Q., Wang, J.H., Wu, D.M. (2017). Registration method for three-dimensional point cloud in rough and fine registrations based on principal component analysis and iterative closest point algorithm. Traitement du Signal, Vol. 34, No. 1-2, pp. 57-75. https://doi.org/10.3166/TS.34.57-75
1151	Benkaddour, M.K., Bounoua, A.	Feature extraction and classification using deep convolutional neural networks, PCA and SVC for face recognition	biometrics, face recognition, feature extraction, convolutional neural network, CNN, support vector machines (SVM), svc, principal component analysis, PCA	34, 1-2, 77-91	https://doi.org/10.3166/TS.34.77-91	Benkaddour, M.K., Bounoua, A. (2017). Feature extraction and classification using deep convolutional neural networks, PCA and SVC for face recognition. Traitement du Signal, Vol. 34, No. 1-2, pp. 77-91. https://doi.org/10.3166/TS.34.77-91
1152	Jiang, C.H., Zhang, C., Zhang, Y.H., Xu, H.	An improved particle swarm optimization algorithm for parameter optimization of proportional–integral–derivative controller	flying time, adaptive weight, constriction factor, Improved Particle Swarm Optimization (IPSO), Proportional–Integral–Derivative (PID) controller	34, 1-2, 93-110	https://doi.org/10.3166/TS.34.93-110	Jiang, C.H., Zhang, C., Zhang, Y.H., Xu, H. (2017). An improved particle swarm optimization algorithm for parameter optimization of proportional–integral–derivative controller. Traitement du Signal, Vol. 34, No. 1-2, pp. 93-110. https://doi.org/10.3166/TS.34.93-110