



Association for  
Computing Machinery

## ACM Transactions on Internet Technology – Special Issue on **Data Science for Cyber-Physical Systems**

### Special Issue Guest Editors

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Cyber-physical systems (CPS) and the Internet of Things (IoT) are developing rapidly and these technologies are now transforming our economy and society. A disruptive transformation of the economy and society is expected due to the data collected by these systems. Also, the data itself is not the key component for new business models. Cyber Physical Systems are also characterized by their ability to adapt and to learn: They analyze their environment and, based on observations, they learn patterns, correlations and predictive models. They follow a data-driven approach to learn and predict. To create value out of the data, it must be transformed to knowledge. Therefore, Data Science methodologies and applications are the key component of future smart systems. Nowadays, there is a growing number of Data Science solutions. With the huge amount of data from Sensor networks (SNs) integration Data Science methodologies and applications present a real challenge for researchers. The integration of these technologies can benefit other areas such as Industry 4.0, Internet of Things, Blockchain, and so forth. In addition, communication networks, embedded computers, control theory, data fusion and knowledge discovery are all areas that require further research.

The objective of this special issue is to attract high-quality research and survey articles that promote research and reflect the most recent advances in addressing Data Science methodologies and applications for Cyber-Physical Systems. We welcome researchers from both academia and industry to provide their state-of-the-art technologies and ideas covering all aspects of Data Science solutions for Cyber-Physical systems.

### Important Deadlines

- Manuscript submission: June 1, 2020
- First notification: October 15, 2020
- Submission of revised manuscript: November 30, 2020
- Final notification: December 31, 2020
- Final submission (camera-ready): January 30, 2021

Potential topics include but are not limited to the following:

- Artificial Intelligence models for Cyber-Physical Systems
- Machine Learning models for Cyber-Physical Systems
- Clustering and classification algorithms for CPS
- Deep and reinforcement learning for CPS
- Big Data analytics for data processing from CPS
- Fuzzy System proposals for CPS
- Expert/hybrid systems for CPS
- AI/ML for IoT, Industry 4.0
- Intelligent security proposals for CPS
- Control systems development for CPS
- Organization-based multiagent systems
- Applications of AI in CPS domains: energy, transportation, etc.

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### Submission Instructions:

Please refer to <http://toit.acm.org/authors.cfm>  
Please select “Special Issue on Data Science for Cyber-Physical Systems” in the TOIT Manuscript Central website.