Pacific Graphics 2018

The 26th Pacific Conference on Computer Graphics and Applications

Hong Kong
October 8 – 11, 2018

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Preface

The 26th International Conference on Computer Graphics and Applications (Pacific Graphics 2018) was held at the City University of Hong Kong on October 8-11, 2018. Pacific Graphics is an annual international conference on computer graphics and applications. It is one of flagship conferences of Asia Graphics Association. As a highly successful conference series, Pacific Graphics provides a premium forum for researchers, developers, practitioners in the Pacific Rim and around the world to present and discuss new problems, solutions, and technologies in computer graphics and related areas.

There were 195 submissions, which were reviewed by a Program Committee of 130 International experts, as well as 260 external reviewers. Each submission underwent a rigorous review process. The Program Co-Chairs assigned each paper to a primary reviewer and at least two secondary reviewers selected from the Program Committee. The secondary reviewers and external reviewers wrote full reviews. The primary did not necessarily write a full review but was responsible for inviting external reviewers so that each paper received at least 4 reviews. The decision of the first review cycle was made after the authors' rebuttal and extensive discussions among the reviewers. Each of the accepted full papers underwent a second review cycle to ensure that the necessary revisions indicated in the reviews were carried out.

Out of 195 submissions, 42 papers (acceptance rate: 21.5%) were selected for the full oral presentation at the conference, as well as for the inclusion in the special issue of Computer Graphics Forum. Additionally, 22 short papers and 5 poster communications appeared in the conference program and proceedings, and were published electronically through the EG Digital Library. All the accepted full and short papers, together with 14 TVCG and 2 CGF journal papers, were presented in a two-track format, while the posters were discussed in a dedicated session at the conference.

In addition to the paper presentations, the conference also featured three keynote speeches by Kavita Bala, Christian Theobalt, and Xin Tong. In the first day of the conference, there was a one-day workshop featuring the computer graphics research in Hong Kong. Eight workshop speakers were invited, including: Tian Fang, Chi-Wing Fu, Manfred Lau, Rynson Lau, Jing Liao, Charlie Wang, Tien-Tsin Wong, and Sai-Kit Yeung.

This event would not be possible without the enthusiasm and the committed efforts of many dedicated people. We are extremely grateful for the hard, voluntary work of the 130 members of our program committee and 260 external reviewers, who sacrificed work hours, holiday and other family commitments to deliver quality assessments in time. Our deepest gratitude goes to the Organization Chair David Junhui Hou, the General Co-chairs Hujun Bao, Horace H. S. Ip, Hans-Peter Seidel, and Alla Sheffer, and the PG steering committee members particularly Wenping Wang and Shi-Min Hu for their help, suggestions and support with numerous aspects during the organization of this event. We gratefully acknowledge the City University of Hong Kong for providing the conference venue and various services, Facebook for its financial support, and Tsinghua University Press for the USB proceedings. Finally, our special thanks go to Stefanie Behnke for her amazingly responsive management of the submission and review system, Michael Wimmer for providing the paper sorting script, Steve Lin and Robin Chen for sharing their past experience in successfully organizing Pacific Graphics 2017, and the student helpers for their great inputs to the conference. Finally, we would like to thank the authors for their interest in and support of this venue and congratulate them for the high quality of the papers compiled into the proceedings.

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Invited Talk

Kavita Bala
Chair of the Computer Science Department at Cornell University

Short Biography

Kavita Bala is the Chair of the Computer Science Department at Cornell University. Bala specializes in computer vision and computer graphics, leading research in recognition and visual search using deep learning; material modeling and acquisition using physics and learning; realistic, physically-based rendering; and material perception. She has served as the Editor-in-Chief of Transactions on Graphics (TOG). Her research projects have been commercialized into Autodesk's production cloud renderer and GrokStyle's visual search engine; and her work on 3D Mandalas was featured at the Rubin Museum of Art, New York.

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Invited Talk

Christian Theobalt
Professor, Max-Planck-Institute (MPI) for Informatics, Germany

Short Biography

Christian Theobalt is a Professor of Computer Science and the head of the research group "Graphics, Vision, & Video" at the Max-Planck-Institute (MPI) for Informatics, Saarbrücken, Germany. He is also a Professor of Computer Science at Saarland University, Germany. From 2007 until 2009 he was a Visiting Assistant Professor in the Department of Computer Science at Stanford University.He received his MSc degree in Artificial Intelligence from the University of Edinburgh, his Diplom (MS) degree in Computer Science from Saarland University, and his PhD (Dr.-Ing.) from Saarland University and Max-Planck-Institute for Informatics.

In his research he looks at algorithmic problems that lie at the intersection of Computer Graphics, Computer Vision and machine learning, such as: static and dynamic 3D scene reconstruction, marker-less motion and performance capture, virtual and augmented reality, computer animation, appearance and reflectance modelling, intrinsic video and inverse rendering, machine learning for graphics and vision, new sensors for 3D acquisition, advanced video processing, as well as image- and physically-based rendering. He is also interested in using reconstruction techniques for human computer interaction.

For his work, he received several awards, including the Otto Hahn Medal of the Max-Planck Society in 2007, the EUROGRAPHICS Young Researcher Award in 2009, the German Pattern Recognition Award 2012, and the Karl Heinz Beckurts Award in 2017. He received two ERC grants, one of the most prestigious and competitive individual research grants in Europe: An ERC Starting Grant in 2013 and an ERC Consolidator Grant in 2017. In 2015, he was elected as one of the top 40 innovation leaders under 40 in Germany by the business magazine Capital. Christian Theobalt is also a co-founder of an award-winning spin-off company from his group - www.thecaptury.com - that is commercializing one of the most advanced solutions for marker-less motion and performance capture.

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Xin Tong
Principal Research Manager, Microsoft Research Asia, China

Short Biography

Xin Tong is a principal research manager in Internet Graphics Group of Microsoft Research Asia. He joined Microsoft Research Asia after he obtained his Ph.D. degree in Computer Graphics from Tsinghua University in 1999. His research interests include appearance modeling and rendering, texture synthesis, facial performance capturing and modeling, as well as data driven geometry processing. Xin has published more than 80 papers in peer-reviewed graphics and vision conferences and journals, including more than 40 papers in ACM Transactions on Graphics. Xin served as paper co-chair of Pacific Graphics 2013. He is associate editors of IEEE TVCG and ACM TOG now.