Guest Editors' Introduction: Special Section on IEEE PacificVis 2018

Stefan Bruckner, Koji Koyamada, and Bongshin Lee

THIS special section of the *IEEE Transactions on Visualization and Computer Graphics (TVCG)* presents the four most highly rated papers from the 2018 IEEE Pacific Visualization Symposium (IEEE PacificVis'18), which was held at the Integrated Research Center of Kobe University, Kobe, Japan from April 10 to 13, 2018. The IEEE Pacific Visualization Symposium, sponsored by the IEEE Visualization and Graphics Technical Committee (VGTC), aims to foster greater exchange between visualization researchers and practitioners especially in the Asia-Pacific region.

We note that this forum has grown to be a truly international event, attracting submissions and attendees from many countries not only in the Asia-Pacific but also in Europe, America, and beyond. Thus, PacificVis symposia now serve the additional purposes of drawing the attention of researchers and practitioners in the region to the state of the art in the field of Visualization and, also, building awareness of research developments in the region to the wider international visualization research community.

To ensure the quality of accepted papers, the IEEE PacificVis'18 Papers Co-Chairs employed a two-stage peer review process. Each paper was assigned both to a "Primary" and to a "Secondary" reviewer from our team of 47 international program committee members. The Primary and Secondary reviewers each recruited an additional external reviewer, ensuring a total of at least four reviewers per paper. It was single-blind for program committee and double-blind for external reviewers.

The submissions this year were outstanding, and the symposium accepted 23 full papers out of 86 submissions. In cooperation with *IEEE TVCG*, the guest editors, who were Papers Co-Chairs for the symposium, selected and recommended four outstanding papers to *IEEE TVCG* based on the first round of reviews. These four papers, representing the most highly rated of the IEEE PacificVis'18 full paper program, were accepted directly by *IEEE TVCG* when the authors revised the original manuscripts as required by the minor revision criteria. We give a brief overview of these four papers below.

Map matching is the process of assigning observed positions of vehicles and their trajectories to road links in a network. The paper "Visual Interactive Map Matching" presents a visual analytics approach to control and steer this process and incorporates parameter optimization with immediate visual feedback. Using large-scale taxi trajectory data, the paper shows that this approach can also be effectively applied on a subset of the data to fine-tune the matching process, leading to improved matching results for the entire dataset.

The paper "Predominance Tag Maps" combines the concepts of a predominance map, which expresses the predominant data category for a geographical entity, with tag maps, where textual labels are arranged according to associated geographical reference points while avoiding occlusions. It presents a novel layout algorithm that accounts for predominance at arbitrary aggregation granularities and can utilize font sizes as visual variables.

The paper "GANViz: A Visual Analytics Approach to Understand the Adversarial Game" aims to provide experts with a better understanding of Generative Adversarial Nets (GANs), a popular framework for the unsupervised learning of data representations. Based on practical needs, the presented visual analytics enables the comparative analysis of subnetworks, providing domain experts with additional insight helping them understand, interpret, evaluate, and potentially improve GAN models.

In "MeetingVis: Visual Narratives to Assist in Recalling Meeting Context and Content," the authors propose a visual narrative-based approach to summarize the content of meetings. It consists of a data pipeline that processes the spoken audio from a group discussion and a visual interface that aims to provide an easily-understandable visual summary, enabling the navigation of this data. In a qualitative study, the paper shows that this type of visualization enables the recall of subtle details from prior meetings and hence has the potential for increasing the productivity of individuals and teams.

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- *S. Bruckner is with the Department of Informatics, University of Bergen, PO Box 7803, 5020 Bergen, Norway. E-mail: stefan.bruckner@uib.no..*
- *K. Koyamada is with the Academic Center for Computing and Media Studies, Kyoto University, Yoshida-honmachi, Sakyo, Kyoto, 606-8501, Japan. E-mail: koyamada.koji.3w@kyoto-u.ac.jp.*
- *B. Lee is with Microsoft Research, One Microsoft Way, Redmond, WA 98052, USA. E-mail: bongshin@microsoft.com.*

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valuable feedback that resulted in both the high-quality program for the symposium and the papers appearing in this special section. We sincerely hope that you enjoy this sample of the best papers presented at IEEE PacificVis'18 and consider submitting your work to the IEEE Pacific Visualization Symposium in the future.

Stefan Bruckner
Koji Koyamada
Bongshin Lee
Guest Editors

Stefan Bruckner received the master's and PhD degrees in computer science from the TU Wien, Austria, in 2004 and 2008, respectively, and the habilitation (venia docendi) degree in practical computer science, in 2012. He is a full professor in visualization with the Department of Informatics, University of Bergen, Norway. Before his appointment in Bergen, in 2013, he was an assistant professor with the Institute of Computer Graphics and Algorithms, TU Wien. His research interests include all aspects of data visualization, with a focus on interactive techniques for the exploration and analysis of spatial data, including visual parameter space analysis, illustrative methods, volume visualization, and knowledge-assisted visual interfaces.

Koji Koyamada received the MS and PhD degrees in electronic engineering from Kyoto University, Japan, in 1985 and 1994, respectively, and worked for IBM Japan from 1985 to 1998. From 1998 to 2001 he was an associate professor with the Iwate Prefectural University, Japan. From 2001 to 2003, he was an associate professor with Kyoto University, Japan. He is a professor with the Academic Center for Computing and Media Studies, Kyoto University, Japan. His research interest includes modeling & simulation and visualization. He is a member of the Science Council of Japan, a former president of the Visualization Society Japan, and a former president of Japan Society of Simulation Technology. He received the IEMT/IMC outstanding paper award in 1998, the VSJ contribution award in 2009 and the VSJ outstanding paper award in 2010.

Bongshin Lee received the MS and PhD degrees in computer science from the University of Maryland at College Park, in 2002 and 2006, respectively. She is a senior researcher with Microsoft Research, where she explores innovative ways to enable people to create visualizations, interact with their data, and share data-driven stories. She has been recently focusing on helping people collect & explore the data about themselves and share insights with others by leveraging visualizations. She currently serves as an associate editor for *IEEE TVCG,* and has served as general co-chair for IEEE PacificVis 2017 and papers co-chair for IEEE InfoVis 2015 & 2016.