

Preface

The Computational Visual Media (CVM) conference series is intended to provide a major international forum for exchanging novel research ideas and significant computational methods that either underpin or apply visual media. The primary goal is to promote cross-disciplinary research to amalgamate aspects of computer graphics, computer vision, machine learning, image and video processing, visualization, and geometric computing. The main topics of interest to CVM include classification, composition, retrieval, synthesis, cognition, and understanding of visual media (e.g., images, video, 3D geometry).

The Computational Visual Media Conference 2023 (CVM 2023), the 11th international conference in the series, was held during April 6-8, 2023, at Shenzhen University, Shenzhen. Following the success of previous CVM conferences, CVM 2023 attracted broad attention from researchers worldwide. A total of 169 technical papers were submitted and reviewed by an international program committee with 189 selected experts. A total of 38 papers were accepted for oral presentation.

Among the 38 accepted papers, six outstanding papers have been selected for inclusion in this special section. These papers cover a wide spectrum of topics including depth estimation, 3D point cloud assembly, floor plan understanding, movie montage, edge detection and retinal vessel segmentation. In addition, we have also included an invited survey paper on 360° images and videos in mixed reality.

We hope that readers will enjoy this special section. We are grateful to all the paper authors and reviewers for their valuable contributions.

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Shi-Min Hu received his Ph.D. degree from Zhejiang University, Hangzhou, in 1996. He is currently a professor in the Department of Computer Science and Technology, Tsinghua University, Beijing. His research interests include digital geometry processing, video processing, rendering, computer animation, and computer-aided geometric design. He is the Editor-in-Chief of Computational Visual Media, and on the editorial boards of several journals, including Computer Aided Design, Computer & Graphics, and Journal of Computer Science and Technology.



Amit Bermano is a senior lecturer (assistant professor) at the Blavatnik School of Computer Science in Tel Aviv University, Tel Aviv, since 2018. His research focuses on computer graphics, computer vision, and computational fabrication, using tools from machine learning and geometry processing. Previously, he was a postdoctoral researcher at the Princeton Graphics Group and a postdoctoral researcher at Disney Research Zurich, Zurich. He has conducted his doctoral studies at ETH Zurich, in collaboration with the computational materials group of Disney Research Zurich. His Master's and Bachelor's degrees were obtained at The Technion—Israel Institute of Technology.



Rui-Zhen Hu is an associate professor at Shenzhen University, Shenzhen. She received her Ph.D. degree from the Department of Mathematics, Zhejiang University, Hangzhou. Before that, she spent two years visiting Simon Fraser University, Vancouver. Her research interests are in computer graphics, with a recent focus on applying machine learning to advance the understanding and modeling of visual data. She received the Asia Graphics Young Researcher Award in 2019. She has served as an editorial board member of *The Visual Computer* and *IEEE CG&A*.