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 2021 (CVM 2021), the 9th international conference in the series, has been held during April 21–23, 2021, at Shandong University, Qingdao. Following the success of previous CVM conferences, CVM 2021 attracted broad attention from researchers worldwide. A total of 179 technical papers were submitted and reviewed by an international program committee with 105 selected experts and 37 additional reviewers. A total of 41 papers were accepted for oral presentation.

Among the 41 accepted papers, six outstanding papers have been selected for inclusion in this special section, and one paper will be published in the regular issue of JCST after revision. These papers cover a wide spectrum of topics including 3D scene reconstruction from multi-view stereo, indoor visual localization, 3D object tracking, age and gender estimation, scene text detection and cloth wrinkle synthesis. In addition, we have also included an invited survey paper on shape editing techniques.

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.

Connelly Barnes is a senior researcher at Adobe Research, Seattle. Previously, he was an assistant professor at the University of Virginia. He received his Ph.D. degree in computer science, from Princeton University, Princeton, in 2011. He develops techniques for efficiently manipulating visual data in computer graphics by using semantic information from computer vision, with applications in computational photography, image editing, art, and hiding visual information. Many computer graphics algorithms are more useful if they are interactive; therefore, he also focuses on efficiency and optimization, including some compiler technologies.

Chang-He Tu received his Bachelor's, Master's, and Ph.D. degrees from Shandong University, Qingdao. He is currently a professor of the School of Computer Science and Technology, Shandong University, Jinan. He has published articles on ACM SIGGRAPH, Eurographics, ACM TOG, IEEE Transactions on Visualization and Computer Graphics, CAGD, etc. His research interests include geometric modeling and processing, computational geometry, and data-driven visual computing.