Preface

The Computational Visual Media (CVM) Conference series is intended to provide a major international forum for exchanging novel research ideas and significant practical computational methods which either underpin or apply visual media. The primary rationale is to target cross-disciplinary research which amalgamates aspects of computer graphics, computer vision, machine learning, image processing, video processing, visualization and geometric computing. The main topics of interest to CVM include classification, composition, retrieval, synthesis, and understanding of visual media.

The Computational Visual Media Conference 2016 (CVM 2016), the 4th international conference in the series, was held on April 6 to April 8, 2016, in Cardiff University, UK. Following the success of previous CVM conferences, CVM 2016 attracted broad attention from researchers worldwide. A total of 72 technical papers were submitted and reviewed by an international program committee comprising 49 selected experts and 44 additional reviewers. From those submissions, 25 papers were accepted for oral presentation.

From those 25 papers, 7 outstanding papers were selected for inclusion in this special section. These papers cover a wide spectrum of topics, from image segmentation, image composition, multi-task learning and nonlinear dimensionality reduction to camera calibration, shape from shading and 3D printing.

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

Leading Editor:

Shi-Min Hu, Professor, Department of Computer Science and Technology, Tsinghua University, Beijing
shimin@Tsinghua.edu.cn

Guest Editors:

Li-Gang Liu, Professor, School of Mathematical Sciences, University of Science and Technology of China, Hefei
lgliu@ustc.edu.cn

Ralph R. Martin, Professor, School of Computer Science and Informatics, Cardiff University, Cardiff
ralph@cs.cf.ac.uk

Shi-Min Hu received his Ph.D. degree in computer science 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 has published more than 100 papers in journals and refereed conference. He is the Editor-in-Chief of Computational Visual Media, and on the editorial boards of several journals, including IEEE Transactions on Visualization and Computer Graphics, Computer Aided Design, and Computer & Graphics.

Li-Gang Liu is a professor at the School of Mathematical Sciences, University of Science and Technology of China, Hefei. He received his B.S. (1996) and Ph.D. (2001) degrees in applied mathematics from Zhejiang University, Hangzhou. Between 2001 and 2004, he worked at Microsoft Research Asia, Beijing. Then he worked at Zhejiang University during 2004 and 2012. He paid an academic visit to Harvard University during 2009 and 2011. He is on the editorial boards of Computer Aided Geometric Design and IEEE Computer Graphics and Applications, and was PC co-chair of ACM Symposium on Solid and Physical Modeling 2014 and Eurograhics Symposium on Geometry Processing 2015. His research interests include computer graphics and image processing.

Ralph R. Martin is a professor at the School of Computer Science and Informatics, Cardiff University, Cardiff. He obtained his Ph.D. degree in engineering in 1983 from Cambridge University. He has published about 300 papers and 14 books, covering such topics as solid and surface modeling, intelligent sketch input, geometric reasoning, reverse engineering, and various aspects of computer graphics. He is a Fellow of the Learned Society of Wales, the Institute of Mathematics and its Applications, and the British Computer Society. He is an Associate Editor-in-Chief of Computational Visual Media, and on the editorial boards of Computer-Aided Design, Computer Aided Geometric Design, Geometric Models, and Computers and Graphics.