Guest Editors' Introduction to the Special Section on Award-Winning Papers from the IEEE Conference on Computer Vision and Pattern Recognition 2009 (CVPR 2009)

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THIS special section contains extended versions of the following award-winning papers from the 2009 IEEE Conference on Computer Vision and Pattern Recognition (CVPR 2009) held in Miami, Florida, USA 25-29 June 2009:

- Kaiming He, Jian Sun, and Xiaoou Tang, "Single Image Haze Removal Using Dark Channel Prior," winner of the Best Paper Award (sponsored by Microsoft).
- Anat Levin, Yair Weiss, Fredo Durand, and Bill Freeman, "Understanding and evaluating blind deconvolution algorithms," winner of the Best Paper-Honorable Mention Award (sponsored by Honeywell).
- Ce Liu, Jenny Yuen, and Antonio Torralba, "Non-parametric Scene Parsing: Label Transfer via Dense Scene Alignment," winner of the Best Student Paper Award (sponsored by MERL).
- Olivier Duchenne, Francis Bach, In So Kweon, and Jean Ponce, "A Tensor-Based Algorithm for High-Order Graph Matching," winner of the Best Student Paper-Honorable Mention Award (sponsored by Hewlett-Packard).

CVPR 2009 received 1,464 complete submissions by the 20 November 2008 deadline. We worked with 46 Area Chairs, who are well-respected members of the computer vision community, and 749 reviewers to select 61 papers as Orals and 322 papers as Posters. Twenty of these accepted papers were recommended to the Awards Committee for consideration. The Awards Committee consisted of five senior members of the vision community, three of whom were Area Chairs. The committee members had no conflicts with the candidate papers. The four award papers were selected after three phases of reviewing. These award papers were presented in the only single-track session of the main conference. The authors of the award-winning papers and honorable mentions were invited to submit an extended version of their paper as a journal submission to *TPAMI*. The papers were reviewed by expert reviewers in the field, following the usual *TPAMI* procedure. All of the papers were accepted, in most cases after relatively minor revisions.

CVPR 2009 also presented the Longuet-Higgins Prize for fundamental contributions in computer vision that have withstood the test of time. The awards committee that selected the CVPR 2009 awards was also asked to assist in the selection of this award. The prize (sponsored by IBM) was awarded to the following two papers that were published in CVPR 1999:

- Jinggang Huang and David Mumford, "Statistics of Natural Images and Models."
- Chris Stauffer and W.E.L. Grimson, "Adaptive Background Mixture Models for Real-Time Tracking."

We would like to thank the Awards Committee members, namely, Horst Bischof (TU Graz), Michael Black (Max Planck Institute, formerly at Brown University), Chuck Dyer (University of Wisconsin), Jan-Olaf Eklundh (KTH), and David Lowe (UBC). We are also very grateful to the CVPR 2009 Area Chairs and reviewers as well as the *TPAMI* reviewers who handled the award-winning papers for this special section.

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Irfan Essa received the PhD (1995) and SM (1990) degrees from the Massachusetts Institute of Technology (MIT) and worked as a research scientist the MIT Media Laboratory, before moving to Georgia Tech. He is a professor in the School of Interactive Computing (iC) of the College of Computing (CoC), and an adjunct professor in the School of Electrical and Computer Engineering, Georgia Institute of Technology (Georgia Tech), in Atlanta. At Georgia Tech he is affiliated with the Robotics and Intelligent Machines Center and the GVU Center and Co-directs the Computational Perception Laboratory. He works in the areas of computer vision, computer fraphics, computational perception, robotics, and computer animation, with potential impact on video analysis and production (e.g., computational photography & video, image-based modeling and rendering, etc.), human computer interaction, and artificial intelligence research. Specifically, he is interested in the analysis, interpretation, authoring, and synthesis (of video), with the goals of building aware environments, recognizing, modeling human activities, and behaviors, and developing dynamic and generative representations of time-varying streams. He has published more than 150 scholarly articles in leading journals and conference venues on these topics. He has served as an associate editor for the *IEEE Transactions on Pattern Analysis and Machine Intelligence*, a program cochair for CVPR 2009, and program chair for the Face and Gesture Conference 1996. He has won numerous awards, including the US National Science Foundation CAREER Award (2000). He is a senior member of the IEEE.

Sing Bing Kang received the PhD degree in robotics from Carnegie Mellon University in 1994. He is currently a principal researcher at Microsoft Corporation, and his research interests are image and video enhancement, as well as image-based modeling. He has coedited two books (*Panoramic Vision* and *Emerging Topics in Computer Vision*) and coauthored two books (*Image-Based Rendering* and *Image-Based Modeling of Plants and Trees*). He has served as an area chair and a member of the technical committee for the major computer vision conferences. He has also served as a papers committee member for SIGGRAPH and SIGGRAPH Asia. He was a program cochair for ACCV 2007 and CVPR 2009, and is currently an associate editor-in-chief for the *IEEE Transactions on Pattern Analysis and Machine Intelligence* and *IPSJ Transactions on Computer Vision and Applications*. He is a senior member of the IEEE.

Marc Pollefeys received the PhD degree from the Katholieke Universiteit Leuven in 1999. He has been a full professor in the Department of Computer Science of ETH Zurich since 2007, where he is the head of the Institute for Visual Computing and leads the Computer Vision and Geometry Lab. He was previously on the faculty in the Department of Computer Science at the University of North Carolina at Chapel Hill. He has received several prizes for his research, including a Marr prize, a US National Science Foundation CAREER award, a Packard Fellowship, and a European Research Council Starting Grant. He is the author or coauthor of more than 150 peer-reviewed publications. He will be general chair for ECCV 2014 and 3DIMPVT2012 and was a program cochair for CVPR 2009 and general/program cochair of 3DIMPVT2006. He is a member of the Editorial Board of the *International Journal of Computer Vision* and was an associate editor of the *IEEE Transactions on Pattern Analysis and Machine Intelligence* from 2005-2009. He is a senior member of the IEEE.

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