Xiaoming Deng

CONTACT INFORMATION Associate Professor

Beijing Key Laboratory of Human-Computer Interaction Institute of Software, Chinese Academy of Sciences

4# South Fourth Street

Zhong Guan Cun, Beijing 100190, P.R. China

RESEARCH INTERESTS

Computer vision: specifically related to camera calibration, 3D reconstruction, omnidirectional vision, simultaneous-localization and mapping (SLAM), human motion tracking and synthesis

ACADEMIC APPOINTMENTS

Associate Professor

July 2011 to present

Beijing Key Laboratory of Human-Computer Interaction, Institute of Software, Chinese Academy of Sciences

Research Fellow

April 2012 to June 2013

E-mail: idengxm@gmail.com

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Department of Electrical & Computer Engineering, National University of Singapore (NUS)

• Advisor: Professor Ping Tan

Assistant Professor

June 2010 to June 2011

Beijing Key Laboratory of Human-Computer Interaction, Institute of Software, Chinese Academy of Sciences

Postdoctoral Research Fellow

January 2008 to May 2010

Virtual Reality Laboratory, Institute of Computing Technology, Chinese Academy of Sciences

- Advisor: Professor Zhaoqi Wang
- Also working with Professor Shihong Xia

EDUCATION

National Laboratory of Pattern Recognition (NLPR), Institute of Automation, Chinese Academy of Sciences, Beijing, China

Ph.D., Pattern Recognition and Intelligent System, January 2008

- Thesis Topic: Omnidirectional Camera Calibration and 3D Reconstruction
- Advisor: Professor Fuchao Wu
- Also working with Professor Zhanyi Hu and Professor Yihong Wu
- Area of Study: Computer Vision

AWARDS AND HONORS

- K.C.Wong post-doctoral fellowship award, 2009 (Awarded annually to 50 post-doctoral research fellows from all institutes of Chinese Academy of Sciences).
- Member of Youth Innovation Promotion Association, Chinese Academy of Sciences, 2013.
- Excellent Young Researchers Program, Institute of Software, Chinese Academy of Sciences, 2014.

SELECTED REFEREED JOURNAL PUBLICATIONS

- [1] Xiaoming Deng, Fuchao Wu, Yihong Wu, Fuqing Duan, Liang Chang, and Hongan Wang. Self-calibration of Hybrid Central Catadioptric and Perspective Cameras. *Computer Vision and Image Understanding* 116(6): 715-729 (2012)
- [2] Fuqing Duan, Fuchao Wu, Mingquan Zhou, Xiaoming Deng, and Yun Tian. Calibrating Effective Focal Length for Central Catadioptric Cameras using One Space Line. *Pattern Recognition Letters* 33(5): 646-653 (2012)
- [3] Hui Zeng, Xiaoming Deng, and Zhanyi Hu. A New Normalized Method on Line-based Homography Estimation. *Pattern Recognition Letters* 29(9): 1236-1244 (2008)

- [4] Liang Chang, Xiaoming Deng, Suiwu Zheng, Yongqing Wang. Scaling Up Kernel Grower Clustering Method for Large Data Sets via Core-sets. *Acta Automatica Sinica* 34 (3): 376-382(2008)
- [5] Xiaoming Deng, Fuchao Wu, Yihong Wu. An Easy Calibration Method for Central Catadioptric Cameras, *Acta Automatica Sinica* (2007)

SELECTED CONFERENCE PUBLICATIONS

- [6] Xiaoming Deng, Jie Liu, Feng Tian, Liang Chang, Hongan Wang. Motion Estimation of Multiple Depth Cameras Using Spheres. *ICIP* 2014..
- [7] Xiaoming Deng, Shihong Xia, Wenzhong Wang, Zhaoqi Wang, Liang Chang, Hongan Wang. Automatic Gait Motion Capture with Missing-marker Fillings. *ICPR* 2014.
- [8] Zhenglong Zhou, Bo Shu, Shaojie Zhuo, Xiaoming Deng, Ping Tan, Stephen Lin. Image-based Clothes Animation for Virtual Fitting. *SIGGRAPH Asia* 2012 Technique Briefs.
- [9] Liang Chang, Xiaoming Deng, Mingquan Zhou, Fuqing Duan, Zhongke Wu: Smoothness-constrained Face Photo-sketch Synthesis using Sparse Representation. ICPR 2012: 3025-3029
- [10] Xiaoming Deng, Fuchao Wu, Yihong Wu, Liang Chang, Wei Liu, Hongan Wang: Calibration of Central Catadioptric Camera with One-dimensional Object undertaking General Motions. *ICIP* 2011: 637-640
- [11] Liang Chang, Mingquan Zhou, Yanjun Han, Xiaoming Deng. Face Sketch Synthesis via Sparse Representation. *ICPR* 2010: 2146-2149
- [12] Wenzhong Wang, Xiaoming Deng, Xianjie Qiu, Shihong Xia, Zhaoqi Wang. Learning Local Models for 2D Human Motion Tracking. *ICIP* 2009: 2589-2592
- [13] Xiaoming Deng, Fuchao Wu, Yihong Wu, Fuqing Duan. Visual Metrology with Uncalibrated Radial Distorted Images. *ICPR* 2008.

TEACHING EXPERIENCE

Institute of Software, Chinese Academy of Sciences, Beijing, China

Guest Lecturer: Computer Vision

November 2013, 2014

- Ph.D. student level course in computer science
- Lecture: "an overview of computer vision, image based modelling, and object recognition"

PROFESSIONAL SERVICE

Committee Service

• Committee, Computer Vision Task Forces Forum, China Computer Federation.

Journal Reviewer

- CVIU- Computer Vision and Image Understanding.
- MVA- Machine Vision and Applications.
- *OE– Optical Engineering.*
- SMC-IEEE Transactions on Systems, Man and Cybernetics.
- TOMM-ACM Transactions on Multimedia Computing, Communications, and Applications.

Program Committee Member or Reviewer

- ACCV-Asia Conference on Computer Vision, 2014.
- APCHI– Asia Pacific Conference on Computer Human Interaction, 2012.
- ICPR-International Conference on Pattern Recognition, 2006, 2008, 2012.
- IUI– ACM International Conference on Intelligent User Interfaces, 2012.
- SIGCHI– ACM CHI Conference on Human Factors in Computing Systems, 2012.
- SIGGRAPH Asia— ACM Conference on Computer Graphics and Interactive Techniques in Asia, 2012.

• WACV-IEEE Winter Applications of Computer Vision Conference, 2015.