## Xiaoming Deng


CONTACT INFORMATION

Associate Professor
Beijing Key Laboratory of Human-Computer Interaction
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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
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 Researcher Program, Institute of Software, Chinese Academy of Sciences, 2014 (Awarded to 5 young researchers under 35 from Institute of Software, Chinese Academy of Sciences).

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] Liang Chang, Yves Rozenholc, Xiaoming Deng, Fuqing Duan, Mingquan Zhou. Face Sketch Synthesis Using Non-local Means and Patch-based Seaming. *ICIP* 2015.

[7] Xiaoming Deng, Jie Liu, Feng Tian, Liang Chang, Hongan Wang. Motion Estimation of Multiple Depth Cameras Using Spheres. *ICIP* 2014.

[8] Xiaoming Deng, Shihong Xia, Wenzhong Wang, Zhaoqi Wang, Liang Chang, Hongan Wang. Automatic Gait Motion Capture with Missing-marker Fillings. *ICPR* 2014.

[9] Zhenglong Zhou, Bo Shu, Shaojie Zhuo, Xiaoming Deng, Ping Tan, Stephen Lin. Image-based Clothes Animation for Virtual Fitting. *SIGGRAPH Asia* 2012 Technique Briefs.

[10] Liang Chang, Xiaoming Deng, Mingquan Zhou, Fuqing Duan, Zhongke Wu: Smoothness-constrained Face Photo-sketch Synthesis using Sparse Representation. *ICPR* 2012: 3025-3029

[11] 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

[12] Liang Chang, Mingquan Zhou, Yanjun Han, Xiaoming Deng. Face Sketch Synthesis via Sparse Representation. *ICPR* 2010: 2146-2149

[13] Wenzhong Wang, Xiaoming Deng, Xianjie Qiu, Shihong Xia, Zhaoqi Wang. Learning Local Models for 2D Human Motion Tracking. *ICIP* 2009: 2589-2592

[14] 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.*
- *TIP– IEEE Transactions on Image Processing.*
- *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.*