Qingan Yan

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Research Interests

My work lies in the field of *computer vision and graphics*. In particular, I tackle the challenges in: 3D reconstruction, structure from motion, matching, scene understanding and deep learning.

Education

- Ph.D. in Computer Science, **Wuhan University**, China — Sep 2012 – Jul 2017
  Advisor: Prof. *Chunxia Xiao*
  Areas of Focus: *Computer Vision, Computer Graphics*
- M.S. in Computer Science, **Southwest University of Science and Technology** — Sep 2009 – Jun 2012
  Advisor: Prof. *Yadong Wu*
  Areas of Focus: *Computer Vision, Image Processing, Human-Computer Interaction*
- B.E. in Computer Science, **Hubei University for Nationalities**, China — Sep 2004 – Jun 2008
  Areas of Focus: *Image Processing*

Publications

- **Qingan Yan**, Long Yang, Chunxia Xiao. *Distinguishing the indistinguishable: exploring structural ambiguities via geodesic context.* **IEEE Conference on Computer Vision and Pattern Recognition (CVPR), 2017. (Spotlight)**
- Ling Zhang, **Qingan Yan**, Zheng Liu, Hua Zou and Chunxia Xiao. *Illumination Decomposition for Photograph with Multiple Light Sources.* **IEEE Transactions on Image Processing (TIP). (To appear in 2017)**
- Long Yang, **Qingan Yan**, Yanping Fu, Chunxia Xiao. *Surface reconstruction via fusing sparse-sequence of depth images.* **IEEE Transactions on Visualization and Computer Graphics (TVCG). (To appear in 2017)**
- Long Yang, **Qingan Yan** and Chunxia Xiao. *Shape-controllable geometry completion for point cloud models.* **The Visual Computer (TVC), 2017, 33(3): 385-398.**
- **Qingan Yan**, Long Yang, Chao Liang, Huajun Liu, Ruimin Hu and Chunxia Xiao. *Geometrically based linear iterative clustering for quantitative feature correspondence.* **Computer Graphics Forum (CGF), 2016, 35(7): 1-10. (Proceedings of Pacific Graphics 2016)**
- **Qingan Yan**, Zhan Xu and Chunxia Xiao. *Fast feature-oriented visual connection for large image collections.* **Computer Graphics Forum (CGF), 2014, 33(7): 339-348. (Proceedings of Pacific Graphics 2014)**
- Yadong Wu **Qingan Yan**, Jie Fu, Hongli Deng and Lili Song. *Vision based multi-touch system used in visualization.* **IEEE Pacific Visualization Symposium (PacificVis), 2011. (Poster)**

Patents

- Yadong Wu, **Qingan Yan**, Zhiqin Liu. *Optical multi-touch contact detection based on visual attention model (in Chinese).* **Patent Number: CN102855025B, granted, June.17.2015**.

Selected Projects

- **Multi-modal Sensing based Outdoor Structures Reconstruction and Editing** Jan 2016 – Present

  Description: *We are developing innovative approaches for modeling outdoor architectural structures combining multi-modal sensor data, such as Internet imagery, aerial photography and depth cameras. We also research deep learning methods to transfer the style of different architectures.*

- **Editing and Storytelling in Unstructured Video Collections** Jan 2015 – Present

  Description: *Collected a new dataset of faces and outdoor scenes. We use this data to train a CNN to predict the aging of human faces and the temporal change of natural scenes. We also explore the potentiality of other image analytics in deep learning.*

- **Crowdsourced 3D Streetscape Reconstruction and Augmentation** Jan 2013 – Dec 2016

  Description: *Built an unstructured imagery reconstruction framework that addresses several relevant and challenging problems existing in recent structure from motion modeling techniques, such as the matching of image collections, desification of feature correspondences and disambiguation of duplicate scenes.*

- **Vision based Finger-touch Interaction** Sep 2010 – May 2012

  Description: *Developed a vision based multi-touch system which requires lasers to be the light source and utilizes a camera to detect bright touching points. We also designed a remote finger-control system that combines Kinect and Internet of Things*

- **Digital Image Super-resolution** Oct 2009 – Oct 2010

  Description: *Developed a novel algorithm which allows rendering more vivid frames efficiently on television chip.*

Experience

- CIS Academic Summer Session, Wuhan, China Jul 2016 – Jul 2016

  Position: *Teaching Assistant of* Prof. *Brian A. Barsky, UC Berkeley, US*
  Duty: *Responsible for grading assignments, holding office hours, advising project teams and creating assignments, exams.*

- Chinagraph 2014 and CAD&CG 2014, Wuhan University, China Jul 2014 – Oct 2014

  Position: *Conference Volunteer*
  Duty: *Responsible for submission notification and conference registration.*

- Wuhan EONES technology Co.,Ltd, Wuhan, China Jul 2008 – Apr 2009

  Position: *Software Developer*
  Duty: *EONES is a software service provider located in Optics Valley, Wuhan. As one of the employees, I developed a logistics management system in C/C++ and an Intranet email system using Java.*

Honors and Awards

- Award of Excellent Graduate of Southwest University of Science and Technology, 2012.
- The First Class Scholarship of Jiangsu Yangshan, 2011.
- Outstanding Student of Southwest University of Science and Technology, 2011.
- Outstanding Student of Southwest University of Science and Technology, 2010.
- The Second Class Award of Outstanding Undergraduate Thesis of Hubei Province, 2008.
- Award of Excellent Graduate of Hubei University for Nationalities, 2008.

Technical Skills

Programming Languages:	*C/C++, Matlab, Python, Java*
Development Libraries:	*OpenGL, OpenCV, QT, OpenMPI, Caffe, Dlib, PCL, CUDA, D3.js*
Other Tools:	*LaTeX, Ubuntu, Vim, Git*