Qingan Yan

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Research Interests

My research interests lie in the field of *computer vision and graphics*. In particular, I tackle the challenges in: image-based modeling and rendering, dense correspondence, scene and shape analysis, multi-view stereo and deep learning in 3D applications.

Education

Sep 2012 - Jun 2017 School of Computer, **Wuhan University**, China
Ph.D. in Computer Science
Advisor: Prof. *Chunxia Xiao*
Research Field: Computer Graphics and Vision

Sep 2009 - Jun 2012 School of Computer, **Southwest University of Science and Technology**, China
M.S. in Computer Science
Advisor: Prof. *Yadong Wu*
Research Field: Virtual Reality and Human-Computer Interaction

Sep 2004 - Jun 2008 School of Information Engineering, **Hubei University for Nationalities**, China
B.S. in Computer Science

Publications

(Under review)

- I recently have two papers which respectively submitted to CVPR2017 and TIP.
- Long Yang, **Qingan Yan**, Yanping Fu, Chunxia Xiao. Surface reconstruction via fusing sparse-sequence of depth images. **TVCG minor revision**.

  We show that the input images of depth camera used for 3D modeling can be significantly reduced. Many scanned frames are redundant and noise. Thus eliminating them can improve both the efficiency and accuracy.

(Published)

- **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 (Proceedings of Pacific Graphics 2016)**.

  A general deficiency to image-based modeling methods is the sparseness of output point clouds. This can be mainly attributed to the sparseness of feature matches. To overcome this problem, we provide a quantitative criteria for matching determination in order to recover more accurate and denser correspondences in unmatchable regions for SfM application.

- Long Yang, **Qingan Yan** and Chunxia Xiao. Shape-controllable geometry completion for point cloud models. **The Visual Computer**, to appear in 2016.

  We present a geometry completion algorithm for point cloud models, which is capable of filling holes on either smooth models or surfaces with sharp features, such as the sphere or the nose of humman beings.

- **Qingan Yan**, Zhan Xu and Chunxia Xiao. Fast feature-oriented visual connection for large image collections. **Computer Graphics Forum (Proceedings of Pacific Graphics 2014)**.

  Image matching in large-scale datasets is very time-consuming. We propose a feature-oriented method for this problem. That means, instead of querying a number of similar neighbors for each image, we find a subset of related candidates for each feature to match. This can further reduce the comparison redundancy within overlapping images.

- Yadong Wu **Qingan Yan**, Jie Fu, Hongli Deng and Lili Song. Vision based multi-touch system used in visualization. **Proceedings of Pacific Visualization 2011**, poster.

  We build a vision-based multi-touch system, which can be used for exhibition and visualization. It requires lasers to be the light source and utilizes a camera to detect bright touching points. For more information, please view my video HERE.

Patent

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

Honors and Awards

- *The First Class Scholarship of Jiangsu Yangshan*, Southwest University of Science and Technology, 2011.
- *Outstanding Student*, School of Computer, Southwest University of Science and Technology, 2011.
- *Outstanding Student*, School of Computer, Southwest University of Science and Technology, 2010.
- *The Second Class Award of Excellent Bachelor's Degree Thesis in Hubei Province*, Hubei University for Nationalities, 2008.

Work Experience

Jul 2016 - Aug 2016 — CIS Summer Project, Wuhan University, China
Teaching Assistant, the Course of Computer Graphics
Supervisor: Prof. *Brian A. Barsky*, UC Berkeley, US

Jul 2008 - Apr 2009 — Wuhan EONES technology Co.,Ltd, Wuhan, Hubei
Software Developer
Technologies: C/C++, Redhat Linux system, PostgreSQL.

Presentations

- *Oral Presentation.* Geometrically based linear iterative clustering for quantitative feature correspondence. Pacific Graphics 2016, 11 Oct, 2016, Okinawa.
- *Oral Presentation.* Fast feature-oriented visual connection for large image collections. Pacific Graphics 2014, 10 Oct, 2014, Seoul.
- *Poster Presentation.* Multi-touch system used in visualization. PacificVis 2011, 2 Mar, 2011, Hong Kong.

Technical Skills

Programming Languages	C/C++, Matlab, Python, CUDA, QT
Open Source Library	OpenGL, OpenCV, OpenMPI, Caffe, PCL, D3.js
Tools	Vim, Git, LaTeX
Systems	Windows , Ubuntu