Jian Jerome **Jiang**

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Education

Stony Brook University — *Stony Brook, NY*
M.S. in Computer Science — *Aug. 2013 - Present*

University of Science and Technology of China — *Hefei, China*
B.S. in School for Gifted Young, Electronic Engineering and Information Science — *Aug. 2009 - July 2013*

Skills

Programming C/C++ (15K+ lines), OpenGL, Qt, Python, Java, SQL, C#, LaTeX, MATLAB, HTML

Experience

Microsoft Research Asia — *Beijing, China*
Research Intern, Internet Graphics Group — *July 2012 - May 2013*

- Developed Autosub, an open source software for subtitle automatic recognition & translation, with support of Google Translate API.
- Developed an image search algorithm, which searches the web images by users sketches and assigned color. Integrated into Bing Search Engine.
- Developed Model A Person, an algorithm to reconstruct the human body shape from sparse 3-D information scanned from Microsoft Kinect.

Dept. of Computer Science, Stony Brook University — *Stony Brook, NY*
Research Assistant, 3-D Scanning Lab — *Aug. 2014 - May 2016*

- Focused on Computer Vision, Computer Graphics, Machine Learning and Visualization research.
- Used Markov Random Field for image registration and morphing.
- Developed a 3-D scanning software that captures the full human body and reconstructs the 3-D model automatically.
- Published papers on top Computer Vision journals and Computational Geometry conferences, such as SPM, CAD and IEEE Transactions on PAMI.

The Mathematical Science Center, Tsinghua University — *Beijing, China*
Visiting Scholar & Coach — *June 2014,2015 - Aug. 2014,2015*

- Coach of Mathematical Camp in Tsinghua University
- Instructor of the course Computational Geometry

Selected Projects

Quadrilateral and Hexahedral Remeshing Using Strebel Differential — *Journal of Computer Aided Design*
Leader — *Sep. 2015 - Present*

- Proposed and implemented a novel algorithm for Quad and Hex remeshing for surface and volume, respectively.
- Solved one of the most challenging problems in over 20 years in Computational Mechanics.
- Invented the C++ Library for Hexahedron Mesh.
- Developed 3-D manifold viewer to render Tetrahedron and Hexahedron Meshes with OpenGL and Qt.

High Genus Surface Registration — *IEEE Trasactions on PAMI, ECCV*
Core Member — *Aug. 2015 - May 2016*

- Proposed Hyperbolic Harmonic Mapping method to register high genus surfaces, which outperforms state-of-the-art method significantly.
- Integrated Strebel Differential into the registration pipeline such that the distortion of curvature was reduced up to 70%.

Publications

Hyperbolic Harmonic Mapping for Surface Registration, ***IEEE Transactions on Pattern Analysis and Machine Intelligence (TPAMI)***
Rui Shi, Wei Zeng, Zhengyu Su, **Jian Jiang**, Hanna Damasio, Zhonglin Lu, Yalin Wang, Shing-Tung Yau, Xianfeng Gu

Surface Registration Using Foliations, submitted to ***European Conference on Computer Vision 2016***
Jian Jiang, Xiaopeng Zheng, Na Lei, Xianfeng Gu

Measure Controllable Volumetric Mesh Parameterization, ***Journal of Computer Aided Design***
Kehua Su, Wei Chen, Na Lei, Li Cui, **Jian Jiang**, Xianfeng Gu

Honors & Awards

2013 **Special CS Department Chair Fellowship**, Stony Brook University *Stony Brook, NY*
2009 **Freshman Scholarship (First Grade)**, University of Science and Technology of China *Hefei, China*