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Xifeng Gao

Current Occupation

Aug./18–current **Assistant Professor**

- Department of Computer Science, Florida State University

Education

Aug./16–Jul./18 **Postdoctoral Associate, Courant Institute of Mathematical Sciences, New York University**

⋆ Host: Prof. Daniele Panozzo,
⋆ Research topic: Mesh Generation and Simulation.

Sep./11–May/16 **Ph.D., Department of Computer Science, University of Houston**

⋆ Best PhD Thesis Award (2016), Best PhD Student Award (2015), Best Junior PhD Student Award (2013)

Sep./08–Jun./11 **M.Sc., Department of Computer Science and Technology, Shandong University**

⋆ Outstanding Student Scholarship (2010), Research Innovation Scholarship (2008)
⋆ National Graduate Contest in Mathematical Modeling, First Place (2008)

Sep./04–Jun./08 **B.Sc., Department of Computer Science and Technology, Shandong University**

⋆ Outstanding Student Scholarship (2007, 2006, 2005)
⋆ GPA: 88.38/100, top 5 (182 in total).

Teaching

Aug./18–current **Lecturer, Computer Science Department, Florida State University**

⋆ Course: Computer Graphics

May/03/2017 **Guest Lecture, New York University**

⋆ Course: Geometry Processing

Sep./11–Jun./15 **Teaching Assistant, University of Houston**

⋆ Courses: 1) *Topics in Computer Science-Medical Imaging*, 2) *Topics in Computer Science-Cyber Physical Systems*, 3) *Computer Architecture*, 4) *Introduction to Automata and Computability*, 5) *Computer Graphics*, and 6) *Intro Computer Science II (C++, JAVA)*

Sep./09–Jun./11 **Teaching Assistant, Shandong University**

⋆ Course: Computer Graphics

Research

Geometry Computing and Optimization for applications in Computer Graphics, Digital Fabrication, and Image Processing.

Publications (in recent 3 years, my homepage has the complete list)

[1] Teseo Schneider, Jeremie Dumas, **Xifeng Gao**, Mario Botsch, Denis Zorin, Daniele Panozzo. "Poly-Spline Finite Element Method", *ACM Transactions on Graphics*, Accepted with Major Revision.

[2] Teseo Schneider, Yixin Hu, Jeremie Dumas, **Xifeng Gao**, Daniele Panozzo, Denis Zorin. "Decoupling Simulation Accuracy from Mesh Quality", *ACM Transactions on Graphics*(SIGGRAPH ASIA 2018), 14 pages.

[3] Yixin Hu, Qingnan Zhou, **Xifeng Gao**, Alec Jacobson, Denis Zorin, Daniele Panozzo. "Tetrahedral Meshing in the Wild", *ACM Transactions on Graphics* (SIGGRAPH 2018), 14 pages.

[4] Kui Wu, **Xifeng Gao**, Zachary Ferguson, Daniele Panozzo, Cem Yuksel. "Stitch Meshing", *ACM Transactions on Graphics* (SIGGRAPH 2018), 12 pages.

[5] **Xifeng Gao**, Daniele Panozzo, Wenping Wang, Zhigang Deng, Guoning Chen. "Robust Structure Simplification for Hex Re-meshing", *ACM Transactions on Graphics* (SIGGRAPH ASIA 2017), 36, 6, pages 185:1–185:13, Article 185 (Nov. 2017), 13 pages.

[6] **Xifeng Gao**, Jin Huang, Kaoji Xu, Zherong Pan, Zhigang Deng, Guoning Chen. "Evaluating Hex-mesh Quality Metrics via Correlation Analysis", *Computer Graphics Forum* 36, 5, (SGP 2017), 12 pages.

[7] Kaoji Xu, **Xifeng Gao**, Guoning Chen. "Hexahedral Mesh Quality Improvement via Edge-angle Optimization", *Computer & Graphics (CAD/Graphics 2017)*, 12 pages.

[8] **Xifeng Gao**, Marco Tarini, Wenzel Jacob, Daniele Panozzo. "Robust Hex-Dominant Mesh Generation using Field-Guided Polyhedral Agglomeration", *ACM Transactions on Graphics* (SIGGRAPH 2017), 36, 4, Article 114 (July 2017), 13 pages.

[9] Kaoji Xu, **Xifeng Gao**, Zhigang Deng, and Guoning Chen. "Hexahedral Meshing with Varying Element Sizes", *Computer Graphics Forum*, (April 2017), 13 pages.

[10] Yongxia Zhang, Xuemei Li, **Xifeng Gao**, and Caiming Zhang. "A Simple Algorithm of Superpixel Segmentation with Boundary Constraint", *IEEE Transactions on Circuits and Systems for Video Technology*, 27, 7, pages 1502–1514 (July 2017), 13 pages.

[11] Wenqian Deng, Xuemei Li, **Xifeng Gao**, and Caiming Zhang. "A Modified Fuzzy C-means Algorithm for Brain MR Image Segmentation and Bias Field Correction", *Journal of Computer Science and Technology*,31, 3, pages 501–511, (May 2016), 11 pages.

[12] **Xifeng Gao**, Tobias Martin, Sai Deng, Elaine Cohen, Zhigang Deng and Guoning Chen. "Structured Volume Decomposition via Generalized Sweeping", *IEEE Transactions on Visualization and Computer Graphics (TVCG)*, 22, 7, pages 1899–1911, (July 2016), 13 pages.

[13] **Xifeng Gao**, and Guoning Chen. "A Local Frame based Hexahedral Mesh Optimization", *25th International Meshing Roundtable, research note*, September, 2016, 5 pages.

Patent

- "A Similarity-Transformation Invariant Reversible Watermarking Method and Equipment for 3D Models", June 11, 2014, No. CN102339456 B (in Chinese).

Academic Services

Volunteer SIGGRAPH, 2013

Associate Editor TVCJ, 2018 -

International Program Committee Member
CVM, 2019
GMP, 2019
Reproducibility Stamp, 2017-2019
PG, 2018
SGP, 2018
SMI, 2018
SIBGRAPI, 2017
ICVRV, 2017

Reviewer Served as a reviewer for more than 20 manuscripts every year from the major conferences and Journals in computer graphics.

Invited Talks

Jul./12/2018 Peiking University of Technology, Beijing, China,
Tetrahedralization in the Wild.

Jul./11/2018 Shandong University, Qingdao, China,
Tetrahedralization in the Wild.

Jul./06/2018 Geometric Design Colloquim, Hefei, China,
Stitch Meshing.

Jul./05/2018 University of Science and Technology of China, Hefei, China,
Robust Mesh Generation and Applications to Geometry Processing.

Apri./03/2018 Peking University, Beijing, China,
Robust Meshing.

Feb./20/2018 Florida state University, Tallahassee, US,
Robust Volumetric Meshing.

Feb./15/2018 University of Montreal, Montreal, Canada,
Robust Volumetric Meshing.

Nov./28/2017 SIGGRAPH ASIA, Bangkok, Thailand,
Robust Structure Simplification for Hex Re-meshing.

Nov./25/2017 Shandong University, Jinan, China,
Robust Structure Simplification for Hex Re-meshing.

Nov./24/2017 Peking University, Beijing, China,
Robust Hexahedral and Hex-dominant Meshing.

Nov./23/2017 Microsoft Asia Research, Beijing, China,
Robust Structure Simplification for Hex Re-meshing.

Aug./24/2017 Brigham Young University, Provo, US,
Robust Hexahedral and Hex-dominant Meshing.

Aug./22/2017 University of Utah, Salt Lake City, US,
Robust Hexahedral and Hex-dominant Meshing.

Aug./02/2017 SIGGRAPH, Los Angeles, US,
Robust Hex-Dominant Mesh Generation using Field-Guided Polyhedral Agglomeration.

July/11/2017 SIAM/GD, Pittsburgh, US,
Robust Hex-Dominant Mesh Generation using Field-Guided Polyhedral Agglomeration.

Mar./08/2016 New York University, New York, US,
Towards High Quality Hex-meshing: Generation, Optimization, and Evaluation.

Aug./13/2015 SIGGRAPH, Los Angeles, US,
Hexahedral Mesh Re-parameterization from Aligned Base-Complex.

July/09/2015 Shandong University, China,
Generation and Optimization of Hexahedral Meshes.

Apr./15/2014 Computer Animation and Social Agents (CASA), Houston, US,
An Evaluation of The Quality of Hexahedral Meshes via Modal Analysis.