Jie Yang

✉ yangjie01@ict.ac.cn ✆ +86 18811573001
Homepage: http://people.geometrylearning.com/~jieyang/
No. 6 Kexueyuan South Road, Haidian District, Beijing, P.R. China, 100190

Education

University of Chinese Academy of Sciences — Dept. Computer Sciences **Beijing, China**
Ph.D. in Computer Science *Sep. 2018 – Jun. 2022(expected)*
Major in Computer Graphics, Geometry Learning Supervisor: Prof. Lin Gao and Shihong Xia

Cardiff University — School of Computer Science and Informatics **Wales, UK**
Short-Term Visiting Student *Nov. 2017 – Dec. 2017*
Supervisor: Prof. Yu-Kun Lai

University of Chinese Academy of Sciences — Dept. Computer Sciences **Beijing, China**
Master in Computer Science *Sep. 2016 – Jun. 2018*
Major in Computer Graphics, Geometry Learning Supervisor: Prof. Lin Gao and Shihong Xia

Sichuan University — Dept. Mathematics **Chengdu, China**
B.S. in Mathematics and Applied Mathematics *Sep. 2012 – Jun. 2016*
GPA: 3.6/4.0, Rank: 3/42

Publications

[1] Jia-Heng Tang#, Weikai Chen#, **Jie Yang**, Bo Wang, Songrun Liu, Bo Yang and Lin Gao. *OctField: Hierarchical Implicit Functions for 3D Modeling.*
The Thirty-Fifth Annual Conference on Neural Information Processing Systems (NeurIPS), 2021.

[2] Mingxian Lin, **Jie Yang**, He Wang, Yu-Kun Lai, Rongfei Jia, Binqiang Zhao and Lin Gao. *Single Image 3D Shape Retrieval via Cross-Modal Instance and Category Contrastive Learning.*
IEEE International Conference on Computer Vision (ICCV), 2021.

[3] Aihua Mao, Canglan Dai, Qing Liu, **Jie Yang**, Lin Gao, Ying He and Yong-Jin Liu. *STD-Net: Structure-preserving and Topology-adaptive Deformation Network for Single-View 3D Reconstruction.*
IEEE Transactions on Visualization and Computer Graphics, 2021.

[4] Qingyang Tan#, Ling-Xiao Zhang#, **Jie Yang**, Yu-Kun Lai and Lin Gao. *Variational Autoencoders for Localized Mesh Deformation Component Analysis.*
IEEE Transactions on Pattern Analysis and Machine Intelligence (IEEE TPAMI), 2021.

[5] **Jie Yang**, Lin Gao, Qingyang Tan, Yihua Huang, Shihong Xia and Yu-Kun Lai. *Multiscale Mesh Deformation Component Analysis with Attention-based Autoencoders.*
IEEE Transactions on Visualization and Computer Graphics, 2021.

[6] **Jie Yang**#, Kaichun Mo#, Yu-Kun Lai, Leonidas J. Guibas and Lin Gao. *DSG-Net: Learning Disentangled Structure and Geometry for 3D Shape Generation.*
ACM Transactions on Graphics, Provisional Accept with Major Revisions, 2021 (**ACM TOG**)

[7] Yi-Ling Qiao, Lin Gao, **Jie Yang**, Paul L. Rosin, Yu-Kun Lai and Xilin Chen. *Learning on 3D Meshes with Laplacian Encoding and Pooling.*
IEEE Transactions on Visualization and Computer Graphics, 2020.(**IEEE TVCG**)

[8] Yu-Jie Yuan, Yu-Kun Lai, **Jie Yang**, Hongbo Fu and Lin Gao. *Mesh Variational Autoencoders with Edge Contraction Pooling.*
Learning 3D Generative Models, CVPR 2020 Workshop.(**IEEE CVPR WorkShop**)

[9] Lin Gao, **Jie Yang**, Tong Wu, Yu-Jie Yuan Hongbo Fu, Yu-Kun Lai and Hao(Richard) Zhang. *SDM-NET: Deep Generative Network for Structured Deformable Mesh.*
ACM Transactions on Graphics (SIGGRAPH Asia), 38(6), 2019.(**ACM TOG**)

[10] Lin Gao, **Jie Yang**, Ying-Ling Qiao, Yu-Kun Lai, Paul L. Rosin, Weiwei Xu and Shihong Xia. *Automatic Unpaired Shape Deformation Transfer.*
ACM Transactions on Graphics (SIGGRAPH Asia), 37(6), 2018.(**ACM TOG**)

[11] **Jie Yang**, Lin Gao, Yu-Kun Lai, Paul L. Rosin and Shihong Xia. *Biharmonic deformation transfer with automatic key point selection.*
Graphical Models vol. 98, 1-13,2018.

[12] Lin Gao, Yu-Kun Lai, **Jie Yang**, Ling-Xiao Zhang, Leif Kobbelt and Shihong Xia. *Sparse Data Driven Mesh Deformation.*
IEEE Transactions on Visualization and Computer Graphics, 2019.(**IEEE TVCG**)

[13] Qingyang Tan, Lin Gao, Yu-Kun Lai, **Jie Yang** and Shihong Xia. *Mesh-based Autoencoders for Localized Deformation Component Analysis.*
AAAI Conference on Artificial Intelligence (Spotlight), 2018.(**AAAI**)

PrePrints

[1] Lan Chen, Lin Gao*, **Jie Yang**, Shibiao Xu*, Juntao Ye, Xiaopeng Zhang and Yu-Kun Lai. *Deep Deformation Detail Synthesis for Thin Shell Models.*
ArXiv abs/2102.11541 (2021)

[2] Rao Fu, **Jie Yang**, Jiawei Sun, Fanglue Zhang, Yu-Kun Lai and Lin Gao. *RISA-Net: Rotation-Invariant and Structure-Aware Network for Fine-grained 3D Shape Retrieval.*
ArXiv abs/2010.00973 (2020)

Professional Service

Conference Reviewer: Computer Vision and Pattern Recognition 2022 (**CVPR 2022**) Chinese Conference on Pattern Recognition and Computer Vision 2019 (**PRCV 2019**), Pacific Graphics 2020 (**PG 2020**)

Research Experience

HuaWei Research Project: Deformation and synthesis of 3D model.   **Institute of Computing Technology, CAS**
Guide: Prof. Lin Gao.   *Jan. 2018 – Dec. 2019*
- Conducted research on Real-time shape editing
- Organize the C++ code and reduce the dependency library of the code, Migrate code to mobile devices
- Apply the algorithm on the available meshes to show some editing result

Bachelor Thesis: GPU-based Preconditioned Conjugate gradient method.   **Institute of Computing Technology, CAS and Sichuan University**
Guide: Prof. Lin Gao and Prof. Quan Zheng   *Mar. 2016 – Jun. 2016*
- Conducted research on Conjugate gradient method
- Designed a method that is based on the GPU can improve the performance the Conjugate gradient method with **CUDA** libraries using Visual Studio
- Apply the strategy(Coarse to Fine) on the mesh to improve the performance

Mathematics Department "Small Spark" Project in Sichuan University.   **Sichuan University**
Guide: Prof. Yongdao Zhou   *Dec. 2014 – Jun. 2015*
- Conducted research on Bank queuing theory
- Improve the performance of the Bank queuing

Awards and Honors

2021: 4DShoeTech CAD&CG Scholarship.
2021: Zhuliyuehua Scholarship for Excellent Doctoral Student of Chinese Academy of Sciences.
2020: Merit Student of University of Chinese Academy of Sciences.
2019: 4Paradigm Scholarship.
2018: National Scholarship.
2018: Merit Student in University of Chinese Academy of Sciences.
2018: 1st scholarship in University of Chinese Academy of Sciences.
2017: 1st scholarship in University of Chinese Academy of Sciences.
2017: 1st Prize in Academic scholarship in University of Chinese Academy of Sciences.
2015: Mathematical Contest In Modeling/Interdisciplinary Contest In Modeling (**Honourable Mention**).

2014: 2nd Prize (Mathematical) in 6th Chinese Mathematics Competitions.
2013: 3rd Prize (Mathematical) in 5th Chinese Mathematics Competitions.
2013: 2nd Prize in Scholarship of Sichuan University.

Skills

Programming: C/C++, Python, Matlab, Latex, HTML, CSS, MYSQL, NodeJS.
Tools: PyTorch, TensorFlow, OpenGL, Sapien, Vim, Git
Software: Autodesk Maya, Adobe Illustrator, Adobe Photoshop