Yuefan Shen

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🎓 Education

Zhejiang University   Sep.2019 - June.2024 (expected)
Doctor of Philosophy(Ph.D.), Major in Computer Graphics, Supervised by Researcher Youyi Zheng.

Shandong University   Sep.2015 - July.2019
Bachelor of Engineering(B. Eng.), Digital Media Technology

🔍 Research Interests

Neural-aided geometry computing in high-fidelity 3D reconstruction for solving challenging problems: scanned noise, various geometry representations, and domain gaps.
Keywords: 3D Reconstruction, Geometry Processing, Hair Modeling, Domain Alignment, etc.

📄 Publications

[1] **Yuefan Shen**, Shunsuke Saito, Ziyan Wang, Olivier Maury, Chenglei Wu, Jessica Hodgins, Youyi Zheng, Giljoo Nam, "CT2Hair: High-Fidelity 3D Hair Modeling using Computed Tomography," *ACM SIGGRAPH (ACM Trans. Graph.),* 2023.

[2] Beijia Chen, **Yuefan Shen**, Hongbo Fu, Xiang Chen, Kun Zhou, Youyi Zheng, "NeuralReshaper: Single-image Human-body Retouching with Deep Neural Networks," *Science China Information Sciences,* 2023.

[3] **Yuefan Shen***, Yanchao Yang*, Mi Yan, He Wang, Youyi Zheng, Leonidas Guibas, "Domain Adaptation on Point Clouds via Geometry-Aware Implicits," *IEEE CVPR,* 2022.

[4] Youyi Zheng, Beijia Chen, **Yuefan Shen**, Kaidi Shen, "TeethGNN: Semantic 3D Teeth Segmentation with Graph Neural Networks," *IEEE Transactions on Visualization and Computer Graphics,* 2022.

[5] **Yuefan Shen***, Yanchao Yang*, YouYi Zheng, C. Karen Liu, Leonidas Guibas, "DCL: Differential Contrastive Learning for Geometry-Aware Depth Synthesis," *IEEE RA-L & ICRA,* 2022.

[6] **Yuefan Shen**, Hongbo Fu, Zhongshuo Du, Xiang Chen, Evgeny Burnaev, Denis Zorin, Kun Zhou, Youyi Zheng, "GCN-Denoiser: Mesh Denoising with Graph Convolutional Networks," *ACM Trans. Graph.,* 2022.

[7] **Yuefan Shen***, Changgeng Zhang*, Hongbo Fu, Kun Zhou, Youyi Zheng, "DeepSketchHair: Deep Sketch-based 3D Hair Modeling," *IEEE Transactions on Visualization and Computer Graphics,* 2020.

💼 Experience

Meta Reality Labs, Pittsburgh, USA   Jul. 2022 - Dec. 2022
Research Scientist Intern   **Advisor: Giljoo Nam**
The development of digital entertainment leads to the growing demand for 3D hair models. To acquire realistic hairstyles without complex interactive designing, I proposed an automatic high-fidelity 3D hair modeling method using Computed Tomography during the internship.

Zhejinag University, Hangzhou, CN   2019 - 2021
Teaching Assistant   **Advisor: Youyi Zheng**
- C Programming
- Fundamental Data Structure

⟨⟩ OTHER PROJECTS

Interactive Hair Strands Renderer   2022

An open-source real-time hair strands visualization tool based on OpenGL and Dear ImGUI. The tool supports various hair rendering settings, including strand width, hair shadow, hair occlusion, hair transparency, etc. The tool is easy to use and can help users see hair geometry details interactively.

Paired Objecet Depth Renderer   2021

An open-source synthetic depth renderer for existing 3D objects and known camera poses. This tool can be used to render the 'synthetic twin' for corresponding real depth.

Reconstruct Mesh from Noise Point Cloud   2020

An algorithm to reconstruct meshes from noise point clouds without normal. This algorithm is a patch-based method that can predict local unsigned distance fields from points using a neural network.

▤ ACADEMIC SERVICES

Paper Reviewer
- ACM SIGGRAPH (Aisa) 2023
- IEEE Transactions on Visualization and Computer Graphics (TVCG) 2022, 2023
- Euro Graphics 2021
- ACM Transactions on Multimedia Computing (TOMM) 2022, 2023
- The Visual Computer 2020, 2021, 2022

♖ HONORS AND AWARDS

Style3D Graduate Fellowship (10 Ph.D. students in China)	2023
National Scholarship (Top 3 among 200+ Ph.D. students)	2021-2022, Zhejiang University
The Guorui Scholarship (Top 8 among 200+ Ph.D. students)	2019-2020, Zhejiang University
Merit Student Award	2019-2020, 2021-2022, Zhejiang University
Honor Student Award	2015-2018, Shandong University
President's Scholarship of School of Software	2015-2018, Shandong University
The Second Prize Scholarship	2015-2018, three-year continuous, Shandong University
Gold Winner (Top 10 among 400+ teams)	Oct.2016, in 14th Shandong Software Design Contest

⚙ SKILLS

- Programming: Python, C++, JAVA, Matlab, LaTeX
- Computer Graphics (OpenGL, Open3D, Blender, Houdini)
- Learning Frameworks (Pytorch, Pytorch3D, Tensorflow)
- Language: Native Mandarin, Good command of English