Chenbo Jiang

✉ cbjiang@foxmail.com
jiang25262.github.io

Education

2019–2023 **B.E., Computer Science and Technology**.
Nanjing University of Science and Technology Zijin College
Degree GPA – 3.83/4, Overall 90.03/100, rank 2/114

Research

Feb 2021 - Nov 2022 **NeuralSlice: Neural 3D Triangle Mesh Reconstruction via Slicing 4D Tetrahedral Meshes**, *Associate professor, Lin Gao. Institute of Computing Technology, Chinese Academy of Science* , Professor, Yu-Kun Lai. Cardiff University.

- TL;DR: NeuralSlice is a novel approach to representing 3D shapes with flexible topology in a pure explicit fashion, which represents a 3D shape as the intersection of a 4D deformable tetrahedral mesh and a learnable 4D hyperplane.
- A novel network architecture that incorporates NeuralSlice to learn the deformable 4D tetrahedral mesh and 4D hyperplane for 3D shape reconstruction, which ensures the high fidelity of the obtained meshes with regular triangulation by introducing Lipschitz normalization and Laplacian regularization;
- Experiments demonstrate that our 3D reconstruction method accurately reconstructs 3D shapes of diverse topology, outperforming existing explicit methods in accuracy, and much faster than implicit methods. Furthermore, NeuralSlice can represent different 3D shapes and topologies in one 4D tetrahedral mesh.

Feb 2021 **Improve the 3D Modeling Performance of Neural ODE**, *Assistant Professor, Bo Yang, The Hong Kong Polytechnic University*.

- We have noticed that a Neural ODE $F : \mathbb{R}^3 \to \mathbb{R}^3$ is not capable of expressing all homomorphism mappings in $\mathbb{R}^3$. But a Neural ODE $F : \mathbb{R}^6 \to \mathbb{R}^6$ can represent all homomorphism mappings in $\mathbb{R}^3$.
- Increased the Chamfer Distance of Neural Mesh Flow from 2.976 to 1.873.
- As a baseline in "NeuralSlice".

Research Interests.

- 3D Deep Learning, 3D Generative Model, Geometric Deep Learning, Embodied AI, Object-centric Learning.

Experience

07/2022-Now **Research Intern**.

- Institute of Computing Technology, Chinese Academy of Science
- Instructor: Prof. Lin Gao
- Geometry Learning

Publications

[1] **NeuralSlice: Neural 3D Triangle Mesh Reconstruction via Slicing 4D Tetrahedral Meshes**.
Chenbo Jiang, Jie Yang, Shwai He, Yu-Kun Lai and Lin Gao.
Proceedings of the 40th International Conference on Machine Learning, 2023 (ICML 2023).

[2] **SD-Conv: Towards the Efficiency of Dynamic Convolution**.
Shwai He, **Chenbo Jiang**, Daize Dong and Liang Ding.
IEEE/CVF Winter Conference on Applications of Computer Vision, 2023 (WACV 2023).

Scholarships

Jan 2022 **Special scholarship**, *Nanjing University of Science and Technology Zijin College*.

- Ranked 1/114 in School of Computer Science.

2020-2021 **First-class scholarship** $\times 3$, *Nanjing University of Science and Technology Zijin College*.

- Ranked in the TOP 2% in School of Computer Science.