

Chen Yang

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Education

- Sep 2021 – Present 📖 **Ph.D. in Computer Science, Shanghai Jiao Tong University**
Ph.D. Advisor: **Wei Shen**
- Sep 2019 – Jun 2021 📖 **M.A. in Precision Instrument, Shanghai Jiao Tong University**
GPA: 3.76/4.0
- Sep 2015 – Jun 2019 📖 **B.A. in Precision Instrument, Shanghai Jiao Tong University**
GPA: 3.91/4.3

Selected Research Projects

- 2023 – 2024 📖 **GaussianObject: Just Taking Four Images to Get A High-Quality 3D Object**
- Aiming to reconstruct finely detailed objects from very sparse inputs (as few as 4 images). Leveraging 3DGS as scene representation and refining a pre-trained diffusion model for strong priors.
 - Project lead by **Wei Shen**
 - Accepted by *ACM Transactions on Graphics (TOG), SIGGRAPH Asia 2024*.
- 2023 📖 **Segment Anything in 3D with NeRFs**
- Leveraged SAM (Segment Anything) to segment NeRFs, providing a simplified pipeline for efficient 3D segmentation. The project shows a generic methodology to lift 2D foundation models to the 3D space.
 - Project lead by **Wei Shen**
 - Accepted by *NeurIPS 2023*.
- 2022 – 2023 📖 **Efficient Deformable Tissue Reconstruction via Orthogonal Neural Plane**
- Accelerated the optimization and inference on reconstructing deformable tissues with NeRFs, improving efficiency and quality across non-rigid deformations.
 - Project lead by **Wei Shen**.
 - Accepted by *MICCAI 2023, Young Scientist Award* and *IEEE Transactions on Medical Imaging (TMI)*.
- 2021 – 2022 📖 **NeRFVS: Neural Radiance Fields for Free View Synthesis via Geometry Scaffolds**
- Designed a novel approach enabling neural radiance fields to perform free view synthesis at room scale and perform superior extrapolation in room scale.
 - Project lead by **Weichao Qiu** and **Wei Shen**.
 - Accepted by *CVPR 2023*.

Skills

Programming Languages Python, C, C++, Matlab
Software & Tools PyTorch, OpenCV, OpenGL, L^AT_EX, Jax, COMSOL

Teaching Experience

Spring 2019 Teaching Assistant, MI 321: Course Design of Instrument Bus and Virtual Environment, Shanghai Jiao Tong University
Fall 2020 Teaching Assistant, MI 318: Measuring and Controlling Circuit, Shanghai Jiao Tong University
Spring 2021 Teaching Assistant, EE 334: Industrial Measurement and Control Technology and System, Shanghai Jiao Tong University

Internship Experience

2023 – 2024 3D Vision Intern, Huawei Cloud mentored by *Jiemin Fang* and *Qi Tian*.
2021 – 2022 Machine Vision Intern, Huawei Noah's Ark Lab mentored by *Weichao Qiu*.





Awards and Achievements

2023 MICCAI Young Scientist Award, Awarded top 5 among 2250 submissions.
Intel Scholarship, Awarded top 5 among over 100 competitors.
2022 Second Prize of National Post-Graduate Mathematical Contest in Modeling, Awarded to top 14.5% of contestants.
2021 National Scholarship, Awarded to top 3% of students at Shanghai Jiao Tong University.
First Prize of Huawei Chinese University ICT Competition, Awarded top 1 among 88 teams.
2019 – 2021 First-class Academic Scholarship, Awarded to top 30% of students at Shanghai Jiao Tong University.

Publications

- 1 Yang, C., Li, S., Fang, J., Liang, R., Xie, L., Zhang, X., ... & Tian, Q. *GaussianObject: Just Taking Four Images to Get A High-Quality 3D Object with Gaussian Splatting*. ACM Transactions on Graphics (TOG), 2024.
- 2 Wang, K., Yang, C., Wang, Y., Li, S., Wang, Y., Dou, Q., Yang, X., & Shen, W. *EndoGSLAM: Real-Time Dense Reconstruction and Tracking in Endoscopic Surgeries using Gaussian Splatting*. MICCAI, 2024.
- 3 Cen, J., Fang, J., Yang, C., Xie, L., Zhang, X., Shen, W., & Tian, Q. *Segment any 3d gaussians*. arXiv preprint arXiv:2312.00860, 2023.
- 4 Yang, C., Wang, K., Wang, Y., Dou, Q., Yang, X., & Shen, W. *Efficient deformable tissue reconstruction via orthogonal neural plane*. IEEE Transactions on Medical Imaging (TMI), 2024.
- 5 Li, P., Wang, S., Yang, C., Liu, B., Qiu, W., & Wang, H. *NeRF-MS: Neural Radiance Fields with Multi-Sequence*. ICCV, 2023.
- 6 Yang, C., Wang, K., Wang, Y., Yang, X., & Shen, W. *Neural LerPlane Representations for Fast 4D Reconstruction of Deformable Tissues*. MICCAI, 2023.
- 7 Yang, C., Li, P., Zhou, Z., Yuan, S., Liu, B., Yang, X., ... & Shen, W. *NeRFVS: Neural Radiance Fields for Free View Synthesis via Geometry Scaffolds*. CVPR, 2023.

Publications (continued)

- 8  Liang, R., Zhang, J., Li, H., **Yang, C.**, & Vijaykumar, N. *SPIDR: SDF-based Neural Point Fields for Illumination and Deformation*. CVPR workshop, 2023.
- 9  **Yang, C.**, Yao, S. Y., Zhou, Z. W., Ji, B., Zhai, G. T., & Shen, W. *Poxture: Human Posture Imitation Using Neural Texture*. IEEE Transactions on Circuits and Systems for Video Technology (TCSVT), 2022.
- 10  Zhou, Z., Wang, Z., Yao, S., Yan, Y., **Yang, C.**, Zhai, G., ... & Yang, X. *DialogueNeRF: Towards Realistic Avatar Face-to-face Conversation Video Generation*. arXiv preprint arXiv:2203.07931, 2022.
- 11  Ji, B., **Yang, C.**, Shunyu, Y., & Pan, Y. *HPOF: 3d human pose recovery from monocular video with optical flow*. ICMR, 2021.