JIAPENG TANG

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EDUCATION

Technical University of Munich *Nov. 2021 - Present*
Ph.D. of Informatics

South China University of Technology *Sep. 2018 - Jun. 2021*
Master of Signal and Information Processing

South China University of Technology *Sep. 2014 - Jun. 2018*
Bachelor of Engineering, Information Engineering GPA: 3.85/4 Ranking: 6/61

RESEARCH INTERESTS

Generative Models: Controllable Video Diffusion Models, Multi-view Image Diffusion, Relighting Diffusion, 3D Shape/Scene Generation, and 4D Motion Generation.

Head Avatar Reconstruction: Animatable NeRF/Gaussian Splatting, Neural Parametric Models, and Head Tracking.

RECENT PROJECTS

Controllable Head Video Diffusion Models

Dynamic Shape Diffusion Models

Generative Object Relighting via Multi-view Diffusion Models.

Gaussian Avatars Reconstruction via Multi-view Head Diffusion.

EXPERIENCE

Meta Reality Lab *Jul. 2025 - Nov. 2025*
Research Scientist Intern Burlingame, US
Google Research *Jul. 2024 - Oct. 2024*
Research Scientist Intern San Francisco, US
DAMO Academy, Alibaba Group *Jun. 2020 - Jun. 2021*
Research Intern Shenzhen, China
The Chinese University of Hong Kong, Shenzhen *July. 2018 - Sep. 2018*
Visiting Student Shenzhen, China

PUBLICATIONS

∗ Joint first author # Corresponding author

- **J. Tang**, W. Cao, B. Zhang, C. Luo, Y. Liu, M. Nießner. Motion2VecSets: Non-Rigid Shape Reconstruction and Tracking with 4D Latent Set Diffusion. **Submitted to TPAMI**.
- **J. Tang**, M. Levine, D. Verbin, S. Garbin, M. Nießner, R. Brualla, P. Srinivasan, P. Henzler. ROGR: Relightable 3D Objects using Generative Relighting. **In Submission**.

- L. Schoneveld, Z. Chen, D. Davoli, **J. Tang**, S. Terazawa, K. Nishino, M. Nießner. SHeaP: Self-Supervised Head Geometry Predictor Learned via 2D Gaussians. **ICCV 2025**.
- **J. Tang**, D. Davoli, T. Kirschstein, L. Schoneveld, M. Nießner. GAF: Gaussian Avatars Reconstruction from Monocular Videos via Multi-view Head Diffusion. **CVPR 2025**.
- S. Gong, H. Li, **J. Tang**, D. Hu, S. Huang, H. Chen, T. Chen, Z. Li. Monocular and Generalizable Gaussian Talking Head Animation. **CVPR 2025**.
- T. Kirschstein, S. Giebenhain, **J. Tang**, M. Georgopoulos, M. Nießner. GGHead: Fast and Generalizable 3D Gaussian Heads. **SIGGRAPH ASIA 2024**.
- Z. Xu, S. Gong, **J. Tang**, L. Liang, Y. Huang, H. Li, S. Huang. KMTalk: Speech-Driven 3D Facial Animation with Key Motion Embedding. **ECCV 2024**.
- **J. Tang**, A. Dai, Y. Nie, L. Markhasin, J. Thies, M. Nießner. DPHMs: Diffusion Parametric Head Models for Depth-based Tracking. **CVPR 2024**.
- W. Cao*, C. Luo*, B. Zhang, M. Nießner, **J. Tang**#. Motion2VecSets: 4D Latent Vector Set Diffusion for Non-rigid Shape Reconstruction and Tracking. **CVPR 2024, master thesis project**.
- **J. Tang**, Y. Nie, L. Markhasin, A. Dai, J. Thies, M. Nießner. DiffuScene: Denoising Diffusion Probabilistic Model for Generative Indoor Scene Synthesis. **CVPR 2024**.
- B. Zhang, **J. Tang**, M. Niessner, P. Wonka. 3DShape2VecSet: A 3D Shape Representation for Neural Fields and Generative Diffusion Models. (**SIGGRAPH 2023, Journal Track**).
- J. Lei, **J. Tang**, Kui Jia. RGBD2: Generative Scene Synthesis via Incremental View Inpainting using RGBD Diffusion Models. The IEEE Conference on Computer Vision and Pattern Recognition (**CVPR 2023**).
- **J. Tang**, L. Markhasin, B. Wang, J. Thies, M. Nießner. Neural Shape Deformation Priors. Neural Information Processing Systems (**NeurIPS 2022**), **Spotlight presentation**.
- X. Yu, **J. Tang**, Y. Qin, C. Li, L. Bao, X. Han, and S. Cui. PVSeRF: Joint Pixel-, Voxel-and Surface-Aligned Radiance Field for Single-Image Novel View Synthesis. ACM International Conference on Multimedia (**ACM MM**), 2022.
- **J. Tang**, J. Lei, D. Xu, F. Ma, K. Jia, and L. Zhang. SA-ConvONet: Sign-Agnostic Optimization of Convolutional Occupancy Networks. International Conference on Computer Vision **(ICCV)**, 2021, **Oral presentation, 3.4%**.
- **J. Tang**, X. Han, M. Tan, X. Tong and K. Jia. SkeletonNet: A Topology-Preserving Solution for Learning Mesh Reconstruction of Object Surfaces from RGB Images. IEEE Transactions on Pattern Analysis and Machine Intelligence (**TPAMI**), 2021.
- **J. Tang**, D. Xu, K. Jia, and L. Zhang. Learning Parallel Dense Correspondence from Spatio-Temporal Descriptors for Efficient and Robust 4D Reconstruction. The IEEE Conference on Computer Vision and Pattern Recognition (**CVPR**), 2021.
- J. Pan, X. Han, W. Chen, **J. Tang** and K. Jia. Deep Mesh Reconstruction from Single RGB Images via Topology Modification Networks. International Conference on Computer Vision (**ICCV**), 2019.
- **J. Tang**, X. Han, J. Pan K. Jia and X. Tong. A Skeleton-bridged Deep Learning Approach for Generating Meshes of Complex Topologies from Single RGB Images. The IEEE Conference on Computer Vision and Pattern Recognition (**CVPR**), 2019, **Oral presentation, Best paper final lists, 0.8%.**

AWARDS

Second-class South China University of Technology Scholarship *2015-2017*

Merit Student of South China University of Technology *2016-2017*

First-class South China University of Technology Postgraduate Scholarship *2018-2019*

South China University of Technology Postgraduate Scholarship *2019-2021*

SKILLS AND INTERESTS

Language: Native in Chinese (Mandarin), Fluent in English

Programming Language: Python, C++/Cuda, Matlab, LaTeX

Deep Learning Platform: PyTorch, TensorFlow

Sports: Basketball, Badminton, Table tennis, Hiking, and Travelling