Xiangjun Tang

xiangjun.tang@outlook.com | Solve real-world problems | https://yuyujunjun.github.io/

Experience

Post-doctoral position — Thuwal, Saudi Arabia
Working with Prof. Peter Wonka at King Abdullah University of Science and Technology (KAUST) — Sep. 2024 - now

Ph.D. in Electronic Information — Hangzhou, China
Advised by Xiaogang Jin in State Key Lab of CAD&CG, Zhejiang University — Sep. 2020 - Exp. Jun. 2024

M.S. in Computer Science and Technology — Hangzhou, China
Advised by Xiaogang Jin in State Key Lab of CAD&CG, Zhejiang University — Sep. 2019 - Jun. 2020

B.S. in Digital Media — Hangzhou, China
Zhejiang University — Sep. 2015 - Jun. 2019

Awards and Honors

Dec. 2023 **Graduate with Merit A Performance** from Zhejiang University
Aug. 2023 **Style3D Graduate Fellowship** from Linctex Digital Co., LTD.
Dec. 2022 **Graduate of Merit/Triple A Graduate** from Zhejiang University, 2^{nd} Honours
Dec. 2021 **Award of Honor for Graduate** from Zhejiang University
Dec. 2018 **National Scholarship** from Ministry of Education of the People's Republic of China, 1^{st} Honour

Research Projects

Motion Generation — Zhejiang University 2021-present

- Proposed a method for generating high-quality in-between motions with varying target frames and durations in real-time.
- Led a junior colleague in proposing a fast, versatile, and controllable method for generating high-quality in-between styled motion online.
- Led a junior colleague to decouple contact from motion for fine-grained motion style transfer, improving the quality and controllability.

Vulkan based Cross-platform Particle System Engine — Zhejiang University 2020-2021

- Led two junior colleagues in building an animation and rendering engine for a particle system.
- The system includes collision avoidance, group animation, application of external forces based on point cloud and SDF, keyframe attribute editing, and has been commercially deployed on Oppo phones.

Parametric Facial Editing — Zhejiang University 2019-2021

- Contributed, as a part of a team, to automatically adjust the proportion of input portrait while retaining personal facial features. My responsibilities included 3D to 2D projection, image warping, and optimization for background distortion removal.
- Led a junior colleague in presenting a parametric method to efficiently reshape a portrait in videos, producing a smooth, retouched outcome.

Virtual Reality — Zhejiang University 2018-2019

- Proposed a novel shape-constrained fireworks simulation method with rich textures in an HMD virtual environment using sketched feature lines as input.
- Proposed a novel VR modeling tool that uses volume skeleton-based convolution surfaces. It enables the user to draw with arbitrarily shaped brushed and generate 3D manifold objects by fusing the brushed primitives.

First-authored Publications

RSMT: Real-time Stylized Motion Transition for Characters — SIGGRAPH

SIGGRAPH '23 Conference Proceedings, Los Angeles, 6-10 August, 2023. — 2023

- **Xiangjun Tang**, Linjun Wu, He Wang, Bo Hu, Xu Gong, Yuchen Liao, Songnan Li, Qilong Kou, and Xiaogang Jin.
- Project Page: *yuyujunjun.github.io/publications/Siggraph2023_RSMT/*
- Source Code: *github.com/yuyujunjun/RSMT-Realtime-Stylized-Motion-Transition*

Real-time Controllable Motion Transition for Characters TOG

ACM Transactions on Graphics (Proc. Siggraph 2022), 2022, 41(4): Article No.: 137. 2022

- **Xiangjun Tang**, He Wang, Bo Hu, Xu Gong, Ruifan Yi, Qilong Kou, and Xiaogang Jin.
- Project Page: *yuyujunjun.github.io/publications/TOG2022_Transition*

Parametric Reshaping of Portraits in Videos ACM MM (Oral)

Proceedings of the 29th ACM International Conference on Multimedia, 4689-4697. 2021

- **Xiangjun Tang**, Wenxin Sun, Yong-Liang Yang, and Xiaogang Jin.
- Project Page: *yuyujunjun.github.io/publications/ACMMM2021_Reshaping_Videos/*

Additional Publications

3DBrushVR: From Virtual Reality Primitives to Complex Manifold Objects ISMAR-Adjunct

IEEE International Symposium on Mixed and Augmented Reality Adjunct, 2022. 2022

- Yuzhen Zhu, **Xiangjun Tang**, Jing Zhang, Ye Pan, Jingjing Shen, Xiaogang Jin.

Efficient Real-time Dynamic Diffuse Global Illumination using Signed Distance Fields Vis Comput

The Visual Computer (Special Issue of CGI' 2021), 2021. 2021

- Jinkai Hu, Milo K Yip, Guillermo Elias Alonso, Shihao Gu, **Xiangjun Tang**, Xiaogang Jin.

Wowtao: A Personalized Pottery-Making System Comput Ind

Computers in Industry, 2021. 2021

- Ruifan Cai, Yingying Lin, Honglin Li, Yuzhen Zhu, **Xiangjun Tang**, Yanjun Weng, Lihua You, Xiaogang Jin

Deep Shapely Portrait ACM MM

Proceedings of the 28th ACM International Conference on Multimedia, 1800-1808. 2020

- Qinjie Xiao, **Xiangjun Tang**, You Wu, Leyang Jin, Yong-Liang Yang, and Xiaogang Jin.

Sketch-based Shape-constrained Fireworks Simulation in Head-Mounted Virtual Reality CAVW

Computer Animation and Virtual Worlds, 2020. 2020

- Xiaoyu Cui, Ruifan Cai, **Xiangjun Tang**, Zhigang Deng, Xiaogang Jin.

Presentations

Motion Synthesis from My Perspective

- Invited talk by Mihoyo, Aug, 2023.

Real-time, High-quality and Stylized In-between Motion Generation

- Style 3D Open Day - Scholarship Certification and Communication Conference, Aug, 2023.

RSMT: Real-time Stylized Motion Transitions for Characters

- SIGGRAPH Technique Paper Session, Aug, 2023.
- CSIG SIGGRAPH Preview Presentations, Jul, 2023.

Parametric Reshaping of Portraits in Videos

- 29th ACM MM, Oct, 2021.

Professional Activities

As a reviewer for multiple graphics-related journals and conferences, including:

- ACM TOG ACM SIGGRAPH & SIGGRAPH Asia IEEE TVCG ACM MM ACM CGF ACM SCA The Visual Computer

Technical Skills

Graphics API Vulkan, OpenGL, Unity3D Engine, GPU-based Programming (Cuda, Compute Shader)

Programming C++, Python

Referees

- Prof. Xiaogang Jin
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