Tianyi Xie

Email: tianyixie77@gmail.com | Github: XPandora | Website: https://xpandora.github.io/

EDUCATION

University of California, Los Angeles 03/2023 - Present
Ph.D. in Computer Science
Advisor: Prof. Chenfanfu Jiang and Prof. Demetri Terzopoulos

University of California, Los Angeles 09/2021 - 03/2023
M.Sc. in Computer Science

Shanghai Jiao Tong University 09/2016 - 06/2020
B.Eng. in Software Engineering

RESEARCH INTERESTS

Physics-based Simulation, Generative AI

PUBLICATIONS

Dress-1-to-3: Single Image to Simulation-Ready 3D Outfit with Diffusion Prior and Differentiable Physics
ACM Transactions On Graphics (SIGGRAPH), 2025
Xuan Li*, Chang Yu*, Wenxin Du*, Ying Jiang*, **Tianyi Xie**, Yunuo Chen, Yin Yang, Chenfanfu Jiang

PhysAnimator: Physics-Guided Generative Cartoon Animation
Conference on Computer Vision and Pattern Recognition (CVPR), 2025
Tianyi Xie, Yiwei Zhao, Ying Jiang, Chenfanfu Jiang

GRIP: A General Robotic Incremental Potential Contact Simulation Dataset for Unified Deformable-Rigid Coupled Grasping
arXiv: 2503.05020, 2025
Siyu Ma*, Wenxin Du*, Chang Yu*, Ying Jiang*, Zeshun Zong, **Tianyi Xie**, Yunuo Chen, Yin Yang, Xuchen Han, Chenfanfu Jiang

VideoPhy: Evaluating Physical Commonsense In Video Generation
International Conference on Learning Representations (ICLR), 2025
Hritik Bansal, Zongyu Lin*, **Tianyi Xie**, Zeshun Zong, Michal Yarom, Yonatan Bitton, Chenfanfu Jiang, Yizhou Sun, Kai-Wei Chang, Aditya Grover

GarmentDreamer: 3DGS Guided Garment Synthesis with Diverse Geometry and Texture Details
International Conference on 3D Vision (3DV), 2025
Boqian Li*, Xuan Li*, Ying Jiang* (equal contribution), **Tianyi Xie**, Feng Gao, Huamin Wang, Yin Yang, Chenfanfu Jiang

PhysMotion: Physics-Grounded Dynamics From a Single Image
arXiv: 2411.17189, 2024
Xiyang Tan*, Ying Jiang*, Xuan Li* (equal contribution), Zeshun Zong, **Tianyi Xie**, Yin Yang, Chenfanfu Jiang

Atlas3D: Physically Constrained Self-Supporting Text-to-3D for Simulation and Fabrication
Neural Information Processing Systems (NeurIPS), 2024.
Yunuo Chen*, **Tianyi Xie***, Zeshun Zong* (equal contribution), Xuan Li, Feng Gao, Yin Yang, Ying Nian Wu, Chenfanfu Jiang

VR-GS: A Physical Dynamics-Aware Interactive Gaussian Splatting System in Virtual Reality
ACM SIGGRAPH, 2024
Ying Jiang*, Chang Yu*, **Tianyi Xie***, Xuan Li* (equal contributions), Yutao Feng, Huamin Wang, Minchen Li, Henry Lau, Feng Gao, Yin Yang, Chenfanfu Jiang

PhysGaussian: Physics-Integrated 3D Gaussians for Generative Dynamics
Conference on Computer Vision and Pattern Recognition (CVPR), 2024

Highlight (11.9%)
Tianyi Xie*, Zeshun Zong*, Yuxing Qiu*, Xuan Li* (equal contribution), Yutao Feng, Yin Yang, Chenfanfu Jiang

A Contact Proxy Splitting Method for Lagrangian Solid-Fluid Coupling
ACM Transactions On Graphics (SIGGRAPH), 2023
Tianyi Xie, Minchen Li, Yin Yang, Chenfanfu Jiang

Multi-Layer Thick Shells
ACM SIGGRAPH, 2023
Yunuo Chen, **Tianyi Xie**, Cem Yuksel, Danny Kaufman, Yin Yang, Chenfanfu Jiang, Minchen Li

Towards Realistic Visual Dubbing with Heterogeneous Sources
ACM International Conference on Multimedia (ACM MM), 2021
Tianyi Xie, Liucheng Liao, Cheng Bi, Benlai Tang, Xiang Yin, Jianfei Yang, Mingjie Wang, Jiali Yao, Zejun Ma

CHECKER: Detecting Clickbait Thumbnails with Weak Supervision and Co-teaching
European Conference on Machine Learning and Principles and Practice of Knowledge Discovery in Databases (ECML PKDD), 2021
Tianyi Xie, Thai Le, Dongwon Lee

EXPERIENCES

Research Intern   **06/2024 – Present**
Netflix Research
- Mentor: Yiwei Zhao
- Research Topic: Controllable video generation

Research Intern   **04/2020 – 07/2021**
Bytedance AI Lab, Shanghai
- Research Topic: GAN based audio-driven avatar generation

SCHOLARSHIP & AWARDS

- UCLA Non-residential Tuition Grant,   2024-2025
- UCLA Graduate Fellowship,   2023
- Tung OOCL Scholarship (top 10% in SJTU),   2019
- B-Class Academic Excellence Scholarship (top 10% in SJTU),   2017-2019
- Huawei Scholarship (top 10% in SJTU),   2018
- First Prize of the National College Students Physics Competition (Shanghai Zone), 2018
- Wish Scholarship (top 5% in SJTU),   2017
- SJTU Merit Student,   2017

TEACHING

Teaching Assistant, University of California, Los Angeles
- CS174A: Introduction to Computer Graphics   Fall 2024 - Spring 2025
- CS33: Introduction to Computer Organization   Spring 2024
- PIC20A: Principles of Java Language with Applications   Fall 2023, Winter 2024

ACADEMIC SERVICE

Conference Reviewer
CVPR (25), ICCV(25), SIGGRAPH (23,24,25), SIGGRAPH ASIA (23,24), ACM MM(25), 3DV (25), EG (24), PG(24)
Journal Reviewer
TPAMI, TCSVT