Xiang Feng

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Education

Zhejiang University, Hangzhou, China   **09/2018 – 06/2022**
B.Eng. in Computer Science (Mixed Class of Chu Kochen Honors College)   *Rank: 2/84, GPA: 4.0/4.0*

Zhejiang University, Hangzhou, China   **09/2022 – Present**
M.Eng in Computer Science, advisor: Prof. Hongzhi Wu

Publications

ARM: Appearance Reconstruction Model for Relightable 3D Generation
Xiang Feng*, Chang Yu*, Zoubin Bi*(equal contributors), Yintong Shang, Feng Gao, Hongzhi Wu, Kun Zhou, Chenfanfu Jiang, Yin Yang
Arxiv 2024 https://arm-aigc.github.io/

Learning Photometric Feature Transform for Free-form Object Scan
Xiang Feng, Kaizhang Kang, Fan Pei, Huakeng Ding, Jinjiang You, Ping Tan, Kun Zhou, Hongzhi Wu
TVCG 2024, minor revision https://arxiv.org/abs/2308.03492

Gaussian Splashing: Dynamic Fluid Synthesis with Gaussian Splatting
Yutao Feng*, **Xiang Feng***(equal contributors), Yintong Shang, Ying Jiang, Chang Yu, Zeshun Zong, Tianjia Shao, Hongzhi Wu, Kun Zhou, Chenfanfu Jiang, Yin Yang
Arxiv 2024 https://amysteriouscat.github.io/GaussianSplashing/

ElastoGen: 4D Generative Elastodynamics
Yutao Feng*, Yintong Shang*, **Xiang Feng***(equal contributors), Lei Lan, Shandian Zhe, Tianjia Shao, Hongzhi Wu, Kun Zhou, Hao Su, Chenfanfu Jiang, Yin Yang
Arxiv 2024 https://anunrulybunny.github.io/elastogen/

GS^3: Efficient Relighting with Triple Gaussian Splatting
Zoubin Bi*, Yixin Zeng*(equal contributors), Chong Zeng, Fan Pei, **Xiang Feng**, Kun Zhou, Hongzhi Wu
SIGGRAPH Asia 2024 https://gsrelight.github.io/

Real-time Acquisition and Reconstruction of Dynamic Volumes with Neural Structured Illumination
Yixin Zeng*, Zoubin Bi*(equal contributors), Mingrui Yi, **Xiang Feng**, Kun Zhou, Hongzhi Wu
CVPR 2024 https://svbrdf.github.io/publications/realtimedynamic/project.html

Differentiable Dynamic Visible-Light Tomography
Kaizhang Kang*, Zoubin Bi*(equal contributions), **Xiang Feng**, Yican Dong, Hongzhi Wu, Kun Zhou
SIGGRAPH Asia 2023 https://svbrdf.github.io/publications/dynamicCT/project.html

Experience

Zhejiang University, Hangzhou, China   **09/2022 – Present**
Research Assistant, advisor: Prof. Hongzhi Wu
- Research topics: Acquisition and reconstruction of 3D shape and appearance; Differentiable photography with camera, projector, scanner, and lightstage.

University of Utah, Salt Lake City, United States   **04/2024 – 10/2024**
Research Assistant, advisor: Prof. Yin Yang
- Research topics: Injecting physics into 3D vision and generative models; 3D AIGC.

Projects

Asuna: Vulkan-based Path Tracer
- A fundamental GPU path tracer written in C++ with VulkanRT extension
- Common materials and Monte Carol multiple importance sampling are implemented
- https://github.com/f1shel/asuna

Circuit-level Differentiable Hardware for Visual Computing
- Developed a system on Zynq FPGA to simultaneously control the camera and light
- Leveraged a Basler line scanner camera to capture and optimize the physical properties of the lighting module

Simplay: implemented physically-based animation tools and algorithms
- Dynamics of Rigid body/cloth/elastic body/shallow wave/character animation was implemented
- Stable fluid/PIC/FLIP/APIC/2-way coupling MPM were implemented
- SIGGRAPH Paper *Fast Simulation of Mass-Spring Systems* and *Position-Based Surface Tension Flow* were implemented