Education

Xidian Universitv

B.ENG. IN INFORMATION AND COMMUNICATION ENGINEERING,

University of Science and Technology of China

M.Sc. IN INFORMATION AND COMMUNICATION ENGINEERING,

King Abdullah University of Science and Technology

PH.D. IN ELECTRICAL AND COMPUTER ENGINEERING, SUPERVISOR: PROF. WOLFGANG HEIDRICH

Summary_

Research: Computational photography, 3D scene reconstruction, neural & differentiable rendering, visual tracking, image segmentation. Skills: I have many years coding experience with C, C++, CUDA, Python for machine learning, low-level computer vision, robotics tasks, especially low-cost system programming (UAVs, sonic, infrared, camera sensors, etc), and deep learning for large-scale 3D neural reconstruction.

Publications

Rui Li, Darius Rückert, Yuanhao Wang, Ramzi Idoughi, Wolfgang Heidrich. Neural Adaptive SCEne Tracing. In VMV (Oral), 2022.

Rui Li, Guangming Zang, Miao Qi, Wolfgang Heidrich. Shape and Reflectance Reconstruction in Uncontrolled Environments by Differentiable Rendering. https://arxiv.org/abs/2110.12975. 2022.

Darius Rückert, Yuanhao Wang, Rui Li, Ramzi Idoughi, Wolfgang Heidrich. NeAT: Neural Adaptive Tomography. In ACM Transactions on Graphics (Proc. SIGGRAPH), 2022.

Guangming Zang, Ramzi Idoughi, Rui Li, Peter Wonka, Wolfgang Heidrich. Learning based Tomography via Sinogram Synthesis and Prediction. In ICCV, 2021.

Rui Li*, S. Qiu*, G. Zang, W. Heidrich. Reflection Separation via Multi-bounce Polarization State Tracing. In ECCV, 2020.

Rui Li, W. Heidrich. Hierarchical and View-invariant Light Field Segmentation by Maximizing Entropy Rate on 4D Ray Graphs. In ACM Transactions on Graphics (Proc. SIGGRAPH Asia), 2019.

Rui Li, M. Pang, C. Zhao, G. Zhou, L. Fang. Monocular Long-Term Target Following on UAVs. In CVPR Workshops, 2016. **Rui Li**, Lu Fang. *Cluster Sensing Superpixel and Grouping*. In CVPR Workshops, 2016.

Work Experience _____

Sony

R&D INTERN

Algorithm research & development in the area of computational photography, including polarization, hyper-spectral, light field.

Sadeem (Startup Company in Saudi Arabia)

INTERN DEVELOPER

- Hardware: designed C++ driver and API for sonic, camera, infrared light sensors on a hardware motherboard, deployed first generation system.
- Code Refactoring: re-designed software architecture for sensor data communication, vehicle detection and emergency event detection.

HKUST Robotics Institute

RESEARCH ASSISTANT

• Working on research project for various vision (image processing, tracking, segmentation) algorithm on low-cost UAVs and home robot system.

Rui Li · Résumé

DJI

RESEARCH INTERN

OCTOBER 7, 2022

- Developed robust visual tracking algorithm for Phantom 4 UAV in long term tracking situation and complex environment.
- Supported product-level design for deploying algorithms to low cost UAV system and design the I/O interface for GPS and sensor.



Tokvo, Japan

Mar. 2017 - Sep. 2017

Jun. 2022 - Sep. 2022

Hong Kong, China

Jan. 2016 - Aug. 2016

ShenZhen, China

Sep. 2014 - Sep. 2015

Hefei, China

Thuwal. Saudi Arabia

Aug. 2016 - Dec. 2022 (expected)

Xian. China Aug. 2009 - Aug. 2013

Sep. 2013 - June. 2016

Reviewers for ECCV(2022), PAMI(2020, 2021, 2022), CVPR(2019), ICRA(2015, 2016)

Honors & Awards

2020 Rank 1st, 7th KAUST NVIDIA Workshop on Accelerating Scientific Applications using GPUs

Saudi Arabia