Rui Li

Ph.D. Student in KAUST · Visual Computing Center

2204-WS07, Lv 2, Bldg 1, KAUST, Thuwal, Saudi Arabia

☐ (+966) 548054069 | ✉ rui.li@kaust.edu.sa | ⌂ arthurlirui.com | ⌨ https://github.com/arthurlirui

Education

Xidian University   *Xian, China*

B.Eng. in Information and Communication Engineering,   *Aug. 2009 - Aug. 2013*

University of Science and Technology of China   *Hefei, China*

M.Sc. in Information and Communication Engineering,   *Sep. 2013 - June. 2016*

King Abdullah University of Science and Technology   *Thuwal, Saudi Arabia*

Ph.D. in Electrical and Computer Engineering   *Aug. 2016 - Now*

Summary

Currently 4th year Ph.D. student in KAUST, **supervisor: Wolfgang Heidrich**.
Research: Various imaging problems: 3D reconstruction that based on light field, polarization image. Recently differentiable rendering
Engineering: Expert-level C++ and python skill, especially for CPU-level instruction set & RAM optimization, low-cost vision & imaging processing.

Selected Publications

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

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

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

Rui Li, M. Pang, C. Zhao, G. Zhou, Lu Fang. *Monocular Long-Term Target Following on UAVs*. CVPR Workshops, 2016.

Rui Li, Lu Fang. *Cluster Sensing Superpixel and Grouping*. CVPR Workshops, 2016.

Work Experience

Sony   *Tokyo, Japan*

R&D Intern   *Jun. 2021*

- Algorithm research & development in the area of computational photography, including polarization, hyper-spectral, light field and compressive sensing etc

Algorithmic Trading Team   *Saudi Arabia*

Founder   *Jan. 2017 - Now*

- To be a founder of algorithmic trading team, I am mainly working on designing crypto trading system and algorithms, e.g., API to access account in multiple crypto exchanges, smart AI system to capture hourly speculation opportunities, real-time parallel analyzing market, etc.

Sadeem (Startup Company in Saudi Arabia)   *Saudi Arabia*

Intern Developer   *Mar. 2017 - Sep. 2017*

- 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   *Hong Kong, China*

Research Assistant   *Jan. 2016 - Aug. 2016*

- To be a research assistant in RI, HKUST, I designed vision (image processing, tracking, segmentation) algorithm for UAV and home robot.

DJI   *ShenZhen, China*

Research Intern   *Sep. 2014 - Sep. 2015*

- 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.