XINGE YANG

+966-545659075 ⋄ xinge.yang@kaust.edu.sa ⋄ singer-yang.github.io

EDUCATION

King Abdullah University of Science and Technology (KAUST) *05/2020 - present*
PhD, Computer Science
GPA: 3.75/4.0 Advisor: Wolfgang Heidrich

King Abdullah University of Science and Technology (KAUST) *08/2020 - 05/2022*
MS, Computer Science
GPA: 3.75/4.0 Advisor: Wolfgang Heidrich
Thesis: Automatic Lens Design based on Differentiable Ray-tracing.

University of Science and Technology of China (USTC) *09/2016 - 06/2020*
BS, Physics and Computer Science
GPA: 3.27/4.3

PUBLICATIONS

Automatic Lens Design based on Differentiable Ray-tracing.
X. Yang, Q. Fu, W. Heidrich. *OSA Imaging and Applid Optics Congress - Computational Optical Sensing and Imaging(COSI), 2022.*

RESEARCH EXPERIENCE

Research Assistant: Differentiable Computational Lens Design 08/2020 - Present
VCC Computational Imaging Group, KAUST *Thuwal, Saudi Arabia*

· Worked on differentiable ray tracing, differentiable optical design, optics and network co-design.
· Maintained and developed our own differentiable ray tracer "DeepLens" (>8k lines of Python code).

Research Assistant: BLE communication 11/2019 - 09/2020
LINKE Lab, USTC *Hefei, China*

· Worked on activation and information transmission of implantable Bluetooth components.
· Worked on the automation of large-scale (up to 128) microcontroller clusters.

Research Intern: Quantum optics 07/2019 - 09/2019
Quantum Photonics Lab, NTU *Singapore*

· Worked on room-temperature coherent activation of a solid-state quantum material (4H-SiC).

Research Intern: Computational Imaging 09/2018 - 10/2018
Shanghai Institute for Advanced Studies, USTC *Shanghai, China*

· Re-implemented an underwater single-photon image reconstruction algorithm.

TEACHING EXPERIENCE

TA for GAMES204: Computational Imaging 09/2022 - 12/2022
Chinese Graphics And Mixed Environment Symposium(GAMES) Webinar *Online*

Developed and graded assignments on computational imaging topics including: image signal processing, high dynamic range imaging, tone mapping, image deblurring, and multi-image fusion.

SERVICES

Reviewer for: IEEE Transactions on Pattern Analysis and Machine Intelligence(**TPAMI**), Optics Express(**OE**)

PROGRAMMING LANGUAGE

Python, Pytorch
MALAB
C/C++
CUDA, GPGPU