

Ruyi Lian

Curriculum Vitae

Department of Computer Science, Stony Brook University
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Education

- Aug 2019 - Present **Stony Brook University**, *Stony Brook, NY, USA*.
Ph.D. in Computer Science, GPA: 4.0/4.0
Advisor: Prof. Haibin Ling
- Aug 2015 - Jun 2019 **University of Science and Technology of China (USTC)**, *Hefei, Anhui, China*.
B.S. in Applied Mathematics, GPA: 3.71/4.3
Advisor: Prof. Ligang Liu
Thesis: *Light Transport Algorithms for Photorealistic Rendering*

Research Interests

Computer Vision, Computer Graphics, Computational Photography, Robotics

Publications

Bingyao Huang, **Ruyi Lian**, Dimitris Samaras, and Haibin Ling. "*Modeling Deep Learning Based Privacy Attacks on Physical Mail*." Proceedings of the AAAI Conference on Artificial Intelligence, 2021.

Projects

- Jun 2021 - Present **Assistive Robot Arm**, *Stony Brook University*.
Advisor: Prof. Haibin Ling, Prof. Nilanjan Chakraborty
Currently working on object pose estimation from RGBD images
- Jan 2021 - Present **Orientation estimation from cryo-EM images**, *Stony Brook University*.
Advisor: Prof. Haibin Ling, Dr. Liguang Wang, Dr. Qun Liu, Dr. Yuewei Lin
Proposed end-to-end supervised learning method to recover missing orientations
Designed robust training objective for asymmetric and symmetric 3D structures
Currently under revision
- Jun 2020 - Dec 2020 **Temporal Consistent Projector Compensation**, *Stony Brook University*.
Advisor: Prof. Haibin Ling
Proposed recurrent compensation network and temporal consistent loss function
Collected various video frame sequences for training and evaluation
- Jan 2020 - Jun 2020 **Imaging Through Scattering Media**, *Stony Brook University*.
Advisor: Prof. Haibin Ling
Collaborated to reconstruct hidden objects from images captured by digital camera
Collected real and synthetic datasets
Paper Accepted by AAAI 2021
- Sep 2017 - Dec 2018 **Computer-aided Digital Sculpting System**, *USTC*.
Advisor: Prof. Ligang Liu
Designed system for automatic operation sequence generation
Proposed deep reinforcement learning based method for efficient training
- Mar 2017 - May 2017 **Two-player Virtual Reality Game**, *USTC*.
Advisor: Prof. Ligang Liu
Realized recognition of hand gestures using Leap Motion in Unity
Presented to public during Science and Technology Week of USTC

Teaching Experience

- Aug 2019 - May 2020 **Teaching Assistant**, *Stony Brook University*.
CSE 215, Foundations of Computer Science, Spring 2020
CSE 303, Introduction to the Theory of Computation, Fall 2019
- Sep 2018 - Jun 2019 **Undergraduate Teaching assistant**, *USTC*.
Foundations of Algorithms, Spring 2019
Single Variable Calculus, Fall 2018

Honors and Awards

- 2018 Third Prize of Scholarship, USTC
2017 Leadership Scholarship, USTC
2016 First Prize of Electromagnetic Paper Competition, USTC
2016 Second Prize of Scholarship, USTC
2015 Outstanding Freshman Scholarship, USTC

Services

- Sep 2020 - Present Organizer of computer vision seminar in CS department, SBU

Skills

- Programming Python, C/C++, MATLAB, \LaTeX
Software Blender, Mathematica, Unity, cryoSPARC, RELION
Language Chinese, English, Japanese
Other Painting (<https://www.instagram.com/ruyi.lian.art>)