

# Shuhong Zheng

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## EDUCATION

### University of Toronto

Ph.D. in Computer Science

Supervisor: Prof. Igor Gilitschenski

Ontario, Canada

Sept. 2024 – Present

### University of Illinois Urbana-Champaign

M.S. in Computer Science

Illinois, U.S.

Aug. 2022 – May 2024

### Peking University

B.S. in Computer Science

Beijing, China

Aug. 2018 – June 2022

## RESEARCH EXPERIENCE

### University of Toronto

Research Assistant

Ontario, Canada

Sept. 2024 – Present

### Vector Institute

Faculty Affiliate Researcher

Ontario, Canada

Sept. 2024 – Present

### Adobe Inc.

Research Intern

California, U.S.

May 2025 – Aug. 2025

### University of Illinois Urbana-Champaign

Research Assistant

Illinois, U.S.

July 2021 – May 2024

### MIT-IBM Watson Lab

Visiting Student Researcher

Massachusetts, U.S.

Apr. 2023 – Oct. 2023

### Peking University

Research Assistant

Beijing, China

Oct. 2020 – July 2022

## PUBLICATIONS/MANUSCRIPTS

- **Shuhong Zheng**, Ashkan Mirzaei, and Igor Gilitschenski. Track, Inpaint, Resplat: Subject-driven 3D and 4D Generation with Progressive Texture Infilling. *Conference on Neural Information Processing Systems (NeurIPS)*, 2025.
- **Shuhong Zheng**, Zhipeng Bao, Ruoyu Zhao, Martial Hebert, and Yu-Xiong Wang. Diff-2-in-1: Bridging Generation and Dense Perception with Diffusion Models. *International Conference on Learning Representations (ICLR)*, 2025.
- Yunze Man, **Shuhong Zheng**, Zhipeng Bao, Martial Hebert, Liang-Yan Gui, and Yu-Xiong Wang. Lexicon3D: Probing Visual Foundation Models for Complex 3D Scene Understanding. *Conference on Neural Information Processing Systems (NeurIPS)*, 2024.
- **Shuhong Zheng\***, Zhipeng Bao\*, Martial Hebert, and Yu-Xiong Wang. Multi-task View Synthesis with Neural Radiance Fields. *IEEE/CVF International Conference on Computer Vision (ICCV)*, 2023. Presented at the workshop on Generative Models for Computer Vision. *IEEE/CVF Conference on Computer Vision and Pattern Recognition (CVPR)*, 2023.

- Yining Hong, Haoyu Zhen, Peihao Chen, **Shuhong Zheng**, Yilun Du, Zhenfang Chen, and Chuang Gan. 3D-LLM: Injecting the 3D World into Large Language Models. *Conference on Neural Information Processing Systems (NeurIPS)*, 2023. (**Spotlight, Top 3.6%**)
- Mingtong Zhang\*, **Shuhong Zheng**\*, Zhipeng Bao, Martial Hebert, and Yu-Xiong Wang. Beyond RGB: Scene-Property Synthesis with Neural Radiance Fields. *IEEE/CVF Winter Conference on Applications of Computer Vision (WACV)*, 2023. (**First-Round Acceptance**)  
Presented at workshop on AI for Creative Video Editing and Understanding. *European Conference on Computer Vision (ECCV)*, 2022.  
Presented at *18th Coordinated Science Laboratory Student Conference (CSLSC)*, Robotics Session, 2023. (**4 out of >40 submissions in the Robotics Session**)
- Haofeng Huang, **Shuhong Zheng**, Wenhan Yang, Ling-Yu Duan, and Jiaying Liu. Seeing in the Dark with Ambient Guidance. In Submission to *International Journal of Computer Vision (IJCV)*.

## ACADEMIC SERVICES

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- **Reviewer:** CVPR 2023-2025, ICML 2024-2025, ICLR 2024-2025, ECCV 2024, NeurIPS 2023-2025, ICCV 2023, SIGGRAPH 2025, ACCV 2024, AAAI 2025, 3DV 2026, TPAMI, ICLR 2024 AGI Workshop: How Far Are We From AGI?
- **Organizing Committee:** Session Co-chair of the Machine Learning and Signal Processing session in the *19th Coordinated Science Laboratory Student Conference (CSLSC)*, 2024

## SCHOLARSHIPS AND AWARDS

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- Outstanding Reviewer, CVPR 2024 2024
- Conference Presentation Award, UIUC 2023
- Excellent Graduate, Peking University 2022
- Merit Student, Peking University 2021
- Peking University Scholarship (Third-Class), Peking University 2021
- Academic Excellence Award, Peking University 2020
- Academic Excellence Award, Peking University 2019

## TEACHING

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- **Teaching Assistant** CSC 478 - Robotic Perception, UofT Winter 2025
- **Teaching Assistant** CSC 2541 - Topics in Machine Learning: Generative AI for Images, UofT Fall 2024
- **Teaching Assistant** CS 445 - Computational Photography, UIUC Spring 2024 (Head TA), Spring 2023
- **Teaching Assistant** CS 543 - Computer Vision, UIUC Fall 2023
- **Teaching Assistant** CS 361 - Probability and Statistics for Computer Science, UIUC Fall 2022

## COMPETITIONS

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- **Winner** of the Grand Challenge on *IEEE International Workshop on Multimedia Signal Processing (MMSP)*, 2021 *First Place* on both *IR (Image Restoration)* track and *IE (Image Editing)* track, and the **Final Winner** of the *MMSP 2021 Grand Challenge*.

## TALKS

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- **Student Speaker** at the *18th Coordinated Science Laboratory Student Conference (CSLSC)* Feb. 2023

## PATENTS

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- A Low-light Enhancement Method with Long-exposure Compensation. Jiaying Liu, Haowei Kuang, **Shuhong Zheng**, Haofeng Huang, Zongming Guo.  
PCT (Patent Cooperation Treaty) Application Number: PCT/CN2022/131018.

## STANDARDIZED TESTS

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- **TOEFL iBT** Oct. 2023  
*107 (Reading 28, Listening 30, Speaking 22, Writing 27)*
- **GRE** Oct. 2020  
*331 + 3.5 (Verbal 161, Quantitative 170, Analytical Writing 3.5)*

## PROGRAMMING SKILLS

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- **Programming Languages:** Python, C/C++, MATLAB, Verilog HDL
- **Machine Learning Frameworks:** PyTorch, TensorFlow, Keras