Shuhong Zheng

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Education

University of Toronto — Ontario, Canada
Ph.D. in Computer Science — Sept. 2024 – Present
Supervisor: Prof. Igor Gilitschenski

University of Illinois Urbana-Champaign — Illinois, U.S.
M.S. in Computer Science — Aug. 2022 – May 2024

Peking University — Beijing, China
B.S. in Computer Science — Aug. 2018 – June 2022

Research Experience

NVIDIA Research — California, U.S.
Research Intern — May 2026 – Aug. 2026

Adobe Inc. — California, U.S.
Research Intern — May 2025 – Aug. 2025

University of Toronto — Ontario, Canada
Research Assistant — Sept. 2024 – Present

Vector Institute — Ontario, Canada
Graduate Student Researcher — Sept. 2024 – Present

University of Illinois Urbana-Champaign — Illinois, U.S.
Research Assistant — July 2021 – May 2024

MIT-IBM Watson AI Lab — Massachusetts, U.S.
Visiting Student Researcher — Apr. 2023 – Oct. 2023

Peking University — Beijing, China
Research Assistant — Oct. 2020 – July 2022

Publications/Manuscripts

- Jingdong Zhang*, Jionghao Wang*, Zhengming Yu, Yancheng Cai, Wei Chow, Chris Choy, Zhiyang Dou, Hang Hua, Jiachen Li, Zhixuan Liu, Chen Wang, Songlin Wei, Siyuan Yang, Yu Yuan, Xiaohang Zhan, Yucheng Zhang, **Shuhong Zheng**, Xin Li, Lingjie Liu, Wojciech Matusik, Zhengzhong Tu, Wenping Wang. Flex-RSI: Benchmarking Recursive Self-Improvement of Frontier Agents. arXiv preprint arXiv:2611.08946. (Alphabetically for contributors)
- **Shuhong Zheng**, Michael Oechsle, Erik Sandström, Marie-Julie Rakotosaona, Federico Tombari†, and Igor Gilitschenski†. Good Token Hunting: A Hitchhiker's Guide to Token Selection for Visual Geometry Transformers. *Conference on Neural Information Processing Systems (**NeurIPS**)*, 2026.
- **Shuhong Zheng**, Aashish Kumar Misraa*, Yu-Teng Li*, Yu-Jhe Li*,†, and Igor Gilitschenski†. Squeezing Capacity from Multimodal Large Language Models for Subject-driven Generation. *Conference on Neural Information Processing Systems (**NeurIPS**)*, 2026.

- Jasper Gerigk, Kenzo Aspuru-Takata, Chin-Hsuan Wu, Mohammad Mohammadi, **Shuhong Zheng**, and Igor Gilitschenski. When Listening Becomes Easier: Scrubbing Visual Cues for Shortcut-free VLAs. arXiv preprint arXiv:2610.10912.
- **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**)

Academic Services

- **Reviewer:** CVPR 2023-2026, ICML 2024-2026, ICLR 2024-2026, ECCV 2024-2026, NeurIPS 2023-2026, ICCV 2023, SIGGRAPH 2025, ACCV 2024, AAAI 2025, 3DV 2026, BMVC 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

- Top Reviewer, NeurIPS 2026 2026
- Outstanding Reviewer, ECCV 2026 2026
- Outstanding Reviewer, CVPR 2026 2026
- Gold Reviewer, ICML 2026 2026
- Top Reviewer, NeurIPS 2025 2025
- 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

- **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

- **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

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

Patents

- Squeezing Capacity from Multimodal Large Language Models for Subject-driven Generation. Aashish Kumar Misraa, Yu-Jhe Li, **Shuhong Zheng**, Yu-Teng Li. Under Application. Adobe Patent Reference Number: P29445-US-1.
- A Low-light Enhancement Method with Long-exposure Compensation. Jiaying Liu, Haowei Kuang, **Shuhong Zheng**, Haofeng Huang, Zongming Guo. Patent Number: CN115240022B.

Programming Skills

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