Guowei Zou 邹国伟

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Visiting PhD Student, National University of Singapore

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Homepage | Google Scholar | GitHub | LinkedIn

Research Interests

Research Area: Artificial Intelligence, Embodied AI, World Models, Vision-Language-Action (VLA) Model, Multi-Agent Systems

Education & Work Experience

National University of Singapore 2026–Present
Visiting PhD Student

Sun Yat-Sen University – Phd 2024–Present
Computer Science and Technology

Huawei Technologies Co., Ltd. 2023–2024
Hardware Engineer, Consumer Business Group

Sun Yat-Sen University – Master 2020–2023
Electronic Science and Technology

China Agricultural University – Bachelor 2016–2020
Electronic Information Engineering

Selected Publications & Preprints

Co-π-tree: Distilling LLM Reasoning into an Interpretable Policy Tree for Human-AI Collaboration 2026
B. Zhang, Y. Liang, **Guowei Zou**, H. Wang, H. Wu. **EMNLP 2026**

CoFlow: Coordinated Few-Step Flow for Offline Multi-Agent Decision Making 2026
Guowei Zou, H. Wang, Beiwen Zhang, Boning Zhang, H. Wu. **arXiv:2605.01457, 2026**

One Step Is Enough: Dispersive MeanFlow Policy Optimization (DMPO) 2026
Guowei Zou, H. Wang, H. Wu, Y. Qian, Y. Wang, W. Li. **ACM Multimedia (ACM MM), 2026**

DM1: MeanFlow with Dispersive Regularization for 1-Step Robotic Manipulation 2025
Guowei Zou, H. Wang, H. Wu, Y. Qian, Y. Wang, W. Li. **arXiv:2510.07865, 2025**

D^2PPO: Diffusion Policy Policy Optimization with Dispersive Loss 2025
Guowei Zou, W. Li, H. Wu, Y. Qian, Y. Wang, H. Wang. **AAAI 2026**

Additional Publications

Modeling light propagation for under-display sensing in a smartphone 2025
Q. Wang, Y. Liu, **Guowei Zou**, Z. Liang, et al. **Optics Express**

18-3: Mini-LED LCDs Integrated with High-capacity MIMO Visible Light Communication 2024
Z. Zhao, Y. Qiu, **Guowei Zou**, J. Weng, B.-R. Yang, Z. Qin. **SID Symposium Digest of Technical Papers**

High-capacity MIMO visible light communication integrated into mini-LED LCDs 2024
Z. Zhao, Y. Qiu, **Guowei Zou**, Y. Liu, et al. **Optics Express**

Enhancing the spatial resolution of light-field displays without losing angular resolution by a computational subpixel realignment 2023
W. Yang, Y. Cheng, **Guowei Zou**, B.-R. Yang, Z. Qin. **Optics Letters**

Two-field sequential color liquid crystal displays with deep learning-enabled real-time driving 2023
Z. Wang, **Guowei Zou**, Y. Li, C. Ma, et al. **Optics Letters**

Deep learning-based real-time driving for 3-field sequential color displays with low color breakup and high fidelity 2023
Z. Wang, **Guowei Zou**, Y. Shen, B.-R. Yang, Z. Qin. **Optics Express**

Deep Learning Designed Driving Method for Field Sequential Color Displays 2022
Z. Wang, **Guowei Zou**, Y. Shen, B.-R. Yang, Z. Qin. **Laser Science**

75-3: Field sequential color displays with simultaneously suppressed color breakup and flicker based on multi-objective optimization 2022
Z. Wang, **Guowei Zou**, B.-R. Yang, Z. Qin. **SID Symposium Digest of Technical Papers**

65-1: Deep Learning-Enabled Image Content Adaptive Driving Algorithm for Field Sequential Color LCDs with Mini-LED Backlight 2022
Guowei Zou, Z. Wang, W. Yang, B.-R. Yang, Z. Qin. **SID Symposium Digest of Technical Papers**

42-2: Spatial resolution-tripled integral imaging light field displays with no loss of angular resolution by recombining subpixels with zero sampling error 2022
W. Yang, Y. Cheng, **Guowei Zou**, B.-R. Yang, Z. Qin. **SID Symposium Digest of Technical Papers**

Deep learning-enabled image content-adaptive field sequential color LCDs with mini-LED backlight 2022
Guowei Zou, Z. Wang, Y. Liu, J. Li, et al. **Optics Express**

Granted Patents

Visible Light Communication Method, Device and System Using Field Sequential Color LCD. Granted 2026
Z. Qin, Z. Zhao, **Guowei Zou**, Y. Qiu, B.-R. Yang. **ZL202211458797.0**

Adaptive Refresh Rate Field Sequential Color Display. Granted 2025
Z. Qin, **Guowei Zou**, Z. Wang, H. Liang, B.-R. Yang. **ZL202210380314.3**

Deep Learning-based Control for Field Sequential Display. Granted 2023
Z. Qin, **Guowei Zou**, Q. Luo, W. Yang, Z. Qiu, Z. Wu, B.-R. Yang. **ZL202110793074.5**

High-resolution Light Field Display Method. Granted 2022
Z. Qin, W. Yang, Y. Cheng, **Guowei Zou**, Y. Gong, Z. Wu, B.-R. Yang. **ZL202110873615.5**

Internship Experience

China Star Optoelectronics Technology Co., Ltd. (CSOT) 2022–2023
AI for image enhancement: computer-vision-based modeling and optimization for image quality improvement.

Huawei Technologies Co., Ltd. 2021–2023
VR/AR image enhancement: AI-based image restoration and visual quality improvement for AR-HUD systems.

Vivo Mobile Communication Co., Ltd. 2021–2023
Mobile vision sensing: deep learning-based sensor modeling and signal enhancement for mobile imaging.

Tridium Inc. (Honeywell) 2019–2020
AIoT smart building: sensor data analysis and data-driven automation for smart building systems.

Wlkata Robotics 2019–2020
Robotic arm control: motion planning and control algorithms for robotic manipulation.

Honors & Awards

Distinguished Student Paper Award 2024
International Conference on Display Technology (ICDT), Hefei, China
Simulation methods for under-display sensing: Near-field and far-field light propagation.

Distinguished Student Paper Award 2023
International Conference on Display Technology (ICDT), Nanjing, China
Mini-LED LCDs Integrated with High-capacity MIMO Visible Light Communication.

Distinguished Student Paper Award 2022
International Conference on Display Technology (ICDT), Fuzhou, China
Simulation and analysis of edge ghosting for microcapsule e-paper based on particle dynamics and light scattering model.

Best Paper Award 2021
Cross-Strait Postgraduate Workshop on Display Technology (PGWS), Hong Kong, China

Beijing Excellent Undergraduate Thesis 2020
Beijing Municipal Government | Top 1%

Excellent Undergraduate Thesis 2020
China Agricultural University | Top 3%

Selected Conference Presentations

The 34th ACM International Conference on Multimedia (ACM MM 2026) 2026
Rio de Janeiro, Brazil | Upcoming

AAAI Conference on Artificial Intelligence (AAAI-26) 2026
Singapore

Society for Information Display (SID) Display Week 2022
California, USA | Oral presentation

International Conference on Display Technology (ICDT) 2022
Fuzhou, China | Oral presentation

International Display Manufacturing Conference (IDMC) 2022
Taipei, China | Poster presentation

Cross-Strait Postgraduate Workshop on Display Technology (PGWS) 2021
Hong Kong, China | Oral presentation