

Guangxin Zhao

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Notre Dame, Indiana, United States

RESEARCH INTERESTS

My research focuses on trustworthy and human-centered AI for healthcare, with an emphasis on developing intelligent conversational agents that provide reliable, personalized, and context-aware support in high-stakes care settings.

EDUCATION

- **University of Notre Dame** Aug 2025 – Present
Ph.D. in Electrical and Electronics Engineering
◦ Advisor: Dr. Zhi Zheng
Notre Dame, IN, United States
- **Imperial College London** Sep 2024 – Sep 2025
M.Sc. in Communications and Signal Processing
◦ Advisor: Dr. Chen Qin
◦ Distinction
London, United Kingdom
- **University of Birmingham** Sep 2022 – Jun 2024
B.Eng. in Electronic and Electrical Engineering
◦ First Class Honours
◦ GPA: 4.25/4.25
Birmingham, United Kingdom
- **University of Electronic Science and Technology of China (UESTC)** Sep 2020 – Jun 2024
B.Eng. in Photoelectric Science and Engineering
◦ GPA: 3.85/4.00
Chengdu, China

RESEARCH EXPERIENCE

- **The Intelligent Interaction Research (I²R) Lab, University of Notre Dame** Aug 2025 – Present
Graduate Research Assistant (Advisor: Dr. Zhi Zheng)
◦ Developing agent-based conversational AI systems for dementia caregiver support, focusing on reliable response generation, personalized interaction, and context-aware assistance in healthcare settings.
Notre Dame, IN
- **Imperial College London** Dec 2024 – Sep 2025
MSc Dissertation Researcher (Advisor: Dr. Chen Qin)
◦ Developed a diffusion-model-based framework for blind multi-coil MRI reconstruction, jointly optimizing latent representations and unknown k-space sampling masks to recover high-quality images from undersampled MR measurements.
London, UK

HONORS AND AWARDS

- **UESTC Excellent Student Scholarship** | University of Electronic Science and Technology of China Jun 2022

PUBLICATIONS

J=JOURNAL, C=CONFERENCE, T=THESIS, P=PREPRINT, W=WORKING PAPERS

PEER-REVIEWED JOURNAL PAPERS

- [J1] **Zhao, G.**, Li, J., Xi, J., & Luo, L. (2024). An Efficient and Stable Registration Framework for Large Point Clouds at Two Different Moments. *Sensors*, 24(22), 7174. <https://doi.org/10.3390/s24227174> [PDF]

PEER-REVIEWED CONFERENCE PROCEEDINGS

- [C2] **Zhao, G.** (2024). Dissecting and implementing SOVA algorithm variations in convolutional and turbo code decoding: An analytical approach. In *2024 4th Asia-Pacific Conference on Communications Technology and Computer Science (ACCTCS)*. IEEE. <https://doi.org/10.1109/ACCTCS61748.2024.00143> [PDF]
- [C1] **Zhao, G.**, Li, J., Luo, L., & Cheng, H. (2023). A deep neural network-based distortion registration technique for astronomical images. In *Fourteenth International Conference on Information Optics and Photonics (CIOP 2023)*, 12935, 49–59. SPIE. <https://doi.org/10.1117/12.3000016> [PDF]

OTHER PUBLICATIONS

- [P1] **Zhao, G.**, Zheng, J., Boustani, M., Nabrzyski, J., Jiang, M., Shi, Y., & Zheng, Z. (2026). ADRD-Bench: A preliminary LLM benchmark for Alzheimer's disease and related dementias. *arXiv preprint arXiv:2602.11460*. Manuscript submitted to ARR May Cycle. <https://arxiv.org/abs/2602.11460> [PDF]

WORK EXPERIENCE

- **SCLEAD**

Jun 2023 – Jul 2023

Research Assistant Intern

- Fine-tuned a CycleMorph model on simulated and real astronomical images by optimizing model parameters.
- Evaluated registration/reconstruction performance using SSIM and MSE to assess accuracy and generalization.

ACADEMIC ACTIVITIES AND SERVICE

- **Conference Reviewer**

- RO-MAN 2026

2026