LINWEI TAO

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EDUCATION

School of Computer Science, University of Sydney Sydney, Australia
Ph.D., Computer Science 2023 - 2026 *(expected)*
- Advisors: Chang Xu & Daochang Liu
- Research area: Uncertainty Calibration, Machine Learning

School of Computer Science, University of Sydney Sydney, Australia
M.Phil., Computer Science 2021 - 2023
- Advisors: Chang Xu & Lijun chang
- Research area: Uncertainty Calibration, Neural Architecture Search

School of Computer Science, University of Sydney Sydney, Australia
M.E., Data Science 2020 - 2021

Huazhong University of Science and Technology Wuhan, China
B.E., Communication Engineering 2013 - 2017
- Received Science and Technology Scholarship

PUBLICATIONS

1. Jinxu Lin, **Linwei Tao**, Minjing Dong, Chang Xu. Uncertainty Weighted Gradients for Model Calibration. *The IEEE / CVF Computer Vision and Pattern Recognition Conference, CVPR* 2025.

2. Jinxu Lin, **Linwei Tao**, Minjing Dong, Chang Xu. Diffusion Attribution Score: Evaluating Training Data Influence in Diffusion Model. *International Conference on Learning Representations, ICLR* 2025. (Spotlight, 5.1% of 11,500 submissions)

3. **Linwei Tao**, Minjing Dong, Chang Xu. Feature Clipping for Uncertainty Calibration. *AAAI Conference on Artificial Intelligence, AAAI* 2025.

4. Lei Pan, Wuyang Luan, Yuan Zheng, Junhui Li, **Linwei Tao**, Chang Xu. GraphFusion: Integrating Multi-Level Semantic Information with Graph Computing for Enhanced 3D Instance Segmentation. *Neurocomputing*, 2024.

5. **Linwei Tao**, Younan Zhu, Haolan Guo, Minjing Dong, Chang Xu. A Benchmark Study on Calibration. *International Conference on Learning Representations, ICLR* 2024.

6. **Linwei Tao**, Minjing Dong, Chang Xu. Dual Focal Loss for Calibration. *International Conference on Machine Learning, ICML* 2023.

7. **Linwei Tao**, Minjing Dong, Daochang Liu, Changming Sun, Chang Xu. Calibrating a Deep Neural Network with Its Predecessors. *International Joint Conference on Artificial Intelligence, IJCAI* 2023.

8. Yingqing Yuan, **Linwei Tao**, Haohui Lu, Matloob Khushi, Imran Razzak, Mark Dras, Jian Yang, Usman Naseem. KG-UQ: Knowledge Graph-Based Uncertainty Quantification for Long Text in Large Language Models. *International World Wide Web Conference, WWW* 2025 Workshop on Sustainable AI for the Future Web

PREPRINTS

1. **Linwei Tao**, Haolan Guo, Minjing Dong, Chang Xu. Consistency Calibration: Improving Uncertainty Calibration via Consistency among Perturbed Neighbors.

2. Yunke Wang, **Linwei Tao**, Bo Du, Yutian Lin, Chang Xu. Visual Imitation Learning with Calibrated Contrastive Representation.

3. Younan Zhu, **Linwei Tao**, Minjing Dong, Chang Xu. Attention Calibration for Reducing Hallucination in Large Vision-Language Models.

4. Haoyang Luo, **Linwei Tao**, Minjing Dong, Chang Xu. Beyond One-Hot Labels: Semantic Mixing for Model Calibration.

EXPERIENCES	**Teaching Assistant** | University of Sydney, Sydney	2022 - now
	• COMP5329 Deep Learning	Spring 2022, 2023, 2024, 2025
	• HTIN5005 Applied Healthcare Data Science	Fall 2022, 2023
	• OCMP5329 Deep Learning (Online)	Fall 2024
	• BUSS6002 Data Science in Business	Spring 2024, Fall 2024
	• QBUS5010 Intro to Dashboarding and Data Visualisation	Fall 2024
	Construction Supervisor | Songjiang Construction Union, Shanghai	2017.07 - 2019.10
	IOS Developer Intern | Trip.com, Shanghai	2015.06 - 2015.09
	Frontend Developer Intern | Sunallies, Shanghai	2014.06 - 2014.09

AWARDS AND GRANTS	• **Google Cloud Research Credits Award ($2340 AUD)**, Google	2024.05
	• **International Tuition Fee Scholarship**, USYD	2023.06
	• **Faculty of Engineering Research Support Scholarship**, USYD	2023.05
	• **Excellent Student Cadre**, HUST,	2015.09
	• **Science and Technology Scholarship**, HUST	2014.06

TALKS

- "ITCD: Image to Text Translation for Classification by Diffusion Models", at Efficiency, Security, and Generalization of Multimedia Foundation Models Workshop @ ACM Multimedia 2024 — 2024.10

- "Dual Focal Loss for Calibration", at AI-Time — 2023.05

- "Calibrating a Deep Neural Network with Its Predecessors", at University of Sydney, Deep Learning class — 2023.02

ACADEMIC SERVICES

Conference Reviewer: *ICML, NeuIPS, ICLR, CVPR, ICCV, AAAI, IJCAI, ACMMM, AISTATS*

Journal Reviewer: *T-MM, TMLR, DAMI, TPAMI, Machine Learning*