Yadan Luo (she/her)

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Personal Statement

Research. Dr Luo is a Senior Lecturer and Australian Research Council (ARC) DECRA in the School of EECS, The University of Queensland. Dr Luo received her PhD from the University of Queensland in 2021 and her research interests mainly include generalisable learning from imperfect data, especially by leveraging domain adaptation/generalization, OOD detection, few-shot/zero-shot learning, and active learning to empower applications in 2D and 3D multimedia data analysis. She has published 50+ papers in **CORE A*** venues, attracting 2517 citations (Google Scholar, Apr 2025). Dr Luo has secured research awards, including the **Google PhD Fellowship** 2020 (the mere 4 recipients in Australia), the **Best Student Paper Award**, **Best Demo Award** and **Outstanding Area Chair Award** at ACM Multimedia (Top 1 in multimedia). She is also a recipient of the **ICT Young Achiever** in Women in Technology (WiT), UQ Foundation Research Excellence Award, Early Career Research Award, further validating the significance of her contributions to the field.

Professional Services. Dr Luo has actively served as a key organizer for several top-tier multimedia conferences, including roles such as **Program Chair** for SIGIR-AP'25, **Short Paper Chair** for WWW'25, **Publication Chair** for MM'24, **Doctoral Symposium Chair** for MMAsia'25, **Short Paper and Demo Chair** for MMAsia'24 and **Volunteer Coordination Chair** for MMAsia'21. Additionally, she has contributed as an **Associate Editor** (AE) for prestigious journals like the IEEE Transactions on Circuits and Systems for Video Technology (TCSVT). Dr Luo has been involved in the Women in ICT community, supporting and encouraging female researchers to pursue careers in this field. Her team has also demonstrated their research outcomes to school students through interactive projects on various occasions, greatly inspiring the new generation's curiosity and interest in studying technology and pursuing careers in computer science.

WORK EXPERIENCE

Senior Lecturer	Australia
The University of Queensland	Jan. 2025 - Present
ARC Discovery Early Career Researcher Awardee (DECRA)	Australia
The University of Queensland	Jul. 2024 - Present
Lecturer/Assistant Professor	Australia
The University of Queensland	Aug. 2022 - Jun. 2024
\circ INFS4205/7205 Advanced Techniques for High-dimensional Data: Po	· · ·
$\circ~{\bf INFS3200}$ Advanced Database Systems: Distributed Databases, DataLak	e
• INFS3208 Cloud Computing: Docker, Docker Swarm, Kubernetes, SparkM	L in GCP
Postdoctoral Research Fellow	Australia
The University of Queensland	May. 2021 - Aug. 2022
EDUCATION	
The University of Queensland	Australia
• Ph.D in Computer Science: Advisors: Prof Helen Huana, Dr Mahsa Baktash.	Jan. 2018 - Sep. 2021

University of Electronic Science and Technology of ChinaChinaB.Sc. in Computer Science and Engineering, Yingcai Honors CollegeAug. 2013 – July. 2017

Honors & Awards

- UQ Foundation Research Excellence Award: The University of Queensland, 2024
- National Transport Research Award: National Technical Research Organisation (NTRO), 2023
- Early Career Research Award: Faculty of EAIT, The University of Queensland 2023
- Best Student Paper Award: ACM International Conference on Multimedia (MM) 2023
- Best Demo Award: ACM International Conference on Multimedia (MM) 2023
- Queensland State iAwards (Finalist): Australian Information Industry Association (AIIA), 2023
- Top 500 in Multimedia (MM): Multimedia Scholar Ranked 248 Globally in Aminer, 2023-2024
- Chinese Young Female Scholars in Artificial Intelligence: Baidu Academic, 2023
- Google PhD Fellowship: Awarded to 47 CS PhDs worldwide [Link] (Mentor: Kevin Swersky, Google Brain)
- Best Paper Award: Australasian Database Conference (ADC) 2020
- Runner Up Award: University of Queensland 3 Minute Thesis (3MT) Competition, 2019
- ICT Young Achiever Award: Women in Technology (WiT) Australia, 2018, Link

Selected Publications

[†] indicates the (corresponding author).

- C1 Ziying Song, Caiyan Jia, Lin Liu, Hongyu Pan, Yongchang Zhang, Junming Wang, Xingyu Zhang, Shaoqing Xu, Lei Yang, Yadan Luo[†]. "Don't Shake the Wheel: Momentum-Aware Planning in End-to-End Autonomous Driving", CVPR 2025, CORE A*.
- C2 Zhuoxiao Chen, Junjie Meng, Mahsa Baktashmotlagh, Zi Huang, Yadan Luo[†]. "MOS: Model Synergy for Test-Time Adaptation on LiDAR-Based 3D Object Detection", ICLR Oral (1.8%) 2025, CORE A^{*}.
- C3 Weikang Meng, **Yadan Luo**, Xin Li, Dongmei Jiang, Zheng Zhang. "PolaFormer: Polarity-aware Linear Attention for Vision Transformers", **ICLR** 2024, CORE A*.
- C4 Jia Syuen Lim, Zhuoxiao Chen, Zhi Chen, Mahsa Baktashmotlagh, Xin Yu, Zi Huang, **Yadan Luo**[†]. "DiPEx: Dispersing Prompt Expansion for Class-Agnostic Object Detection", **NeurIPS** 2024, CORE A*.
- C5 Haoyang Luo, Zheng Zhang, **Yadan Luo**. "Exploiting Descriptive Completeness Prior for Cross Modal Hashing with Incomplete Labels", **NeurIPS** 2024, CORE A*.
- C6 Bowen Yuan, Zijian Wang, Mahsa Baktashmotlagh, Yadan Luo, Zi Huang. "Color-Oriented Redundancy Reduction in Dataset Distillation", NeurIPS 2024, CORE A*.
- C7 Djamahl Etchegaray, Zi Huang, Tatsuya Harada, **Yadan Luo**[†]. "Find n' Propagate: Open-Vocabulary 3D Object Detection in Urban Environments", **ECCV** 2024, CORE A*.
- C8 Bo Peng^{*}, Yadan Luo^{*}, Yonggang Zhang, Yixuan Li, Fang Zhen. "ConjNorm: Tractable Density Estimation for Out-of-Distribution Detection", ICLR 2024, CORE A^{*}.
- C9 Zixin Wang, **Yadan Luo**[†], Zhi Chen, Sen Wang, Zi Huang. "Cal-SFDA: Source-Free Domain-adaptive Semantic Segmentation with Differentiable Expected Calibration Error", **Best Student Paper Award**, **MM** 2023, CORE A*.
- C10 Djamahl Etchegaray, **Yadan Luo**[†], Zachary FitzChance, Anthony Southon, Jinjiang Zhong. "Open-RoadAtlas: Leveraging VLMs for Road Condition Survey with Real-Time Mobile Auditing", **Best Demo Award**, **MM** 2023, CORE A*.
- C11 Yadan Luo[†], Zhuoxiao Chen, Zhen Fang, Zheng Zhang, Mahsa Baktash., Zi Huang. "KECOR: Kernel Coding Rate Maximization for Active 3D Object Detection", ICCV 2023, CORE A*.
- C12 Zhuoxiao Chen, Yadan Luo[†], Zi Huang, Zijian Wang, Mahsa Baktash. "Revisiting Domain-Adaptive 3D Object Detection by Reliable, Diverse and Class-balanced Pseudo-Labeling", ICCV 2023, CORE A*.
- C13 Zijian Wang, Yadan Luo, Zheng Liang, Zi Huang, Mahsa Baktash. "How Far Pre-trained Models are from Neural Collapse on the Target Dataset Informs Their Transferability", ICCV 2023, CORE A*.
- C14 Yiyun Zhang, Zijian Wang, Yadan Luo, Xin Yu, Zi Huang. "Learning Efficient Unsupervised Satellite Imagebased Building Damage Detection", ICDM 2023, CORE A*.
- C15 Yadan Luo, Zhuoxiao Chen, Zijian Wang, Zi Huang, Mahsa Baktash.. "Exploring Active 3D Object Detection from a Generalization Perspective", ICLR Spotlight (5.6%), 2023, CORE A*.

- C16 Zijian Wang, **Yadan Luo**, Zi Huang, Mahsa Baktash. "FFM: Injecting Out-of-Domain Knowledge via Factorized Frequency Modification", **WACV** 2023, CORE A.
- C17 Zijian Wang, **Yadan Luo**, Ruihong Qiu, Zi Huang, Mahsa Baktash.. "Learning to Diversify for Single Domain Generalization", **ICCV** 2021, **ESI Highly Cited Paper**, CORE A*.
- C18 Zhi Chen, Yadan Luo, Ruihong Qiu, Sen Wang, Zi Huang, Jingjing Li, Zheng Zhang. "Semantics Disentangling for Generalized Zero-Shot Learning", ICCV 2021, CORE A*.
- C19 Yang Li, Tong Chen, Yadan Luo, Hongzhi Yin, Zi Huang. "Discovering Collaborative Signals for Next POI Recommendation with Iterative Seq2Graph Augmentation", IJCAI 2021, CORE A*.
- C20 Zhi Chen, Yadan Luo, Sen Wang, Ruihong Qiu, Jingjing Li, Zi Huang. "Mitigating Generation Shifts for Generalized Zero-shot Learning", MM 2021, CORE A*.
- C21 Yadan Luo^{*}, Zijian Wang^{*}, Zi Huang, Mahsa Baktash. "Progressive Graph Learning for Open-Set Domain Adaptation", ICML 2020, CORE A^{*}.
- C22 Yadan Luo, Zi Huang, Zijian Wang, Zheng Zhang, Mahsa Baktash. "Adversarial Bipartite Graph Learning for Video Domain Adaptation", MM Oral (5.8%), 2020, CORE A*.
- C23 Zijian Wang, Yadan Luo, Zi Huang, Mahsa Baktash.. "Prototype-Matching Graph Network for Heterogeneous Domain Adaptation", MM 2020, CORE A*.
- C24 Ziwei Wang, Zi Huang, and Yadan Luo. "Human Consensus-Oriented Image Captioning", IJCAI 2020, CORE A*.
- C25 Ziwei Wang, Zi Huang, and Yadan Luo. "PAIC: Parallelised Attentive Image Captioning", Best Paper Award, ADC 2020.
- C26 Yadan Luo, Zi Huang, Zheng Zhang, Ziwei Wang, Mahsa Baktash., and Yang Yang. "Learning from the Past: Continual Meta-Learning with Bayesian Graph Neural Networks", AAAI 2020, CORE A*.
- C27 Zhi Chen, Jingjing Li, Yadan Luo, Zi Huang, and Yang Yang. "CANSZL: Cycle-Consistent Adversarial Networks for Zero-shot Learning from Natural Language", WACV 2020, CORE A.
- C28 Ziwei Wang^{*}, **Yadan Luo**^{*}, Hongzhi Yin, Zi Huang. "Look Deeper See Richer: Depth-aware Image Paragraph Captioning", **MM** 2019, CORE A^{*}.
- C29 Yadan Luo, Zi Huang, Zheng Zhang, Ziwei Wang, Jingjing Li, Yang Yang. "Curiosity-driven Reinforcement Learning for Diverse Visual Paragraph Generation", MM Oral (5.8%), 2019, CORE A*.
- C30 Zijian Wang, Zheng Zhang, Yadan Luo, and Zi Huang. "Deep Collaborative Discrete Hashing with Semantic-Invariant Structure." SIGIR 2019, CORE A*.
- C31 Yadan Luo, Ziwei Wang, Zi Huang, Yang Yang, Cong Zhao. "Coarse-to-Fine Annotation Enrichment for Segmentation Learning", CIKM, 2018, CORE A.
- C32 Yang Yang, Yadan Luo, Weilun Chen, Fumin Shen, Ji Shao, Heng Tao Shen. "Zero-shot Hashing via Transferring Supervised Knowledge", MM Oral (5.8%) 2017, CORE A*.
- J1 Zhiheng Li, Xin Mao, Desheng Feng, Mengran Li[†], Xiaoyong Xu, Yadan Luo[†], Linzhou Zhuang, Rijia Lin, Tianjiu Zhu, Fengli Liang, Zi Huang, Dong Liu, Zifeng Yan, Aijun Du, Zongping Shao, Zhonghua Zhu[†]. "Prediction of perovskite oxygen vacancies for oxygen electrocatalysis at Different Temperatures", Nature Communications, 2024, CORE A*, IF: 19.5.
- J2 Zixin Wang, Yadan Luo, Zheng Liang, Zhuoxiao Chen, Sen Wang, Zi Huang. "In Search of Lost Online Testtime Adaptation: A Survey", International Journal of Computer Vision (IJCV), 2024, CORE A*, IF: 19.5.
- J3 Jun Nie, Yadan Luo, Shanshan Ye, Yonggang Zhang, Xinmei Tian, Zhen Fang. "Out-of-Distribution Detection with Virtual Outlier Smoothing (IJCV), 2024, CORE A*, IF: 19.5.
- J4 Yadan Luo, Zijian Wang, Zhuoxiao Chen, Zi Huang, Mahsa Baktash. "Source-Free Progressive Graph Learning for Open-Set Domain Adaptation", IEEE Transactions on Pattern Analysis and Machine Intelligence (TPAMI), 2023, CORE A*, IF: 23.6.
- J5 Zheng Wang, Xing Xu, Yadan Luo, Guoqing Wang, Yang Yang. "Hypercomplex Context Guided Interaction Modeling for Scene Graph Generation", Pattern Recognition (PR), 2023, CORE A*, IF: 7.2.
- J6 Zheng Zhang, Jianning Wang, Lei Zhu, Yadan Luo, Guangming Lu. "Deep Collaborative Graph Hashing for Discriminative Image Retrieval", Pattern Recognition (PR), 2023, CORE A*, IF: 7.2.
- J7 Zhi Chen, Yadan Luo, Sen Wang, Jingjing Li, Zi Huang. "GSMFlow: Generation Shifts Mitigating Flow for Generalized Zero-shot Learning", IEEE Transactions on Multimedia (TMM), 2020, CORE A*, IF:8.4.

- J8 Zijian Wang, Zheng Zhang, Yandan Luo, Zi Huang, Heng Tao Shen. "Deep Collaborative Discrete Hashing with Semantic-invariant Structure Construction", IEEE Transactions on Multimedia (TMM), 2020, CORE A*, IF:8.4.
- J9 Yadan Luo, Zi Huang, Hongxu Chen, Yang Yang, Hongzhi Yin, Mahsa Baktash. "Interpretable Signed Link Prediction with Signed Infomax Hyperbolic Graph", IEEE Transactions on Knowledge and Data Engineering (TKDE), 2021, CORE A*, IF: 8.9.
- J10 Yadan Luo, Zi Huang, Yang Li, Fumin Shen, Yang Yang, Peng Cui. "Collaborative Learning for Extremely Low Bit Asymmetric Hashing", IEEE Transactions on Knowledge and Data Engineering (TKDE), 2020, CORE A*, IF:8.9.
- J11 Zheng Zhang, Luyao Liu, Yadan Luo, Zi Huang, Fumin Shen, Heng Tao Shen, Guangming Lu. "Inductive Structure Consistent Hashing via Flexible Semantic Calibration", IEEE Transactions on Neural Networks and Learning Systems (TNNLS), 2020, CORE A*, IF: 14.3.
- J12 Xuewei Qi, Yadan Luo, Guoyuan Wu, Kanok Boriboon., Mattew J. Barth. "Deep Reinforcement Learning Enabled Self-learning Control for Energy Efficient Driving", Transportation Research Part C: Emerging Technologies 2019, IF: 8.3.
- J13 Yadan Luo, Yang Yang, Fumin Shen, Zi Huang, Pan Zhou, and Heng Tao Shen. "Robust Discrete Code Modeling for Supervised Hashing", Pattern Recognition (PR), 2018, CORE A*, IF: 8, ESI Hot Paper & ESI Highly Cited Paper.

Selected Invited Talks

- 2024: "Reliable Model Predictions in the Open World Through the Lens of OOD Detection", Invited Talk, The 85th TrustML Young Scientist Seminar, RIKEN Japan. [Official Posts] [YouTube]
- 2024: "Reliable Model Predictions in the Open World Through the Lens of OOD Detection", Invited Talk, Institute of Science Tokyo.
- 2024: "Beyond AI: Tech Panel in Corperate Industry", Plenary Talk, UQ×Microsoft×Canva.
- 2024: "Maximizing Data Efficiency in an Open World", Invited Talk, UNSW Sydney.
- 2024: "Maximizing Data Efficiency in an Open World", Invited Talk, Chongqing University.
- 2023: "AI Her Way: The Rise of Women's Power in Shaping AI Futures", Invited Talk, EECS@UQ.

PROFESSIONAL SERVICES

• Journal Editor/Conferences Area Chair/Program Committee:

- Associate Editor: IEEE Transactions on Circuits and Systems for Video Technology, 2024-Present
- Area Chair: NeurIPS 2025, ICML 2025, ICLR 2025, CVPR 2025, MM 2024, MM 2023, AJCAI 2023
- Program Committee Member: ICCV 2025, NeurIPS 2024, ECCV 2024, ICML 2024, CVPR 2024, NeurIPS 2023, ICCV 2023, CVPR 2023, ECCV 2022, ACM MM 2021, CIKM 2021, TPAMI, TCSVT, TNNLS, TKDE, PR, TMM, TIP, TCYB, VLDB.
- **Funding Reviewer**: ARC Discovery Projects, Future Fellowship Projects, Linkage Projects, Discovery Early Career Researcher Award

• Conferences Organising Committee:

- Program Chair: ACM-SIGIR Information Retrieval in the Asia Pacific (SIGIR-AP)
- Short Paper Chair: The Web Conference (WWW) 2025
- Publication Chair: ACM Multimedia (MM) 2024
- Short Paper and Demo Chair: ACM Multimedia Asia (MMAsia) 2024
- Doctoral Symposium Chair: ACM Multimedia Asia (MMAsia) 2025
- Short Paper Chair: The Web Conference (WWW) 2025
- Program Co-Chair: Australasian Joint Conference on Artificial Intelligence (AJCAI 2026)
- Session Chair: ICDE 2023, WISE 2022, CIKM 2021, AJCAI 2023

Advising

- Mr Zhuoxiao Chen: (PhD@UQMM Lab), on the topic: Adaptive Autonomous Driving; now Research Scientist at Oracle;
- Ms Zixin Wang: (PhD@UQMM Lab), on the topic: Test-time Domain Adaptation; now Postdoctoral Research Fellow at University of Queensland;
- Mr Djamahl Etchegaray: (PhD@UQMM Lab), on the topic: Open-vocabulary Autonomous Driving;
- Mr Jia Syuen Lim: (PhD@UQMM Lab), on the topic: Out-of-distribution Detection in Vision;
- Mr Fengyi Zhang: (PhD@UQMM Lab), on the topic: 3DGS/4DGS in Autonomous Driving;
- Ms Yuxia Fu: (PhD@UQMM Lab), on the topic: Data Efficiency in Autonomous Driving;
- Mr Zhizhen Zhang: (PhD@UQMM Lab), on the topic: Generalisable VLA Models;

MAJOR RESEARCH GRANTS

- 2024-2026: Australian Research Council (ARC) Discovery Project (DP), "Embracing Changes for Responsive Video-sharing Services", \$632,963, Chief Investigator (CI).
- 2024-2026: Australian Research Council (ARC) Discovery Early Career Researcher Award (DECRA), "Towards Evolvable and Sustainable Multimodal Machine Learning", \$458,823, Chief Investigator (CI).
- 2024-2026: Baosteel-Australia Joint Research and Development Centre, "AI foundation models for enhanced smart SOP monitoring in steel Industry", **\$250,000**, Chief Investigator (CI).
- 2023-2027: Grains Research and Development Corporation (GRDC), "Analytics for the Australian Grains Industry (AAGI)", \$12,000,000, Co-Chief Investigator (CI).
- 2022-2025: Research Contract with Logan City Council, "RoadAtlas: Automated Road Hazard Detection and Asset Management", **\$300,000**, Lead Chief Investigator (CI).
- 2022-2023: Research Contract with Zeotech, "Data Driven Approach to Zeolite Prediction and Analysis", \$300,000, Co-Chief Investigator (CI).
- 2022-2022: HaBS EAIT ECR Collaboration Seed Funding Grant, "Merging Biomechanics and Artificial Intelligence to Understand Human Foot Function", \$19,987, Chief Investigator (CI).
- 2022-2023: Cyber Research Seed Funding, "Resilient and Privacy-reserving Platform for Automated Road Defect Detection and Asset Management", **\$74,976**, Chief Investigator (CI).
- 2021-2023: Australian-Korea Tech Bridge Grant, "Developing a Proof-of-concept Self-contact Tracing App to Support Epidemiological Investigations and Outbreak Response", \$128,500, .