Dr. Shixun Huang

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EDUCATION

RMIT University	Melbourne, Australia
Doctor of Philosophy.	*Aug. 2017 – June 2021*
University of Melbourne	Melbourne, Australia
Master of Information Technology	*July 2015 – Aug. 2017*
Nanjing University	Nanjing, China
Bachelor of Software Engineering	*Sept. 2011 – June 2015*

WORKING EXPERIENCE

Lecturer at University of Wollongong	July. 2023 –
Research Fellow at RMIT University (funded by an ARC discovery project)	Oct. 2021 – June. 2023
Research Intern at Tencent	May. 2021 – Aug. 2021
Visiting Scholar at Tsinghua University	Oct. 2020 – Feb. 2021
Visiting Scholar at Singapore Management University	Aug. 2019 – Feb. 2020
Intern at SAP	July 2014 – Feb. 2015

TEACHING EXPERIENCE (*Two-time College Top Course Award*) AND EXPERTISE

Guest Lecturer, Teaching Assistant in Big Data Management — RMIT University, 2022
Duty: Designing and giving lectures and tutorials. Mean Good Teaching Score (mGTS[1]): 4.75 vs 4.16 (RMIT average).

Teaching Assistant in Big Data Management — RMIT University, 2020
Duty: Giving tutorials on big data techniques (e.g., index design) and marking. mGTS: 4.53 vs 4.11.

Teaching Assistant in Big Data Management — RMIT University, 2019
Duty: Giving tutorials on big data techniques (e.g., query processing) and marking. mGTS: 4.76 vs 4.09.

Teaching Assistant in Big Data Management — RMIT University, 2018
Duty: Giving tutorials on big data techniques (e.g., theoretical analysis) and marking. mGTS: 5.0 out of 5.0.

Expertise: Courses related to Data Science, Data Management and Machine Learning such as Relational Database Management Systems, Computational Data Analysis, Analysis of Experiments and Data Structures and Algorithms.

SUPERVISION EXPERIENCE

Co-supervised PhD students at RMIT: Tingting Wang (2021 -), Ge Lee (2022 -) and Hai Li (upcoming).

Mentored master students: Yanghao Zhou (NUAA), Xiaoyu Zhang (to completion at RMIT) and Hai Lan (RMIT).

RESEARCH INTERESTS AND HIGHLIGHTS

Shixun is interested in data data analytics problems that arise at the cross-intersection of data management, data mining, machine learning, and theoretical computer science. These problems have considerable important applications (e.g., route discovery and planning, online influencer selection and pricing, community detection and friend recommendation), and Shixun solves these problems efficiently and effectively by proposing highly novel algorithms (e.g., approximate, heuristic and machine-learning based algorithms). Shixun's solutions are practical, deployable (e.g., Shixun has one friend recommendation algorithm deployed at Tencent), open access to public, and endorsed by peers, as evidenced by publications in top venues such as SIGMOD, VLDB, ICDE and SIGKDD.

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[1]https://sites.rmit.edu.au/dsclt/understanding-ces/

Publications (Equal contribution[+], https://scholar.google.com/citations?user=NLEeOI4AAAAJ&hl)

Shixun Huang and Zhifeng Bao. "Shortest Paths Discovery in Uncertain Networks via Transfer Learning." To appear in ACM International Conference on Management of Data (**SIGMOD**), full research paper, 2023. (**CORE**[2] **A***)

Shixun Huang, Junhao Gan, Zhifeng Bao, and Wenqing Lin. "Managing Conflicting Interests of Stakeholders in Influencer Marketing." To appear in ACM International Conference on Management of Data (**SIGMOD**), full research paper, 2023. (**CORE A***)

Shixun Huang, Wenqing Lin, Zhifeng Bao, and Jiachen Sun. "Influence Maximization in Real-World Closed Social Networks." The 49th International Conference on Very Large Data Bases (**VLDB**), pp. 180-192, 2023. (**CORE A***)

Tingting Wang[+], **Shixun Huang**[+], Zhifeng Bao, J. Shane Culpepper, and Reza Arablouei. "Representative Routes Discovery From Massive Trajectories." The 28th ACM SIGKDD Conference on Knowledge Discovery and Data Mining (**SIGKDD**), pp. 4059-4069, 2022. (**CORE A***)

Xiaoyu Zhang, **Shixun Huang**, Zhifeng Bao, and Hai Dong. "Edge Node Placement with Minimum Costs: When User Tolerance on Service Delay Matters." The 19th Springer International Conference on Service Oriented Computing (**ICSOC**), pp. 765-772, 2021. (**CORE A**)

Shixun Huang, Yuchen Li, Zhifeng Bao, and Zhao Li. "Towards Efficient Motif-based Graph Partitioning: An Adaptive Sampling Approach." The 37th International Conference on Data Engineering (**ICDE**), pp. 528-539, 2021. (**CORE A***)

Shixun Huang, Zhifeng Bao, Guoliang Li, Yanghao Zhou, and J. Shane Culpepper. "Temporal Network Representation Learning via Historical Neighborhoods Aggregation." The 36th IEEE International Conference on Data Engineering (**ICDE**), pp. 1117-1128, 2020. (**CORE A***)

Shixun Huang, Zhifeng Bao, J. Shane Culpepper, and Bang Zhang. "Finding Temporal Influential Users over Evolving Social Networks." The 35th IEEE International Conference on Data Engineering (**ICDE**), pp. 398-409, 2019. (**CORE A***)

Shixun Huang, Zhifeng Bao, J. Shane Culpepper, Bang Zhang, and Ping Zhang. "A Linear-time Algorithm for Finding Induced Planar Subgraphs." The 17th Symposium on Experimental Algorithms (**SEA**), pp. 23:1-23:15, 2018. (**CORE B**)

Sheng Wang, Zhifeng Bao, **Shixun Huang**, and Rui Zhang. "A Unified Processing Paradigm for Interactive Location-based Web Search." The 11th ACM International Conference on Web Search and Data Mining (**WSDM**), pp. 601-609, 2018. (**CORE A***)

Research Funding Expertise

I participated in writing research tasks in a ARC discovery project ($364,295) and will apply for DECRA in 2023.

Professional Services

Program Chairmanships: co-chair of Encore Track of Australasian Database Conference (ADC) 2023.

Program Committee Memberships: ACM KDD 2022, ACM WSDM 2022, ACM CIKM (2022 and 2021).

Awards & Scholarship

College Top Course Award ×2	RMIT University, 2018 & 2022
CORE Distinguished Dissertation Award Nomination	(The only from) RMIT University, 2021
Best PhD Thesis Award	School of Computing Technologies, RMIT University, 2021
HDR Outstanding Research Achievement Award	School of Computing Technologies, RMIT University, 2020
Google PhD Fellowship Nomination ×2	RMIT University, 2019 & 2020
Data61 PhD Scholarship Top-up	CSIRO, 2017-2021
PhD Full Scholarship	RMIT University, 2017-2021
Best Master Thesis Nomination (mark: 98 out of 100)	University of Melbourne, 2017

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[2]https://www.core.edu.au/home