

# ALEXANDER ZHOU

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## PERSONAL DETAILS

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**Full Name:** Alexander Tiannan ZHOU

**Date of Birth:** 13/01/1997

**Citizenship:** Australian

**Homepage:** atzhou.com

## EDUCATION

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**The Hong Kong University of Science and Technology** *2019 - Present*  
Doctor of Philosophy in Computer Science  
Supervisor: Prof. Lei Chen

**The University of Queensland** *2014 - 2019*  
Bachelor of Engineering (Honours) [Software Engineering] and Bachelor of Science [Statistics]  
Thesis Supervisor: Dr. Hongzhi Yin

**Brisbane Grammar School** *2009 - 2013*

## RESEARCH EXPERIENCES

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**University of Waterloo** *Nov 2022 - March 2023*  
*Visiting Overseas Researcher*

- Spent time at the Data Systems Group at the University of Waterloo working under Prof. Tamer Özsu.
- Involved with working on modelling Positive Communities whilst being cognisant of undesirable attributes these systems traditionally can contain.

**The Chinese University of Hong Kong** *2018 - 2019*  
*Research Assistant*

- Worked with a group of researchers in The Department of Systems Engineering and Engineering Management under the supervision of Prof Jeffrey Xu Yu.
- Involved with research projects in graph databases, specifically with the discovery of maximum edge bicliques in large graphs.

**The University of Queensland** *2018 - 2019*  
*Thesis Project*

- Worked under the supervision of Dr. Hongzhi Yin on a year-long thesis project regarding graph coarsening for network embedding.
- Involved in a conference paper publication [SIGKDD 2019].
- Received grade of 7/7 (High Distinction)

**The University of New South Wales**  
*Summer Research Scholarship*

2017 - 2018

- Worked under the supervisions of Prof. Xuemin Lin, A/Profs. Wenjie Zhang and Ying Zhang regarding finding cohesive subgraphs in large graphs.
- Involved in two conference paper publications [ADC 2018 and DASFAA 2018].

**Siemens**  
*Internship*

2016 - 2017

- Located in Suzhou, China
- Worked on a series of small projects including a targeted web-crawler in Java and using JSoup in conjunction with a MongoDB database.

## TEACHING EXPERIENCES

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**The Hong Kong University of Science and Technology**  
*Teaching Assistant*

2020 - 2024

- Worked as a research assistant for the courses “COMP4331: Data Mining” and “COMP1029V: Excel VBA Programming Bridging Cours” for Prof. Lei Chen and Dr. Gibson Lam respectively.

**The University of Queensland**  
*Teaching Assistant*

2017 - 2019

- Worked as a teaching assistant to the course “INFS1200/7900: Introduction to Information Systems” which contained over 600 students per semester. The course was under the supervision of Prof. Shazia Sadiq (S2 2017, S1 2018, S1 2019), Prof. Xue Li (S1 2017) and Dr. Hassan Khosravi (S2 2018).
- Course outline: Information systems analysis, design and implementation, relational database technology, data modelling, data querying using SQL.
- Activities and Responsibilities: Taught the course content in tutorial sessions, ran practical sessions using phpMyAdmin, grading and creation of assessment, creating of course content material and interviewing and selecting potential new teaching assistants.
- Ranked highly by students with a tutor evaluation of 4.83/5.

## PUBLICATIONS

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**Citations:** 367 / **h-Index:** 7 / **i10-Index:** 7

**Google Scholar ID:** zQSmMZkAAAAJ

**DBLP Key:** 219/5776

(\*): Denotes works where the first author was primarily led by myself.

1. **A Zhou**, Y Wang, L Chen, T Özsu. Positive Communities on Signed Graphs That Are Not Echo Chambers: A Clique-Based Approach. *IEEE International Conference on Data Engineering (ICDE)*. 2024

2. K Chung, **A Zhou**, Y Wang, L Chen. Maximum Balanced  $(k, \epsilon)$ -Bitruss Detection in Signed Bipartite Graph. *International Conference on Very Large Databases (PVLDB)*. 2024 (\*)
3. **A Zhou**, Y Wang, L Chen. Butterfly Counting and Bitruss Decomposition on Uncertain Bipartite Graphs. *International Journal on Very Large Databases (VLDBJ)*. 32: 1013-1036. 2023
4. A Tian, **A Zhou**, Y Wang, L Chen. Maximal D-Truss Search in Dynamic Directed Graphs. *International Conference on Very Large Databases (PVLDB)*. 16(9): 2199-2211. 2023 (\*)
5. M Imran, H Yin, T Chen, Q Nguyen, **A Zhou**, K Zheng. ReFRS: Resource-efficient Federated Recommender System for Dynamic and Diversified User Preferences. *ACM Transactions on Information Systems (TOIS)*. 41(3): 1-30. 2023
6. X Sun, H Yin, B Liu, Q Meng, J Cao, **A Zhou**, H Chen. Structure Learning via Meta-Hyperedge for Dynamic Rumor Detection. *IEEE Transactions on Knowledge and Data Engineering (TKDE)*. 35(9): 9128-9139. 2022
7. Y Wang, R Xu, X Jian, **A Zhou**, L Chen. Towards Distributed Bitruss Decomposition on Bipartite Graphs. *International Conference on Very Large Databases (PVLDB)*. 15(9): 1889-1901. 2022
8. K Wang, W Zhang, X Lin, L Qin, **A Zhou**. Efficient Personalized Maximum Biclique Search. *IEEE International Conference on Data Engineering (ICDE)*. 498-511. 2022
9. **A Zhou**, Y Wang, L Chen. Butterfly Counting in Uncertain Bipartite Networks. *International Conference on Very Large Databases (PVLDB)*. 15(2): 211-223. 2021
10. Q Wang, H Yin, T Chen, J Yu, **A Zhou**, X Zhang. Fast-adapting and Privacy-preserving Federated Recommender System. *International Journal on Very Large Databases (VLDBJ)*. 31: 877-896. 2021
11. **A Zhou**, Y Wang, L Chen. Finding Large Diverse Communities on Networks: The Edge Maximum  $k^*$ -Partite Clique. *International Conference on Very Large Databases (PVLDB)*. 13(12): 2576-2589. 2020
12. L Guo, H Yin, Q Wang, T Chen, **A Zhou**, N Quoc Viet Hung. Streaming Session-based Recommendation. *ACM International Conference on Knowledge Discovery and Data Mining (SIGKDD)*. 1569-1577. 2019
13. **A Zhou**, F Zhang, L Yuan, Y Zhang, X Lin. Finding Maximal Stable Cores in Social Networks. *Australasian Database Conference (ADC)*. 224-235. 2018
14. F Zhang, L Yuan, Y Zhang, L Qin, X Lin, **A Zhou**. Discovering Strong Communities with User Engagement and Tie Strength. *International Conference on Database Systems for Advanced Applications (DASFAA)*. 425-441. 2018

## PROFESSIONAL ACTIVITIES

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**Program Committee Member:** DASFAA, ADMA

**Reviewer:** TODS

**PhD Workshop Invited Speaker:** ADC