

# 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

## EMPLOYMENT

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**The Hong Kong Polytechnic University**  
Research Assistant Professor

*2024 - Current*

## EDUCATION

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

*2019 - 2024*

**The University of Queensland**

Bachelor of Engineering (Honours) [Software Engineering] and Bachelor of Science [Statistics]  
Thesis Supervisor: Prof. Hongzhi Yin

*2014 - 2019*

**Brisbane Grammar School**

*2009 - 2013*

## RESEARCH EXPERIENCES

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**University of Waterloo**  
*Visiting Overseas Researcher*

*Nov 2022 - March 2023*

- 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 (resulting in an ICDE paper).

**The Chinese University of Hong Kong**  
*Research Assistant*

*2018 - 2019*

- 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**  
*Thesis Project*

2018 - 2019

- Worked under the supervision of Prof. 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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**Lecturer:**

**Hong Kong Polytechnic University**  
*COMP2411: Database Systems (Sem 1 2024)*

**Teaching Assistant:**

**Hong Kong University of Science and Technology**  
*COMP1944: Artificial Intelligence Ethics (2024)*  
*COMP1029V: Excel VBA Programming Bridging Course (2021, 2023)*  
*COMP4331: Data Mining (2020)*

**University of Queensland**

*INFS1200/7900: Introduction to Information Systems (2017-2019)*

## PUBLICATIONS

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**Citations:** 475 / **h-Index:** 8 / **i10-Index:** 8

**Google Scholar ID:** zQSmMZkAAAAJ

**DBLP Key:** 219/5776

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

1. A Tian, **A Zhou**, Y Wang, X Jian, L Chen. Efficient Index for Temporal Core Queries over Bipartite Graphs. To Appear In *International Conference on Very Large Databases (PVLDB)*. 2024 (\*)
2. **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

3. 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 (\*)
4. **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
5. 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 (\*)
6. 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
7. 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
8. 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
9. 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
10. **A Zhou**, Y Wang, L Chen. Butterfly Counting in Uncertain Bipartite Networks. *International Conference on Very Large Databases (PVLDB)*. 15(2): 211-223. 2021
11. 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
12. **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
13. 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
14. **A Zhou**, F Zhang, L Yuan, Y Zhang, X Lin. Finding Maximal Stable Cores in Social Networks. *Australasian Database Conference (ADC)*. 224-235. 2018
15. 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

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## PROFESSIONAL ACTIVITIES

**Proceedings Chair:** LSGDA ('24)

**Program Committee Member:** DASFAA ('23-'24), ADMA ('23-'24), APWeb-WAIM ('24)

**Invited Reviewer:** TODS

**PhD Workshop Invited Speaker: ADC**