Chunjiang Zhu

Contact Information

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Research Interests

Machine Learning; Design and Analysis of Algorithms; Artificial Intelligence in Drug Discovery; Cyber-Physical Systems; Database Systems.

Education

UNIVERSITY OF CONNECTICUT, Storrs, CT *April 2018∼Present*
Postdoctor Research Associate *Postdoc Advisor: Jinbo Bi*

CITY UNIVERSITY OF HONG KONG, Hong Kong, PRC
Ph.D. in Computer Science awarded in February, 2015
Dissertation: Efficient Executions of Shortest Path Queries Using Data Broadcast
Advisor: Kam-Yiu Lam. GPA: 4.0/4.0.

CHINESE ACADEMY OF SCIENCES, Beijing, PRC
M.Phil. in Computer Science with Honour awarded in June, 2011

GUANGXI UNIVERSITY, Guangxi, PRC
B.Eng. in Computer Science with Honour awarded in June, 2008

Employment

UNIVERSITY OF CONNECTICUT, Storrs, CT *April 2018∼Present*
Postdoctor Research Associate

WISERS AI LAB, Hong Kong, PRC *September, 2015∼November, 2017*
Researcher (from September, 2015-May, 2017), Senior Researcher (from June, 2017-November, 2017)

HONG KONG BAPTIST UNIVERSITY, Hong Kong, PRC *March, 2015∼August, 2015*
Postdoctor Research Fellow

CITY UNIVERSITY OF HONG KONG, Hong Kong, PRC *September, 2014∼February, 2018*
Research Assistant (September, 2014-February, 2015), Research Fellow (from December, 2017-February, 2018)

Honors

ICML Travel Award (2019)
Hong Kong Government Scholarship, City University of Hong Kong (2011-14)
Graduation with Honor, The Chinese Academy of Sciences (2011)
Exam Exemption, The Chinese Academy of Sciences (2008)
National Scholarship, 1/>300 (2007)

Conference and Journal Publications

In publications marked with *****, authors are ordered alphabetically according to the convention in the theory community.

Machine Learning and Theory.

(1) Guannan Liang, Qianqian Tong, Chun Jiang Zhu and Jinbo Bi. An Effective Hard Thresholding Method based on Stochastic Variance Reduction for Nonconvex Sparse Learning. *To appear in Thirty-Fourth AAAI Conference on Artificial Intelligence*

*(***AAAI 2020***).*

(2) Chun Jiang Zhu, Sabine Storandt, Kam-Yiu Lam, Song Han and Jinbo Bi. Improved Dynamic Graph Learning through Fault-Tolerant Sparsification. *Thirty-Sixth International Conference on Machine Learning (***ICML 2019***); Proceedings:* 7624–7633.

(3) Chun Jiang Zhu, Tan Zhu, Kam-Yiu Lam, Song Han and Jinbo Bi. Communication-Optimal Distributed Dynamic Graph Clustering. *Thirty-Third AAAI Conference on Artificial Intelligence (***AAAI 2019***); Proceedings:* 5957–5964.

(4) Chun Jiang Zhu, Kam-Yiu Lam, Joseph Kee Yin Ng and Jinbo Bi. On the VC-Dimension of Unique Round-Trip Shortest Path Systems. *Information Processing Letters*, 145:1–5, 2019.

(5) ***** Moritz Beck, Kam-Yiu Lam, Joseph Kee Yin Ng, Sabine Storandt and Chun Jiang Zhu. Concatenated k-Path Covers. *Twenty-First Workshop on Algorithm Engineering and Experiments (***ALENEX 2019***); Proceedings:* 81–91.

(6) Chun Jiang Zhu and Kam-Yiu Lam. Deterministic Improved Round-trip Spanners. *Information Processing Letters*, 129:57-60, 2018.

(7) Chung Keung Poon, Chun Jiang Zhu (Corresponding author) and Kam-Yiu Lam. Energy-efficient Air-indices for Shortest Path and Distance Queries on Road Networks, *Information Systems*, 71:182–198, 2017.

(8) Chun Jiang Zhu and Kam-Yiu Lam. Source-wise Round-trip Spanners. *Information Processing Letters*, 124:42-45, 2017.

(9) Chun Jiang Zhu, Kam-Yiu Lam, Song Han. Approximate Path Searching for Supporting Shortest Path Queries on Road Networks, *Information Sciences*, 325(C):409-428, 2015.

(10) Chun Jiang Zhu, Kam-Yiu Lam, Reynold C.K. Cheng and Chung Keung Poon. On Using Broadcast Index for Efficient Execution of Shortest Path Continuous Queries, *Information Systems*, 49(C):142-162, 2015.

(11) ***** Chung Keung Poon and Chun Jiang Zhu. Energy-efficient Air-indices for Distance Queries on Road Networks. *Twentieth International Conference on Advances on Geographic Information Systems (***ACM GIS 2012***); Proceedings:* 558-561.

Chemoinformatics and Drug Discovery.

(12) Chun Jiang Zhu, Tan Zhu, Haining Li, Jinbo Bi and Minghu Song. Accelerating Large-Scale Molecular Similarity Search through Exploiting High Performance Computing. *To appear in 2019 IEEE International Conference on Bioinformatics and Biomedicine (***BIBM 2019***).*

Cyber-Physical Systems.

(13) Chun Jiang Zhu, Kam-Yiu Lam, Yuan-Hao Chang and Joseph Kee-Yin Ng. Linked Block-based Multiversion B-Tree Index for PCM-based Embedded Databases, *Journal of Systems Architecture*, 61(9):383-397, 2015.

(14) Kam-Yiu Lam, Chun Jiang Zhu, Yuan-Hao Chang, Jen-Wei Hiseh, Po-Chun Huang, Chung Keung Poon, Jiantao Wang. Garbage Collection of Multi-version Indexed Data on Flash Memory, *Journal of Systems Architecture*, 60(8):630-643, 2014.

(15) Kam-Yiu Lam, Jiantao Wang, Joseph Kee-Yin Ng, Song Han, Limei Zheng, Calvin Ho Chuen Kam and Chun Jiang Zhu. SmartMood: Towards Pervasive Mood Tracking and Analysis for Manic Episode Detection, *IEEE Transactions on Human-Machine Systems*, 45(1):126-131, 2014.

(16) Kam-Yiu Lam, Jiantao Wang, Yuan-Hao Chang, Jen-Wei Hiseh, Po-Chun Huang, Chung Keung Poon and Chun Jiang Zhu. Garbage Collection for Multi-version Index on Flash Memory. *2014 Design, Automation and Test in Europe (***DATE 2014***); Proceedings:* 1-4.

Miscellaneous.

(17) Chun Jiang Zhu, Geyuan Ding, Yong Sun and Junying Jia. Design and implementation of group chat service in IMS Client. *Computer Engineering and Design*, 32(7):2509-2513, 2011.

(18) Chun Jiang Zhu, Yumin Lu, Taoshen Li, Hengbin Du and Sheng Tang. Design and Implementation of the Auto Classifier Based on Web Mining. *Journal of Guangxi Academy of Sciences*, 24(4):310-312,316, 2008.

Manuscripts Under Review

(19) Chun Jiang Zhu, Minghu Song, Qinqing Liu and Jinbo Bi. A Benchmark on Indexing Algorithms for Accelerating Molecular Similarity Searches.

(20) Chun Jiang Zhu, Song Han and Kam-Yiu Lam. A Fast Algorithm for Source-Wise Round-Trip Spanners.

(21) Guannan Liang, Qianqian Tong, Chun Jiang Zhu and Jinbo Bi. Escaping Saddle Points with SCSG Methods.

(22) Tan Zhu, Guannan Liang, Chun Jiang Zhu and Jinbo Bi. Adaptive Strategies for Deep Stochastic Contextual Bandits.

Professional Services

Program Committee Member: ICML2020, AAAI2020, BIBM2019

External Reviewer: IEEE Transactions on Knowledge and Data Engineering (TKDE), IEEE Transactions on Computers (TC), KDD2019, NIPS2018, GC2018, ICDE2015.

Teaching Activities

Tutorial Instructor
CS6492 (Fall, 13, Fall, 12): Advanced Database Systems, City University of Hong Kong.

Teaching Assistant
CS6223 (Spring, 14): Distributed System;
CS6492 (Fall, 13, Fall, 12), Advanced Database Systems;
CS2311 (Spring, 13, Spring, 12): Computer Programming;
CS3334 (Fall, 11): Data Structures, City University of Hong Kong.

References

Dr. Jinbo Bi
Professor
Associate Head
Department of Computer Science and Engineering, University of Connecticut

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