

Curriculum Vitae of Zhiyi Huang (黄志毅)

Contact Information

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Research Interests

Theoretical Computer Science
Algorithmic Game Theory
Online Algorithms

Academic Positions

2020 – present *Associate Professor*
 Department of Computer Science, The University of Hong Kong

2014 – 2020 *Assistant Professor*
 Department of Computer Science, The University of Hong Kong

2013 – 2014 *Postdoctoral Research Fellow*
 Department of Computer Science, Stanford University
 Mentor: Tim Roughgarden

Education and Experiences

2013 *Doctor of Philosophy*
 Computer and Information Science, University of Pennsylvania
 Advisors: Sampath Kannan, Aaron Roth

2011, 2012 *Research Intern*
 Microsoft Research Redmond
 Mentor: Nikhil R. Devanur

2008 *Bachelor of Engineering*
 Computer Science and Technology, Tsinghua University (“Yao Class”)

Selected Honors

2021	<i>Excellent Young Scientists Fund (Hong Kong and Macau)</i> National Natural Science Foundation of China	港澳优青
2020	<i>Best Paper Award</i> IEEE Symposium on Foundations of Computer Science <i>Best Teacher Award</i> Department of Computer Science, The University of Hong Kong	
2015	<i>Best Paper Award</i> ACM Symposium on Parallelism in Algorithms and Architectures	
2014	<i>Early Career Award</i> University Grants Committee of Hong Kong	
2013	<i>Morris and Dorothy Rubinoff Dissertation Award</i> University of Pennsylvania	
2012	<i>Simons Graduate Fellowship in Theoretical Computer Science</i> Simons Foundation	
2004	<i>Gold Medal</i> International Mathematical Olympiad, Athens, Greece <i>Silver Medal</i> Russian Mathematical Olympiad, Cheboksary, Russia <i>Gold Medal</i> Chinese Mathematical Olympiad, Macau, China	

Invited Articles

Chenghao Guo, Zhiyi Huang, Xinzhi Zhang
Sample complexity of single-parameter revenue maximization
ACM SIGecom Exchanges 17 (2), 2020

Zhiyi Huang
Online primal dual: beyond linear programs
ACM SIGACT News, 45 (4), 2014

Invited Book Chapters

Zhiyi Huang, Thorben Tröbst
Applications of online matching
Online and Matching-based Market Design, forthcoming

Zhiyi Huang
Online combinatorial optimization problems with non-linear objectives
Nonlinear Combinatorial Optimization, 2019

Zhiyi Huang
Privacy preserving auctions
Encyclopedia of Algorithms 2014

Refereed Journal Publications

Authors are listed in alphabetical order following the traditions of theoretical computer science, unless stated otherwise.

Matthew Fahrbach, Zhiyi Huang, Runzhou Tao, Morteza Zadimoghaddam
Edge-weighted online bipartite matching
Journal of the ACM (**JACM**), 69(6), 2022

Xiaoxi Zhang, Zhiyi Huang, Chuan Wu, Zongpeng Li, Francis C.M. Lau (by contribution)
Dynamic VM scaling: provisioning and pricing through an online auction
Transactions on Cloud Computing (**TCC**), 9(1), 2021

Zhiyi Huang, Ning Kang, Zhihao Gavin Tang, Xiaowei Wu, Yuhao Zhang, Xue Zhu
Fully online matching
Journal of the ACM (**JACM**), 67(3), 2020

Zhiyi Huang, Zhihao Gavin Tang, Xiaowei Wu, Yuhao Zhang
Online vertex-weighted bipartite matching: beating $1-1/e$ with random arrivals
ACM Transactions on Algorithms (**TALG**), 15(3), 2019

Sébastien Bubeck, Nikhil R. Devanur, Zhiyi Huang, Rad Niazadeh
Multi-scale online learning: theory and applications to online auctions and pricing
Journal of Machine Learning Research (**JMLR**), 20(62), 2019

Zhiyi Huang, Anthony Kim
Welfare maximization with production costs: a primal dual approach
Games and Economic Behavior (**GEB**), 118(-), 2019

T-H. Hubert Chan, Zhiyi Huang, Shaofeng H.-C. Jiang, Ning Kang, Zhihao Gavin Tang
Online submodular maximization with free disposal
ACM Transactions on Algorithms (**TALG**), 14(4), 2018

Zhiyi Huang, Yishay Mansour, Tim Roughgarden
Making the most of your samples
SIAM Journal on Computing (**SICOMP**), 47(3), 2018

Nikhil R. Devanur, Zhiyi Huang
Primal dual gives optimal energy efficient online algorithms
ACM Transactions on Algorithms (**TALG**), 14(1), 2018

Xiaoxi Zhang, Zhiyi Huang, Chuan Wu, Zongpeng Li, Francis C.M. Lau (by contribution)
Online auctions in IaaS clouds: welfare and profit maximization with server costs
IEEE/ACM Transactions on Networking (**ToN**), 25(2), 2017

Xiaoxi Zhang, Zhiyi Huang, Chuan Wu, Zongpeng Li, Francis C.M. Lau (by contribution)
Online stochastic buy-sell mechanism for VNF chains in the NFV market
IEEE Journal on Selected Areas in Communications (**JSAC**), 35(2), 2017

Ruiting Zhou, Zongpeng Li, Chuan Wu, Zhiyi Huang (by contribution)
An efficient cloud market mechanism for computing jobs with soft deadlines
IEEE/ACM Transactions on Networking (**ToN**), 25(2), 2017

Justin Hsu, Zhiyi Huang, Aaron Roth, Tim Roughgarden, Zhiwei Steven Wu
Private matchings and allocations
SIAM Journal on Computing (**SICOMP**), 45(6), 2016

Nikhil R. Devanur, Zhiyi Huang, Nitish Korula, Vahab Mirrokni, Qiqi Yan
Whole-page optimization and submodular welfare maximization with online bidders
ACM Transactions on Economics and Computation (**TEAC**), 4(3), 2016

Deeparnab Chakrabarty, Zhiyi Huang
Recognizing coverage functions
SIAM Journal on Discrete Mathematics (**SIDMA**), 29(3), 2015

Tanmoy Chakraborty, Zhiyi Huang, Sanjeev Khanna
Dynamic and non-uniform pricing strategies for revenue maximization
SIAM Journal on Computing (**SICOMP**), 42(6), 2013

Refereed Conference Publications

Authors are listed in alphabetical order following the traditions of theoretical computer science, unless stated otherwise.

Zhiyi Huang, Hanrui Jiang, Aocheng Shen, Junkai Song, Zhiang Wu, Qiankun Zhang
Online matching with stochastic rewards: advanced analyses using configuration linear programs
19th Conference On Web And InterNet Economics (**WINE 2023**)

Zhiyi Huang, Minming Li, Xinkai Shu, Tianze Wei
Online Nash welfare maximization without predictions
19th Conference On Web And InterNet Economics (**WINE 2023**)

Ziyun Chen, Zhiyi Huang, Dorsa Majdi, Zipeng Yan
Strong revenue (non-)monotonicity of single-parameter auctions
24th ACM Conference on Economics and Computation (**EC 2023**)

Hadi Hosseini, Zhiyi Huang, Ayumi Igarashi, Nisarg Shah
Class fairness in online matching
37th AAAI Conference on Artificial Intelligence (**AAAI 2023**)

Zhiyi Huang, Xinkai Shu, Shuyi Yan
The power of multiple choices in online stochastic matching
54th ACM Symposium on Theory of Computing (**STOC 2022**)

Ruiquan Gao, Zhongtian He, Zhiyi Huang, Zipei Nie, Bijun Yuan, Yan Zhong
Improved online correlated selection
62nd IEEE Symposium on Foundations of Computer Science (**FOCS 2021**)

Chenghao Guo, Zhiyi Huang, Zhihao Gavin Tang, Xinzhi Zhang
Generalizing complex hypotheses on product distributions: auctions, prophet inequalities, and Pandora's problem
34th Annual Conference on Learning Theory (**COLT 2021**)

Yihang Hu, Zhiyi Huang, Yiheng Shen, Xiangning Wang
Targeting makes sample efficiency in auction design
22nd ACM Conference on Economics and Computation (**EC 2021**)

Zhiyi Huang, Xinkai Shu
Online stochastic matching, Poisson arrivals, and the natural linear program
53rd ACM Symposium on Theory of Computing (**STOC 2021**)

Zhiyi Huang, Zhihao Gavin Tang, Xiaowei Wu, Yuhao Zhang
Fully online matching II: beating Ranking and Water-filling
61st IEEE Symposium on Foundations of Computer Science (**FOCS 2020**)

Matthew Fahrbach, Zhiyi Huang, Runzhou Tao, Morteza Zadimoghaddam
Edge-weighted online bipartite matching
61st IEEE Symposium on Foundations of Computer Science (**FOCS 2020, Best Paper**)

Zhiyi Huang, Qiankun Zhang, Yuhao Zhang

AdWords in a panorama

61st IEEE Symposium on Foundations of Computer Science (**FOCS 2020**)

Zhiyi Huang, Qiankun Zhang

Online primal dual meets online matching with stochastic rewards: configuration LP to the rescue

52nd ACM Symposium on Theory of Computing (**STOC 2020**)

Rachel Cummings, Nikhil R. Devanur, Zhiyi Huang, Xiangning Wang

Algorithmic price discrimination

31st ACM-SIAM Symposium on Discrete Algorithms (**SODA 2020**)

Zhiyi Huang, Xue Zhu

Scalable and jointly differentially private packing

46th International Colloquium on Automata, Languages, and Programming (**ICALP 2019**)

Chenghao Guo, Zhiyi Huang, Xinzhi Zhang

Settling the sample complexity of single-parameter revenue maximization

51st ACM Symposium on Theory of Computing (**STOC 2019**)

Bingqian Du, Chuan Wu, Zhiyi Huang (by contribution)

Learning resource allocation and pricing for cloud profit maximization

AAAI Conference on Artificial Intelligence (**AAAI 2019**)

Zhiyi Huang, Binghui Peng, Zhihao Gavin Tang, Runzhou Tao, Xiaowei Wu, Yuhao Zhang

Tight competitive ratios of classic matching algorithms in the fully online model

30th ACM-SIAM Symposium on Discrete Algorithms (**SODA 2019**)

Zhiyi Huang, Jinyan Liu, Xiangning Wang

Learning optimal reserve price against non-myopic bidders

32nd Conference on Neural Information Processing Systems (**NeurIPS 2018**)

Zhiyi Huang, Ning Kang, Zhihao Gavin Tang, Xiaowei Wu, Yuhao Zhang

Online makespan minimization: the power of restart

21st International Conference on Approximation Algorithms for Combinatorial Optimization Problems (**APPROX 2018**)

Zhiyi Huang, Zhihao Gavin Tang, Xiaowei Wu, Yuhao Zhang

Online vertex-weighted bipartite matching: beating $1-1/e$ with random arrivals

45th International Colloquium on Automata, Languages, and Programming (**ICALP 2018**)

Zhiyi Huang, Jinyan Liu

Optimal differentially private algorithms for k -means clustering

37th ACM SIGMOD-SIGACT-SIGAI Symposium on Principles of Database Systems (**PODS 2018**)

Zhiyi Huang, Ning Kang, Zhihao Gavin Tang, Xiaowei Wu, Yuhao Zhang, Xue Zhu

How to match when all vertices arrive online

50th ACM Symposium on Theory of Computing (**STOC 2018**)

Xiaoxi Zhang, Chuan Wu, Zhiyi Huang, Zongpeng Li (by contribution)
Occupation-oblivious pricing of cloud jobs via online learning
IEEE International Conference on Computer Communications (**INFOCOM 2018**)

Zhiyi Huang, Xue Zhu
Near optimal jointly private packing algorithms via dual multiplicative weight update
29th ACM-SIAM Symposium on Discrete Algorithms (**SODA 2018**)

Sébastien Bubeck, Nikhil R. Devanur, Zhiyi Huang, Rad Niazadeh
Online auctions and multi-scale online learning
18th ACM Conference on Economics and Computation (**EC 2017**)

T-H. Hubert Chan, Zhiyi Huang, Shaofeng H.-C. Jiang, Ning Kang, Zhihao Gavin Tang
Online submodular maximization with free disposal: randomization beats 1/4 for partition matroids
28th ACM-SIAM Symposium on Discrete Algorithms (**SODA 2017**)

Yossi Azar, Niv Buchbinder, T-H. Hubert Chan, Shahar Chen, Ilan R. Cohen, Anupam Gupta, Zhiyi Huang, Ning Kang, Viswanath Nagarajan, Joseph (Seffi) Naor, Debmalya Panigrahi
Online algorithms for covering and packing problems with convex objectives
57th IEEE Symposium on Foundations of Computer Science (**FOCS 2016**)

Nikhil R. Devanur, Zhiyi Huang, Christos-Alexandros Psomas
The sample complexity of auctions with side information
48th ACM Symposium on Theory of Computing (**STOC 2016**)

Justin Hsu, Zhiyi Huang, Aaron Roth, Zhiwei Steven Wu
Jointly private convex programming
27th ACM-SIAM Symposium on Discrete Algorithms (**SODA 2016**)

Nikhil R. Devanur, Miro Dudík, Zhiyi Huang, David M. Pennock
Budget constraints in prediction markets
31st Conference on Uncertainty in Artificial Intelligence (**UAI 2015**)

Zhiyi Huang, Yishay Mansour, Tim Roughgarden
Making the most of your samples
16th ACM Conference on Economics and Computation (**EC 2015**)
Invited to ACM Transactions on Economics and Computation (TEAC), special issue for EC 2015

Yossi Azar, Nikhil R. Devanur, Zhiyi Huang, Debmalya Panigrahi
Non-clairvoyant online scheduling to minimize energy
27th ACM Symposium on Parallelism in Algorithms and Architectures (**SPAA 2015, Best Paper**)

Xiaoxi Zhang, Zhiyi Huang, Chuan Wu, Zongpeng Li, Francis C.M. Lau (by contribution)
Online auctions in IaaS clouds: welfare and profit maximization with server costs
ACM SIGMETRICS (**SIGMETRICS 2015**)

Zhiyi Huang, Anthony Kim
Welfare maximization with production costs: a primal dual approach
26th ACM-SIAM Symposium on Discrete Algorithms (**SODA 2015**)

Invited to Games and Economic Behavior (GEB), special issue for algorithmic game theory papers from STOC/FOCS/SODA 2014 and 2015

Justin Hsu, Zhiyi Huang, Aaron Roth, Tim Roughgarden, Zhiwei Steven Wu

Private matchings and allocations

46th ACM Symposium on Theory of Computing (**STOC 2014**)

Invited to Games and Economic Behavior (GEB), special issue for algorithmic game theory papers from STOC/FOCS/SODA 2014 and 2015

Zhiyi Huang, Aaron Roth

Exploiting metric structure for efficient private query release

25th ACM-SIAM Symposium on Discrete Algorithms (**SODA 2014**)

Nikhil R. Devanur, Zhiyi Huang

Primal dual gives optimal energy efficient online algorithms

25th ACM-SIAM Symposium on Discrete Algorithms (**SODA 2014**)

Nikhil R. Devanur, Zhiyi Huang, Nitish Korula, Vahab Mirrokni, Qiqi Yan

Whole-page optimization and submodular welfare maximization with online bidders

14th ACM Conference on Electronic Commerce (**EC 2013**)

Invited to ACM Transactions on Economics and Computation (TEAC), special issue for EC 2013

Yang Cai, Zhiyi Huang

Simple and nearly optimal multi-item auctions

24th ACM-SIAM Symposium on Discrete Algorithms (**SODA 2013**)

Zhiyi Huang, Sampath Kannan

The exponential mechanism for social welfare: private, truthful, and nearly optimal

53rd IEEE Symposium on Foundations of Computer Science (**FOCS 2012**)

Deeparnab Chakrabarty, Zhiyi Huang

Testing coverage functions

39th International Colloquium on Automata, Languages and Programming (**ICALP 2012**)

Zhiyi Huang, Sampath Kannan, Sanjeev Khanna

Algorithms for the generalized sorting problem

52nd IEEE Symposium on Foundations of Computer Science (**FOCS 2011**)

Xiaohui Bei, Zhiyi Huang

Bayesian incentive compatibility via fractional assignments

22nd ACM-SIAM Symposium on Discrete Algorithms (**SODA 2011**)

Zhiyi Huang, Lei Wang, Yuan Zhou

Black-box reductions in mechanism design

14th International Workshop on Approximation Algorithms for Combinatorial Optimization Problems (**APPROX 2011**)

Zhiyi Huang, Sampath Kannan

Sampling from constrained multivariate distribution

15th International Workshop on Randomization and Computation (**RANDOM 2011**)

Tanmoy Chakraborty, Zhiyi Huang, Sanjeev Khanna
Dynamic and non-uniform pricing strategies for revenue maximization
50th IEEE Symposium on Foundations of Computer Science (**FOCS 2009**)
Invited to SIAM Journal on Computing (SICOMP), special issue for FOCS 2009

Sudipto Guha, Zhiyi Huang
Revisiting the direct sum theorem and space lower bounds in random order streams
36th International Colloquium on Automata, Languages and Programming (**ICALP 2009**)

Shiteng Chen, Zhiyi Huang, Sampath Kannan
Reconstructing numbers from pairwise function values
20th International Symposium on Algorithms and Computation (**ISAAC 2009**)
Invited to Algorithmica, special issue for ISAAC 2009

Theses

Zhiyi Huang
New techniques for computation over private data
Doctoral dissertation, advised by Prof. Sampath Kannan and Prof. Aaron Roth, 2013

Zhiyi Huang
On constructing web directory based on user behavior (in Chinese)
Bachelor thesis, advised by Prof. Yiqun Liu and Prof. Shaoping Ma, 2008

External Grants (as PI)

2023 – 2026	<i>Fractional matroid secretary problem</i> General Research Fund Research Grants Council of Hong Kong	1,151,831 HKD No. 17211723
2022 – 2025	<i>Stochastic online matching problems through expressive linear program formulations</i> General Research Fund Research Grants Council of Hong Kong	1,086,185 HKD No. 17203022
2021 – 2024	<i>Optimization under uncertainty</i> Excellent Young Scientists Fund (Hong Kong and Macau) National Natural Science Foundation of China	2,000,000 CNY No. 6212290003
2021 – 2024	<i>Online correlated selection: theory and applications in online algorithms</i> General Research Fund Research Grants Council of Hong Kong	838,393 HKD No. 17201221
2019 – 2022	<i>Fully online matching</i> General Research Fund Research Grants Council of Hong Kong	731,089 HKD No. 17202019
2017 – 2020	<i>Understanding price of anarchy via the duality framework</i> General Research Fund Research Grants Council of Hong Kong	700,000 HKD No. 17203717
2016 – 2019	<i>The algorithmic and information theoretic foundations of Bayesian mechanism design</i> General Research Fund Research Grants Council of Hong Kong	675,647 HKD No. 17257516
2015 – 2018	<i>New frontiers of the online primal dual technique: convex programs and limitations of the canonical approach</i> General Research Fund Research Grants Council of Hong Kong	496,028 HKD No. 17202115
2014 – 2017	<i>Privacy-preserving mechanisms in economic markets</i> Early Career Scheme Research Grants Council of Hong Kong	931,737 HKD No. 27200214

Selected Talks

Talks are grouped by themes, potentially with different titles at the time they were given.

Online stochastic matching

- Annual Meeting of the Mathematical Programming Branch of Operations Research Society of China, Chengdu, May, 2023
- QuACT Seminar, Institute of Computing Technology, Chinese Academy of Sciences (Virtual), March, 2022

Recent progress in online matching

- FAW 2022 Keynote, Hong Kong (Virtual), August 2022
- COCOA 2021 Keynote, Tianjin (Virtual), December 2021
- Theory Lab of Huawei in Hong Kong Research Institute, Hong Kong, December 2021
- IISc-MSR Seminar Series, IISc (Virtual), August, 2021
- RAMP Symposium, Kyoto University (Virtual), October, 2020

Online correlated selection

- Highlights of Algorithms (HALG) 2021, London School of Economics and Political Science (Virtual), June, 2021
- SIGMA Seminar, Institute of Computing Technology, Chinese Academy of Sciences (Virtual), April, 2020

Fully online matching

- IGAFIT Algorithmic Colloquium, IGAFIT (Virtual), November, 2020
- Simons Institute for the Theory of Computing, Berkeley, September, 2019
- Shenzhen Institutes of Advanced Technology, Chinese Academy of Sciences, May, 2019
- Tsinghua Sanya International Mathematics Forum, May, 2019
- Microsoft Research, August, 2018

Online matching via online primal dual

- Complexity & Algorithms Workshop, May, 2018

Theoretical foundations of data-driven auction design

- Lecture Series (北京大学海外名家讲学计划), Center on Frontiers of Computing Studies, Peking University, September, 2023
- Lecture Series, Gaoling Artificial Intelligence School, Renmin University, September, 2023
- Minisymposium Recent Trends in Market Design, ICIAM, Tokyo, 2023
- Summer School on Algorithmic Game Theory, Ocean University of China, July, 2023
- The University of Hong Kong, TechTalk, May, 2023
- The Chinese University of Hong Kong (Shenzhen), May, 2023
- The Hong Kong University of Science and Technology, March, 2023
- International Joint Conference on Theoretical Computer Science (IJTCS), Peking University (Virtual), August, 2020

- Central South University, Complexity & Algorithms Workshop, May, 2019
- The Chinese University of Hong Kong, October, 2018
- Shanghai University of Finance and Economics, October, 2017
- Zhejiang University, March, 2017
- Shanghai Jiao Tong University, March, 2017
- University of Pennsylvania, January, 2016
- Microsoft Research, June, 2015
- Berkeley EconCS Seminar, March, 2014

Online primal dual framework for problems with convex objectives

- NII Shonan Meeting on “Algorithms and Optimization under Uncertainty”, May, 2017
- Hong Kong Theory Day, January, 2015
- Stanford Theory Lunch, February, 2014

Online submodular matroid maximization with free disposal

- Zhejiang University, Complexity & Algorithms Workshop, May, 2016

Privacy-preserving auctions

- Dagstuhl Seminar on Electronic Markets and Auctions, November, 2013
- EC Workshop on Privacy and Economics, June, 2013
- UW-MSR Theory Center, August, 2012.
- Microsoft Research, Redmond, July, 2012.
- Hong Kong University of Science and Technology, May, 2012.
- The Chinese University of Hong Kong, April, 2012.
- University of Pennsylvania, December, 2011.

Whole-page optimization and submodular welfare maximization with online bidders

- MSR Asia, May, 2013
- Shanghai Jiaotong University, May, 2013

How to compute over private data?

- The University of Hong Kong, March, 2013
- The Hong Kong University of Science and Technology, March, 2013
- Microsoft Research, Redmond, February, 2013
- Microsoft Research, Silicon Valley, January, 2013
- Microsoft Research, New England, January, 2013

Exploiting metric structure for efficient private query release

- DIMACS, October, 2012.

Bayesian incentive compatibility via fractional assignments

- China Theory Week, Tsinghua University, September, 2011
- University of Pennsylvania, May, 2010.

Dynamic and non-uniform pricing strategies for revenue maximization
– University of Pennsylvania, October, 2009.

University and Faculty Services

Member of the Board of Faculty of Engineering	(since 2014 Fall)
Member of Faculty Committee on Undergraduate Curricula	(since 2021 Summer)
Member of Faculty Research Committee	(since 2022 Spring)
Member of Faculty Higher Degrees Committee	(2020 – 2021, and since 2022 Summer)
Member of Faculty Library Committee	(2018 – 2020)

Departmental Services

Associate Head (Academic Development)	(since 2021 Summer)
Member of Departmental Advisory Committee	(since 2021 Summer)
Member of Departmental Curriculum Development Committee	(since 2021 Summer)
– Chair	(since 2021 Summer)
Member of Departmental Research Postgraduate Committee	(since 2016 Spring)
– Chair	(2020 – 2021)
– Deputy Chair	(2018 – 2020)
Programme Director, MPhil/PhD, Computer Science Department	(2020 – 2021)
Chair of Staff-Student Consultative Meeting	(since 2022 Summer)
Member of Accreditation Coordinating Committee	(since 2021 Summer)
– Chair	(since 2021 Summer)
Member of Working Group on Accreditation of BEng	(2021 – 2022)
Coordinator of Outcome-Based Learning	(since 2021 Summer)
Member of Departmental Teaching and Learning Quality Committee	(since 2021 Summer)
Member of Departmental Research Committee	(since 2016 Spring)

Professional Memberships and Services

Member, Institute of Electrical and Electronic Engineers (IEEE)	
Member, Association for Computing Machinery (ACM)	
Member, Society for Industrial and Applied Mathematics (SIAM)	
Member, China Computer Federation (CCF)	
Program Committee:	
– ACM Symposium on Theory of Computing (STOC): 2023	
– ACM-SIAM Symposium on Discrete Algorithms (SODA): 2022, 2023	
– ACM Conference on Economics and Computation (EC): 2023, 2022, 2021, 2020, 2019, 2018, 2017, 2016, 2015	
– Conference on Web and Internet Economics (WINE): 2023, 2020, 2017, 2016	

- European Symposia on Algorithms (ESA): 2018
- Innovations in Theoretical Computer Science (ITCS): 2018
- Algorithms and Data Structures Symposium (WADS): 2021
- International Joint Conference on Theoretical Computer Science (IJTCS): 2021
- Frontier of Algorithmic Wisdom (FAW, formerly International Frontiers of Algorithmics Workshop): 2023 (Chair), 2019
- International Symposium on Algorithms and Computation (ISAAC): 2023, 2019, 2018, 2015
- Theory and Applications of Models of Computation (TAMC): 2016
- The ACM Web Conference (formerly WWW): 2022
- Conference on Neural Information Processing Systems (NeurIPS): 2018, 2019
- International Conference on Machine Learning (ICML): 2019
- AAAI Conference on Artificial Intelligence (AAAI): 2020, 2019
- Theory and Practice of Differential Privacy (TPDP): 2020

Journal Reviewer

- (Theoretical Computer Science) Journal of the ACM, SIAM Journal on Computing, Algorithmica, ACM Transactions on Algorithms, Journal of Computer and System Sciences, Theoretical Computer Science
- (Economics) ACM Transactions on Economics and Computation, Games and Economic Behavior
- (Operations Research) Management Science, Operations Research, Mathematics of Operations Research, Operations Research Letters, INFORMS Journal on Optimization
- (Machine Learning) Journal of Machine Learning Research, Artificial Intelligence, Annals of Mathematics and Artificial Intelligence

Patents

Energy-efficient job scheduling (US9766932 B2)

Teaching

2023	Spring	COMP3251 Algorithm Design
2022	Spring	COMP3250A Design and Analysis of Algorithms COMP3352 Algorithmic Game Theory
2021	Spring	COMP3250A Design and Analysis of Algorithms
2020	Fall	COMP3351 Advanced Algorithm Design
	Spring	COMP3250A Design and Analysis of Algorithms
2019	Fall	COMP3352 Algorithmic Game Theory
	Spring	COMP3250A Design and Analysis of Algorithms
2018	Fall	COMP3351 Advanced Algorithm Design
	Spring	COMP3250A Design and Analysis of Algorithms COMP3352 Algorithmic Game Theory
2017	Spring	COMP3250A Design and Analysis of Algorithms
2016	Fall	COMP9601 Theory of Computation and Algorithms Design
	Spring	CSIS0250/COMP3250A Design and Analysis of Algorithms COMP8601 Advance Topics in Theoretical Computer Science
2015	Spring	CSIS0250/COMP3250A Design and Analysis of Algorithms

Advising

Current Ph.D. Students:

- LI, Dongchen (2023 – present)
- SUN, Enze (2022 – present)
- ZHU, Zixuan (2022 – present)
- LEE, Chui Shan (2021 – present)
- LU, Jianqiao (2020 – present)
- SHU, Xinkai (2019 – present)

Graduated Ph.D. Students:

- ZHANG, Qiankun (2017 – 2021)
- WANG, Xiangning (2016 – 2021)
- ZHU, Xue (2015 – 2020)
- ZHANG, Yuhao (2016 – 2020)
- LIU, Jinyan (2015 – 2020)
- KANG, Ning (2014 – 2019)