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Contact Information

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Research Interests

Theoretical Computer Science
Economics and Computation
Optimization under Uncertainty
Online Algorithms
Mechanism Design

Academic Positions

2025 – present *Associate Dean*
School of Computing and Artificial Intelligence
Shanghai University of Finance and Economics
2024 – present *Associate Professor with tenure*
School of Computing and Artificial Intelligence
Shanghai University of Finance and Economics
2021 – 2024 *Associate Professor*
School of Information Management and Engineering
Shanghai University of Finance and Economics
2019 – 2021 *Assistant Professor*
School of Information Management and Engineering
Shanghai University of Finance and Economics

Education and Experiences

2019	<i>Doctor of Philosophy</i> Department of Computer Science, The University of Hong Kong Advisor: Hubert Chan
2017	<i>Visiting Student</i> ITCS, Shanghai University of Finance and Economics Mentors: Pinyan Lu and Nick Gravin
2016	<i>Research Intern</i> Noah's Ark Lab Huawei Mentors: Zhenguo Li and Xin Jiang
2014	<i>Bachelor of Arts (double degree)</i> China Center for Economic Research, Peking University
2014	<i>Bachelor of Science</i> Department of Mathematics, Peking University
2012	<i>Undergraduate Researcher</i> University of Michigan, Ann Arbor Mentor: Michael Zieve

Selected Honors

2026	申万宏源奖教金
2025	CCF科技成果奖自然科学二等奖
2024	校先进工作者 Shanghai University of Finance and Economics
2024	<i>Best Paper Award</i> International Conference on Autonomous Agents and Multi-Agent Systems
2023	<i>Best Paper Award</i> Frontier of Algorithmic Wisdom
2022	<i>Undergraduate Teaching Award</i> School of Information Management and Engineering, SUFE
2022	<i>First Prize, Higher Education Outstanding Teaching Achievement Award</i> Shanghai Municipal Education Commission
2020	<i>International Young Talents Program</i> Shanghai
2010	<i>Gold Medal</i> Chinese Mathematical Olympiad
2009	<i>Gold Medal (Rank 1)</i> Romanian Master in Mathematics

Invited Articles

Zhiyi Huang, Zhihao Gavin Tang, and David Wajc

Online Matching: A Brief Survey

ACM SIGecom Exchanges 22 (1), 2024

Zhihao Gavin Tang, and Yuhao Zhang

Recent Advances in Online Matching

《华为研究》第三期, 2022

Pinyan Lu, and Zhihao Gavin Tang

Optimal Auction Design: Simplicity and Robustness (in Chinese)

最优拍卖设计：简单性与鲁棒性

中国计算机学会通讯 16 (5), 2020

Yaonan Jin, Pinyan Lu, Qi Qi, Zhihao Gavin Tang, and Tao Xiao

Tight revenue gaps among simple and optimal mechanisms

ACM SIGecom Exchanges 17 (2), 2019

Journal Publications

(Unless stated otherwise, authors are sorted in alphabetical order.)

Ziyun Chen, Zhiyi Huang, Dongchen Li, and Zhihao Gavin Tang

Prophet Secretary and Matching: The Significance of the Largest Item

ACM Transactions on Algorithms (**TALG**), to appear, 2026

Bo Peng, and Zhihao Gavin Tang

Order Selection Prophet Inequality

SIAM Journal on Computing (**SICOMP**), to appear, 2026

Dengji Zhao, Yaoxin Ge, Yao Zhang, Zhihao Gavin Tang, Hu Fu, and Pinyan Lu (by contribution)

Incentives for Early Arrival in Online Cooperative Games

Artificial Intelligence (**AIJ**), 355: 104523, 2026

Liyan Chen, Tomer Ezra, Michal Feldman, Nick Gravin, Nuozhou Sun and Zhihao Gavin Tang

Order-Competitive Ratio

SIAM Journal on Computing (**SICOMP**), 55(2), 2026

Tomer Ezra, Michal Feldman, Nick Gravin and Zhihao Gavin Tang

Tight Bounds for Secretary Matching in General Graphs

Mathematics of Operations Research (**MOR**), 50(4), 2025

Hubert T.-H. Chan, Zhihao Gavin Tang, and Quan Xue

Max-min greedy matching problem: Hardness for the adversary and fractional variant

Theoretical Computer Science (**TCS**), 986: 114329 (2024)

Zhihao Gavin Tang, Xiaowei Wu, and Yuhao Zhang

Towards a Better Understanding of Randomized Greedy Matching

Journal of the ACM (**JACM**), 70(6), 2023

Tomer Ezra, Michal Feldman, Nick Gravin and Zhihao Gavin Tang
Prophet Matching with General Arrivals
Mathematics of Operations Research (**MOR**), 47(2), 2022

Xiangyu Guo, Kelin Luo, Zhihao Gavin Tang, and Yuhao Zhang
The Online Food Delivery Problem on Stars
Theoretical Computer Science (**TCS**), 928: 13-26, 2022

Yaonan Jin, Pinyan Lu, Zhihao Gavin Tang and Tao Xiao
Tight Revenue Gaps among Simple Mechanisms
SIAM Journal on Computing (**SICOMP**), 49(5), 2020

Zhiyi Huang, Ning Kang, Zhihao Gavin Tang, Xiaowei Wu and Yuhao Zhang
Fully Online Matching
Journal of the ACM (**JACM**), 67(3), 2020

Chenzi Zhang, Shuguang Hu, Zhihao Gavin Tang and T.-H. Hubert Chan (by contribution)
Re-Revisiting Learning on Hypergraphs: Confidence Interval, Subgradient Method, and Extension to Multiclass
IEEE Transaction on Knowledge and Data Engineering (**TKDE**), 32(3), 2020

Zhiyi Huang, Zhihao Gavin Tang, Xiaowei Wu and Yuhao Zhang
Online Vertex-Weighted Bipartite Matching: Beating $1 - 1/e$ with Random Arrivals
ACM Transactions on Algorithms (**TALG**), 15(3), 2019

T.-H. Hubert Chan, Zhihao Gavin Tang, Xiaowei Wu and Chenzi Zhang
Diffusion Operator and Spectral Analysis for Directed Hypergraph Laplacian
Theoretical Computer Science (**TCS**), 784: 46-64, 2019

T.-H. Hubert Chan, Zhiyi Huang, Ning Kang, Shaofeng Jiang and Zhihao Gavin Tang
Online Submodular Maximization with Free Disposal
ACM Transactions on Algorithms (**TALG**), 14(4), 2018

T.-H. Hubert Chan, Zhihao Gavin Tang and Xiaowei Wu
On $(1, \epsilon)$ -Restricted Max-Min Fair Allocation Problem
Algorithmica (Invited Paper), 80(7), 2018

T.-H. Hubert Chan, Anand Louis, Zhihao Gavin Tang and Chenzi Zhang
Spectral Properties of Hypergraph Laplacian and Approximation Algorithms
Journal of the ACM (**JACM**), 65(3), 2018

Conference Publications

(Unless stated otherwise, authors are sorted in alphabetical order.)

Zhihao Gavin Tang, Yixin Tao, and Shixin Wang
Pricing with a Hidden Sample
27th ACM Conference on Economics and Computation (**EC 2026**)

Enze Sun, Zhihao Gavin Tang, and Yifan Wang
Combinatorial Philosopher Inequalities
37th Annual ACM-SIAM Symposium on Discrete Algorithms (**SODA 2026**)

Bo Peng, and Zhihao Gavin Tang
Revisiting Ranking for Online Bipartite Matching with Random Arrivals: the Primal-Dual Analysis
26th ACM Conference on Economics and Computation (**EC 2025**)

Enze Sun, Zhihao Gavin Tang, and Yifan Wang
Online Stochastic Matching with Unknown Arrival Order: Beating 0.5 against the Online Optimum
57th Annual ACM SIGACT Symposium on Theory of Computing (**STOC 2025**)

Junyao Zhang, Yao Zhang, Yaoxin Ge, Dengji Zhao, Hu Fu, Zhihao Gavin Tang, and Pinyan Lu (by contribution)
Incentives for Early Arrival in Cost Sharing
24th International Conference on Autonomous Agents and Multiagent Systems (**AAMAS 2025**)

Ziyun Chen, Zhiyi Huang, Dongchen Li, and Zhihao Gavin Tang
Prophet Secretary and Matching: the Significance of the Largest Item
36th Annual ACM-SIAM Symposium on Discrete Algorithms (**SODA 2025**)
Invited to special issue of **TALG**

Tomer Ezra, Michal Feldman, and Zhihao Gavin Tang
Choosing Behind the Veil: Tight Bounds for Identity-Blind Online Algorithms
25th ACM Conference on Economics and Computation (**EC 2024**)

Hu Fu, Pinyan Lu, Zhihao Gavin Tang, Hongxun Wu, Jinzhao Wu and Qianfan Zhang
Sample-Based Matroid Prophet Inequalities
25th ACM Conference on Economics and Computation (**EC 2024**)

Bo Peng, and Zhihao Gavin Tang
Optimal Robust Contract Design
25th ACM Conference on Economics and Computation (**EC 2024**)

Liyan Chen, Nuo Zhou Sun, and Zhihao Gavin Tang
Setting Targets is All You Need: Improved Order Competitive Ratio for Online Selection
25th ACM Conference on Economics and Computation (**EC 2024**)

Zhihao Gavin Tang, and Yuhao Zhang
Improved Bounds for Fractional Online Matching Problems
25th ACM Conference on Economics and Computation (**EC 2024**)

Yaoxin Ge, Yao Zhang, Dengji Zhao, Zhihao Gavin Tang, Hu Fu, and Pinyan Lu (by contribution)
Incentives for Early Arrival in Cooperative Games
23rd International Conference on Autonomous Agents and Multiagent Systems (**AAMAS 2024, Best Paper Award**)
Invited to the award winning track paper of **AIJ, JAIR**
Invited to **IJCAI 2025** Sister Conferences' Best Paper Track

Nick Gravin, Enze Sun, and Zhihao Gavin Tang
Online Ordinal Problems: Optimality of Comparison-based Algorithms and their Cardinal Complexity
64th Annual IEEE Symposium on Foundations of Computer Science (**FOCS 2023**)

Hubert T.-H. Chan, Zhihao Gavin Tang, and Quan Xue
Max-min greedy matching problem: Hardness for the adversary and fractional variant
17th International Joint Conference on Theoretical Computer Science - Frontier of Algorithmic Wisdom (**IJTCS-FAW 2023, Best Paper Award**)
Invited to special issue of **TCS**

Jingxun Liang, Zhihao Gavin Tang, Yixuan Evan Xu, Yuhao Zhang, and Renfei Zhou
On the Perturbation Function of Ranking and Balance for Weighted Online Bipartite Matching
31st Annual European Symposium on Algorithms (**ESA 2023**)

Jianhao Jia, Hao Li, Kai Liu, Ziqi Liu, Jun Zhou, Nick Gravin, and Zhihao Gavin Tang
Online resource allocation in Markov Chains
The 2023 ACM Web Conference (**WWW 2023**)

Xiaohui Bei, Nick Gravin, Pinyan Lu, and Zhihao Gavin Tang
Bidder subset selection problem in auction design
34th Annual ACM-SIAM Symposium on Discrete Algorithms (**SODA 2023**)

Tomer Ezra, Michal Feldman, Nick Gravin, and Zhihao Gavin Tang
"Who is Next in Line?" On the Significance of Knowing the Arrival Order in Bayesian Online Settings
34th Annual ACM-SIAM Symposium on Discrete Algorithms (**SODA 2023**)

Nick Gravin, Hao Li, and Zhihao Gavin Tang
Optimal Prophet Inequality with Less than One Sample
18th Conference on Web and Internet Economics (**WINE 2022**)

Bo Peng, and Zhihao Gavin Tang
Order Selection Prophet Inequality: From Threshold Optimization to Arrival Time Design
63rd Annual IEEE Symposium on Foundations of Computer Science (**FOCS 2022**)
Invited to special issue of **SICOMP**

Michal Feldman, Nick Gravin, Zhihao Gavin Tang, and Almog Wald
Lookahead Auctions with Pooling
15th Symposium on Algorithmic Game Theory (**SAGT 2022**)

Tomer Ezra, Michal Feldman, Nick Gravin and Zhihao Gavin Tang
General Graphs are Easier than Bipartite Graphs: Tight Bounds for Secretary Matching
23rd ACM Conference on Economics and Computation (**EC 2022**)

Zhihao Gavin Tang, Hongxun Wu and Jinzhao Wu
(Fractional) Online Stochastic Matching via Fine-Grained Offline Statistics
54th Annual ACM SIGACT Symposium on Theory of Computing (**STOC 2022**)

Shaofeng H.-C. Jiang, Erzhi Liu, You Lyu, Zhihao Gavin Tang and Yubo Zhang
Online Facility Location with Predictions
10th International Conference on Learning Representations (**ICLR 2022**)

Hu Fu, Pinyan Lu, Zhihao Gavin Tang, Abner Turkieltaub, Hongxun Wu, Jinzhao Wu and Qianfan Zhang

Oblivious Online Contention Resolution Schemes

5th Annual ACM-SIAM Symposium on Simplicity in Algorithms (**SOSA 2022**)

Chenghao Guo, Zhiyi Huang, Zhihao Gavin Tang and Xinzhi Zhang

Generalizing Complex Hypotheses on Product Distributions: Auctions, Prophet Inequalities, and Pandora's Problem

34th Annual Conference on Learning Theory (**COLT 2021**)

Zhihao Jiang, Pinyan Lu, Zhihao Gavin Tang and Yuhao Zhang

Online Selection Problems against Constrained Adversary

38th International Conference on Machine Learning (**ICML 2021**)

Hu Fu, Zhihao Gavin Tang, Hongxun Wu, Jinzhao Wu and Qianfan Zhang

Random Order Vertex Arrival Contention Resolution Schemes For Matching, With Applications

48th International Colloquium on Automata, Languages, and Programming (**ICALP 2021**)

Nick Gravin, Zhihao Gavin Tang and Kangning Wang

Online Stochastic Matching with Edge Arrivals

48th International Colloquium on Automata, Languages, and Programming (**ICALP 2021**)

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

Fully Online Matching II: Beating Ranking and Water-filling

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

Tomer Ezra, Michal Feldman, Nick Gravin and Zhihao Gavin Tang

Online Stochastic Max-Weight Matching: prophet inequality for vertex and edge arrival models

21st ACM Conference on Economics and Computation (**EC 2020**)

Zhihao Gavin Tang, Xiaowei Wu and Yuhao Zhang

Towards a Better Understanding of Randomized Greedy Matching

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

Yaonan Jin, Pinyan Lu, Qi Qi, Zhihao Gavin Tang and Tao Xiao

Tight Approximation Ratio of Anonymous Pricing

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

Xiaohui Bei, Nick Gravin, Pinyan Lu and Zhihao Gavin Tang

Correlation-Robust Analysis of Single Item Auction

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

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

Tight Competitive Ratios of Classic Matching Algorithms in the Fully Online Model

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

Yaonan Jin, Pinyan Lu, Zhihao Gavin Tang and Tao Xiao

Tight Revenue Gaps among Simple Mechanisms

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

Zhiyi Huang, Ning Kang, Zhihao Gavin Tang, Xiaowei Wu and 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 and 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, Ning Kang, Zhihao Gavin Tang, Xiaowei Wu, Yuhao Zhang and Xue Zhu
How to Match when All Vertices Arrive Online
50th Annual ACM SIGACT Symposium on Theory of Computing (**STOC 2018**)

Hu Fu, Christopher Liaw, Pinyan Lu and Zhihao Gavin Tang
The Value of Information Concealment
29th Annual ACM-SIAM Symposium on Discrete Algorithms (**SODA 2018**)

T.-H. Hubert Chan, Shaofeng H.-C. Jiang, Zhihao Gavin Tang and Xiaowei Wu
Online Submodular Maximization Problem with Vector Packing Constraint
25th Annual European Symposium on Algorithms (**ESA 2017**)

Chenzi Zhang, Shuguang Hu, Zhihao Gavin Tang and T.-H. Hubert Chan (by contribution)
Re-visiting Learning on Hypergraphs: Confidence Interval and Subgradient Method
34th International Conference on Machine Learning (**ICML 2017**)

Chenzi Zhang, Fan Wei, Qin Liu, Zhihao Gavin Tang and Zhenguo Li (by contribution)
Graph Edge Partitioning via Neighborhood Heuristic
23rd ACM SIGKDD International Conference on Knowledge Discovery and Data Mining (**KDD 2017**)

T.-H. Hubert Chan, Zhiyi Huang, Shaofeng H.-C. Jiang, Ning Kang and Zhihao Gavin Tang
Online Submodular Maximization with Free Disposal: Randomization Beats $1/4$ for Partition Matroids
28th Annual ACM-SIAM Symposium on Discrete Algorithms (**SODA 2017**)

T.-H. Hubert Chan, Zhihao Gavin Tang and Xiaowei Wu
On $(1, \epsilon)$ -Restricted Max-Min Fair Allocation Problem
27th International Symposium on Algorithms and Computation (**ISAAC 2016**)
Invited to special issue of **Algorithmica**

T.-H. Hubert Chan, Zhihao Gavin Tang and Chenzi Zhang
Cheeger Inequalities for General Edge-Weighted Directed Graphs
21st International Computing and Combinatorics Conference (**COCOON 2015**)

External Grant (as PI)

2026 - 2029	<i>Online Bayesian Selection Problems: Against the Online Optimum</i> NSFC62572291, National Natural Science Foundation of China	(500,000 RMB)
2021 - 2022	<i>Algorithms and solvers for large-scale operational optimization problems</i> Ant Finance	(500,000 RMB)
2020 - 2022	<i>Fully online matching</i> NSFC61902233, National Natural Science Foundation of China	(280,000 RMB)

Professional Services

2026 – present	<i>Young Assistant Editor</i> Frontiers of Computer Science
2024 – present	<i>Deputy Director</i> Technical Committee on TCS of Shanghai Computer Society
2024 – present	<i>Deputy Secretary-General</i> Technical Committee on TCS of China Computer Federation
2019 – 2024	<i>Secretary-General</i> Technical Committee on TCS of Shanghai Computer Society

Program Committee

- ACM Conference on Economics and Computation (EC): 2026 (senior), 2025, 2024, 2023, 2022, 2021
- Conference on Web and Internet Economics (WINE): 2026 (senior), 2025 (senior), 2023, 2021
- Symposium on Theoretical Aspects of Computer Science (STACS): 2026
- International Computing and Combinatorics Conference (COCOON): 2025
- International Joint Conference on Theoretical Computer Science – Frontier of Algorithmic Wisdom (IJTCS-FAW): 2024 (co-chair), 2022, 2021, 2020
- Workshop on Approximation and Online Algorithms (WAOA): 2022
- International Symposium on Algorithms and Computation (ISAAC): 2026, 2019
- The Web Conference (WWW): 2026
- Conference on Theory and Applications of Models of Computation (TAMC): 2026

Teaching

2024	Fall	Online Algorithms
2021, 2022, 2023, 2024	Fall	Mathematical Analysis
2020, 2021, 2022, 2023, 2024, 2025	Spring	Algorithm Design and Analysis
2019, 2020, 2022	Fall	(Grad-level) Mechanism Design

References

Hubert Chan (Email: hubert@cs.hku.hk)

Associate Professor, Department of Computer Science, The University of Hong Kong

Zhiyi Huang (Email: zhiyi@cs.hku.hk)

Professor, Department of Computer Science, The University of Hong Kong

Pinyan Lu (Email: lu.pinyan@mail.shufe.edu.cn)

Professor, Institute for Theoretical Computer Science, Shanghai University of Finance and Economics

Nick Gravin (Email: nikolai@mail.shufe.edu.cn)

Professor, Institute for Theoretical Computer Science, Shanghai University of Finance and Economics

Michal Feldman (Email: michal.feldman@cs.tau.ac.il)

Professor, Blavatnik School of Computer Science, Tel-Aviv University