

Song Zuo

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About me

I got my PhD at IIIS, Tsinghua University. 2013 - 2018

I obtained my Bachelor Degree at Yao Class of IIIS, Tsinghua University. 2009 - 2013

My advisor is Prof. Pingzhong Tang.

I am one of the [2017 Google PhD Fellows](#). I also won the [Yao Award](#) during my undergraduate.

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Research Interests

Auction and Mechanism Design, Economics and Computation

Journal Publications

- [\[arXiv\]](#) [Auto-bidding and Auctions in Online Advertising: A Survey](#).
Co-author with Gagan Aggarwal, Ashwinkumar Badanidiyuru, Santiago Balseiro, Kshipra Bhawalkar, Yuan Deng, Zhe Feng, Gagan Goel, Christopher Liaw, Haihao Lu, Mohammad Mahdian, Jieming Mao, Aranyak Mehta, Vahab Mirrokni, Renato Paes Leme, Andres Perloth, Georgios Piliouras, Jon Schneider, Ariel Schvartzman, Balasubramanian Sivan, Kelly Spendlove, Yifeng Teng, Di Wang, Hanrui Zhang, Mingfei Zhao, Wennan Zhu. ACM SIGecom Exchanges, 2024, 22 (1).
- [\[PDF, SSRN\]](#) [Dynamic Double Auctions: Toward First Best](#).
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Conference version published at SODA-19, San Diego, USA.
- [\[PDF, Supplement, SSRN\]](#) [Non-Clairvoyant Dynamic Mechanism Design](#).
Co-author with Vahab Mirrokni, Renato Paes Leme, Pingzhong Tang. Econometrica, 2020, 88 (5).
[\[Slides\]](#) Conference version published at EC-18, Ithaca, USA.

Conference Publications

- [\[arXiv\]](#) [Complex Dynamics in Autobidding Systems](#).
Co-author with Renato Paes Leme, Georgios Piliouras, Jon Schneider, Kelly Spendlove. EC-24, New Haven, USA.
- [\[SSRN\]](#) [Optimal Mechanisms for a Value Maximizer: The Futility of Screening Targets](#).
Co-author with Santiago Balseiro, Yuan Deng, Jieming Mao, Vahab Mirrokni. EC-24, New Haven, USA.
- [\[arXiv\]](#) [Bayesian Calibrated Click-Through Auction](#).
Co-author with Junjie Chen, Minming Li, Haifeng Xu. ICALP-24, Tallinn, Estonia.
- [\[arXiv\]](#) [Mechanism Design for Large Language Models](#).
Co-author with Paul Dütting, Vahab Mirrokni, Renato Paes Leme, Haifeng Xu. WWW-24, Singapore.
★ [Best Paper Award](#) (WWW-24), [Highlights Beyond EC 2024](#) [\[Slides\]](#).
- [\[arXiv\]](#) [Non-uniform Bid-scaling and Equilibria for Different Auctions: An Empirical Study](#).
Co-author with Yuan Deng, Jieming Mao, Vahab Mirrokni, Yifeng Teng. WWW-24, Singapore.
- [\[arXiv\]](#) [Efficiency of the Generalized Second-Price Auction for Value Maximizers](#).
Co-author with Yuan Deng, Mohammad Mahdian, Jieming Mao, Vahab Mirrokni, Hanrui Zhang. WWW-24, Singapore.

- [\[arXiv\]](#) **Autobidding Auctions in the Presence of User Costs.**
Co-author with *Yuan Deng, Jieming Mao, Vahab Mirrokni, Hanrui Zhang*. WWW-23, Austin, USA.
- [\[PDF, SSRN\]](#) **Optimal Mechanisms for Value Maximizers with Budget Constraints via Target Clipping.**
Co-author with *Santiago Balseiro, Yuan Deng, Jieming Mao, Vahab Mirrokni*. EC-22, Boulder, USA.
- [\[arXiv\]](#) **Calibrated Click-Through Auctions.**
Co-author with *Dirk Bergemann, Paul Dütting, Renato Paes Leme*. WWW-22, Online.
- [\[arXiv\]](#) **Robust Auction Design in the Auto-bidding World.**
Co-author with *Santiago Balseiro, Yuan Deng, Jieming Mao, Vahab Mirrokni*. NeurIPS-21, Online.
- [\[PDF, SSRN\]](#) **The Landscape of Auto-bidding Auctions: Value versus Utility Maximization.**
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- [\[PDF\]](#) **Revenue-Incentive Tradeoffs in Dynamic Reserve Pricing.**
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- [\[arXiv\]](#) **Towards Efficient Auctions in an Auto-bidding World.**
Co-author with *Yuan Deng, Jieming Mao, Vahab Mirrokni*. WWW-21, Online.
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- [\[PDF\]](#) **A Data-Driven Metric of Incentive Compatibility.**
Co-author with *Yuan Deng, Sébastien Lahaie, Vahab Mirrokni*. WWW-20, Online.
- [\[arXiv\]](#) **An Economic Approach to Vehicle Dispatching for Ride Sharing.**
Co-author with *Mengjing Chen, Weiran Shen, Pingzhong Tang*. IJCAI-19, Macau, China.
- [\[arXiv\]](#) **Automated Mechanism Design via Neural Networks.**
Co-author with *Weiran Shen, Pingzhong Tang*. AAMAS-19, Montréal, Canada.
- [\[arXiv\]](#) **The Matthew Effect in Computation Contests: High Difficulty may Lead to 51% Dominance.**
Co-author with *Yulong Zeng*. WWW-19, San Francisco, USA.

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- [\[SSRN\]](#) **Dynamic Double Auctions: Towards First Best.**
Co-author with Santiago Balseiro, Vahab Mirrokni, Renato Paes Leme. SODA-19, San Diego, USA.
- [\[PDF\]](#) **Ex-Post IR Dynamic Auctions with Cost-Per-Action Payments.**
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- [\[PDF\]](#) **Incentive-Aware Learning for Large Markets.**
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- [\[SSRN\]](#) **Dynamic Revenue Sharing.**
Co-author with Santiago Balseiro, Max Lin, Vahab Mirrokni, Renato Paes Leme. NeurIPS-17, Long Beach, USA.
- [\[PDF\]](#) **Fans Economy and All-Pay Auctions with Proportional Allocations.**
Co-author with Pingzhong Tang, Yulong Zeng. AAAI-17, San Francisco, USA.
- [\[PDF\]](#) **Dynamic Auctions with Bank Accounts.**
Co-author with Vahab Mirrokni, Renato Paes Leme, Pingzhong Tang. IJCAI-16, New York, USA.
- [\[PDF\]](#) **Digital Good Exchange.**
Co-author with Wenyi Fang, Pingzhong Tang. IJCAI-16, New York, USA.
- [\[PDF\]](#) **Randomized Assignments for Barter Exchanges: Fairness vs. Efficiency.**
Co-author with Wenyi Fang, Aris Filos-Ratskas, Søren Stiel-Fredriksen, Pingzhong Tang. ADT-15, Kentucky, USA.
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- [\[arXiv\]](#) **Tighter Relations Between Sensitivity and Other Complexity Measures.**
Co-author with Andris Ambainis, Mohammad Bavarian, Yihan Gao, Jieming Mao, Xiaoming Sun. ICALP-14, Copenhagen, Denmark.

- [\[PDF\]](#) On the sensitivity complexity of bipartite graph properties.

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