

# Mingfei ZHAO

## PERSONAL DATA

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## EDUCATION

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SEP 2019 Ph.D. of Computer Science, **Yale University**, USA  
Advisor: Prof. Yang CAI

SEP 2017 Ph.D. of Computer Science, **McGill University**, Canada  
Advisor: Prof. Yang CAI

SEP 2015 Master of Computer Science(Thesis), **McGill University**, Canada  
Thesis: "Approximating Gains from Trade in Two-sided Markets via Simple Mechanisms"  
Advisor: Prof. Yang CAI  
GPA: 4.0/4.0

SEP 2011 Bachelor Degree in Computer Science and Technology, **Tsinghua University**, China  
GPA: 87.9/100(Major) 86.8/100(Overall)  
Second Bachelor Degree of Science: Pure and Applied Mathematics

## RESEARCH INTERESTS

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Algorithmic Game Theory, Mechanism Design.

## PUBLICATIONS

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### **On Multi-Dimensional Gains from Trade Maximization**

Yang CAI, Kira GOLDNER, Steven MA, **Mingfei ZHAO**

To appear in Proceedings of the 32nd ACM-SIAM Symposium on Discrete Algorithms (SODA 2021)

### **An Efficient $\epsilon$ -BIC to BIC Transformation and Its Application to Black-Box Reduction in Revenue Maximization**

Yang CAI, Argyris OIKONOMOU, Grigoris VELEGKAS, **Mingfei ZHAO**

To appear in Proceedings of the 32nd ACM-SIAM Symposium on Discrete Algorithms (SODA 2021)

### **Simple Mechanisms for Profit Maximization in Multi-item Auctions**

Yang CAI and **Mingfei ZHAO**

Proceedings of the 2019 ACM Conference on Economics and Computation (EC 19) Pages 217-236

### **The Best of Both Worlds: Asymptotically Efficient Mechanisms with a Guarantee on the Expected Gains-From-Trade**

Moshe BABAIOFF, Yang CAI, Yannai A. GONCZAROWSKI and **Mingfei ZHAO**

Proceedings of the 2018 ACM Conference on Economics and Computation (EC 18), Pages 373

### **Simple Mechanisms for Subadditive Buyers via Duality**

Yang CAI and **Mingfei ZHAO**

Proceedings of the 49th Annual ACM SIGACT Symposium on Theory of Computing (STOC 2017), Pages 170-183

Invited to the Special Issue of Games and Economic Behavior for STOC/FOCS/SODA

## Approximating Gains from Trade in Two-sided Markets via Simple Mechanisms

Johannes BRUSTLE, Yang CAI, Fa WU and Mingfei ZHAO

Proceedings of the 2017 ACM Conference on Economics and Computation (EC 17), Pages 589-590

## Robust Influence Maximization

Wei CHEN, Tian LIN, Zihan TAN, Mingfei ZHAO and Xuren ZHOU

Proceedings of the 22nd ACM SIGKDD International Conference on Knowledge Discovery and Data Mining (KDD 16), Pages 795-804

## Tight Bound on Randomness for Violating the Clauser-Horne-Shimony-Holt Inequality

Yifeng TENG, Shenghao YANG, Siwei WANG and Mingfei ZHAO

IEEE Transactions on Information Theory (Volume: 62, Issue: 4, April 2016)

## CONFERENCE PRESENTATION

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- JUN 2017 Simple Mechanisms for Subadditive Buyers via Duality  
STOC 2017, Montreal, CA
- JUN 2017 Approximating Gains from Trade in Two-sided Markets via Simple Mechanisms  
Workshop: Connections between Theory of Computing and Mechanism Design  
in STOC 2017, Montreal, CA
- JUN 2017 Approximating Gains from Trade in Two-sided Markets via Simple Mechanisms  
EC 2017, Boston, US
- JUL 2017 Simple Mechanisms for Subadditive Buyers via Duality  
China Theory Week 2017, Shanghai, China
- JUN 2019 Simple Mechanisms for Profit Maximization in Multi-item Auctions  
EC 2019, Pheonix, US

## OTHER EXPERIENCE

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- JUL 2018 *Software Engineering Internship, Google Mountain View*  
Manager: Saeed Alaei  
Found auctions with good revenue robustness under the pctr improvements in ad auctions.
- SEP 2015 *Teaching Assistant, McGill University*  
Algorithms and Data Structures: Winter 2016  
Algorithmic Game Theory (Graduate Course): Fall 2017  
Algorithm Design: Winter 2017, Fall 2018, Winter 2018
- FEB 2014 *Mathematical Contest in Modeling 2014, Tsinghua University*  
Meritorious Winner  
Built a mathematical model studying the tradeoff between road efficiency and safety for different traffic rules in freeways; as a group leader, wrote the simulation program of freeways and came up with the main idea of intelligence freeway system.
- OCT 2012 *Students Research Training, Tsinghua University*  
As a group member, developed an application that allows people to play Bridge game with another three players controlled by an advanced artificial intelligence, wrote the main platform by c++ that supports the application and the "Bidding" part of the artificial intelligence.

## SCHOLARSHIPS AND CERTIFICATES

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- SEP 2017 Richard H. Tomlinson Doctoral Fellowship
- MAY 2013 Tsinghua School Plan Scholarship
- JAN 2010 China Mathematics Olympics, Silver Medal
- AUG 2009 China National Olympiad in Informatics (Summer Camp), Silver Medal

## LANGUAGES

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CHINESE:  Mothertongue  
ENGLISH:  Proficient

## COMPUTER SKILLS

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Languages:  C++, Java, Matlab, Latex, Pascal