

ZHAOHUA CHEN

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EDUCATION

Ph.D. of Science, in process

2021.09 – 2026.07 (in expectation)

Peking University, Beijing, China

Center on Frontiers of Computing Studies (CFCS), School of Computer Science

Advisor: Prof. Xiaotie Deng

Bachelor of Science, Summa Cum Laude

2017.09 – 2021.07

Peking University, Beijing, China

Intelligence Science and Technology

School of Electronics Engineering and Computer Science

RESEARCH INTERESTS

I am now working on various topics in the interplay of computer science and economics, also known as algorithmic game theory.

PUBLICATIONS

CONFERENCE PAPERS

Contextual Decision-Making with Knapsacks beyond Worst Cases

($\alpha\beta$) Rui Ai, **Zhaohua Chen**, Xiaotie Deng, Yuqi Pan, Chang Wang, and Mingwei Yang

NeurIPS 2024

Are Bounded Contracts Learnable and Approximately Optimal?

($\alpha\beta$) Yurong Chen, **Zhaohua Chen**, Xiaotie Deng, and Zhiyi Huang

EC 2024

ArXiv: 2402.14486

Robust Decision Aggregation with Second-order Information

Yuqi Pan, **Zhaohua Chen**, and Yuqing Kong

WWW 2024

doi: 10.1145/3589334.3645384

ArXiv: 2311.14094

Budget-Constrained Auctions with Unassured Priors: Strategic Equivalence and Structural Properties

Zhaohua Chen, Mingwei Yang, Chang Wang, Jicheng Li, Zheng Cai, Yukun Ren, Zhihua Zhu, and Xiaotie Deng

WWW 2024 (Oral)

doi: 10.1145/3589334.3645344

ArXiv: 2203.16816

SSRN: 4071291

Dynamic Budget Throttling in Repeated Second-Price Auctions

Zhaohua Chen*, Chang Wang*, Qian Wang*, Yuqi Pan, Zhuming Shi, Zheng Cai, Yukun Ren, Zhihua Zhu, and Xiaotie Deng

AAAI 2024

Arxiv: 2207.04690

Coordinated Dynamic Bidding in Repeated Second-Price Auctions with Budgets

Yurong Chen*, Qian Wang*, Zhijian Duan, Haoran Sun, **Zhaohua Chen**, Xiang Yan, and Xiaotie Deng

ICML 2023

Arxiv: 2306.07709

Decentralized Asset Custody Scheme with Security against Rational Adversary

($\alpha\beta$) **Zhaohua Chen** and Guang Yang

WINE 2021

doi: 10.1007/978-3-030-94676-0_25

Arxiv: 2008.10895

Cryptology ePrint Archive: 2020/1229

On Tightness of the Tsaknakis-Spirakis Algorithm for Approximate Nash Equilibrium

($\alpha\beta$) **Zhaohua Chen**, Xiaotie Deng, Wenhan Huang, Hanyu Li*, and Yuhao Li

SAGT 2021

doi: 10.1007/978-3-030-85947-3_7

Arxiv: 2107.01471

An Efficient Permissioned Blockchain Model with Provable Reputation Mechanism

($\alpha\beta$) Hongyin Chen*, **Zhaohua Chen***, Yukun Cheng, Xiaotie Deng, Wenhan Huang, Jichen Li, Hongyi Ling*, and Mengqian Zhang

ICDCS 2021 (Poster)

doi: 10.1109/ICDCS51616.2021.00123

Arxiv: 2002.06852

CycLedger: A Scalable and Secure Parallel Protocol for Distributed Ledger via Sharding

Mengqian Zhang*, Jichen Li*, **Zhaohua Chen***, Hongyin Chen*, and Xiaotie Deng

IPDPS 2020 (Best paper nominee)

doi: 10.1109/IPDPS47924.2020.00045

Arxiv: 2001.06778

JOURNAL PAPERS

On Tightness of Tsaknakis-Spirakis Descent Methods for Approximate Nash Equilibria

($\alpha\beta$) **Zhaohua Chen**, Xiaotie Deng, Wenhan Huang, Hanyu Li, and Yuhao Li

Information and Computation

doi: 10.1016/j.ic.2023.105046

An Efficient and Robust Committee Structure for Sharding Blockchain

Mengqian Zhang*, Jichen Li*, **Zhaohua Chen***, Hongyin Chen*, and Xiaotie Deng

IEEE Transactions on Cloud Computing

doi: 10.1109/TCC.2022.3217856

A Provable Softmax Reputation-based Protocol for Permissioned Blockchains

($\alpha\beta$) Hongyin Chen*, **Zhaohua Chen***, Yukun Cheng, Xiaotie Deng, Wenhan Huang, Jichen Li, Hongyi Ling*, and Mengqian Zhang

IEEE Transactions on Cloud Computing

doi: 10.1109/TCC.2021.3130244

PATENTS

CN112419060A. Asset hosting system, asset management method, node and medium

Inventor: YANG GUANG, **CHEN ZHAOHUA**, WU MING, LONG FAN, LI CHENXING

INTERNSHIPS

Research Intern at Alibaba

2024.07 –

Mentor: Zhilin Zhang

Topic: Design and analysis of mechanisms and algorithms in the online market

Research Intern at DeCus.io (under Conflux)

2020.09 – 2021.10

Mentors: Ge Chen, Tian Lin, Guang Yang

Topic: Group assignment scheme design in decentralized asset custody

Research Intern at Conflux

2020.03 – 2020.09

Mentor: Guang Yang

Topic: Mechanism design and analysis in blockchain cross-chain protocols

TEACHINGS

Advisor:

Billiards

Yuanpei College, Peking University, 2023.03 – 2023.06

Billiards

Yuanpei College, Peking University, 2022.10 – 2022.12

Teaching Assistant:

Discrete Math and Structures (I)

Peking University, 2023.09 – 2024.01

<i>Study and Practice on Topics of Frontier Computing (II)</i>	Peking University, 2023.02 – 2023.06
<i>Study and Practice on Topics of Frontier Computing (I)</i>	Peking University, 2022.09 – 2023.01
<i>Discrete Math and Structures (I)</i>	Peking University, 2021.09 – 2022.01
<i>Discrete Math and Structures (I)</i>	Peking University, 2020.09 – 2021.01
<i>Blockchain Theory and Technique</i>	Peking University, 2019.09 – 2020.01

SERVICES

Conference Reviewing:

NeurIPS 2024, FOCS 2024, WWW 2024, GameSec 2021

Journal Reviewing:

SIAM Journal on Computing

Services in Academic Organizations:

Administrative assistant

CCF TCCE, 2022.08 –

Organizing:

Chair of undergraduate research forum

IJTCS 2021

Leader of volunteer group

WINE 2020

Volunteering:

IJTCS-FAW 2023, CSIAM-BTAF 2021, IJTCS 2020

HONORS

Presidential Scholarship	2024
UBIQUANT Scholarship	2023
The China Optics Valley Scholarship	2022
3 rd Prize of Peking University Scholarship	2020
National Scholarship	2019
Jingjishijie Scholarship	2018

Merit Student	2023
Merit Student	2022
Excellent Graduate of Peking University	2021
Merit Student	2020
Merit Student	2019
Merit Student	2018

3 rd Place in Captial Colledge Student Billiards Championship (Single)	2021
2 nd Place in Captial Colledge Student Billiards Championship (Team)	2019

3 rd Prize in “Tencent Cup” Peking University Programming Contest	2019
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