

ZHAOHUA CHEN

Center on Frontiers of Computing Studies (CFCS),
School of Computer Science,
Peking University,
Beijing, China

Email: chenzhaohua@pku.edu.cn, caezoah@gmail.com

Homepage: <https://daleczh.github.io/>

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 in the interplay of computer science and economics, also known as algorithmic game theory.

PUBLICATIONS

CONFERENCE PAPERS

Are Bounded Contracts Learnable and Approximately Optimal?

Yurong Chen, **Zhaohua Chen**, Xiaotie Deng, and Zhiyi Huang

EC 2024

ArXiv: [2402.14486](https://arxiv.org/abs/2402.14486)

Robust Decision Aggregation with Second-order Information

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

WWW 2024

ArXiv: [2311.14094](https://arxiv.org/abs/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)

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

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

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

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**

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 BlockchainMengqian 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 BlockchainsHongyin 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 DeCus (Conflux)**

2020.09 – 2021.10

Mentor: Dr. Ge Chen, Dr. Tian Lin, Dr. Guang Yang**Topic:** Group assignment scheme design in decentralized asset custody scenario**Research Intern at Conflux**

2020.03 – 2020.09

Mentor: Dr. 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

Study and Practice on Topics of Frontier Computing (II)

Peking University, 2023.02 – 2023.06

Study and Practice on Topics of Frontier Computing (I)

Peking University, 2022.09 – 2023.01

Discrete Math and Structures (I)

Peking University, 2021.09 – 2022.01

Discrete Math and Structures (I)

Peking University, 2020.09 – 2021.01

Blockchain Theory and Technique

Peking University, 2019.09 – 2020.01

SERVICES**Conference Reviewing:** FOCS 2024, WWW 2024, GameSec 2021, IPDPS 2020**Journal Reviewing:** SIAM Journal on Computing**Volunteer Experience:** IJTCS-FAW (IJTCS) {2023; 2021, Undergraduate Research Forum Chair;

2020}, CSIAM-BTAF 2021, WINE 2020 (Volunteer Group Leader, in Local Organization Committee)

HONORS

| | |
|---|------|
| 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 |