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

Robust Decision Aggregation with Second-order Information
Yuqi Pan, **Zhaohua Chen**, and Yuqing Kong
TheWebConf (WWW) 2024
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
TheWebConf (WWW) 2024
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 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
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 **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: TheWebConf 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
3rd 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

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

3rd Prize in "Tencent Cup" Peking University Programming Contest	2019