

ZHAOHUA CHEN

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EDUCATION

Ph.D. of Science, in process

Peking University, Beijing, China
school of Computer Science

September 2021 – July 2026

Bachelor of Science, Summa Cum Laude

Peking University, Beijing, China
School of Electronics Engineering and Computer Science
Intelligence Science and Technology
GPA 3.768 / 4

September 2017 – July 2021

RESEARCH INTERESTS

I am currently much interested in various subjects of theoretical computer science. Specifically, I am fascinated by the field of game theory, algorithmic game theory and complexity theory. Previously, I have worked on the scalability issue of blockchain, when I mainly focused on the application of game theory and mechanism design in blockchain.

PUBLICATIONS

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

Journal: IEEE Transactions on Cloud Computing

(journal version of "An Efficient Permissioned Blockchain Model with Provable Reputation Mechanism")

doi: [10.1109/TCC.2021.3130244](https://doi.org/10.1109/TCC.2021.3130244) (Early Access)

Decentralized Asset Custody Scheme with Security against Rational Adversary

Zhaohua Chen and Guang Yang

Conference: WINE 2021

doi: [10.1007/978-3-030-94676-0_25](https://doi.org/10.1007/978-3-030-94676-0_25)

Arxiv: [2008.10895](https://arxiv.org/abs/2008.10895)

Cryptology ePrint Archive: [2020/1229](https://eprint.iacr.org/2020/1229)

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

Zhaohua Chen, Xiaotie Deng, Wenhan Huang, Hanyu Li* and Yuhao Li

Conference: SAGT 2021

doi: 10.1007/978-3-030-85947-3_7 Arxiv: 2107.01471

Poster: 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

Conference: ICDCS 2021

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

Conference: IPDPS 2020 (Best paper nominee)

doi: 10.1109/IPDPS47924.2020.00045

Arxiv: 2001.06778

INTERNSHIPS

Research Intern at DeCus (Conflux)

September 2020 - Now

Mentor: Dr. Ge Chen, Dr. Tian Lin, Dr. Guang Yang

Topic: Group assignment scheme design in decentralized asset custody scenario

Research Intern at Conflux

March 2020 - September 2020

Mentor: Dr. Guang Yang

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

TEACHINGS

TA of *Discrete Math and Structures (I)*

Peking University, September 2021 – January 2022

TA of *Discrete Math and Structures (I)*

Peking University, September 2020 – January 2021

TA of *Blockchain Theory and Technique*

Peking University, September 2019 – January 2020

SERVICES

Conference Reviewing: GameSec 2021, IPDPS 2020

Journal Reviewing: SIAM Journal on Computing

Volunteer Experience: CSIAM-BTAF 2021, IJTCS 2021 (Undergraduate Research Forum Chair), WINE 2020 (Volunteer Group Leader, in Local Organization Committee), IJTCS 2020

HONORS

Excellent Graduate of Peking University

2021

Outstanding Student in Center on Frontiers of Computing Studies, Peking University

2020

The Third Prize of Peking University Scholarship	2020
Merit Student	2020
National Scholarship	2019
Merit Student	2019
Meritorious Winner for Mathematical Contest in Modeling	2019
The Third Prize in “Tencent Cup” Peking University Programming Contest	2019
Jingjishijie Scholarship	2018
Merit Student	2018