ZHAOHUA CHEN

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EDUCATION

Ph.D. of Science, in process
Peking University, Beijing, China   September 2021 – July 2026 (in expectation)
Center on Frontiers of Computing Studies (CFCS), School of Computer Science

Bachelor of Science, Summa Cum Laude
Peking University, Beijing, China   September 2017 – July 2021
Intelligence Science and Technology
School of Electronics Engineering and Computer Science

RESEARCH INTERESTS

I am much interested in the interplay of computer science and economics, also known as algorithmic game theory. More specifically, I am currently working on various problems in ad auctions. Previously, I have worked on the scalability issue of blockchain, when I mainly focused on the application of game theory and mechanism design in the field of 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 (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
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
Conference: **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
Conference: **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
Conference: **IPDPS 2020** *(Best paper nominee)*
doi: 10.1109/IPDPS47924.2020.00045
Arxiv: 2001.06778

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)**   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