

Hongjie Chen

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Research Interests

Privacy-preserving machine learning, particularly differential privacy
High-dimensional statistical estimation

Education

ETH Zürich

PH.D. COMPUTER SCIENCE

2022 - Present

Advised by David Steurer

ETH Zürich

M.S. COMPUTER SCIENCE (WITH DISTINCTION)

2019 - 2021

Advised by David Steurer

Thesis: On the Spreadness Property and Lower Bounds for Robust Regression

Shanghai Jiao Tong University

B.E. COMPUTER SCIENCE AND TECHNOLOGY

2015 - 2019

Advised by Chihao Zhang

Thesis: An Empirical Study on Mixing Time of Markov Chains

Professional Experience

Apple Machine Learning Research

RESEARCH INTERN

Hosted by Hilal Asi

Cupertino, USA

May - Sep 2025

Caltech

VISITING UNDERGRADUATE RESEARCH INTERN

Hosted by Anima Anandkumar and Kamyar Azizzadenesheli

Pasadena, USA

Jul - Sep 2018

Publications

Improved robust estimation for Erdős-Rényi graphs: the sparse regime and optimal breakdown point. Hongjie Chen, Jingqiu Ding, Yiding Hua, Stefan Tiegel. *NeurIPS 2025*.

Outlier-robust mean estimation near the breakdown point via sum-of-squares. Hongjie Chen, Deepak Narayanan, David Steurer. *SODA 2025*.

Private edge density estimation for random graphs: optimal, efficient and robust. Hongjie Chen, Jingqiu Ding, Yiding Hua, David Steurer. *NeurIPS 2024 (spotlight)*.

Private graphon estimation via sum-of-squares. Hongjie Chen, Jingqiu Ding, Tommaso d'Orsi, Yiding Hua, Chih-Hung Liu, David Steurer. *STOC 2024*.

Private estimation algorithms for stochastic block models and mixture models. Hongjie Chen, Vincent Cohen-Addad, Tommaso d'Orsi, Alessandro Epasto, Jacob Imola, David Steurer, Stefan Tiegel. *NeurIPS 2023 (spotlight)*.

On the well-spreadness property and its relation to linear regression. Hongjie Chen, Tommaso d'Orsi. *COLT 2022*.

Honors & Awards

ETH Medal for Outstanding Master's Thesis

2022

Rongchang Scholarship, Shanghai Jiao Tong University

2017, 2018

Zhiyuan Scholarship, Shanghai Jiao Tong University

2016, 2017

Teaching & Service

Algorithms and Data Structures, ETH Zürich, (Head) Teaching Assistant

2022 - 2025

Optimization for Data Science, ETH Zürich, Teaching Assistant

2023

Conference reviewing: STOC, NeurIPS, ITCS