Pei Wu
Department of Computer Science and Engineering
Pennsylvania State University

Positions

2024-PRESENT PENN STATE UNIVERSITY, UNIVERSITY PARK, PA

Assistant Professor

2023-2024 WEIZMANN INSTITUTE OF SCIENCE, ISRAEL

Postdoctoral

Supervisor: Thomas Vidick

SUMMER,2023 SIMONS INSTITUTE FOR THE THEORY OF COMPUTING, BERKELEY, CA

Research Fellow

Program: Beyond the Boolean Cube

2021-2023 INSTITUTE FOR ADVANCED STUDY, PRINCETON, NJ

Postdoctoral member

Supervisor: Avi Wigderson

Education

2015-2021 UNIVERSITY OF CALIFORNIA, LOS ANGELES

Ph.D., Computer Science

Thesis title: Communication and Computation

Advisor: Alexander Sherstov

2013-2015 DARTMOUTH COLLEGE

M.S., Computer Science

Thesis advisor: Amit Chakrabarti

2009-2013 NANJING UNIVERSITY, CHINA

Bachelor of Science, Computer Science and Technology

Publications

Optimal interactive coding for insertions, deletions, and substitutions

A. A. Sherstov, P. Wu

The 58th Annual Symposium on Foundations of Computer Science (FOCS 2017)

IEEE Transactions on Information Theory, 65(10):5971–6000, 2019

Near-optimal lower bounds on the threshold degree and sign-rank of AC^0

A. A. Sherstov, P. Wu

The 51st ACM Symposium on Theory of Computing (STOC 2019)

Invited to appear in SIAM Journal on Computing (special issue for STOC 2019)

An optimal separation of randomized and quantum query complexity

A. A. Sherstov, A. A. Storozhenko, P. Wu

The 53rd ACM Symposium on Theory of Computing (STOC 2021)

SIAM Journal on Computing, 52(2):525-567, 2023

An optimal "it ain't over till it's over" theorem

R. Eldan, A. Wigderson, P. Wu

The 55th ACM Symposium on Theory of Computing (STOC 2023)

The power of unentangled proofs with non-negative amplitudes

F. G. Jeronimo, P. Wu

The 55th ACM Symposium on Theory of Computing (STOC 2023)

Dimension independent disentanglers from unentanglement and applications

F. G. Jeronimo, P. Wu

In 39th Computational Complexity Conference (CCC 2024)

Subset states and pseudorandom states

F. G. Jeronimo, N. Magrafta, P. Wu

Manuscript

Coherance in property testing: quantum-classical separations and collapses

F. G. Jeronimo, N. Magrafta, J. Slote, P. Wu

In submission

Speaking Engagements

"**Coherance in property testing: quantum-classical separations and collapses**"

08/2024	Center on Frontiers of Computing Studies, Peking University, China
09/2024	Theory Seminar, Penn State University

"Dealing with Multiple Merlins in the Quantum Era"

03/2024	Theory Lunch, Weizmann Institute of Science, Israel

"The power of unentangled quantum proofs with non-negative amplitudes"

04/2023	Quantum Colloquium, Simons Institute, Berkeley, CA
04/2023	Quantum Seminar, Weizmann Institute of Science, Israel
05/2023	Quantum Seminar, University of Texas Austin, TX
05/2023	Theory Seminar, Nanjing University, China
01/2024	QIP 2024, January 13-19, Taipei

"Polynomial method in communication complexity"

11/2022	CS/DM Seminar, Institute for Advanced Study, Princeton, NJ

"Random restrictions on Boolean functions with small influences"

09/2022	Theory Lunch, Princeton University, Princeton, NJ
09/2022	Discrete Math Seminar, Shandong University, China
10/2022	Theory Seminar, Nanjing University, China

10/2022   DIMACS & Rutgers University, New Brunswick, NJ

11/2022   Discrete Math Seminar, Princeton University, Princeton, NJ

"It ain't over till it's over"

09/2022   Member's short talk, Institute for Advanced Study, Princeton, NJ

06/2023   STOC 2023, June 20-23, Orlando, FL

06/2023   "Analysis and TCS", Simons Institute, Berkeley, CA

"Recent progress on query complexity", two lectures

10/2021   CS/DM Seminar, Institute for Advanced Study, Princeton, NJ

"Black cats, white cats, and Schrödinger's cats"

09/2021   Member's short talk, Institute for Advanced Study, Princeton, NJ

"Optimal separation of randomized and quantum query complexity"

02/2021   QIP 2021, online

04/2021   Algorithm and Complexity Seminar (online), Waterloo University, Canada

06/2021   STOC 2021, online

"Settling the threshold degree and sign rank of AC^0

02/2020   Invited plenary talk, Southern California theory day, UC Riverside, California

"Near-optimal lower bounds on the threshold degree and sign rank of AC^0**"**

07/2019   STOC 2019, June 23-26, 2019 in Phoenix, Arizona

"**Optimal interactive coding for insertions, deletions, and substitutions**"

10/2017   FOCS 2017, October 15-17, 2017 in Berkeley, California

Other Services

Conference review: STOC/FOCS, CCC, ITCS, ICALP, STACS, TQC, QIP

Journal review: Algorithmica, SICOMP, TIT, Quantum