"Towards practical large-scale least squares solvers with Iterative Right Random Sketching." February 2023 at Argonne National Labs LANS seminar in Chicago, Illinois (Virtual).

"Residual Tracking and Stopping for Iterative Random Sketching" April 2022 at Copper Mountain Conference on Iterative Methods in Copper Mountain, Colorado (Virtual).

HONORS & AWARDS

Outstanding TA May 2023.

Student Research Grant Competition UW - Madison February 2023.

Outstanding TA (Honorable Mention) May 2022.

SERVICE

Committee Service: TA Training Redesign (2020), Space Committee (2021), Awards and Outreach Committee (2022).

Statistics Graduate Student Association: Outreach Chair (Spring 2018 - Fall 2020), President (Fall 2020 - Spring 2023).

SKILLS

Computer Languages: Julia, R, C, C++, Python

APIs: CUDA, MPI, OpenMP, PETSc

Nathaniel Pritchard
September 2023

CONTACT

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RESEARCH INTERESTS

Generalized Linear Models. High Performance Computing. Iterative Solvers. Optimization. Preconditioners. Random Sketching. Statistical Computation.

EDUCATION

University of Wisconsin - Madison, Madison, WI
Ph.D., Statistics August 2018 - May 2024
Supervisors: Vivak Patel

University of North Carolina at Chapel Hill Chapel Hill, NC
B.S., Statistics and Analytics (Highest Honors and Highest Disctinction) August 2014 - May 2018
Honors Thesis Adiviser: Shankar Bhamidi

RESEARCH EMPLOYMENT

Argonne National Labs, Chicago, Illinois
Givens Associate May 2020 - July 2020
Supervisor: Adrian Maldonado
Topic: Preconditioners for solving graph Laplacians arising from power grid networks

Argonne National Labs, Chicago, Illinois
Givens Associate May 2023 - July 2023
Supervisor: Adrian Maldonado
Topic: Accelerating Newton-Ralphson on GPUs using deflation methods

PRE-PRINTS

Pritchard, N., & Patel, V. (2022). "Residual Tracking and Stopping for Solving Consistent Linear Inverse Problems with Finite Domains." *arXiv preprint arXiv:2201.05741*.

PUBLICATIONS

Pritchard, N., & Patel, V. (2023). Towards Practical Large-Scale Randomized Iterative Least Squares Solvers through Uncertainty Quantification. *SIAM/ASA Journal on Uncertainty Quantification*, 11(3), 10.1137/22M1515057.

He, M., Glasser, J., **Pritchard, N.**, Bhamidi, S., & Kaza, N. (2020). Demarcating geographic regions using community detection in commuting networks with significant self-loops. *PloS one* 15(4), e0230941.

TALKS

"Large-scale randomized iterative least squares." March 2023 at SIAM CSE in Amsterdam, Netherlands.