

Aravind Reddy Talla

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EDUCATION/TRAINING

Broad Institute of MIT and Harvard Postdoctoral Associate, Mentor: Victoria Popic	Cambridge, MA July 2023 -
Northwestern University Ph.D. in Computer Science, Advisers: Konstantin Makarychev and Aravindan Vijayaraghavan M.S. in Computer Science, GPA: 4.0	Evanston, IL June 2023 March 2021
Indian Institute of Technology (IIT) Kanpur Bachelor of Technology (B.Tech.) in Computer Science with minor in Physics, <i>Distinction</i>	May 2018

INTERNSHIPS

Adobe Research Primary mentor: Ritwik Sinha Primary mentors: Ryan Rossi and Zhao Song	San Jose, CA (remote) Summer 2022 Summer 2021
Paris Centre for Quantum Technologies, Université Paris Diderot Mentors: Eleni Diamanti and Iordanis Kerenidis, partly funded by Charpak Scholarship	Paris, France Summer 2017
Centre for Quantum Technologies, National University of Singapore Mentor: Hartmut Klauck	Singapore Summer 2016

PUBLICATIONS

Online Adaptive Mahalanobis Distance Estimation with Lianke Qin and Zhao Song, arXiv link	(to appear in) <i>BigData</i> 2023
Dynamic Tensor Product Regression with Zhao Song and Lichen Zhang, link	<i>NeurIPS</i> 2022
Adaptive and Dynamic Multi-Resolution Hashing for Pairwise Summations with Lianke Qin, Zhao Song, Zhaozhuo Xu, and Danyang Zhuo, link	<i>BigData</i> 2022
One-Pass Algorithms for MAP Inference of Nonsymmetric Determinantal Point Processes with Ryan Rossi, Zhao Song, Anup Rao, Tung Mai, Nedim Lipka, Gang Wu, Eunye Koh, and Nesreen Ahmed, link	<i>ICML</i> 2022
Beyond Perturbation Stability: LP Recovery Guarantees for MAP Inference on Noisy Stable Instances with Hunter Lang, David Sontag, and Aravindan Vijayaraghavan, link	<i>AISTATS</i> 2021
Improved Guarantees for k-means++ and k-means++ Parallel with Konstantin Makarychev and Liren Shan, link	<i>NeurIPS</i> 2020

PATENT

Online Inference and Learning for Nonsymmetric Determinantal Point Processes with Ryan Rossi, Zhao Song, Anup Rao, Tung Mai, Nedim Lipka, Gang Wu, and Eunye Koh	2022 <i>Filed at USPTO</i>
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AWARDS & RESEARCH GRANTS

Adobe Research Gift Grant (\$20,000)	2022
Peter and Adrienne Barris Outstanding Teaching Assistant Award , Northwestern, press release	2022
Charpak Scholarship for Research Internship , Government of France	2017
National Initiative on Undergraduate Science Scholarship , HBCSE (TIFR)	2015
Gold Medallist , Indian National Physics Olympiad, <i>National top 35</i>	2014

CONFERENCE TRAVEL GRANTS

NeurIPS 2022 Scholar Award (\$2000)	2022
FOCS 2022 Travel Award (\$425)	2022
ICML 2022 Participation Grant (\$400)	2022
STOC 2019 Student Travel Grant (\$600)	2019

TEACHING EXPERIENCE

Teaching Assistant at Northwestern:

- Mathematical Foundations of Computer Science (CS 212) - Spring 2022, Fall 2020, Fall 2019;
- Received an award for being the best TA in the Spring 2022 quarter, [press release](#).
- Design & Analysis of Algorithms (CS 336) - Winter 2019

Teaching Assistant at IIT Kanpur: Fundamentals of Computing (ESC 101) - Winter 2018

Volunteer Math Tutor: As a part of the non-profit [Tutoring Chicago program](#), I tutored a Chicago area middle-school student for the 2021-22 academic year, mainly focusing on middle-school and high-school math.

Guest lectures at Northwestern:

- Submodular Function Maximization Algorithms for Big Data, April 2022
- Introduction to Markov Chains Math Toolkit for Theoretical Computer Scientists, May 2019

SERVICE

Conference Reviewer:

- Neural Information Processing Systems (NeurIPS) 2023, 2022, 2021
- International Conference on Machine Learning (ICML) 2023, 2022
- International Conference on Learning Representations (ICLR) 2024, 2023, 2022
- International Conference on Artificial Intelligence and Statistics (AISTATS) 2024, 2023

Workshop Leader and Mentor: NeurIPS 2022 High-School Outreach Program

Board Member: CS PhD Advisory Council (NU, 2020 - 2022)

INVITED TALKS AND POSTER SESSIONS

Dynamic Tensor Product Regression :

- Neural Information Processing Systems (NeurIPS) Dec 2022, New Orleans, LA

Beyond Perturbation Stability: LP recovery guarantees for MAP Inference on noisy stable instances :

- University of Chicago Theory Lunch Nov 2022, Chicago, IL
- International Conference on Artificial Intelligence and Statistics (AISTATS) April 2021, virtual

One-Pass Algorithms for MAP Inference of Nonsymmetric Determinantal Point Processes :

- NSF TRIPODS meeting (poster) Sep 2022, virtual
- International Conference on Machine Learning (ICML) July 2022, Baltimore, MD

Improved Guarantees for k-means++ and k-means++ Parallel :

- Neural Information Processing Systems (NeurIPS) Dec 2020, virtual