

Ardhendu Tripathy

Education

- 2018 • Ph.D. in Electrical and Computer Engineering with a minor in Mathematics, Iowa State University
Advisor: Aditya Ramamoorthy
- 2012 • B.Tech. in Electrical Engineering, Indian Institute of Technology Kanpur

Employment

- '18-'20 • Postdoctoral research associate, University of Wisconsin-Madison, WI.
Supervisor: Robert Nowak
- '12-'18 • Graduate research assistant, Iowa State University, Ames IA.
Supervisor: Aditya Ramamoorthy
- 2017 • Summer intern, Mitsubishi Electric Research Labs, Cambridge MA.
Supervisor: Ye Wang
- 2011 • Interim engineering intern, Qualcomm India Pvt. Ltd., Hyderabad India.
Supervisor: Chandra Chetty.

Awards

- 2018 • Research excellence award from the Graduate College, Iowa State University.
- 2015 • Graduate and Professional Student Senate Scholarship, Iowa State University.
- 2010 • 'Best project' in Summer Undergraduate Research Grant for Excellence (SURGE) program, Indian Institute of Technology Kanpur.
- 2007 • Certificate of Distinction, National Standard Examination in Physics and Astronomy, India.
- 2006 • Kishore Vaigyanik Protsahan Yojana (KVPY) Fellowship, India.
- 2006 • National Talent Search Exam (NTSE) Scholarship, India.

Publications

Preprints available at https://arxiv.org/a/tripathy_a_1.html

Journal articles

- 2018 • A. Tripathy and A. Ramamoorthy. Sum-networks from incidence structures: construction and capacity analysis. In *IEEE Trans. Inform. Theory*, 64(5): 3461-3480, May 2018.
- 2014 • L. Kumar, A. Tripathy, and R. M. Hegde. Robust multi-source localization over planar arrays using music-group delay spectrum. In *IEEE Trans. Sig. Proc.*, 62(17): 4627-4636, Sep. 2014.

Conference proceedings

- 2019 • S. Katariya*, A. Tripathy*, and R. Nowak. MaxGap Bandit: Adaptive Algorithms for Approximate Ranking. In *Adv. Neural Inform. Processing Systems (NeurIPS)*, Dec. 2019.
(* denotes equal contribution and listed alphabetically)
- 2019 • B. Mason*, A. Tripathy*, and R. Nowak. Learning Nearest Neighbor Graphs from Noisy Distance Samples. In *Adv. Neural Inform. Processing Systems (NeurIPS)*, Dec. 2019.
(* denotes equal contribution and listed alphabetically)
- 2019 • A. Tripathy, Y. Wang, and P. Ishwar. Privacy-preserving adversarial networks. In *57th Annual Allerton Conf. on Comm., Control and Comput.*, Sep. 2019.

Publications (continued)

- 2018 • A. Tripathy and A. Ramamoorthy. Zero-error Function Computation on a Directed Acyclic Network. In *Proc. IEEE Inform. Theory Workshop (ITW)*, Nov. 2018.
- 2016 • A. Tripathy and A. Ramamoorthy. On computation rates for arithmetic sum. In *Proc. IEEE Intl. Symp. Inform. Theory (ISIT)*, Jul. 2016.
- 2015 • A. Tripathy and A. Ramamoorthy. Capacity of sum-networks for different message alphabets. In *Proc. IEEE Intl. Symp. Inform. Theory (ISIT)*, Jun. 2015.
- 2014 • A. Tripathy and A. Ramamoorthy. Sum-networks from undirected graphs: construction and capacity analysis. In *52nd Annual Allerton Conf. on Comm., Control and Comput.*, Oct. 2014.
- 2012 • A. Tripathy, L. Kumar, and R. M. Hegde. Robust two dimensional source localization using the MUSIC-Group delay spectrum. In *Intl. Conf. Sig. Proc. Comm. (SPCOM)*, Jul. 2012.
- 2011 • A. Tripathy, L. Kumar, and R. M. Hegde. Group delay based methods for speech source localization over circular arrays. In *Joint Workshop on Hands-free Speech Comm. and Microphone Arrays (HSCMA)*, May 2011.

In preparation

- 2019 • A. Tripathy and A. Ramamoorthy. Zero-error Function Computation on a Directed Acyclic Network. Available online at <https://arxiv.org/abs/1805.03730>

Travel grants

- 2019 • Travel grant to attend NeurIPS in Vancouver.
- 2016 • IEEE student travel grant to attend ISIT in Barcelona.
- 2016 • Professional Advancement Grant from Iowa State University Student Senate to attend ISIT in Barcelona.
- 2015 • IEEE student travel grant to attend ISIT in Hong Kong.

Teaching experience

- 2019 • Guest lecturer in Special Topics in Communication and Signal Processing (EE 520) taught by Prof. Namrata Vaswani at Iowa State University: Gave two tutorial-style lectures on *Introduction to Stochastic Bandits* to around 30 graduate students and faculty.
- 2018 • Teaching assistant for Signals and Systems I (EE 224) at Iowa State University: Led recitations for all sections, in total around 100 students, mostly sophomores and juniors. Held office hours for clearing doubts and supplementary instruction.
- '14-'16 • Substitute instructor in a few lectures for Prof. Aditya Ramamoorthy at Iowa State University in the following courses: Information Theory (EE 622), Random Processes for Communications and Signal Processing (EE 523), and Communication Systems II (EE 422).

Professional activities

Reviewer

- NeurIPS, Annals of Statistics, IEEE Transactions on Information Forensics and Security, IEEE Transactions on Information Theory, IEEE International Conference on Communications, IEEE Transactions on Communications, IEEE Transactions on Signal Processing.

Invited talks

- Session on Recovering Permuted Data, Conference on Information Sciences and Systems, Princeton NJ, Mar. 2020.
- Indian Institute of Technology Kanpur, India, Jan. 2020.
- Graduation Day, Information Theory and Applications workshop, San Diego CA, Feb. 2018.

Professional activities (continued)

Posters

- Midwest Machine Learning Symposium, University of Wisconsin-Madison WI, Jun. 2019.
- North American Summer school in Information Theory, Texas A&M, College Station TX, May 2018.
- Croucher Summer school in Information Theory, Chinese University of Hong Kong, Jun. 2015.
- DIMACS workshop on network coding: the next 15 years, Rutgers University, Dec. 2015.

Programming skills

- MATLAB (proficient), Python (proficient), C (basic), R (basic), SageMath, \LaTeX , Git.

University service

- University Relations & Legislative Affairs Chair of the Graduate and Professional Student Senate from 2015-16.
- Senator for Electrical and Computer Engineering (ECE) department to the Graduate and Professional Student Senate at Iowa State University from 2016-18.
- A founding organizer of a weekly Data Science Reading Group, consisting of graduate students in the ECE and related departments at Iowa State University. Website: <http://www.dsrg.stuorg.iastate.edu/>