

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

- 2018 • June '18 – current. Postdoctoral research associate, University of Wisconsin-Madison, WI.
Supervisor: Robert Nowak
- 2017 • May – August '17. Summer intern, Mitsubishi Electric Research Labs, Cambridge MA.
Supervisor: Ye Wang
- 2012 • August '12 – May '18. Graduate research assistant, Iowa State University, Ames IA.
Supervisor: Aditya Ramamoorthy
- 2011 • May – July '11. Interim engineering intern, Qualcomm India Pvt. Ltd., Hyderabad India.
Supervisor: Chandra Chetty.

Awards

- 2018 • Research excellence award from the Graduate College, Iowa State University.
- 2016 • IEEE student travel grant to attend ISIT in Barcelona.
- 2015 • IEEE student travel grant to attend ISIT in Hong Kong.
- 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

Submitted

- 2018 • A. Tripathy and A. Ramamoorthy. Zero-error Function Computation on a Directed Acyclic Network. Available online at <https://arxiv.org/abs/1805.03730>
- 2017 • A. Tripathy, Y. Wang, and P. Ishwar. Privacy-preserving adversarial networks. Available online at <https://arxiv.org/abs/1712.07008>

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.

Publications (continued)

Conference proceedings

- 2018 • A. Tripathy and A. Ramamoorthy. Zero-error Function Computation on a Directed Acyclic Network. To appear 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.

Graduate courses taken

- ECE • Random processes, Convex optimization, Information theory, Design & analysis of algorithms, Detection & estimation theory, Digital signal processing, Communication systems, Deep machine learning.
- MTH • Linear algebra, Graph theory, Abstract algebra, Design theory & association schemes.

Teaching experience

- 2018 • TA for Signals and Systems I: Led recitations for all sections, in total around 100 students, mostly sophomores and juniors. Held office hours for clearing doubts and supplementary instruction.

Programming skills

- MATLAB (proficient), Python (proficient), C (basic), R (basic), SageMath, L^AT_EX, Git.

Professional activities

Reviewer

- IEEE Transactions on Information Theory, IEEE International Conference on Communications, IEEE Transactions on Communications, IEEE Transactions on Signal Processing.

Participant

- North American Summer school in Information Theory, Texas A&M, College Station TX, May 2018.
- Graduation day, Information Theory and Applications workshop, San Diego CA, Feb. 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.

University service

- Member of the executive committee of the Graduate and Professional Student Senate in the year 2015 - 16.
- A founding organizer of a weekly Data Science Reading Group, consisting of graduate students in the ECE and related departments at ISU. Website: <http://www.dsrg.stuorg.iastate.edu/>