GAUTAM DASARATHY

CURRICULUM VITAE

CONTACT Goldwater Center, Room 324 gautamd@asu.edu 650 E Tyler Mall, Tempe, AZ - 85281 INFORMATION http://gautamdasarathy.com

RESEARCH **INTERESTS** Machine Learning, Statistics, Signal Processing, Networked Systems, and Information Theory

EDUCATION

Ph.D., Electrical Engineering,

Aug '14

Department of Electrical and Computer Engineering University of Wisconsin - Madison

Thesis: Data Efficient and Robust Algorithms for Reconstructing Large Graphs

Advisors: Dr. Robert Nowak and Dr. Stark Draper

M.S., Electrical Engineering, May '10

Electrical and Computer Engineering University of Wisconsin - Madison

Advisors: Dr. Robert Nowak and Dr. Stark Draper

B.Tech., Electronics and Communication Engineering May '08

VIT University, Vellore, Tamil Nadu, India (Graduated First Class with Distinction)

PROFESSIONAL Assistant Professor Aug '18 to Present

EXPERIENCE School of Electrical, Computer, and Energy Engineering

Arizona State University

Post-Doctoral Fellow Aug '16 to Aug '18

Department of Electrical and Computer Engineering

Rice University

Host: Dr. Richard Baraniuk

Post-Doctoral Fellow Aug '14 to Aug '16

Machine Learning Department Carnegie Mellon University Host: Dr. Aarti Singh

Graduate Research Assistant May '09 to Aug '14

Department of Electrical and Computer Engineering

University of Wisconsin - Madison

Advisors: Dr. Robert Nowak, and Dr. Stark Draper

Research Intern May '10 to Sept. '10

Mistubishi Electric Research Laboratories (MERL)

Cambridge, MA

Host: Dr. Mathew Brand

Project Assistant Oct. '08 to Feb. '09

Waisman Lab for Brain Imaging and Behavior

University of Wisconsin - Madison

JOURNAL &
JOURNAL-STYLE
CS CONFERENCE
PAPERS

- 1. Aghazadeh, A., Spring, R., LeJeune, D., Dasarathy, G., Shrivastava, A., Baraniuk, R., *Ultra Large-Scale Feature Selection using Count-Sketches*. International Conference on Machine Learning, Stockholm, Sweden, Jul. '18 (acceptance rate: 25.1%)
- 2. Kandaswamy, K., Dasarathy, G., Oliva, J., Schneider, J., Poczos, B., *Multi-Fidelity Bayesian Optimisation with Continuous Approximations*. International Conference on Machine Learning, Sydney, Australia, Aug. '17 (acceptance rate: 25.5%)
- 3. Kandaswamy, K., Dasarathy, G., Schneider, J., Poczos, B., *The Multi-Fidelity Multi-Armed Bandit*. Advances in Neural Information Processing Systems, Barcelona, Spain, Dec. '16 (acceptance rate: 22.7%)
- 4. Kandaswamy, K., Dasarathy, G., Oliva, J., Schneider, J., Poczos, B., *Gaussian Process Bandit Optimization with Multi-fidelity Evaluations*. Advances in Neural Information Processing Systems, Barcelona, Spain, Dec. '16 (acceptance rate: 22.7%)
- 5. Dasarathy, G., Singh, A., Balcan, M. F., Park, J. H., *Active Learning Algorithms for Graphical Model Selection*. International Conference on Artificial Intelligence and Statistics (AISTATS), Cadiz, Spain, May'16 (Full Oral Presentation, acceptance rate: 6.5%)
- 6. Dasarathy, G., Nowak, R., Zhu, X., S^2 : An Efficient Graph Based Active Learning Algorithm with Application to Nonparametric Classification. Conference on Learning Theory (COLT), Paris, France, July '15 (acceptance rate: 39.7%)
- 7. Dasarathy, G., Nowak, R., Roch, S., *Data Requirement for Phylogenetic Inference from Multiple Loci: A New Distance Method.* IEEE/ACM Transactions on Computational Biology and Bioinformatics, Vol 12, Issue 2, April '15
- 8. Dasarathy, G., Shah, P., Bhaskar, B., Nowak, R., *Sketching Sparse Matrices, Covariances, and Graphs via Tensor Products.* IEEE Transactions of Information Theory, Vol 61, Issue 3, January '15
- 9. Eriksson, B., Dasarathy, G., Barford, P., Nowak R., *Efficient Network Tomography for Internet Topology Discovery*. IEEE/ACM Transactions on Networking, Vol 20, Issue 3, June '12

Conference Papers

- 1. Lipor, J., Dasarathy, G., *Quantile Search with Time-Varying Search Parameter*. Asilomar Conference on Signals, Systems, and Computers, Pacific Grove, CA, USA, Oct. '18
- 2. Mousavi, A., Dasarathy, G., Baraniuk, R., *DeepCodec: Adaptive Sensing and Recovery via Deep Convolutional Neural Networks*. Allerton Conference on Communication, Control, and Computing (Allerton), Monticello, IL, USA, Oct. '17
- 3. Dasarathy, G., Shah, P., Baraniuk, R., *Sketched Covariance Testing: A Compression-Statistics Tradeoff*. IEEE International Symposium of Information Theory (ISIT), Aachen, Germany, Jun. '17
- 4. Dasarathy, G., Rao, N., Baraniuk, R., On Computational and Statistical Tradeoffs in Matrix Completion with Graph Information. Signal Processing with Adaptive Sparse Representations (SPARS), Lisbon, Portugal, Jun. '17 (Full Oral Presentation, acceptance rate: 23.4%)
- Dasarathy, G., Nowak, R., Roch, S., New Sample Complexity Bounds for Phylogenetic Inference from Multiple Loci. IEEE International Symposium on Information Theory (ISIT), Honolulu, HI, July '14

- Dasarathy, G., Draper, S., Upper and Lower Bounds on the Reliability of Content Identification. International Zurich Seminar on Communications (S. D. Invited), Feb. '14
- 7. Dasarathy, G., Shah, P., Bhaskar, B., Nowak R., *Sketching Sparse Covariance Matrices and Graphs*. NIPS workshop on Randomized Methods in Machine Learning, Lake Tahoe, NV, Dec. '13
- 8. Dasarathy, G., Shah, P., Bhaskar, B., Nowak R., *Covariance Sketching*. 50th Annual Allerton Conference, Allerton House, Urbana-Champaign, IL (R. N. Invited), Oct. '12
- 9. Dasarathy, G., Draper, S., *On Reliability of Content Identification from Databases based on Noisy Queries*. IEEE International Symposium on Information Theory (ISIT), St. Petersburg, Russia, Aug. '11
- 10. Dasarathy, G., Draper, S., *Reliability in Noisy Search*. UCSD Workshop on Information Theory and Applications, (S. D. Invited), Feb. '11
- 11. Eriksson, B., Dasarathy, G., Barford, P., Nowak R., *Active Clustering: Robust and Efficient Hierarchical Clustering using Adaptively Selected Similarities*. Artificial Intelligence and Statistics (AISTATS), Ft Lauderdale, FL, April '11
- 12. Eriksson, B., Dasarathy, G., Barford, P., Nowak R., *Toward the Practical Use of Network Tomography for Internet Topology Discovery*. IEEE International Conference on Computer Communications. San Diego, CA, Mar '10

WORKSHOP ORGANIZATION

Advances In Modeling And Learning Interactions From Complex Data NIPS 2017, Long Beach, CA, USA Dec. '17

Pulsar Workshop on Information Processing

Jun. '17

SPARS 2017, Lisbon, Portugal

SELECTED INVITED TALKS AND AWARDS

- Invited Talk at Computer Science, Purdue University, West Lafayette, IN Apr. '18
- Invited Talk at Electrical and Computer Engineering, Rice University,
 Houston, TX
 Mar. '18

• **Invited Talk** at Electrical and Computer Engineering, University of Toronto, Toronto, ON, Canada

- Toronto, ON, Canada Mar. '18

 Invited Talk at Electrical, Computer, and Energy Engineering, Arizona State University,
 Tempe, AZ Mar. '18
- Invited Talk at Electrical and Computer Engineering, University of Illinois,
- Chicago, IL Mar. '18

 Invited Talk at Computer Science, University of California, Santa Cruz, CA Mar. '18
- Invited Talk at Computer Science, University of California, Santa Cruz, CA
 Invited Talk at Computer Science, University of Utah, Salt Lake City, UT
 Mar. '18
- Invited Talk at Computer Science, University of Utah, Salt Lake City, UT
 Invited Talk at Electrical Engineering and Computer Science,
 - Pennsylvania State University, State College, PA

 Feb. '18
- Invited Talk at Electrical, Computer, and Energy Engineering, University of Colorado, Boulder, CO Feb. '18
- Invited Talk at Computer Science and Engineering, The Ohio State University,
 Columbus, OH Feb. '18
- Invited Talk at the Information Theory and Applications (ITA) Workshop, La Jolla, CA. Feb. '18
- Invited Talk at the Asilomar Conference on Signals, Systems, and Computers, Pacific Grove, CA
 Nov. '17
- Invited Talk at the CSP Seminar Series, EECS, University of Michigan,
 Ann Arbor, MI Sep. '17

- **Invited Talk** at the Information Theory and Applications (ITA) Workshop, La Jolla, CA.
- Invited Talk at the ECE Seminar Series, Rice University, Houston, TX. May '16

Feb. '17

- Invited Talk at TTI-Chicago, Chicago, IL. Apr. '16
- NSF Travel Award for attending SIAM Conference on Applied Algebraic Geometry, Daejon, South Korea.
 Aug. '15
- Invited Talk at the SIAM Conference on Applied Algebraic Geometry, Daejon, South Korea.

 Aug. '15
- Invited Talk at the Computer Science and Engineering Department Seminar, IIT Madras, Chennai, India. Feb. '15
- Invited Talk at the Electrical Engineering Department Seminar, IIT Bombay, Mumbai, India. Feb. '15
- **Invited Talk** at the Information Theory and Applications (ITA) Workshop as part of the "Graduation Day" for outstanding students and postdocs, La Jolla, CA. Feb. '15
- **Travel Award** for attending the International Symposium on Information Theory (ISIT) 2014, Honolulu, HI. Jun. '14
- Merit Scholarship for Best Academic Performance at VIT University, Vellore, India.
 Jul. '05
- Merit Certificate by Central Board of Secondary Education (CBSE), India being in the top 0.1% of the examinees in Physics in the All India Senior School Certificate Exam (AISSCE).
 Jul. '04

TEACHING

Arizona State University, ECEE (Assistant Professor)

Random Signal Analysis (Fall '18)

Rice University, ECE (Postdoctoral Associate)

Advanced Digital Signal Processing: Signal Processing And Machine Learning With Graphs (Fall '17)

University of Wisconsin - Madison, ECE (Teaching Assistant)

Introduction to Signal and Information Processing (Spring '09) Probability and Random Processes (Spring '09)

PROFESSIONAL ACTIVITIES AND SERVICE

- Senior Program Committee Member: AAAI Conference on Artificial Intelligence (AAAI-2018)
- Technical Program Committee Member and Reviewer: ACM-SIAM Symposium on Discrete Algorithms (SODA), Neural Information Processing Systems (NIPS), International Conference of Machine Learning (ICML), Symposium on the Theory of Computing (STOC), The International Conference on AI & Statistics (AISTATS), International Joint Conference on Artificial Intelligence (IJCAI) ML Track, The AAAI Conference on Artificial Intelligence (AAAI), IEEE International Symposium on Information Theory (ISIT).
- Journal Reviewer: IEEE Transactions on Signal Processing, Signal Processing (EURASIP), Annals of Statistics, Electronic Journal of Statistics, IEEE Transactions of Information Theory, Applied and Computational Harmonic Analysis, Distributed Computing, IEEE Journal of Selected Topics in Signal Processing
- Member: CMU's BiasBusters Workshop (2015), UW Indian Graduate Student Association New Student Outreach (2010 2013), UW ECE Graduate Student Association (Inaugural) Board (2010).