

CONTACT INFORMATION	Duncan Hall, Room 2017A 6100 Main Street, Houston, TX -77005	gautamd@rice.edu http://gautamdasarathy.com
RESEARCH INTERESTS	Machine learning, statistical signal processing, and information theory	
EDUCATION	University of Wisconsin , Madison, WI, USA <ul style="list-style-type: none"> • Doctor of Philosophy, Electrical Engineering Aug '14 Thesis: <i>Data Efficient and Robust Algorithms for Reconstructing Large Graphs</i> Advisors: Robert Nowak, Ph.D. and Stark Draper, Ph.D. • Master of Science, Electrical Engineering May '10 Advisors: Robert Nowak, Ph.D. and Stark Draper, Ph.D. VIT University , Vellore, Tamil Nadu, India <ul style="list-style-type: none"> • Bachelor of Technology, Electronics and Communication Engineering, May '08 (Graduated First Class with Distinction) 	
RESEARCH EXPERIENCE	Post-Doctoral Research Associate Aug '16 to Present Electrical and Computer Engineering Department Rice University Post-Doctoral Fellow Aug '14 to Aug '16 Machine Learning Department Carnegie Mellon University Graduate Research Assistant May '09 to Aug '14 Department of Electrical Engineering University of Wisconsin - Madison Research Intern May '10 - Sept. '10 Mistubishi Electric Research Laboratories (MERL) Cambridge, MA <ul style="list-style-type: none"> • Developed algorithms for dynamic updates and rapid routing on large graphs Advanced Independent Study May '08 - July '09 Professor Barry Van Veen's Bio-Signal Processing Lab University of Wisconsin - Madison <ul style="list-style-type: none"> • Studied the effect of basic signal processing on Granger Causality Project Assistant Oct. '08 to Feb. '09 Waisman Lab for Brain Imaging and Behavior University of Wisconsin - Madison <ul style="list-style-type: none"> • Developed algorithms to tackle noise due to physiological changes in ECG data 	
JOURNAL & JOURNAL-STYLE CS CONFERENCE PAPERS	<ol style="list-style-type: none"> 1. Kandaswamy, K., Dasarathy, G., Oliva, J., Schneider, J., Póczos, B., <i>Multi-fidelity Bayesian Optimisation with Continuous Approximations</i>. International Conference on Machine Learning (ICML), Sydney, Australia, Aug. '17 (acceptance rate: 25.5%) 2. Kandaswamy, K., Dasarathy, G., Schneider, J., Póczos, B., <i>The Multi-Fidelity Multi-Armed Bandit</i>. Advances in Neural Information Processing Systems, Barcelona, Spain, Dec. '16 (acceptance rate: 22.7%) 3. Kandaswamy, K., Dasarathy, G., Oliva, J., Schneider, J., Póczos, B., <i>Gaussian Process Bandit Optimization with Multi-fidelity Evaluations</i>. Advances in Neural Information Processing Systems, Barcelona, Spain, Dec. '16 (acceptance rate: 22.7%) 	

4. 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%)
5. Dasarathy, G., Nowak, R., Zhu, X., *S²: 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%)
6. 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
7. 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
8. 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
9. 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, USA, April '11 (acceptance rate: 28.3%)
10. 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, USA, Mar '10 (acceptance rate: 17.5%)

CONFERENCE
PAPERS

1. 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
2. Dasarathy, G., Shah, P., Baraniuk, R., *Sketched Covariance Testing: A Compression-Statistics Tradeoff*. IEEE International Symposium of Information Theory (ISIT), Aachen, Germany, Jun. '17
3. 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%)
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, USA, July '14
5. Dasarathy, G., Draper, S., *Upper and Lower Bounds on the Reliability of Content Identification*. International Zurich Seminar on Communications (S. D. Invited), Feb. '14
6. 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, USA, Dec. '13
7. Dasarathy, G., Shah, P., Bhaskar, B., Nowak R., *Covariance Sketching*. 50th Annual Allerton Conference, Allerton House, Urbana-Champaign, IL (R. N. Invited), Oct. '12

8. 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
9. Dasarathy, G., Draper, S., *Reliability in Noisy Search*. UCSD Workshop on Information Theory and Applications, (S. D. Invited), La Jolla, CA, USA, Feb. '11

WORKSHOP
ORGANIZATION

- *Advances In Modeling And Learning Interactions From Complex Data* at NIPS 2017, Long Beach, CA, USA, Dec. '17
- *Pulsar Workshop on Information Processing* collocated with SPARS 2017, Lisbon, Portugal, Jun. '17

SELECTED
INVITED TALKS
AND AWARDS

- **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 at Ann Arbor, MI. Sep. '17
- **Invited Talk** at the Information Theory and Applications (ITA) Workshop, La Jolla, CA. Feb. '17
- **Invited Talk** at the ECE Seminar Series, Rice University, Houston, TX. May '16
- **Full Oral Presentation (top 6.5% of submissions)** at the International Conference on Artificial Intelligence and Statistics, Cadiz, Spain, May '16
- **Invited Talk** at TTI-Chicago, Chicago, IL. Apr. '16
- **NSF Travel Award** for attending SIAM Conference on Applied Algebraic Geometry, Daejeon, South Korea. Aug. '15
- **Invited Talk** at the SIAM Conference on Applied Algebraic Geometry, Daejeon, 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

Instructor

Department of Electrical and Computer Engineering
Rice University

- **ELEC 631: Advanced Digital Signal Processing: Signal Processing And Machine Learning With Graphs** Fall '17
- Co-Instructor: Dr. Richard Baraniuk

Guest Lecturer

Department of Electrical Engineering
University of Wisconsin - Madison

- **ECE 901: Statistical Learning Theory** Spring '14
- Instructor: Dr. Robert Nowak.
Lecture on *Minimax Lower Bounds*

- **ECE 729: Information Theory** Spring '12
Instructor: Dr. Stark Draper.
Lecture on *Rate-Distortion Theory*

Project Assistant/Grader Fall '09
Department of Electrical Engineering
University of Wisconsin - Madison

- **ECE 735 - Signal Synthesis and Recovery Techniques**
Instructor: Dr. John Gubner.

Teaching Assistant Spring '09
Department of Electrical Engineering
University of Wisconsin - Madison

- **ECE 379 - Introduction to Signals and Information Processing**
Instructor: Dr. Robert Nowak.

Teaching Assistant Spring '09
Department of Electrical Engineering
University of Wisconsin - Madison

- **ECE 331 - Probability and Random Processes**
Instructor: Dr. James Bucklew.

MENTORING **Jong Hyuk Park** Fall '14 - Spring '15
Machine Learning Department
Carnegie Mellon University

- Honors Undergraduate Research Thesis: Active Sampling for Estimating Gaussian Graphical Models
- Runner-up in Yahoo! Undergraduate Research Award in Meeting of the Minds.
- Co-supervised by Dr. Aarti Singh.

Amrit Prahaj Summer '11
Department of Electrical and Computer Engineering
University of Wisconsin - Madison

- Khorana Scholar project: Efficient Structure Learning of Genetic Networks
- Co-supervised by Dr. Robert Nowak.

PROFESSIONAL ACTIVITIES AND SERVICE

- **Senior Program Committee Member:** AAAI Conference on Artificial Intelligence (AAAI-2018).
- **Technical Program Committee Member & Reviewer:** International Joint Conference on Artificial Intelligence (IJCAI) - ML Track, The AAAI Conference on Artificial Intelligence (AAAI), The International Conference on AI & Statistics (AISTATS), IEEE International Symposium on Information Theory (ISIT), Neural Information Processing Systems (NIPS), Symposium on the Theory of Computing (STOC)
- **Journal Reviewer:** Signal Processing (EURASIP), Annals of Statistics, Electronic Journal of Statistics, IEEE Transactions of Information Theory (TIT), Applied and Computational Harmonic Analysis, Distributed Computing, IEEE Journal of Selected Topics in Signal Processing, IEEE Transactions on Signal Processing (TSP), PLOS ONE, Theoretical Population Biology
- **Lead Organizer:** Statistical Machine Learning Reading Group (2014-15), Reading Group on Convex Optimization Methods (2012), Reading Group on Modern Methods in Information Processing (2012), Reading Group on Fundamentals of Information Theory (2011), UW Communications and Signal Processing (CommDSP) Seminar Series (2009).
- **Member:** CMU's BiasBusters Workshop (2015), UW Indian Graduate Student Association New Student Outreach (2010 - 2013), UW ECE Graduate Student Association (Inaugural) Board (2010).