

Chinmay Hegde

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Research Interests

Data Analytics
Machine Learning
Signal Processing
Design and Analysis of Algorithms

Education

- 2012** Ph.D. in Electrical and Computer Engineering, Rice University
Advisor: Richard G. Baraniuk
Thesis: "Nonlinear Signal Models: Geometry, Analysis, and Algorithms"
Winner of 2013 Ralph Budd Award for Best Thesis in School of Engineering
- 2010** M.S. in Electrical and Computer Engineering, Rice University
- 2006** B.Tech. in Electrical Engineering, Indian Institute of Technology Madras

Positions

- | | | |
|----------------|--|-------------------------------|
| 2015- | Iowa State University, ECpE Department | Assistant Professor |
| 2017-20 | Iowa State University, College of Engineering | Black & Veatch Faculty Fellow |
| 2012-15 | Massachusetts Institute of Technology, CSAIL | Postdoctoral Associate |
| 2014-15 | Massachusetts Institute of Technology, EECS Department | Instructor |
| 2011 | Mitsubishi Electric Research Labs (MERL) | Summer Intern |
| 2006-12 | Rice University | Graduate Research Assistant |
| 2005 | Ittiam Systems Pvt. Ltd. | Summer Intern |

Honors and Awards

- 2017** Black & Veatch Building a World of Difference Faculty Fellowship
- 2017** Best Poster Award, Midwest Machine Learning Symposium (MMLS)
- 2016** NSF CISE Research Initiation Initiative (CRII) Award
- 2016** Warren B. Boast Undergraduate Teaching Award

2015	Best Paper Award, International Conference on Machine Learning (ICML)
2013	Ralph Budd Award for Best Thesis in the School of Engineering, Rice University
2010	Robert L. Patten Award for university service, Rice University
2009	Best Student Paper Award, SPARS Workshop
2006-12	Rice University Fellowship
2002-03	National Board of Higher Mathematics (NBHM) Fellowship, India
2002	Gold Medal, Indian National Physics Olympiad
2001,02	Certificate of Distinction, Indian National Mathematics Olympiad
2001	Certificate of Distinction, Indian National Astronomy Olympiad
2000-02	Kishore Vaigyanik Protsahan Yojana (KVPY) Fellowship, India
2000	National Talent Search Exam (NTSE) Scholarship, India

Funding

PI, “CRII: CIF: Towards Linear-Time Computation of Structured Data Representations”, National Science Foundation (NSF), April 2016-March 2018, \$173,282 (sole PI).

Senior Personnel, “PFI: BIC: A Smart Service System for Traffic Incident Management Enabled by Large-data Innovations”, National Science Foundation (NSF), September 2016-August 2019, \$1,000,000. (PI: Anuj Sharma, CH share: summer support).

PI, “GPU Grant Program”, NVIDIA Corporation, \$1,000 (equipment).

PI, “Faculty Fellowship”, Black & Veatch Foundation, September 2017-May 2020, \$22,500.

Publications

Google Scholar metrics (Sept 2017): 2287 citations, H-index=16, i10-index=22.

Thesis

C. Hegde. *Nonlinear Signal Models: Geometry, Algorithms, and Analysis*. PhD thesis, ECE Department, Rice University, Sept. 2012. ***Ralph Budd Award for Best Thesis in School of Engineering.***

Journal Articles

M. Soltani and C. Hegde. Fast algorithms for demixing signals from nonlinear observations. *IEEE Trans. Sig. Proc.*, 65(16):4209–4222, Aug. 2017.

C. Hegde, A. Sankaranarayanan, W. Yin, and R. Baraniuk. NuMax: A convex approach for learning near-isometric linear embeddings. *IEEE Trans. Sig. Proc.*, 63(22):6109–6121, Nov. 2015.

C. Hegde, P. Indyk, and L. Schmidt. Fast algorithms for structured sparsity. *Bulletin of the EATCS*, 1(117):197–228, Oct. 2015.

C. Hegde, P. Indyk, and L. Schmidt. Approximation algorithms for model-based compressive sensing. *IEEE Trans. Inform. Theory*, 61(9):5129–5147, Sept. 2015.

- Y. Li, C. Hegde, A. Sankaranarayanan, R. Baraniuk, and K. Kelly. Compressive image classification via secant projections. *J. Optics*, 17(6), June 2015.
- S. Nagaraj, C. Hegde, A. Sankaranarayanan, and R. Baraniuk. Optical flow-based transport for image manifolds. *Appl. Comput. Harmon. Anal.*, 36(2):280–301, March 2014.
- C. Hegde and R. Baraniuk. Signal recovery on incoherent manifolds. *IEEE Trans. Inform. Theory*, 58(12):7204–7214, Dec. 2012.
- C. Hegde and R. Baraniuk. Sampling and recovery of pulse streams. *IEEE Trans. Sig. Proc.*, 59(4):1505–1517, Apr. 2011.
- M. Davenport, C. Hegde, M. Duarte, and R. Baraniuk. Joint manifolds for data fusion. *IEEE Trans. Image Proc.*, 19(10):2580–2594, Oct. 2010.
- R. Baraniuk, V. Cevher, M. Duarte, and C. Hegde. Model-based compressive sensing. *IEEE Trans. Inform. Theory*, 56(4):1982–2001, Apr. 2010.

Preprints

- M. Soltani and C. Hegde. Improved algorithms for matrix recovery from rank-one projections. Preprint, available online at <http://arxiv.org/abs/1705.07469>, May 2017.
- G. Jagatap and C. Hegde. Phase retrieval using structured sparsity: A sample-efficient algorithmic framework. Preprint, available online at <http://arxiv.org/abs/1705.06412>, May 2017.
- C. Hegde. Bilevel feature selection in nearly-linear time. Preprint, 2016.
- C. Hegde, A. Sankaranarayanan, and R. Baraniuk. Learning manifolds in the wild. Preprint, July 2012.

Conference Proceedings

- G. Jagatap and C. Hegde. Fast sample-efficient algorithms for structured phase retrieval. In *Adv. Neural Inf. Proc. Sys. (NIPS)*, Dec. 2017.
- Z. Jiang, A. Balu, C. Hegde, and S. Sarkar. Collaborative deep learning over fixed topology networks. In *Adv. Neural Inf. Proc. Sys. (NIPS)*, Dec. 2017.
- C. Hubbard and C. Hegde. Parallel computing heuristics for matrix completion. In *Proc. IEEE Global Conf. Signal and Image Processing (GlobalSIP)*, Nov. 2017.
- M. Soltani and C. Hegde. Demixing structured superposition signals from periodic and aperiodic nonlinearities. In *Proc. IEEE Global Conf. Signal and Image Processing (GlobalSIP)*, Nov. 2017.
- C. Hegde. Learning graph evolutions from cut sketches: Faster algorithms, fewer samples. In *Proc. Asilomar Conf. Sig. Sys. Comput.*, Nov. 2017.
- V. Shah, M. Soltani, and C. Hegde. Reconstruction from periodic nonlinearities, with applications to HDR imaging. In *Proc. Asilomar Conf. Sig. Sys. Comput.*, Nov. 2017.
- M. Soltani and C. Hegde. Fast algorithms for learning latent variables in graphical models. In *Proc. ACM KDD Workshop on Mining and Learning with Graphs (KDD MLG)*, Aug. 2017.
- B. Wang, C. Gan, J. Yang, C. Hegde, and J. Wu. Graph-based multiple-line outage identification in power transmission systems. In *IEEE Power and Engineering Systems General Meeting (PES)*, Jul. 2017.
- M. Soltani and C. Hegde. Stable recovery of sparse vectors from random sinusoidal feature maps. In *Proc. IEEE Int. Conf. Acoust., Speech, and Signal Processing (ICASSP)*, Mar. 2017.
- C. Hegde, P. Indyk, and L. Schmidt. Fast recovery from a union of subspaces. In *Adv. Neural Inf. Proc. Sys. (NIPS)*, Dec. 2016.

- M. Soltani and C. Hegde. Iterative thresholding for demixing structured superpositions in high dimensions. In *Proc. NIPS Workshop on Learning in High Dimensions with Structure (LHDS)*, Dec. 2016.
- M. Soltani and C. Hegde. A fast iterative algorithm for demixing sparse signals from nonlinear observations. In *Proc. IEEE Global Conf. Signal and Image Processing (GlobalSIP)*, Dec. 2016.
- M. Soltani and C. Hegde. Demixing sparse signals from nonlinear observations. In *Proc. Asilomar Conf. Sig. Sys. Comput.*, Nov. 2016.
- C. Hubbard, J. Bavslík, C. Hegde, and C. Hu. Data-driven prognostics of lithium-ion rechargeable battery using bilinear kernel regression. In *Annual Conf. Prognostics and Health Management (PHM)*, Oct. 2016.
- C. Hegde, P. Indyk, and L. Schmidt. Nearly linear-time algorithms for graph-structured sparsity. In *Proc. Intl. Joint Conf. Artificial Intelligence (IJCAI)*, Best Paper Awards Track, July 2016.
- C. Hegde. A fast algorithm for demixing signals with structured sparsity. In *Proc. Intl. Conf. Sig. Proc. Comm. (SPCOM)*, June 2016.
- C. Hegde. Bilevel feature selection in nearly-linear time. In *Proc. Stat. Sig. Proc. (SSP)*, June 2016.
- C. Hegde, P. Indyk, and L. Schmidt. A nearly linear-time framework for graph-structured sparsity. In *Proc. Int. Conf. Machine Learning (ICML)*, July 2015. **Best Paper Award.**
- J. Acharya, I. Diakonikolas, C. Hegde, J. Li, and L. Schmidt. Fast and near-optimal algorithms for approximating distributions by histograms. In *Proc. Symp. Principles of Database Systems (PODS)*, May 2015.
- M. Araya-Polo, C. Hegde, P. Indyk, and L. Schmidt. Greedy strategies for data-adaptive shot selection. In *Proc. Annual EAGE Meeting*, May 2015.
- L. Schmidt, C. Hegde, P. Indyk, L. Lu, X. Chi, and D. Hohl. Seismic feature extraction using Steiner tree methods. In *Proc. IEEE Int. Conf. Acoust., Speech, and Signal Processing (ICASSP)*, Apr. 2015.
- C. Hegde, P. Indyk, and L. Schmidt. Nearly linear-time model-based compressive sensing. In *Proc. Intl. Colloquium on Automata, Languages, and Programming (ICALP)*, July 2014.
- C. Hegde, P. Indyk, and L. Schmidt. A fast approximation algorithm for tree-sparse recovery. In *Proc. IEEE Int. Symp. Inform. Theory (ISIT)*, June 2014.
- Y. Li, C. Hegde, and K. Kelly. Object tracking via compressive sensing. In *Proc. Comput. Optical Sensing and Imaging (COSI)*, June 2014.
- C. Hegde, A. Sankaranarayanan, and R. Baraniuk. Lie operators for compressive sensing. In *Proc. IEEE Int. Conf. Acoust., Speech, and Signal Processing (ICASSP)*, May 2014.
- L. Schmidt, C. Hegde, P. Indyk, J. Kane, L. Lu, and D. Hohl. Automatic fault localization using the Generalized Earth Movers Distance. In *Proc. IEEE Int. Conf. Acoust., Speech, and Signal Processing (ICASSP)*, May 2014.
- C. Hegde, P. Indyk, and L. Schmidt. Approximation-tolerant model-based compressive sensing. In *Proc. ACM Symp. Discrete Alg. (SODA)*, Jan. 2014.
- E. Grant, C. Hegde, and P. Indyk. Nearly optimal linear embeddings into very low dimensions. In *Proc. IEEE Global Conf. Signal and Image Processing (GlobalSIP)*, Dec. 2013.
- C. Hegde, A. Sankaranarayanan, and R. Baraniuk. Learning measurement matrices for redundant dictionaries. In *Proc. Work. Struc. Parc. Rep. Adap. Signaux (SPARS)*, July 2013.
- L. Schmidt, C. Hegde, and P. Indyk. The Constrained Earth Movers Distance model, with applications to compressive sensing. In *Proc. Sampling Theory and Appl. (SampTA)*, July 2013.
- Y. Li, C. Hegde, R. Baraniuk, and K. Kelly. Compressive classification via secant projections. In *Proc. Comput. Optical Sensing and Imaging (COSI)*, June 2013.
- D. Grady, M. Moll, C. Hegde, A. Sankaranarayanan, R. Baraniuk, and L. Kavraki. Multi-robot target verification with reachability constraints. In *Proc. IEEE Int. Symp. on Safety, Security, and Rescue Robotics (SSRR)*, Nov. 2012.

- D. Grady, M. Moll, C. Hegde, A. Sankaranarayanan, R. Baraniuk, and L. Kavraki. Multi-objective sensor replanning for a car-like robot. In *Proc. IEEE Int. Symp. on Safety, Security, and Rescue Robotics (SSRR)*, Nov. 2012.
- C. Hegde, A. Sankaranarayanan, and R. Baraniuk. Near-isometric linear embeddings of manifolds. In *Proc. Stat. Sig. Proc. (SSP)*, Aug. 2012.
- C. Hegde and R. Baraniuk. SPIN: Iterative signal recovery on incoherent manifolds. In *Proc. IEEE Int. Symp. Inform. Theory (ISIT)*, July 2012.
- A. Sankaranarayanan, C. Hegde, S. Nagaraj, and R. Baraniuk. Go with the flow: Optical flow-based transport operators for image manifolds. In *Proc. Allerton Conf. on Comm., Contr., and Comp.*, Sept. 2011.
- D. Grady, M. Moll, C. Hegde, A. Sankaranarayanan, R. Baraniuk, and L. Kavraki. Look before you leap: Predictive sensing and opportunistic navigation. In *Proc. IROS Workshop on Open Prob. Motion Plan.*, Sept. 2011.
- M. Davenport, C. Hegde, M. Duarte, and R. Baraniuk. High-dimensional data fusion via joint manifold learning. In *Proc. AAAI Fall Symp. on Manifold Learning*, Nov. 2010.
- C. Hegde and R. Baraniuk. Compressive sensing of a superposition of pulses. In *Proc. IEEE Int. Conf. Acoust., Speech, and Signal Processing (ICASSP)*, March 2010.
- S. Schnelle, J. Laska, C. Hegde, M. Duarte, M. Davenport, and R. Baraniuk. Texas hold 'em algorithms for distributed compressive sensing. In *Proc. IEEE Int. Conf. Acoust., Speech, and Signal Processing (ICASSP)*, March 2010.
- C. Hegde and R. Baraniuk. Compressive sensing of streams of pulses. In *Proc. Allerton Conf. on Comm., Contr., and Comp.*, Sept. 2009.
- V. Cevher, P. Indyk, C. Hegde, and R. Baraniuk. Recovery of clustered sparse signals from compressive measurements. In *Proc. Sampling Theory and Appl. (SampTA)*, May 2009.
- C. Hegde, M. Duarte, and V. Cevher. Compressive sensing recovery of spike trains using a structured sparsity model. In *Proc. Work. Struc. Parc. Rep. Adap. Signaux (SPARS)*, Apr. 2009. **Best Student Paper Award.**
- M. Duarte, C. Hegde, V. Cevher, and R. Baraniuk. Recovery of compressible signals from unions of subspaces. In *Proc. IEEE Conf. Inform. Science and Systems (CISS)*, March 2009.
- V. Cevher, M. Duarte, C. Hegde, and R. Baraniuk. Sparse signal recovery using Markov Random Fields. In *Adv. Neural Inf. Proc. Sys. (NIPS)*, Dec. 2008.
- M. Davenport, C. Hegde, M. Wakin, and R. Baraniuk. Manifold-based approaches for improved classification. In *Proc. NIPS Workshop on Topology Learning*, Dec. 2007.
- C. Hegde, M. Davenport, M. Wakin, and R. Baraniuk. Efficient machine learning using random projections. In *Proc. NIPS Workshop on Efficient Machine Learning*, Dec. 2007.
- C. Hegde, M. Wakin, and R. Baraniuk. Random projections for manifold learning. In *Adv. Neural Inf. Proc. Sys. (NIPS)*, Dec. 2007.

Books and Monographs

- C. Hegde and A. Kamal. Theoretical foundations of computer engineering. Monograph available online, June 2017.
- C. Hegde. Lecture notes on data analytics. Monograph available online, June 2017.
- R. Baraniuk, M. Davenport, M. Duarte, and C. Hegde. *An Introduction to Compressive Sensing*. Connexions e-textbook, 2011.

Technical Reports

C. Hubbard and C. Hegde. GPUFish: A parallel computing framework for matrix completion from a few observations. Technical report, Iowa State University, December 2016.

C. Hegde, P. Indyk, and L. Schmidt. A fast adaptive variant of the GW algorithm for the Prize-Collecting Steiner Tree problem. DIMACS Workshop, Dec. 2014.

C. Hegde, O. Tuzel, and F. Porikli. Efficient upsampling of natural images. MERL Technical Report, March 2012.

M. Davenport, C. Hegde, M. Duarte, and R. Baraniuk. A theoretical analysis of joint manifolds. Technical Report TREE0901, Rice University ECE Department, Jan. 2009.

C. Hegde, M. Wakin, and R. Baraniuk. Random projections for manifold learning: Proofs and analysis. Technical Report TREE-0710, Rice Univ., ECE Dept., 2007.

Patents

O. Tuzel, F. Porikli, and C. Hegde, “Upscaling Natural Images”, US Patent No. 8,620,073, December 2013.

Invited Presentations

“Fast(er) Algorithms for Machine Learning in High Dimensions”, Big Data Seminar Series, Iowa State University, November 2017.

“Fast(er) Algorithms for Machine Learning in High Dimensions”, Statistics Seminar, Iowa State University, September 2017.

“Fast Algorithms for Learning Latent Variables in Graphical Models”, ACM KDD Mining and Learning with Graphs Workshop (spotlight presentation), Halifax NS, August 2017.

“Fast(er) Algorithms for Machine Learning in High Dimensions”, The Alan Turing Institute, London UK, August 2017.

“Phase Retrieval with Structured Sparsity”, International Linear Algebra Society (ILAS) Conference, Ames IA, July 2017.

“SVD-free Algorithms for Low-Rank Matrix Recovery”, SIAM Conference on Optimization, Vancouver BC, Canada, May 2017.

“Stable Inversion of (Certain) Periodic Random Feature Maps”, Information Theory and Applications Workshop, San Diego CA, February 2017.

“Iterative Thresholding for Demixing Structured Superpositions in High Dimensions”, NIPS Workshop on Learning in High Dimensions, Barcelona, Spain, December 2016. **Oral presentation; acceptance rate: 2/50.**

“A Fast Algorithm for Demixing Signals with Structured Sparsity”, International Conference on Signal Processing and Communications, Bangalore, India, June 2016.

“Nearly Linear-Time Algorithms for Structured Sparsity”, Information Theory and Applications Workshop, San Diego CA, February 2016.

“Learning Structured Sparse Representations Using Approximation”, Joint Mathematics Society, Special Session on “Analysis, Geometry, and Data”, Seattle WA, January 2016.

“Fast Algorithms for Structured Sparsity”, EE Seminar, Indian Institute of Technology Bombay, Mumbai, India, October 2015.

“Fast Algorithms for Structured Sparsity”, ECE Seminar, Indian Institute of Science, Bangalore, India, October 2015.

“Fast Algorithms for Structured Sparsity”, Computer Science Colloquium, Iowa State University, Ames IA, September 2015.

“Nearly Linear-Time Algorithms for Structured Sparsity”, International Symposium on Mathematical Programming (ISMP), Pittsburgh PA, July 2015.

“The Power of Structured Sparsity in Data Acquisition and Analysis”, ECE Seminar, Ohio State University, Columbus OH, April 2015.

“The Power of Structured Sparsity in Data Acquisition and Analysis”, ECpE Seminar, Iowa State University, Ames IA, March 2015.

“Structured Sparsity: Models, Algorithms, and Applications”, ECE Seminar, University of Illinois, Chicago IL, March 2015.

“Structured Sparsity: Models, Algorithms, and Applications”, EECS Seminar, Washington State University, Pullman WA, February 2015.

“Structured Sparsity: Models, Algorithms, and Applications”, EECS Seminar, University of California, Irvine CA, February 2015.

“Nearly Linear-Time Algorithms for Structured Sparsity”, ECE Seminar, Rice University, Houston TX, October 2014.

“Nearly Linear-Time Algorithms for Structured Sparsity”, ECE Seminar, University of Massachusetts, Amherst MA, October 2014.

“Linear Dimensionality Reduction of Large-Scale Datasets”, PED Seminar Series, MIT Lincoln Laboratory, Lexington MA, March 2014.

“Approximation Algorithms for Structured Sparse Recovery”, INFORMS Optimization Society Conference, Houston TX, March 2014.

“Approximation-Tolerant Model-Based Compressive Sensing”, EIS Seminar, Carnegie Mellon University, Pittsburgh PA, November 2013.

“Approximation-Tolerant Model-Based Compressive Sensing”, CSIP Seminar, Georgia Institute of Technology, Atlanta GA, October 2013.

“Sparse Modeling Techniques for Geological Exploration”, Hunters Network Meeting, Massachusetts Institute of Technology, Cambridge MA, August 2013.

“A Convex Approach for Designing Good Linear Embeddings”, Workshop on Sparse Fourier Transform etc., Massachusetts Institute of Technology, Cambridge MA, February 2013.

“Geometric Models for Signal Acquisition and Processing”, University of Wisconsin, Madison WI, May 2012.

“Near-Isometric Linear Embeddings of Manifolds”, KECOM Workshop, The Ohio State University, Columbus OH, May 2012.

“A Geometric Approach for Compressive Sensing”, Shell Bellaire Technology Center, Houston TX, April 2012.

“Geometric Signal Models for Compressive Sensing”, Mitsubishi Electric Research Labs, Cambridge MA, June 2011.

“Random Projections for Manifold Learning”, IMA Workshop on Multi-Manifold Data Modeling, Minneapolis MN, October 2008.

Teaching Experience

At ISU

Fall 2017 CprE 310: Theoretical Foundations of Computer Eng. Iowa State University

	Professor	
Spring 2017	EE 525X: Principles of Data Analytics for ECpE Professor (Evaluation: 4.8 (mean))	Iowa State University
Fall 2016	CprE 310: Theoretical Foundations of Computer Eng. Professor (Evaluation: 4.4/5 (mean))	Iowa State University
Spring 2016	EE 525X: Principles of Data Analytics for ECpE Professor (Evaluation: 4.7/5 (mean))	Iowa State University
Fall 2015	EE 324: Signals and Systems II Professor (Evaluation: 4.8/5 (mean))	Iowa State University
Pre-ISU		
Spring 2015	6.006: Introduction to Algorithms Instructor	Massachusetts Institute of Technology
Spring 2014	6.042: Mathematics for Computer Science Instructor	Massachusetts Institute of Technology
Summer 2010	Summer School on Image Analysis Teaching Assistant	Park City Mathematical Institute
2007-2011	ELEC 301, ELEC431, ELEC 531 Graduate Course Assistant	Rice University

Student Supervision

Graduate Students

Mohammadreza Soltani (PhD Student, Jan 2016-)
 Gauri Jagatap (PhD Student, August 2016-)
 Viraj Shah (PhD Student, August 2016-)
 Thanh Nguyen (PhD Student, August 2016-)
 Charlie Hubbard (MS Student, May 2016-)
 Manaswi Podduturi (MS Student, May 2016-)
 Shen Fu (MS Student, co-advised with Prof. Daji Qiao, August 2016-)

Undergraduate Students

Yazan Okasha (Independent study, 2017-2018.)
 Omar Taylor (Independent study, 2016-2017.)
 Souparni Agnihotri (Independent study, 2016-2017.)
 Chun-Hao Lo (Independent study, 2016.)

Senior Design Mentoring

Jose Candelario, Bradlee Stiff, Yifan Liu, Sam Park, "FollowMe: A Guided Autonomous Vehicle", 2017.
 Cameron Cornick, Ashlyn Freestone, Yiru Gao, Wen-Chi Hsu, Zachary Snyder, "A Voice for Autism", 2016.
 Daniel Kim, Ryan Ostwinkle, Johnny Panicola, Matt Ruebbelke, "Traffic Control Warning Lights", 2016.
 Dillon Einck, Paul Gerlich, and Brian Shannan, "Machine Learning for Retinopathy Detection", 2015-2016.

ISU Future Faculty Program

Davood Hajinezhad, Fall 2016.

Professional Activities

Organizing Committee

2017-18 Midwest Big Data Summer School

Conference Session Chair

2017 Asilomar Conference on Signals, Systems, and Computers

2016 International Conference on Signal Processing and Communications (SPCOM)

Proposal Reviewer

2017 Israeli Science Foundation (ISF)

2016 German-Israeli Foundation for Scientific Research and Development

Technical Program Committees

2016 International Conference on Artificial Intelligence and Statistics (AISTATS)

2016 International Conference on Signal Processing and Communications (SPCOM)

2015 International Joint Conferences on Artificial Intelligence (IJCAI) - ML Track

2013 IEEE GlobalSIP Symposium on New Sensing and Statistical Inference Methods

Reviewer

Artificial Intelligence and Statistics (AISTATS)

ACM-SIAM Symposium on Discrete Algorithms (SODA)

ACM Symposium on Principles of Distributed Computing (PODC)

Applied Computational and Harmonic Analysis

European Symposium on Algorithms (ESA)

EURASIP Journal on Advances in Signal Processing

IEEE Conference on Acoustics, Speech and Signal Processing (ICASSP)

IEEE Conference on Information Processing and Sensor Networks (IPSN)

IEEE International Symposium on Information Theory (ISIT)

IEEE Journal on Selected Topics in Signal Processing

IEEE Signal Processing Letters

IEEE Transactions on Cyber-Physical Systems

IEEE Transactions on Geoscience and Remote Sensing

IEEE Transactions on Information Theory
 IEEE Transactions on Image Processing
 IEEE Transactions on Pattern Analysis and Machine Intelligence
 IEEE Transactions on Robotics
 IEEE Transactions on Signal Processing
 IEEE Transactions on Systems, Man and Cybernetics
 IEEE Workshop on Computational Advances in Multi-Sensor Adaptive Processing
 International Conference on Learning Representations (ICLR)
 International Journal on Applied Control and Signal Processing
 Journal of Computational and Graphical Statistics
 Journal of Optics
 Neural Information Processing Systems (NIPS)
 Neural Computation (NECO)
 Pattern Recognition
 Sampling Theory and Applications (SampTA)
 SIAM Journal on Computing
 SIAM Journal on Imaging Sciences
 Signal Processing with Adaptive Sparse Structured Representations (SPARS)

Affiliations

2012- Member, IEEE
2013- Member, IEEE Signal Processing Society
2010-2011 Student member, AAAI
2007-2012 Student member, IEEE

Participant

2017 Simons Institute Workshop on Fast Iterative Methods for Optimization
2017 Information Theory and Applications (ITA) Workshop
2016 Information Theory and Applications (ITA) Workshop
2012 Workshop on Knowledge-Enhanced Compressive Sensing (KeCoM)
2009-2011 Winedale Workshop
2011 Rice University Office of Faculty Development Workshop
2011 Signal Processing Education Network (SPEN) Workshop
2010 Park City Mathematics Institute Summer Program on Image Processing
2008 IMA Workshop on Multi-Manifold Data Modeling and Applications
2008 IMA Workshop on Nonlinear Approximation Techniques using L1
2007 IPAM Workshop on Sparsity and High Dimensional Geometry

University Service

At ISU

2016- ECE representative, University Honors Committee
2016-2017 CoE representative, Data Science Minor Committee
2016- Member, ECpE Graduate Admissions Committee
2016- Member, Promotion and Tenure Review Committee
2016 Member, ABET Accreditation Subcommittee
2015-2016 Member, ECpE Faculty Search Committee
2015 Member, Senior Design Committee
2015- Participant, EE/CprE 294 (Program Discovery)
2015- Participant, EE/CprE 394 (Program Exploration)
2015- Participant, Take Your Professor to Lunch (TYPTL) Program

Pre-ISU

2008-2009 President, Indian Students at Rice (ISAR)
2009-2010 Representative, Graduate Students Association (GSA), Rice University
2008-2010 Graduate Mentor, ECE Department, Rice University