Gauri Jagatap

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Education

Aug 2016 -*Present*	Doctor of Philosophy (PhD) in Electrical Engineering **Iowa State University** (GPA: 3.88/4)
Aug 2010 -May 2015	Bachelor of Engineering (Hons.) in Electrical and Electronics Engineering Master of Science (Hons.) in Physics **BITS Pilani University**, India (GPA: 8.69/10)

Programming Languages and Frameworks

MATLAB, Python, C, TensorFlow

Research Interests

Machine Learning, Statistical Learning, Learning Theory, Algorithms, Signal Processing, Optimization

Research

Aug 2016 -*Present*	PhD student at **Iowa State University** Advisor: Dr. Chinmay Hegde Phase retrieval using structured sparsity: utilizing underlying structure (such as block and tree sparsities) in signal data to develop fast and sample efficient algorithms for solving absolute-valued inverse problems. Formulated and analyzed bounds on the number of sample points required for invertibility. Analyzed convergence criterion and running time of the algorithm. Applications to sub-diffractive super-resolution imaging.
Jul 2015 -Jul 2016	Project Assistant at **Indian Institute of Science**, Bengaluru, India Advisor: Dr. Chandra Sekhar Seelamantula Axial super-resolution of ultrasound images using compressed sensing.
Aug 2015	Low rank and sparse decomposition of compressively sensed video via Alternating Directions Method of Multipliers (ADMM).

Journal articles

Nov 2017	**G. Jagatap** and C. Hegde, "Sample-efficient algorithms for recovering structured signals from magnitude-only measurements", *under review*, **IEEE Transactions on Information Theory**. (Paper).

Conference proceedings

Dec 2017	**G. Jagatap** and C. Hegde, "Fast, sample-efficient algorithms for structured phase retrieval", Advances in Neural Information Processing Systems (NIPS), pp. 4922-4932, 2017. (Acceptance rate: 20.93%). (Paper).
Apr 2018	**G. Jagatap**, Z. Chen, C. Hegde and N. Vaswani, "Sub-diffraction imaging using Fourier ptychography and structured sparsity", *to appear*, International Conference on Acoustics, Speech, and Signal Processing (ICASSP), 2018 (Oral presentation). (Paper).
Apr 2018	Z. Chen, **G. Jagatap**, S. Nayer, C. Hegde and N. Vaswani, "Low rank Fourier ptychography", *to appear*, International Conference on Acoustics, Speech, and Signal Processing (ICASSP), 2018. (Paper).

Articles

Under review

Jan 2018	**G. Jagatap** and C. Hegde, "Towards sample-optimal methods for solving random quadratic equations with structure", 2018. (Paper).
Feb 2018	**G. Jagatap**, Z. Chen, C. Hegde and N. Vaswani, "Model corrected low rank ptychography", 2018. (Paper).

Workshops and Symposia

Jun 2017	**G. Jagatap** and C. Hegde, "Fast and sample-efficient algorithms for structured phase retrieval", **Midwest Machine Learning Symposium (MMLS) 2017**.
Dec 2017	**G. Jagatap** and C. Hegde, "Phase retrieval using structured sparsity: A sample efficient algorithmic framework", **Women in Machine Learning (WiML) 2017 Workshop**.

Graduate Courses

Iowa State University

Data Analytics for ECpE, Deep Machine Learning, Statistical Machine Learning, Convex Optimization, Nonlinear Programming, Detection and Estimation Theory, Theory of Probability and Statistics, Applied Linear Algebra

Graduate Course Projects

May 2017	Sparse PCA using truncated and inverse power methods for topic extraction from textual database, EE 525, **Iowa State University**
May 2017	Non-negative matrix factorization using orthogonal gradient method and successive projection method for topic extraction from textual database, IE 631, **Iowa State University**

Scholarships and Awards

Oct 2017	Student Travel Award for NIPS 2017
Nov 2017	WiML 2017 Travel Grant
Aug 2016 -	Research Assistant, **Iowa State University**
2011 - 15	INSPIRE Scholarship, **Department of Science and Technology, Govt. of India**

Teaching Assistantships

Spring 2018	EE 525:Data Analytics in Electrical & Computer Eng, **Iowa State University**
Spring 2014	BITS C386:Quantum Information & Computing, **BITS Pilani University**
Fall 2012	PHY F110:Physics Laboratory, **BITS Pilani University**

Reviewing

IEEE Transactions on Signal Processing (TSP), 2018.
International Conference on Signal Processing and Communications (SPCOM), 2018.
Women in Machine Learning (WiML) Workshop, 2017.

Professional Activities

Event coordinator, Data Science Reading Group, **Iowa State University**.

updated on March 6, 2018