

Praneeth Narayanamurthy

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Education

B.Tech., Electrical and Electronics Engineering, National Institute of Technology Karnataka, 2014.
Thesis: *Efficient-Estimation of Lightning Parameters using Genetic Algorithms*.

Ph.D., Electrical Engineering, Iowa State University, 2016 – 2020 (expected).

Work Experience

Project Assistant: July 2014 – Dec. 2015, Indian Institute of Science, Bangalore.

Graduate Courses

Electrical Engineering: Probability and Random Processes, Convex Optimization, Detection and Estimation Theory, Principles of Data Science, Deep Machine Learning, Statistical Machine Learning

Computer Science: Design and Analysis of Algorithms, Machine Learning

Mathematics: Linear Algebra, Numerical Analysis-II

Skills

Proficient: MATLAB, \LaTeX ,

Intermediate: Python, C++, Perl, Bash

Beginner: Julia, Scheme

Honors and Awards

Finalist of National GE Edison Challenge – 2013

Indian National Mathematical Olympiad Awardee – 2009

Certificate of Excellence from Central Board of Secondary Education for securing 100% grade in Mathematics and Sanskrit in 10th standard – 2008

Publications and Pre-Prints

Journals and Pre-Prints

1. Nearly Optimal Robust Subspace Tracking,
Praneeth Narayanamurthy and Namrata Vaswani,
under review, IEEE Transactions on Information Theory (Mar. 2018).
2. Provable Dynamic Robust PCA or Robust Subspace Tracking,
Praneeth Narayanamurthy and Namrata Vaswani,
to appear, IEEE Transactions on Information Theory, 2018.
3. Finite Sample Guarantees for PCA in non-isotropic and Data-Dependent Noise,
Namrata Vaswani and Praneeth Narayanamurthy,
manuscript (May 2017).
4. Robust PCA, Subspace Learning, and Tracking,
Namrata Vaswani, Thierry Bouwmans, Sajid Javed and Praneeth Narayanamurthy,
IEEE Signal Processing Magazine (July 2018).
5. Static and Dynamic Robust PCA and Matrix Completion: A review,
Namrata Vaswani, and Praneeth Narayanamurthy,
Proceedings of IEEE (Aug. 2018).

Conference and Workshops

1. Nearly Optimal Robust Subspace Tracking,
Praneeth Narayanamurthy and Namrata Vaswani, ICML, Long talk (Top 8.6% of papers) 2018.
2. Provable Dynamic Robust PCA or Robust Subspace Tracking,
Praneeth Narayanamurthy and Namrata Vaswani, ISIT, 2018.
3. Nearly Optimal Robust Subspace Tracking: A Unified Approach,
Praneeth Narayanamurthy and Namrata Vaswani, DSW, 2018.
4. PCA in Sparse Data-Dependent Noise,
Namrata Vaswani and Praneeth Narayanamurthy, ISIT, 2018.
5. A Fast and Memory-Efficient Algorithm for Robust PCA (MERoP),
Praneeth Narayanamurthy and Namrata Vaswani, ICASSP, 2018
6. Finite Sample Guarantees for PCA in non-isotropic and Data-Dependent Noise,
Namrata Vaswani and Praneeth Narayanamurthy, Allerton 2017
7. Robust PCA and Robust Subspace Tracking: A comparative Evaluation,
Sajid Javed, Praneeth Narayanamurthy, Namrata Vaswani and Thierry Bouwmans, SSP, 2018.
8. Provably correct Robust Subspace Tracking: A Correlated-PCA-based Approach,
Brian Loïs, Namrata Vaswani and Praneeth Narayanamurthy, NIPS workshop on LHDS, 2016.
9. Efficient Resampling of speech signals in Shift-Invariant Spaces,
Gutta Sreedevi, Praneeth Narayanamurthy, and Chandra Sekhar Seelamantula, NCC 2016.
10. Dictionary-Learning based Post-Filter for HMM-based Speech Synthesis,
Praneeth Narayanamurthy and Chandra Sekhar Seelamantula, TENCON 2015.

Talks

1. *MEDRoP: Memory Efficient Dynamic Robust PCA*
Microsoft Research India
ECE Department, Indian Institute of Science, Bangalore
December 2017

Last updated: September 27, 2018