

Title: Hard Thresholding based methods for Robust Learning

Date: Thursday 07 November, 2019.

Time: 5PM

Venue: RM101 (new CSE building)

Abstract: Learning in presence of outliers is a critical problem that can heavily affect performance of the learning algorithms in practice. In this talk, we present a general approach for learning with outliers, where we iteratively estimate the model parameters with estimated inliers and threshold out point which seems unlikely to be generated from the model to obtain more refined set of inliers. We instantiate this general approach for the outlier efficient PCA problem and demonstrate that it leads to nearly optimal solution in $O(\text{PCA})$ computation time.

Based on joint works with Kush Bhatia, Y. Cherapanamjeri, Kartik Gupta, Purushottam Kar, Praneeth Netrapalli, Arun S.

Speaker Bio: Dr. Prateek Jain is an adjunct faculty in the CSE department and is currently a Senior Principal Researcher at Microsoft Research and works with the Machine Learning and Optimization and the Algorithms and Data Sciences Group. Dr. Jain is an alumni of IIT Kanpur (BT 2004) and did his Ph.D. at the University of Texas at Austin. Dr Jain works in the areas of machine learning, non-convex optimization, high-dimensional statistics, and applications of machine learning to privacy, computer vision, text mining and natural language processing. Dr. Jain is a well-recognized figure in the area of machine learning with multiple best paper awards (ICML 2007, CVPR 2008) and memberships on senior program committees for top ML conferences.