

Department of Statistics Seminar Series



Arya Mazumdar
**School of Computing, Information and
Data Sciences**
UC - San Diego

The Binary Iterative Hard Thresholding Algorithm

Wednesday, April 8th, 2026

12:10-1:30 PM

Hill Center - 552

Zoom Meeting: Meeting ID: 926 1608 1995

Password: 153525

<https://rutgers.zoom.us/j/92616081995?pwd=TqPVh6Y1O6aUt8i2uUBCRhrgH6Ayx.1>

Light refreshments will be served in Hill 452 11:40am

Abstract:

We will discuss our work on the convergence of iterative hard threshold algorithms for sparse signal recovery problems. For classification problems with nonseparable data this algorithm can be thought of minimizing the so-called ReLU loss. It seems to be very effective (statistically optimal, simple iterative method) for a large class of models of nonseparable data - sparse generalized linear models. It is also robust to adversarial perturbation.

Based on joint work with Namiko Matsumoto.

Bio:

Arya Mazumdar is the HDSI Endowed Chair Professor in AI at University of California San Diego. Arya received his Ph.D. degree from the University of Maryland, College Park, in 2011. Subsequently, he was a postdoctoral researcher with the Massachusetts Institute of Technology. In the past, he has been a professor in University of Minnesota and University of Massachusetts Amherst, and a research scientist in Amazon. His research areas cover algorithmic and statistical aspects of machine learning, error correcting codes, optimization, and signal processing. Awards received by Arya include the 2011 ECE Distinguished Dissertation Award and 2025 ECE Distinguished Alumni Award (both from Univ. of Maryland), EURASIP Best Paper Award, IEEE ISIT Jack Keil Wolf paper award, and an NSF CAREER Award. He was a Distinguished Lecturer of the Information Theory Society for 2023-24, and currently serves as an associate editor for IEEE Transactions on Information Theory, and an area editor for Now Publishers Foundation and Trends in Communication and Information Theory series, among others.

****This seminar is combined with SIP**