Whiteboard Session I

Model Selection in High-Dimensional Misspecified Models
Pallavi Basu, University of Southern California

Compressed Sensing without Sparsity Assumptions
Miles Lopes, University of California, Davis

Connections Between Coding and Compressed Sensing
Henry Pfister, Duke University

Efficient PCA for large high-dimensional datasets via Randomized Sketching
Farhad Pourkamali-Anaraki, University of Colorado, Boulder

Scalable Approximations of Marginal Posteriors in Variable Selection
Galen Reeves, Duke University

Learning Single Index Models in High Dimensions
Rebecca Willett, University of Wisconsin-Madison

Whiteboard Session II

ConceFT: Concentration in Frequency and Time
Ingrid Daubechies, Duke University

Hierarchical Graph-Coupled HMMs for Heterogeneous Personalized Health Data
Kai Fan, Duke University

Theoretical Limits in Sparsity and Deep Learning
Raja Giryes, Duke University

Learning mixtures of subspaces
Sayan Mukherjee, Duke University

Abstract Algebraic Subspace Clustering
Manolis Tsakiris, Johns Hopkins University

Randomized blocked algorithms for efficiently computing rank-revealing factorizations of matrices
Sergey Voronin, University of Colorado Boulder

Poster Session I

Universal Denoising in Approximate Message Passing
Yanting Ma, North Carolina State University

Information geometry and model reduction
Sorin Mitran, University of North Carolina, Chapel Hill

Spectrally Grouped Edge-Preserving Reconstruction
Ikenna Odinaka, Duke University

Random Forests Can Hash
Qiang Qiu, Duke University

Complete Dictionary Learning Over the Sphere
Qing Qu, Columbia University

Learning Program Attributes in Control Flow Graphs
Akshay Rangamani, Johns Hopkins University

Fluorescence Modeling for OB-CD Raman Spectroscopy
Owen Rehrauer, Purdue University

Bayesian Nonparametric Higher Order Markov Chains
Abhra Sarkar, Duke University

The performance of differentially private PCA
Anand Sarwate, Rutgers University

Linear Systems with Sparse Inputs
Shahin Sefati, Johns Hopkins University

Computational statistics for CLARITY volumes
Anish Simhal, Duke University

Signal processing approaches for genomic data
Catherine Stamoulis, Harvard Medical School

Reduced Stochastic Models of Permeable Medium Flow
Charles Talbot, University of North Carolina, Chapel Hill

Compressed NMF is Fast and Accurate
Mariano Tepper, Duke University

Abstract Algebraic Subspace Clustering
Manolis Tsakiris, Johns Hopkins University

Gaussian Process Kernels for Cross-Spectrum Analysis
Kyle Ulrich, Duke University

An efficient algorithm for computing a CUR factorization
Sergey Voronin, University of Colorado Boulder

Bayesian Or's of And's for Interpretable Classification
Tong Wang, Massachusetts Institute of Technology

Spatial dependent deep factor model
Yizhe Zhang, Duke University

Poster Session II

Analysis & Simulation Framework: X-ray Threat Detection
Amit Ashok, University of Arizona

Extreme Compressive Sampling for Covariance Estim.
Martin Azizyan, Carnegie Mellon University

Image Reconstruction in Radio Astronomy
Dror Baron, North Carolina State University

Sparse Multinomial Logistic Regression via AMP
Evan Byrne, The Ohio State University

Learning a Personalized CDSS From EHR Data
Dan Coroian, Duke University

Bayesian Cluster Detection for Rare Variants
Jyotishka Datta, Duke University

Burst Deblurring
Mauricio Delbracio, Duke University

Efficient variance estimation for high-dimensional linear models
Lee Dicker, Rutgers University

Model reduction of stochastic biomechanical system
Yan Feng, Duke University

Deep Neural Networks with Random Gaussian Weights: A Universal Classification Strategy?
Raja Giryes, Duke University

Coding and compression in snapshot XRD imaging
Joel Greenberg, Duke University

Compressive Parameter Estimation via AMP
Shermin Hamzehei, University of Massachusetts Amherst

Pose-invariant cross-modality facial expression
Jordan Hashemi, Duke University

On the sample complexity of correlation mining
Alfred Hero, University of Michigan

Minimax Rates for Photon Limited Image Reconstruction
Xin Jiang, University of Wisconsin-Madison

Locating Rare and Weak Material Anomalies by Convex Demixing of Propagating Wavefield Data
Mojtaba Kadkhodaie, University of Minnesota

Variational Automatic Relevance Determination
Yan Kaganovsky, Duke University

NMR structural calculation via semidefinite programming
Yuehaw Khoo, Princeton University

Robust Prediction of DBS targeting structures
Jinyoung Kim, Duke University

Reed-Muller Codes Achieve Capacity on Erasure Channels
Santhosh Kumar, Texas A & M University

Stable Super-Resolution of Mixture Models
Yuanxin Li, The Ohio State University

Belief-Propagation Reconstruction for Compressed Sensing: Quantization vs. Gaussian Approximation
Mengke Lian, Duke University

Partial Face Recognition
Luoluo Liu, Johns Hopkins University

Compressed Sensing without Sparsity Assumptions
Miles Lopes, University of California, Davis

Optical imaging for forensics
John Lu, National Institute of Standards and Technology

Randomized Kaczmarz Algorithm and its Cousins: Exact MSE Analysis and Asymptotically Sharp Bounds
Yue Lu, Harvard John A. Paulson School of Engineering and Applied Sciences