



BIOINFORMATICS 2017 Spring SEMINAR SERIES
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<http://bioinformatics.udel.edu/Seminars/Current>

MONDAY, May 8, 2017
3:30pm
DBI Room 102

Sufficient Dimension Reduction with Simultaneous Variable Selection in Application to Tumor Diagnosis

Shanshan Ding
Assistant Professor, Department of Applied Economics and Statistics
University of Delaware

ABSTRACT:

Sufficient dimension reduction (SDR) is known to be a powerful tool for achieving data reduction and data visualization in regression and classification problems. In this work, we study ultrahigh-dimensional SDR problems and propose solutions under a unified minimum discrepancy approach with regularization. The proposed approach is equipped with a new algorithm to efficiently solve the regularized objective functions and a new data-driven procedure to determine structural dimension and tuning parameters. We demonstrate the potential application of our method for tumor diagnosis and the identification of candidate targets for therapy via gene expression profiling data.