Seminar in
Mathematics, Statistics and Computer Science

COURSE NUMBER: MSCS 6960, SECTION 102-SEM (3061)

TITLE: SEMINAR ON INTERDISCIPLINARY DATA ANALYSIS

*TIME: MONDAY, 4:00 – 4:50 PM
*LOCATION: CUDAHY HALL, ROOM 401

OBJECTIVE: To provide tools for doing interdisciplinary statistical analysis and to showcase the interdisciplinary research of the faculty members from different disciplines.

SPECIFICS: This seminar series is organized by Dr. Mehdi Maadooliat, Dr. Serdar Bozdag, and Dr. Naveen Bansal of MSCS. We will give a brief discussion of frequentist and Bayesian statistics. Given recent high demand for modeling the massive data structures, we will cover some recent tools of data analyses in Machine Learning and Data Mining such as Hidden Markov Models, Boosting, Dimension Reduction techniques and Discriminant Analysis with applications to Bioinformatics (Gene Expression Analysis, Proteomics, Epigenetics, etc). In Bioinformatics, we will cover methods to integrate various biological datasets (gene expression, copy number, methylation, etc.) to build predictive models of gene regulation. We will discuss methods to analyze next generation sequencing data. We will also introduce some popular tools in literature, i.e. False Discovery Rates, Gibbs Sampling and EM algorithms. Various speakers from different disciplines will be invited to present their research work.