

**Department of Epidemiology and Biostatistics
Biostatistics Seminar**

Wednesday, January 28, 2015
12:00pm - 1:00pm -- WG73

“A comprehensive case study of proteomic data”

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Abstract: With the recent advance in proteomics, especially in mass spectrometry (MS) techniques such as MALDI-TOF MS and LC-MS/MS, protein profiles have shown promise for discovering biologically related protein patterns/biomarkers. However, the complexity and high dimensionality of MS data make quantitative analysis quite challenging. My research aims to tackle this by providing appropriate statistical analysis strategies. In this talk, I will present a comprehensive analysis procedure by walking through a real case study step by step: (1) introducing the complex high-throughput proteomic data; (2) demonstrating the major steps of data preprocessing; (3) addressing the data quality issue; (4) bringing out statistical analysis methods and models; and (5) providing solutions to model evaluation and validation.