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School of Arts and Sciences

Department of Statistics and Biostatistics

DEPARTMENT OF STATISTICS AND BIOSTATISTICS

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Identification of Homogeneous and Heterogeneous Variables in Pooled Cohort Studies

October 26, 2016
3:20 – 4:20pm
Light refreshments will be served
110 Frelinghuysen Road
Hill Center, Room 552

Abstract: Pooled analyses utilize data from multiple studies and intend to achieve a large sample size for increased statistical power. When heterogeneity exists in variables' effects across studies, the simple pooling strategy fails to present a fair and complete picture of the effects of heterogeneous variables. Thus, it is important to investigate the homogeneous and heterogeneous structure of variables in pooled studies. In this talk, I will present our recent work on using composite penalty regularized likelihood approaches to identifying variables with heterogeneous effects in pooled studies. The methods will be demonstrated using numerical simulations and real study applications.

Bio: Dr. Liu received her Ph.D. in Statistics from Columbia University in 2004, and then joined NYU School of Medicine (NYUSoM) the Division of Biostatistics. She was the Interim Director of the Division from 2013-2016, and current, she is the Associate Professor in the Department of Population Health and Department of Environmental Medicine, and the Graduate Advisor of Ph.D. program in Biostatistics in the Sackler Institute at NYUSoM.

Dr. Liu's statistical research focuses on semiparametric modeling and inference for survival data, including joint analysis with longitudinal data, in genetics study, in epidemiology studies and other type of risk-set sampling studies. She had led multiple NIH funded methodology grants, and currently is the Multi-PI on an R01 grant on building breast cancer risk prediction for younger women. She has also engaged in a broad range of collaborative projects. She is a member of the NYU Cancer Institute, and a Co-investigator of the NYU Clinical and Translational Science Institute (CTSI), the NYU Women's Health Study, and the WTC Environmental Health Center (WTCEHC).