



SEMINAR SERIES 2018-2019

When: Thursday, October 11, 2018
Time: 3:30 – 4:30 pm
Refreshments at 3:15 pm
Where: Sidney Smith Hall Rm 2105
Speaker: Jianhua Hu, Columbia University
Host: Fang Yao

Biomedical Data Science

Large and complex quantitative data have been massively produced in the biomedical field to facilitate understanding of disease formation and progression towards the goal of improving disease diagnosis, prognosis, and treatment.

This talk focuses on two practical problems that motivate development of new statistical methods. First, I will introduce a transformed low-rank ANOVA framework to study associations between high-dimensional genetic variables, disease phenotypes, and/or demographic and clinical variables. An application to Single-Nucleotide-Polymorphism-based genome-wide association studies will be discussed.

The proposed framework has the flexibility of handling various types of genetic variables, disease phenotypes, and multi-way associations. In the second part, I will talk about a new framework of shared informative factor models (SIFORM) for integration of multi-platform omics data and clinical data.

