

The Medical College of Wisconsin

Division of Biostatistics

Proudly Presents:
A Statistical Research Seminar
Talk By:



Yuan Luo PhD

Assistant Professor in Biomedical Informatics, Northwestern University

Title: Towards Unified Biomedical Modeling with Graph and Factorization Algorithms

ABSTRACT: The talk will focus on concrete examples including biomedical relation extraction (short text understanding) from clinical notes and computational phenotyping of cancer patients (long text understanding), imputing missing laboratory data and predicting patient mortality risk using numerical clinical time series, integrating deep phenotypic and genetic information to characterize cardiac mechanics in hypertensive patients, and implicating neurodevelopmentally coregulated exon clusters in phenotypes of Autism Spectrum Disorder (ASD). In each example, I will show how to automatically build relational information into a graph representation and how to learn features from graphs. Depending on the degree of structure in the data format, heavier machinery of factorization models becomes necessary to reliably group important features. I will demonstrate that these methods lead to not only improved performance but also better interpretability.

Tuesday, October 30, 2018

3:30 PM – 4:30 PM

Medical College of Wisconsin

M2050

Light refreshment provided 3:10 PM