

Indiana University Indianapolis
Department of Mathematical Sciences

STATISTICS SEMINAR

12:15pm—1:15pm, Tuesday, August 27, 2024

Zoom Meeting: Meeting ID: 845 0989 4694

Speaker: **Juexin Wang**

Department of Biomedical Engineering and Informatics, IU Indianapolis

Title: **Exploring spatial omics with machine learning**

Abstract:

Emerging spatial omics provides unprecedented challenges and opportunities for bioinformatic research. Here I present three recent works in my lab: (1) BSP, a dimension-agnostic granularity-based spatially variable gene identification approach, and scBSP, a computational efficient implementation of BSP; (2) REGNN, an empowered graph neural networks for heterogeneous tissue architecture analysis in kidney; and (3) TrimNN, a triangulation structural motif neural network for identifying cell organization in spatial omics.

Bio:

Dr. Juexin Wang is an Assistant Professor in the Department of Biomedical Engineering and Informatics at Indiana University Indianapolis. His research mainly focuses on developing computational methods to model single-cell and spatial transcriptomics data, and data analysis in kidney diseases, cancer, and nervous system diseases. His lab has been funded by NIH.