

**Indiana University-Purdue University  
Indianapolis**  
**Department of Mathematical Sciences**

STATISTICS SEMINAR

12:15pm—1:15pm, Tuesday, October 05, 2021  
Zoom Meeting: Meeting ID: 845 0989 4694

**Speaker:** Heming Wang

*Division of Sleep and Circadian Disorders, Harvard Medical School*

**Title:** Genetic association studies of obstructive sleep apnea

**Abstract:**

Obstructive sleep apnea (OSA) is a common disorder associated with increased risk of cardiovascular disease and mortality. Although OSA is heritable, few genetic associations have been identified due to the challenge of collecting large samples with physiological signals. Leveraging polysomnography signals from the National Sleep Research Resource (NSRR) linked to genomics data, we applied admixture mapping analysis on a Hispanic/Latino American sample and identified three novel genomic regions for OSA, including FECH, a key heme metabolism gene. A follow-up pathway-based Mendelian randomization study using transcriptional data further suggested a causal association between increased heme biosynthesis and OSA severity.

**Bio:**

Dr. Heming Wang is an Assistant Professor in the Division of Sleep and Circadian Disorders at Harvard Medical School. Her primary research interest is to identify genetic variants and pathways for sleep and cardiovascular diseases using genomics and other -omics data. She is a principal investigator funded by NHLBI and the Sleep Research Society studying the heterogeneous background of sleep health and impact on cardiovascular diseases.