

Statistics Seminar  
Department of Mathematical Sciences

<b>DATE:</b>	Thursday, March 25, 2021
<b>TIME:</b>	1:15pm - 2:15pm
<b>LOCATION:</b>	Zoom meeting
<b>SPEAKER:</b>	Xiaoke Qin, Binghamton University
<b>TITLE:</b>	Zero-inflated generalized Dirichlet multinomial regression model for microbiome compositional data analysis

**Abstract**

There is heightened interest in quantifying abundances of microbial taxa and linking it to human diseases and traits. In the paper 'Zero-inflated generalized Dirichlet multinomial regression model for microbiome compositional data analysis', the authors, Zheng-Zheng Tang and Guanhua Chen, propose the new zero-inflated generalized Dirichlet multinomial(ZIGDM) distribution in order to model multivariate taxon counts. The existing models are limited in handling excessive zero observations and flexibly accommodating complex correlation structures among taxa. Based on ZIGDM distribution, they propose a ZIGDM regression model to overcome these limitations and link microbial abundances to covariates.

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