

Slippery Rock University
Department of Mathematics and Statistics

Presents

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**“Flexible Regression Models for
Dispersed Count Data”**

Abstract

Poisson regression is a popular tool for modeling count data and is applied in a vast array of applications across disciplines. Real data, however, are often over- or under-dispersed relative to the Poisson model, and thus are not conducive to Poisson regression. This talk presents a regression model based on the Conway-Maxwell-Poisson (COM-Poisson or CMP) distribution which serves as a flexible alternative that contains both the Poisson and logistic regressions as special cases, and can handle other count data with a range of dispersion levels. We discuss model estimation, inference, diagnostics etc. for both the standard CMP regression and its zero-inflated analog, and introduce the associated R package, COMPoissonReg, developed to aid analysts with such data.

Thursday, Nov 5th

12:30 p.m.

<https://sru.zoom.us/j/98352961875>

Zoom password: Poisson

Students are welcome!