

BI-CO MATHEMATICS COLLOQUIUM

Nickolas J. Horton
Smith College

*“Much ado about nothing:
methods and software implementations
to estimate incomplete data regression models”*

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Talk at 4:15 – KINSC H109
Tea at 4:00 – KINSC Math Lounge, H208

Abstract: Missing data are a recurring problem that can cause bias or lead to inefficient analyses. The development of statistical methods to address missingness has been actively pursued in recent years, including imputation, likelihood and weighting approaches. Each approach is considerably more complicated when there are many patterns of missing values and both categorical and continuous random variables are involved. Implementations of routines to incorporate observations with incomplete variables in regression models are now widely available, though not widely implemented. We review these methods in the context of a motivating example from a large health services research dataset. While there are still limitations to the current implementations, and additional efforts are required of the analyst, it is feasible and scientifically desirable to incorporate partially observed values as well as undertake sensitivity analyses to modelling and missingness assumptions.

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