Professor Edward L Boone

Department of Statistical Science and Operations Research
Virginia Commonwealth University, Richmond, VA

**Thursday, September 29, 2016
Rm 277 WCharlton Hall
4 – 5 pm**

Determining Tolerable Dosage Regions with Synergistic and Inhibitory Effects

Toxicologists are interested in determining the amount of a substance one can be exposed to before negative outcomes occur. Typically Bench Mark Dose (BMD) approach as been used on single stressor and single outcome studies. The traditional approach ignores that several stressors may be present simultaneously and hence ignores any additive or interactive (synergistic or inhibitory) effects as well. This talk considers a Bayesian approach to determining a Bench Mark Dose Tolerable Region (BMDTR) in both the additive and interaction cases across multiple stressors and multiple outcomes. In addition to creating a BMDTR the proposed method also allows for the assessment of the sensitivity of each of the multiple outcomes and which outcomes should be studied in the future. The method is illustrated on rodent data from the EPA.

**Refreshments will be served 3:15 – 3:45 pm in the Faculty & Graduate Student Lounge
Rm 4118 French Hall West**

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