Seminar Series: Research Colloquium

Date: Friday, February 10, 2017
Time: 10:30 – 11:20 a.m.
Location: GRIS 103

Speaker: Dr. Matthew Plumlee
Affiliation/Organization: University of Michigan

**BAYESIAN CALIBRATION OF INEXACT COMPUTER MODELS**

**Abstract:** Bayesian calibration is used to study computer models in the presence of both a calibration parameter and model bias. The parameter in the predominant methodology is left undefined. This results in an issue where the posterior of the parameter is sub-optimally broad. There have been no generally accepted alternatives to date. This talk proposes and studies a relatively straightforward fix for Bayesian calibration where the prior distribution on the bias is made orthogonal to the gradient of the computer model. Problems associated with Bayesian calibration are shown to be mitigated through analytic results in addition to examples.