Michigan Math Club

Thursday at 4pm in East Hall 2851
(Nesbitt Room) Free Pizza and Pop

A Model for Happiness

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Abstract for 2 Feb. 2012

Understanding and treating Bipolar Disorder (BP) is one of the leading medical challenges facing society. BP patients experience extreme changes in mood that appear to be unpredictable. I will discuss a collaborative project between a recent Michigan Math undergraduate, myself and researchers at Michigan's Depression Center to develop a mathematical model to characterize mood changes in BP patients. The model is a simple stochastic differential equation model. I will also discuss how this model can be adjusted to match the disorder in specific patients and used to classify subjects along the BP spectrum. Finally, I will discuss how relevant data to fit the model could potentially be collected using smartphones.