

# **Analysis/Dynamical Systems Seminar**

Thursday, November 12th, 2015

4:00-4:50 pm in Hume 331

## **On some mathematical problems related to the foundations of (classical) statistical mechanics**

**Alexander Grigo**

University of Oklahoma

The study of mechanical systems has a several centuries long history of major scientific advances and discoveries. In particular, within the last 100 years two qualitatively distinct features, namely stability and stochastic-like behavior, have been studied with various success in a variety of contexts (e.g., the solar system and Brownian motion). In this talk, I will describe a few examples which are addressing the question of (1) how it is possible that even simple mechanical systems can behave like a random system, and (2) how it is possible to predict the evolution of mechanical systems with very many constituents. The presentation is intended to be self-contained and accessible to non-experts.