THE UNIVERSITY
of NORTH CAROLINA
at CHAPEL HILL

M. E. Taylor Analysis and PDE Seminar

Wednesday, October 9th
3:30 - 4:30 p.m.
Phillips Hall 385

Equations on the Wasserstein space and applications

Ben Seeger (UNC)

Abstract. The purpose of this talk is to give an overview of recent work involving differential equations posed on spaces of probability measures and their use in analyzing controlled multi-agent systems. Justifying the continuum description of such interacting agent models is often nontrivial and sensitive to the type of stochastic noise influencing the population. We describe settings for which the convergence to mean field stochastic control problems can be resolved through the well-posedness of a certain Hamilton-Jacobi-Bellman equation posed on Wasserstein spaces. The results are general enough to allow for continuum descriptions of some more general random models. This is joint work with S. Daudin and J. Jackson.