

Public Abstract

First Name:John

Middle Name:David

Last Name:Kahl

Adviser's First Name:Stamatis

Adviser's Last Name:Dostoglou

Co-Adviser's First Name:

Co-Adviser's Last Name:

Graduation Term:SS 2010

Department:Mathematics

Degree:PhD

Title:Measures on Hilbert Spaces and Applications to Hydrodynamics

Homogeneous and isotropic statistical solutions of the Navier-Stokes equations are produced. These are shown to be approximated by Galerkin statistical solutions on finite dimensional subspaces. Homogeneous and isotropic measures are approximated in the 2nd Wasserstein metric by measures supported on finite dimensional subspaces. The homogeneous measures are then shown to be a subspace of positive curvature of the 2nd Wasserstein space.