

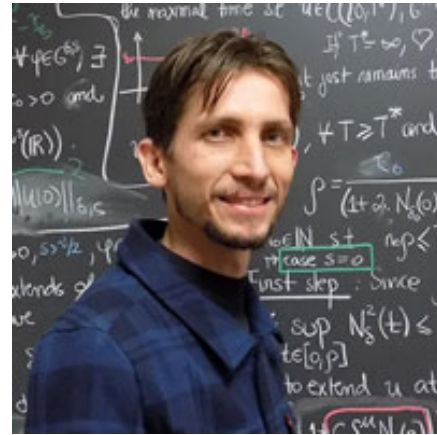
PDE, COMPLEX ANALYSIS AND DIFFERENTIAL GEOMETRY SEMINAR

Guest Speaker: Rafael Barostichi
**University of Notre Dame and Federal
University of Sao Carlos**

Date: Tuesday, September 24, 2019

Time: 11:00 AM

Location: 258 Hurley Hall



Lecture Title:

On the Cauchy problem for the modified KdV equation with higher dispersion in spaces of analytic functions

Abstract

We shall consider the initial value problem for the modified KdV equation with higher dispersion (mKdVm), with initial data belonging in a class of analytic functions on the line that can be extended holomorphically in a symmetric strip of the complex plane around the real axis. We shall present briefly the proof of the local well-posedness of the Cauchy problem in the analytic spaces and use an almost conservation law to prove that the local analytic solution can be extended globally in time. We shall also present the evolution of the uniform radius of analyticity as time goes to infinity. This is work in collaboration with Alex Himonas and Renata de Oliveira.