PDE, Complex Analysis and Differential Geometry Seminar

UNIVERSITY OF NOTRE DAME
Department of Mathematics

Speaker: Curtis Holliman
University of Notre Dame

Tuesday, December 2, 2014
11:00 AM
258 Hurley Hall

Title: On the ill-posedness for CH and related equations

Abstract:

We shall consider the Cauchy problem for CH type equations and discuss the phenomenon of norm inflation in Sobolev spaces H^s for s less than the well-posedness critical index, which for these equations is equal to 3/2. This means that there exist solutions which are initially arbitrarily small and eventually arbitrarily large with respect to the H^s norm, in an arbitrarily short time. When there is norm inflation, then we have ill-posedness since the data-to-solution map is not continuous.