



Speaker: Walter Craig
McMaster University

Wednesday, April 11, 2018

4:00 PM

129 Hayes-Healy Hall

Title: On the size of the Navier -- Stokes singular set

Abstract:

The question of regularity of solutions of the Navier - Stokes system of fluid dynamics is, to say the least, a focus of much interest. The result of partial regularity provides an upper bound on the size of the singular set of (suitable) weak solutions. My talk will describe this famous problem, and will give a description of a complementary lower bounds, both for the the singular set and the energy (L^2) concentration set, in case that they are nonempty. These bounds are microlocal in nature, and are based on a novel estimate for weak solutions of the Navier - Stokes equations. Part of the result is joint work with A. Biryuk and M. Arnold. This talk is aimed at a general audience.