

SEMINAR

CAPDE de EDPs

Primera sesión 16:00 hrs.

Expositor

Matthew Gursky

Notre Dame University

Title

The singular Yamabe problem and a fully nonlinear generalization

Abstract: I will begin with an overview of the work of Loewner-Nirenberg on constructing complete conformal metrics of constant negative scalar curvature on domains in Euclidean space, and its extension to Riemannian manifolds with boundary. I will then describe some fully nonlinear generalizations. Finally, I will discuss a certain geometric invariant of solutions, called the renormalized volume, and some recent work with Robin Graham on computing closed formulas for these invariants in dimension four.

Segunda sesión 17:00 hrs.

Expositor

Manuel del Pino

Universidad de Chile and University of Bath

Title

Vortex desingularization for the 2D Euler equations

Abstract: We present a construction of solutions for the 2D Euler equation with highly concentrated vorticity around a finite number of points, which gives a precise asymptotic expansion of the vorticity and velocity. We do this by exploiting a connection with the Liouville equation. This is joint work with J. Dávila, M. Musso and J. Wei

Martes 17 de julio a las 16.00 y 17:00 hrs en la sala de John Von Neumann CMM, Beauchef 851, Torre Norte, Piso 7.