

CMM PDE Seminar

Speaker: Manuel Del Pino ([University of Bath](http://www.math.bath.ac.uk/~mdp/), Inglaterra)

Title: Dynamics of Concentrated Vorticities In 2d and 3d Euler Flows.

Abstract: A classical problem that traces back to Helmholtz and Kirchhoff is the understanding of the dynamics of solutions to the Euler equations of an inviscid incompressible fluid when the vorticity of the solution is initially concentrated near isolated points in 2d or vortex lines in 3d. We discuss some recent results on these solutions' existence and asymptotic behavior. We describe, with precise asymptotics, interacting vortices, and traveling helices, and extension of these results for the 2d generalized SQG. In particular we establish Helmholtz' conjecture on leapfrogging vortex ring interaction. This is research in collaboration with J. Dávila, A. Fernández, M. Musso, and J. Wei.

March 20, 2023 at 12 Santiago time

To be held in person at **Sala de seminarios DIM, 5th floor**, Beauchef 851, and online via zoom:
<https://reuna.zoom.us/j/86586773750?pwd=Y1NXbno0Ty9RaVVPMHY2RXpNREdjUT09>

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