

CMM PDE Seminar

Speaker: Claudia García (Universitat de Barcelona, Spain)

Title: Time periodic solutions for 3D quasi-geostrophic model.

Abstract: The aim of this talk is to study time periodic solutions for 3D inviscid quasigeostrophic model. We show the existence of non trivial simply-connected rotating patches by suitable perturbation of stationary solutions given by generic revolution shapes around the vertical axis. The construction of those special solutions are done through bifurcation theory. In general, the spectral problem is very delicate and strongly depends on the shape of the initial stationary solutions. More specifically, the spectral study can be related to an eigenvalue problem of a self-adjoint compact operator and we are able to implement the bifurcation only from the largest eigenvalues of such operator which are simple. At the end of the talk, we will speak also about the doubly-connected case. This is a joint work with T. Hmidi and J. Mateu.

Date: Tuesday, September 27, 2022 at 12 Santiago time

Modalidad: Presencial en sala de seminarios del CMM, piso 7, o bien online via zoom:

<https://uchile.zoom.us/j/97687856555?pwd=MkZYZWpEY0YwUTBHT3ROK29ob1JYdz09>

Para más información y videos de seminarios pasados, ver página:

<https://eventos.cmm.uchile.cl/pdeseminar/>

