

CMM PDE Seminar

Speaker: Andrés Zúñiga (Universidad de O'Higgins)

Title: A nonlocal isoperimetric problem: density perimeter.

Abstract: We will discuss a variant of a classical geometric minimization problem, known as the “nonlocal isoperimetric problem”, which arises from studies in Nuclear Physics by Gamow in the 1930's. By introducing a density in the perimeter functional, we obtain features that differ substantially from existing results in the framework of the classical problem without densities. In the regime of “small” non-local contribution, we completely characterize the minimizer, in the case the density is a monomial radial weight. This work is a collaboration with Stan Alama and Lia Bronsard (McMaster University) and Ihsan Topaloglu (Virginia Commonwealth University), as part of the project QUALITATIVE PROPERTIES OF WEIGHTED AND ANISOTROPIC VARIATIONAL PROBLEMS financed by ANID CHILE FONDECYT INICIACION N° 11201259.

Date: July 6, 2022 at 12 Santiago time

Modalidad: presencial en la sala de seminarios del DIM piso 5 o bien online vía zoom:

<https://uchile.zoom.us/j/97786834089?pwd=ZXFzU1dRbzFGVWJhM0NPL2lhTFA1QT09>

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

