
Barcelona Analysis Seminar

2021–2022

URL . <https://mat.uab.cat/web/seminarianalisi/>

Date. March 14, 2022

Time. 15:00 CET

Room. Room T2, Universitat de Barcelona

Online streaming (Zoom). <https://ub-edu.zoom.us/j/95538016558>

Periodic surfaces with constant nonlocal mean curvature

Albert Mas

Universitat Politècnica de Catalunya

In this talk I will present a joint work with Xavier Cabré (UPC) and Gyula Csató (UB) on the existence of periodic surfaces of revolution which have constant nonlocal mean curvature (CNMC). These surfaces may be considered a nonlocal (or fractional) analogue of the classical Delaunay cylinders. Our approach is based on variational methods and yields the existence of CNMC periodic surfaces for every given volume within a slab. In the talk I will also comment their symmetry properties (derived from rearrangement inequalities) as well as related stability results.