



UNIVERSITÀ  
DEGLI STUDI DI BARI  
ALDO MORO

DIPARTIMENTO  
DI MATEMATICA

## *Seminari di Matematica*

12 settembre 2025  
Ore 14:30 – Aula I  
Dipartimento di Matematica

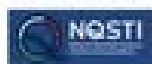
### **Delaunay-like compact equilibria in the liquid drop model**

**Prof.ssa Monica Musso**  
University of Bath (UK)

#### Abstract

The liquid drop model was originally introduced by Gamow in 1928 to model atomic nuclei. The model describes the competition between surface tension (which keeps the nuclei together) and Coulomb force (which corresponds to sets in the 3-dimensional Euclidean space which satisfies an equation that links the mean curvature of the boundary of the set to the Newtonian potential of the set. In this talk I will present the construction of toroidal surfaces, modelled on a family of Delaunay surfaces, with large volume which provide new equilibrium shapes for the liquid drop model. This work is in collaboration with M. del Pino and A. Zuniga

**Organizzato dalla Prof.ssa Silvia Cingolani e dalla Prof.ssa Giusi Vaira**



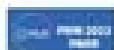
PNRR-MUR project FUR0000023 NQSTI - National  
Quantum Science and Technology Institute  
(CUP H3C22000470006)



Funded by the  
European Union  
NextGenerationEU



Ministero  
dell'Università  
e della Ricerca



PRIN PRIN 2022-P3022YTAJH "Linear and Nonlinear PDEs: New directions and Applications"  
Finanziato dall'Unione Europea-PIANO NAZIONALE DI RIPRESA E RESILIENZA (PNRR)-NextGenerationEU  
CUP H3J2023C008950001 Missione: 4 Componente 2 Investimento: 1.1

