

CMM PDE Seminar

Speaker: Bruno Vergara Biggio (Universitat de Barcelona, España)

Title: Boundary controllability of critically singular parabolic equations on convex domains.

Abstract: In this talk I will discuss the null boundary control of heat-like equations on convex domains, featuring a singular potential that diverges as the inverse square of the distance to the boundary. For this purpose, I will establish global Carleman estimates for the associated operators by combining intermediate inequalities with distinct weights that involve non-smooth powers of the boundary distance. These estimates are sharp in the sense that they capture both the natural boundary conditions and the H^1 -energy for the problem. Additionally, I will describe the role of the potential strength and the geometry of the domain in our results. This is based on joint work with A. Enciso (ICMAT) and A. Shao (QMUL).

March 27, 2023 at 12 Santiago time

To be held in person at **Sala de seminarios DIM, 5th floor**, Beauchef 851, and online via zoom:

El link de la reunión:

<https://us06web.zoom.us/j/81519152386?pwd=WFRvMlF3TTNDeVovSDQxWk5mNGg4QT09>

For further information, see our webpage: <https://eventos.cmm.uchile.cl/pdeseminar/>

