Seminario de Análisis y Aplicaciones

Viernes 5 de Mayo 2023,

11:30-12:30, Aula Naranja, ICMAT

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Higher-order Transversality and the Brascamp-Lieb inequalities

Resumen:
Transversality (i.e. the extent to which a collection of objects point in different directions) is a notion that arises ubiquitously in mathematics, and commonly one can discern an appropriate means of quantifying it using angles or determinants, however there are many situations where these elementary tools are insufficient. In such cases, Brascamp–Lieb inequalities offer a robust framework for defining an appropriately 'higher-order' notion of transversality. In my talk, I shall introduce Brascamp–Lieb inequalities, describe some of the settings in which they arise, and discuss the topic of nonlinear Brascamp–Lieb inequalities, a variant that generalises this framework to the manifold setting.