

Friday 11 February 2022 at 14:15

Online (Zoom)

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Functional inequalities and their role in Analysis, Probability, Geometry and (Mathematical) Physics

This colloquium talk will be devoted to the discussion of the important role played by functional inequalities in many areas of mathematics, giving examples and discussing the extremal functions and the best constants of some of the inequalities. The identification of the best constants and the extremal functions is strongly related to the consideration of symmetry and symmetry breaking issues. By dealing with some concrete examples it will be possible to describe the mathematical difficulties lying behind this topic and also the important progress that has been made recently in several interesting cases.

Maria J. Esteban is a senior researcher at CNRS (Centre National de Recherche Scientifique) in Paris. She is a specialist in the study of nonlinear partial differential equations and the calculus of variations, with a large investment in the applications of these fields to the study of various problems of quantum mechanics and quantum chemistry. Until recently she was the President of the International Council for Industrial and Applied Mathematics (ICIAM).

