Departamento de Matemática Aplicada



CONFERENCIAS MIÉRCOLES 14 DE JUNIO DE 2023

10:30 - 11:20	Riikka Korte (Aalto University)
11:20 - 12:00	Coffee break
12:00 - 12:50	Nages Shanmugalingam (University of Cincinnati)

Riikka Korte Aalto University

JN_p – a generalisation of BMO

In 1961, along with the well-known class of functions of bounded mean oscillation (BMO), John and Nirenberg also introduced the following variant of the BMO condition, which was subsequently used to define what is now called the John-Nirenberg space with exponent p > 1, denoted JN_p . Even though the space of BMO functions has been extensively studied, the John-Nirenberg spaces have attracted more attention only recently. The nature of these function spaces is not yet well understood. For example, we know already from the work of John and Nirenberg that JN_p space lies between L^p and weak L^p spaces, but the first known example of a JN_p -function that is not L^p -integrable was constructed only recently. The goal of this talk is to give an introduction to JN_p -functions and to what is now known about them.

Nages Shanmugalingam University of Cincinnati

An introduction to functions of bounded variation, beyond the interval

Many of us have seen the definition of functions of bounded variation on an interval in the real line, and they form the largest class of functions that satisfy an integration-by-parts formula, with signed Radon measure as its derivative. In this talk we will discuss different notions of functions of bounded variation in higher dimensional Euclidean setting and in metric measure spaces, and discuss their structural behavior.

Lugar: Aula Luis Rodríguez Marín del Departamento de Matemática Aplicada de la UNED (Aula 2.32). ETSI Industriales.