



Analysis Seminar

Title: Averaging operators in metric measure spaces

Speaker: Jesús M. Aldaz (Universidad Autónoma de Madrid and ICMAT)

Date: Tue 27th February 2024 at 3:00PM

Location: E0.32 (beside Pi restaurant)

Abstract: Let (X, d) be a separable metric space and let μ be a Borel measure on X which assigns finite measure to bounded Borel sets. Denote by $B(x, r)$ a ball centered at x of radius r . Given $g \in L^1(\mu)$, the averaging operators $A_{r,\mu}$ acting on g are defined as follows: fix $r > 0$ and set

$$A_{r,\mu}g(x) := \frac{1}{\mu(B(x, r))} \int_{B(x, r)} g(y) d\mu(y). \quad (1)$$

We will discuss when $A_{r,\mu}$ is a bounded operator on $L^1(\mu)$.

<https://ucd-ie.zoom.us/j/69080408321>