



Analysis Seminar

Title: Measure representation of functionals on Lipschitz spaces

Speaker: Eva Pernecká, (Czech Technical University, Prague)

Date: Tue 21st November 2023 at 3:00PM

Location: E0.32 (beside Pi restaurant)

Abstract: From the work of K. de Leeuw from 1962 it follows that the dual of the space of Lipschitz functions can be identified with a quotient of a space of Radon measures. Thus, every continuous functional on the space of Lipschitz functions admits a representation by a (non-unique) measure of the same norm.

In this talk, we will focus on functionals that belong to a natural predual of the space of Lipschitz functions – the Lipschitz-free space. We will present some recent results on the existence of “nice” representing measures for these functionals, using the optimal transport theory. Finally, we will show an application of such measure representation to the problem of identifying the extreme points in Lipschitz-free spaces.

The talk will be based on ongoing joint work with Ramón J. Aliaga (Universitat Politècnica de València) and Richard J. Smith (University College Dublin).

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