



Barcelona Analysis Seminar

2021 - 2022

URL (provisional). https://sites.google.com/view/seminari-analisi-barcelona/2021-2022 **Date.** November 29, 2021 Time. 15:00 CET Room. CRM A1 (Universitat Autònoma de Barcelona) Online streaming (Microsoft Teams). Click here to join.

Carleson measure estimates, Uniform rectifiability and Varopoulos extensions

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Carleson measures are measures that behave, in a certain sense, like their dimension is lower than the dimension of the underlying space. Over the past decades, numerous authors have shown that these types of measures (particularly Carleson measure estimates for solutions to elliptic PDE) are deeply intertwined with e.g. boundary geometry, boundedness of singular integral operators and absolute continuity properties of harmonic measure. In this talk, we discuss Carleson measure estimates particularly in the context of domains with uniformly rectifiable boundaries. We consider L^{∞} and BMO type Carleson measure estimates and how they are related to quantitative A_{∞} type absolute continuity properties of harmonic measure. We also discuss the construction of so-called Varopoulos extensions that satisfy L^1 type Carleson measure estimates instead of the usual L^2 type estimates. This is a joint work with Steve Hofmann.