

The Oliver Club

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Singular Integral Operators and Boundary Value Problems Under Sharp Geometric Measure Theoretic Assumptions

It has long been recognized that there are subtle connections between the boundedness of singular integral operators (SIO) and the geometric measure-theoretic properties of sets.

The aim of this talk is to explore the role that SIO may play in the treatment of boundary value problems under sharp geometric measure theoretic assumptions on the underlying domain. In particular, I will describe some recent work which forges new links between the analysis of SIO on uniformly rectifiable surfaces and problems in PDE, most notably boundary problems for the Laplace operator and other second order elliptic operators, including systems (such as Lamé, Stokes and Maxwell).



Marius Mitrea

University of Missouri, Columbia

Refreshments will be served at 3:55 PM in the Mathematics Department lounge (532 Malott Hall).

**Thursday, November 8, 2007
at 4:25 PM in 406 Malott Hall**