

The Trivial Notions Seminar
Proudly Announces

Calderon-Zygmund decomposition and
Harnack inequality

A talk by
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Abstract

The Calderon-Zygmund decomposition is an important tool in harmonic analysis and PDEs. The decomposition states that, given an integrable function on a cube, we can decompose the cube into two disjoint sets so that the given integrable function is small on one set, while the another set is a countable union of subcubes whose interiors are mutually disjoint and the given integrable function is large (But the average of the function over each subcube is bounded). As an application, we prove the Nash-Nirenberg inequality and, Harnack inequality for uniformly elliptic partial differential equation in divergence form. In particular, it implies the usual Harnack inequality for harmonic functions.

Thursday October 14th, at 3:00 pm
Science Center 507