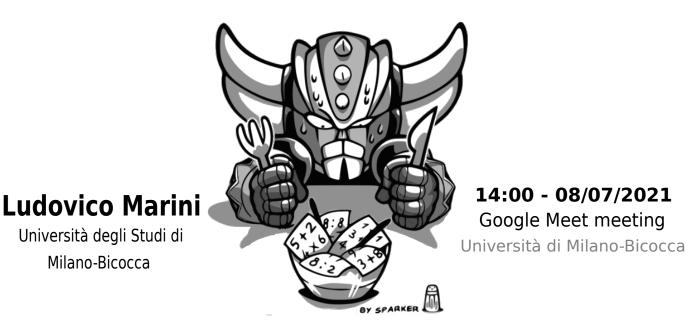
Insalate di Matematica presents

The Calderón-Zygmund inequality on Riemannian manifolds



Abstract

Milano-Bicocca

The L^p -Calderón-Zygmund inequality (CZ(p)) is a global second order regularity estimate for the solution of the Poisson equation. While CZ(p) always holds on \mathbb{R}^n , in a Riemannian setting some geometric assumptions are needed. In this talk, we will present some existence results, show the relation of CZ(p)to other regularity estimates and discuss its role in proving the equivalence of different notions of Sobolev spaces. Finally, we will sketch how to use singular metric spaces in order to produce some new smooth counterexamples.



Keywords:

Global regularity estimates · Sobolev spaces on manifolds · Singular metric spaces · Positive sectional curvature