

---

**Barcelona Analysis Seminar**      **2022–2023**

---

**URL.** <https://mat.uab.cat/web/seminarianalisi/>

**Date.** April 27, 2023

**Time.** 16:15 CET

**Room.** T2 (Universitat de Barcelona)

**Online streaming (Zoom).** [Click here to join.](#)

---

## **Nonlinear potential theoretic methods in nonuniformly elliptic problems.**

Giuseppe Mingione

Università di Parma

Nonuniformly elliptic equations are a classical topic in regularity theory. Here I will present a few new results and techniques via nonlinear potentials leading to a unified approach to Lipschitz continuity of solutions working both in the uniformly and in the nonuniformly elliptic case. In fact, the new approach allows in a sense to reduce nonuniformly elliptic problems to uniformly elliptic ones via renormalized Caccioppoli inequalities in the setting of the Bernstein method, and a suitable control of the constants along the iterations.

From recent, joint work with Lisa Beck (Augsburg) and Cristiana De Filippis (Parma).