
Barcelona Analysis Seminar **2022–2023**

URL. <https://mat.uab.cat/web/seminarianalisi/>**Date.** February 16, 2023**Time.** 15:00 CET**Room.** C3b-158 (Universitat Autònoma de Barcelona)**Online streaming.** [Click here to join.](#)

Nontangential maximal function bounds and boundary value problems for singular Schrödinger equations

Andrew Morris

University of Birmingham

We will first give a brief overview of the first-order approach to boundary value problems, which factorises second-order divergence-form equations into Cauchy-Riemann systems. The advantage is that the holomorphic functional calculus for such systems can provide semigroup solution operators in tremendous generality, extending classical harmonic measure and layer potential representations. We will then show how recent developments allow for the deduction of nontangential maximal function bounds from the associated quadratic estimates for Schrödinger equations with potentials in reverse Hölder spaces. This is joint work with Andrew Turner.