
Barcelona Analysis Seminar **2022–2023**

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

Date. February 23, 2023

Time. 15:00 CET

Room. T2 (Universitat de Barcelona)

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

Singularities of Harmonic maps

Daniele Valtorta

Università degli Studi di Milano-Bicocca

We discuss some structural results on the singular set of minimizing harmonic maps.

In particular, we will show that the singular set of a minimizing harmonic map u between two Riemannian manifolds M and N is rectifiable with codimension 3 in the domain, with uniform volume bounds depending only on its energy.

This result is based on a refined analysis of the monotonicity formula for harmonic maps and a Reifenberg-type theorem for the singular set. The technique used to prove this result is very flexible in nature, and can be adapted to different problems in GMT.

References for this result can be found on arXiv at [arXiv:1504.02043](#), [arXiv:1611.03008](#), [arXiv:1612.08052](#).

This talk was funded by the European Research Council (ERC) under the Grant Agreement No 801867.