

# Marco Badran

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## General informations

- work address: ETH Zürich, Rämistrasse 101, 8006 Zürich, HG FO 28.7
- email: marco.badran@math.ethz.ch
- research interest: Geometric analysis, minimal surfaces (local and nonlocal), harmonic maps (classical and fractional).
- website: <https://marco-badran.github.io>

## Positions

- Sep. 2023. Postdoctoral position at ETH Zürich with Prof. Joaquim Serra.

## Education

- 2019 – 2023  
Ph.D. in Mathematics at University of Bath, UK. Supervisor: Prof. Manuel del Pino.  
Thesis: *Concentrating solutions in the magnetic Ginzburg–Landau model*. Defended on 28th April 2023.
- 2017 – 2019  
Master in Mathematics at Università degli Studi Milano, IT. Supervisor: Prof. Bernhard Ruf.  
Thesis: *The Allen–Cahn equation: a conjecture by De Giorgi*.
- 2014 – 2017  
Bachelor in Mathematics at Università degli Studi Milano, IT.

## Preprints and articles

- (1) with M. del Pino: *Entire solutions to 4-dimensional Ginzburg–Landau equations and codimension 2 minimal submanifolds*. (Adv. Math.)
- (2) with M. del Pino: *Solutions of the Ginzburg–Landau equations concentrating on codimension-2 minimal submanifolds*. Preprint (J. London Math. Soc)

## Invited speaker - seminars

- Dec. 20, 2022 – Analysis seminar – UniMi, Milano
- Jan. 11, 2023 – Geometry seminar – UCL, London
- Jan. 20, 2023 – Analysis seminar – UAM/ICMAT, Madrid

- Feb. 16, 2023 – Analysis seminar – University of Bath, Bath
- Oct. 6, 2023 – Young researchers in PDEs – UAM/ICMAT Madrid
- Feb. 7, 2024 – Analysis & PDE seminar – NUS Singapore

### Visiting periods

- May 31 - Jun. 16, 2023 at ETH Zürich.
- Feb. 2 - Feb. 12, 2024 at NUS Singapore

### Attended conferences/workshops

- Jul. 2019. XI Workshop in Nonlinear Differential Equations – Varese, Italy.
- Dec. 2022. Workshop on Geometric PDEs – Warwick, UK.
- Apr. 2023. British Mathematical Colloquium – Bath, UK.
- Jun. 2023. Regularity Theory for Free Boundary and Geometric Variational Problems III – Levico Terme, Italy.
- Sep. 2023. Conference in honour of Luigi Ambrosio's 60th birthday – ETH Zürich
- Sep. 2023. Young researchers in PDEs – UAM/ICMAT Madrid
- Jan. 2024. New Trends in Nonlinear PDEs, Physics and Geometry – IMAG Granada
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### Teaching

- 2019 – 2023. Graduate Teaching Assistant at University of Bath.
- Spring 2024. Organiser for Analysis IV, ETH Zürich.

### Referee for

- Advances in Differential Equations.

### Languages

- Italian (native)
- English (fluent)
- Spanish (good)