

# MARCO BADRAN

Postdoc at ETH Zürich

[email](#) | [website](#)

## EMPLOYMENT

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### Postdoc at ETH Zürich

2023 – ongoing

Mentor: Prof. Joaquim Serra.

## EDUCATION

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### Ph.D. in Mathematics

University of Bath, 2019 – 2023

Thesis Title: *Concentrating solutions in the magnetic Ginzburg–Landau model.*

Supervisor: Prof. Manuel del Pino.

### Master in Mathematics

Università statale di Milano, 2017 – 2019

Thesis Title: *The Allen–Cahn equation: a conjecture by De Giorgi.*

Supervisor: Prof. Bernhard Ruf.

### Bachelor in Mathematics

Università statale di Milano, 2014 – 2017

## PREPRINTS AND PUBLICATIONS

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- *Harmonic maps to the circle with higher dimensional singular set.* **arXiv**
- *Solutions of the Ginzburg–Landau equations concentrating on codimension-2 minimal submanifolds.* (with M. del Pino.) **J. London Math. Soc.**
- *Entire solutions to 4-dimensional Ginzburg–Landau equations and codimension 2 minimal submanifolds.* (with M. del Pino.) **Adv. Math.**

## INVITED SPEAKER - SEMINARS

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- Analysis seminar, UniMi Milano (12.22)
- Geometry seminar, UCL London (01.23)
- Analysis seminar, UAM/ICMAT Madrid (01.23)
- Analysis seminar, University of Bath (02.23)

- Young researchers in PDEs, UAM/ICMAT Madrid (10.23)
- Analysis & PDE seminar, NUS Singapore (02.24)
- Analysis Seminar, ETH Zürich (02.25)
- Analysis Seminar, SNS Pisa (03.25)

## TEACHING

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- Graduate Teaching Assistant at University of Bath (several courses, 2019 – 2023)
- Organiser for *Analysis IV*, D-MATH ETHZ. (Spring 2024)
- Lecturer for *Nonlinear Analysis and Perturbation Methods*, D-MATH ETHZ. (Fall 2024)
- Organiser for *Analysis I*, D-INFK ETHZ (Spring 2025)
- Organiser for *Partial Differential Equations*, D-MATH ETHZ (Spring 2025)

## OTHER ACTIVITIES

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**Referee for:** Adv. Differential Equations, Ars Inven. Analytica, Proc. London Math. Soc., Discrete Contin. Dyn. Sys.

### **Supervision:**

- Matteo Gatti (Bachelor thesis – ETH Zürich, 2025)
- Lennard Trautmann (Semester paper – ETH Zürich, 2025)
- Luana Jost (Semester paper – ETH Zürich, 2025)