

Edoardo Giovanni Tolotti

POSTDOCTORAL RESEARCHER

Università di Pavia

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Education and academic positions

Mathematics Cluster of Excellence

Münster, Germany

2025 - 2028

POSTDOCTORAL RESEARCHER

- Mentor: Prof. Caterina Zeppieri

Università di Pavia

Pavia, Italy

2022 - 2025

PH.D. IN MATHEMATICS

- Advisor: Prof. Maria Giovanna Mora
- Thesis: Variational problems in materials science: thin structures and defect patterns.

Università di Pavia

Pavia, Italy

2020 - 2022

MASTER DEGREE IN MATHEMATICS

- Advisor: Prof. Maria Giovanna Mora
- Thesis: On a strain gradient plasticity model accounting for the Burgers vector and plastic spin
- Grade: 110L/110

Università di Pavia

Pavia, Italy

2017 - 2020

BACHELOR DEGREE IN MATHEMATICS

- Advisor: Prof. Stefano Gualandi
- Thesis: Algoritmi per il trasporto ottimo semidiscreto e stampa 3D
- Grade: 110L/110

Publications

ARTICLES

E.G. Tolotti: Stability of the Von Kármán regime for thin plates under Neumann boundary conditions. *ESAIM: Control, Optimisation and Calculus of Variations* **31**,61(2025). <https://doi.org/10.1051/cocv/2025050>.

E.G. Tolotti: On the hierarchy of plate models for a singularly perturbed multi-well nonlinear elastic energy. *Journal of Nonlinear Science* **35**,77(2025). <https://doi.org/10.1007/s00332-025-10174-3>

PREPRINTS

M.G. Mora, L. Rondi, L. Scardia, E.G. Tolotti: Nonlocal anisotropic Riesz interactions with a physical confinement, (2025). arXiv:2507.07710 [math.AP].

E. Maggiorelli, F. Riva, E.G. Tolotti: A free boundary approach to the quasistatic evolution of debonding models, (2025). arXiv:2503.17023 [math.AP].

Awards, Fellowships, & Grants

2024 **Student Paper Competition Finalist**, The 14th AIMS conference, Abu Dhabi.

2020 - 2022 **Merit scholarship**, Università di Pavia

€ 12,000

Visiting

2025 **TU Wien**, visiting prof. Elisa Davoli for three weeks in December.

2025 **TU Wien**, visiting prof. Elisa Davoli for one week in January.

2024 **Heriot-Watt University**, visiting prof. Lucia Scardia from September to December.

Talks and posters

Seminar on Calculus of Variations, Wien (AT), December 15, 2025, **talk with title:** *A free boundary approach to the quasistatic evolution of debonding models.*

Mathematical Analysis and Applications, Como (IT), June 09-13, 2025, **poster presentation:** *Explicit minimizers of the confined anisotropic Riesz potential.*

Workshop on Singularities in Discrete Systems, Oberwolfach (GE), May 04-09, 2025, **contributed short talk:** *Explicit minimizers of the confined anisotropic Riesz potential.*

XXXIV Convegno Nazionale di Calcolo delle Variazioni, Riccione (IT), February 10-14, 2025, **contributed talk:** *Stability of the Von Kármán regime for thin plates under Neumann boundary conditions.*

The 14th AIMS Conference on Dynamical Systems and Differential Equations, Abu Dhabi (UAE), December 16-20, 2024, **invited speaker:** *Stability of the Von Kármán regime for thin plates under Neumann boundary conditions.*

Heriot-Watt Analysis Seminar, Edinburgh (UK), October 2, 2024, **invited speaker:** *Stability of the Von Kármán regime for thin plates under Neumann boundary conditions.*

Italian-Japanese Workshop on Variational Perspectives for PDEs, Pavia (IT), September 9-13, 2024, **poster presentation:** *Stability of the Von Kármán regime for thin plates under Neumann boundary conditions.*

Diffuse Interface Methods in Continuum Mechanics: Analysis, Singular Limits, and Algoritms, Cetraro (IT), July 8-12, 2024, **poster presentation:** *Stability of the Von Kármán regime for thin plates under Neumann boundary conditions.*

Lions-Magenes Days 2024, Pavia (IT), May 21-22, 2024, **poster presentation:** *On the hierarchy of plate models for a singularly perturbed multi-well nonlinear elastic energy.*

Variational and Geometric Structures for Evolution, Levico Terme (IT), October 8-13, 2023, **contributed talk:** *On the hierarchy of plate models for a singularly perturbed multi-well nonlinear elastic energy.*

Hausdorff School Analysis of PDEs: Variational and Geometric perspectives, Bonn (GE), July 10-14, 2023, **poster presentation:** *On the hierarchy of plate models for a singularly perturbed multi-well nonlinear elastic energy.*

Teaching Experience

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|-------------|---------------------------------------------------------------------------------|---------------------|
| Spring 2024 | Ingegneria elettronica e informatica - Analisi matematica 2, Teaching Assistant | Università di Pavia |
| Summer 2023 | Finance - Real Analysis, Precourse | Università di Pavia |
| Spring 2023 | Bioingegneria - Analisi matematica 2, Teaching Assistant | Università di Pavia |
| Spring 2023 | Ingegneria elettronica e informatica - Analisi matematica 2, Teaching Assistant | Università di Pavia |

Miscellanea

OTHER ACTIVITIES

- Editor of the Oberwolfach report for Workshop 2519: Singularities in Discrete Systems.

LANGUAGES

- Italian: Mother tongue
- English: C1 level (self-evaluated)
- German: A2 level (self-evaluated)

PROGRAMMING SKILLS

- Python3
- MATLAB
- LATEX