

Current Position

- *Dipartimento di Scienze Fisiche, Informatiche e Matematiche, Università degli Studi di Modena e Reggio Emilia*, Modena, Italy
Associate professor (MATH-03/A Analisi matematica) from October 1st 2022
- Abilitazione scientifica nazionale alla funzione di Professore Associato, settore concorsuale 01/A3 - Analisi Matematica, Probabilità e Statistica Matematica (from April 3rd 2018 to April 3rd 2030)

Positions held

- *Dipartimento di Matematica, Università degli Studi di Milano*, Milano, Italy
Postdoctoral fellow (Assegno di ricerca Post-doc di tipo A) from August 1st 2012 to July 31st 2016
 - 2-year post-doc position, with a possibility of a renewal for 2 years (renewal approved in July 2014)
 - Supervisor: Prof. Bernhard Ruf
 - Area of study: Nonlinear differential equations
- *Departement Mathematik und Informatik, Universität Basel*, Basel, Switzerland
Postdoctoral fellow from August 1st 2016 to November 30th 2016
 - 1-year post-doc position in the SNSF Professorship grant *Non-linear and non-local differential equations in functional and geometric analysis* of Luca Martinazzi
- *Dipartimento di Matematica, Università degli Studi di Milano*, Milano, Italy
Research fellow (Ricercatore a tempo determinato di tipo A, MAT/05) from December 1st 2016 to September 30th 2019
- *Dipartimento di Scienze Fisiche, Informatiche e Matematiche, Università degli Studi di Modena e Reggio Emilia*, Modena, Italy
Assistant professor (Ricercatore a tempo determinato di tipo B, MAT/05) from October 1st 2019 to September 30th 2022

Education

- *Università degli Studi di Modena e Reggio Emilia*, Modena, Italy
B.Sc. in Mathematics, December 14th 2006
 - Advisor: Prof. Massimo Villarini
 - Thesis title: Misura di Hausdorff e Geometria degli Insiemi Frattali
 - Final grade: 110/110 cum laudeM.Sc. in Mathematics, October 28th 2008
 - Advisor: Prof. Massimo Villarini
 - Thesis title: Metodi Variazionali e Geometrici per lo Studio dei Sistemi Hamiltoniani
 - Final grade: 110/110 cum laude
- *Università degli Studi di Milano*, Milano, Italy
Ph.D. in Mathematics, February 20th 2012
 - Scholarship holder (Borsa di Dottorato Ministeriale) from January 1st 2009 to December 31st 2011
 - Advisor: Prof. Bernhard Ruf
 - Thesis title: Exponential type inequalities in \mathbb{R}^n and applications to elliptic and biharmonic equations

Research visits

- *Courant Institute of Mathematical Sciences, New York University*, New York, US
Visitor, from September 2011 to November 2011 (3 months)
 - Supervisor: Prof. Nader Masmoudi
- *Departamento de Matemática, Universidade Federal da Paraíba*, João Pessoa, Brazil
Bolsista de Pós-doutorado Júnior, from September 2014 to December 2014 (3 months)
 - Bolsa de Pós-doutorado Júnior vinculada ao Projeto Pesquisador Visitante Especial approved by CNPq for the A.Y. 2014/2015
 - Supervisor: Prof. João Marcos do Ó
- *Departamento de Matemática, Universidade Federal da Paraíba*, João Pessoa, Brazil
Bolsista de Pós-doutorado Júnior, from February 2015 to May 2015 (3 months)
 - Bolsa de Pós-doutorado Júnior vinculada ao Projeto Pesquisador Visitante Especial approved by CNPq for the A.Y. 2014/2015
 - Supervisor: Prof. João Marcos do Ó
- *Courant Institute of Mathematical Sciences, New York University*, New York, US
INdAM fellowship, from January 2016 to April 2016 (3 months)
 - Borse di studio per l'estero dell'Istituto Nazionale di Alta Matematica “Francesco Severi” for the A.Y. 2015/2016
 - Supervisor: Prof. Nader Masmoudi
- *Division of Mathematical Science of the Department of Systems Innovation, Osaka University*, Japan
Visiting professor, from January 2017 to February 2017 (1 month)
- *Division of Science, NYU Abu Dhabi*, United Arab Emirates
Visitor, April/May 2019 (2 weeks)

Teaching

Teaching activities

- *Università degli Studi di Modena e Reggio Emilia*, Modena, Italy

The updated list is available at the following link

<https://unimore.unifind.cineca.it/get/person/109886>

Previous teaching assistant activities

- *Politecnico di Milano*, Milano, Italy
 - A.Y. 2009/2010 *Analisi Matematica 1* (40 hours) - Engineering School
 - A.Y. 2009/2010 *Equazioni Differenziali* (16 hours) - Engineering School
 - A.Y. 2009/2010 *Analisi Matematica II* (48 hours) - Engineering School
 - A.Y. 2010/2011 *Analisi Matematica II* (48 hours) - Engineering School
 - A.Y. 2010/2011 *Analisi Matematica 2* (30 hours) - Engineering School
 - A.Y. 2011/2012 *Equazioni Differenziali* (20 hours) - Engineering School
 - A.Y. 2011/2012 *Analisi e Geometria 2* (48 hours) - Engineering School
 - A.Y. 2013/2014 *Equazioni Differenziali* (40 hours) - Engineering School
 - A.Y. 2013/2014 *Equazioni Differenziali* (40 hours) - Engineering School
 - A.Y. 2015/2016 *Equazioni Differenziali Ordinarie* (40 hours) - Engineering School
- *Università degli Studi dell'Insubria*, Varese, Italy
 - A.Y. 2011/2012 *Analisi Matematica B* (10 hours) - Engineering School
 - A.Y. 2012/2013 *Analisi Matematica B* (16 hours) - Engineering School
 - A.Y. 2013/2014 *Analisi Matematica A* (32 hours) - Engineering School
 - A.Y. 2013/2014 *Analisi Matematica B* (16 hours) - Engineering School
 - A.Y. 2014/2015 *Analisi Matematica A* (32 hours) - Engineering School
- *Universität Basel*, Basel, Switzerland
 - A.Y. 2016/2017 *Variational Methods for Elliptic PDEs* (20 hours) - Departement Mathematik und Informatik
- *Università degli Studi di Milano*, Milano, Italy
 - A.Y. 2016/2017 *Analisi Matematica 2* (30 hours) - Department of Physics
 - A.Y. 2016/2017 *Analisi Matematica 4* (22 hours) - Department of Mathematics
 - A.Y. 2017/2018 *Analisi Matematica 3* (44 hours) - Department of Mathematics
 - A.Y. 2018/2019 *Analisi Matematica 3* (20 hours) - Department of Physics
 - A.Y. 2018/2019 *Analisi Matematica 3* (20 hours) - Department of Physics

Research

Research interests

Nonlinear Analysis, Nonlinear Partial Differential Equations, Calculus of Variations, Trudinger-Moser and Adams-type inequalities, Hamiltonian systems.

Publications

The updated list of publications is available at the following link

<https://unimore.unifind.cineca.it/get/person/109886>

Talks

- *Invited talks in Analysis seminars*

- February 5th 2009 Università degli Studi di Modena e Reggio Emilia
- June 3rd 2009 *Seminari di Analisi Nonlineare*, Università degli Studi di Milano
- March 2nd 2011 Università degli Studi di Modena e Reggio Emilia
- October 13th 2011 *Analysis Seminar*, Courant Institute of Mathematical Sciences
- November 15th 2012 *Seminari di Analisi Nonlineare*, Università degli Studi di Milano
- November 22nd 2012 *Seminari permanenti di Analisi Matematica*, Università degli Studi di Parma
- December 10th 2014 Universidade Federal da Paraíba
- March 31st 2015 Pontificia Universidade Católica do Rio de Janeiro
- April 14th 2015 Universidade de Brasília
- December 9th 2015 *Analysis Seminar*, Universität Basel
- February 4th 2016 *Analysis Seminar*, Courant Institute of Mathematical Sciences
- May 20th 2016 *Analysis Seminar*, Politecnico di Milano
- December 13rd 2016 *Seminario di Equazioni Differenziali*, Università di Roma Tor Vergata
- February 3rd 2017 Kanazawa University
- February 6th/7th 2017 Osaka University
- February 9th 2017 Ehime University
- March 27th 2017 *Seminario di Analisi Matematica*, Università degli Studi di Roma La Sapienza
- January 30th 2019 *Seminario di Analisi Matematica*, Università di Roma Tre
- May 2nd 2019 *Analysis Seminar*, New York University Abu Dhabi
- February 5th 2020 *Incontri di Analisi Matematica*, Università degli Studi di Roma La Sapienza
- October 15th 2020 *Seminario di Analisi Matematica*, Università degli Studi di Modena e Reggio Emilia
- April 7th 2022 *Seminari di Analisi Matematica Bruno Pini*, Università degli Studi di Bologna

- *Invited talks at conferences*

- July 10th 2014 *The 10th AIMS Conference on Dynamical Systems, Differential Equations and Applications*, Special Session *Functional Inequalities and Variational Problems*, Madrid, Spain
- April 19th 2015 *AMS Spring Western Sectional Meeting*, Special Session *Geometric Inequalities and Nonlinear Partial Differential Equations*, University of Nevada
- February 17th 2017 *Nonlinear Analysis and Related Topics*, Osaka City University
- May 22nd 2017 *International Conference on Elliptic and Parabolic Problems*, Minisymposium *PDEs in Geometry and Mathematical Physics*, Gaeta, Italy
- June 22nd 2017 *Emerging Issues in Non Linear Elliptic Equations: Singularities, Singular Perturbations and Non Local Problems*, Mathematical Research and Conference Center (Będlewo, Poland)

- September 4th 2017 *X Workshop on Nonlinear Differential Equations*, Universidade de Brasília
- February 23rd 2018 (Plenary speaker) *VII Workshop in Nonlinear PDE's and Geometric Analysis*, João Pessoa, Brazil
- April 2nd 2018 *Physical, Geometrical and Analytical Aspects of Mean Field Systems of Liouville Type*, BIRS Banff, Canada
- July 7th 2018 *The 12th AIMS Conference on Dynamical Systems, Differential Equations and Applications*, Special Session *Recent Trends in Nonlinear PDEs*, Taipei, Taiwan
- February 22nd 2019 *XI Summer Workshop in Mathematics – Analysis Session*, Universidade de Brasília
- March 24th 2019 *AMS Spring Central and Western Joint Sectional Meeting*, Special Session *New Trends on Variational Calculus and Non-Linear Partial Differential Equations*, University of Hawaii
- May 31st 2019 *Brescia-Trento Nonlinear Day*, Università degli Studi di Trento
- September 2nd 2022 *Variational Methods and Evolution Equations: II edition*, online workshop
- May 19th 2023 *Variational and PDE problems in Geometric Analysis, IV*, Università degli Studi di Bologna
- June 1st 2023 *The 13th AIMS Conference on Dynamical Systems, Differential Equations and Applications*, Special Session SS10 *Sharp inequalities and nonlinear differential equations*, Wilmington (NC), US
- June 1st 2023 *The 13th AIMS Conference on Dynamical Systems, Differential Equations and Applications*, Special Session SS71 *At the Edge of Ellipticity*, Wilmington (NC), US
- September 15th 2023 *XII Workshop on Nonlinear Differential Equations*, Universidade de Brasília
- November 18th and 19th 2023 (2 talks) *Non-compactness phenomena on critical problems and related topics*, Osaka Metropolitan University
- December 19th 2023 *Nonlinear Meeting in Milan 2023*, Politecnico di Milano
- May 9th 2024 *Italian Japanese Nonlinear Days –Three days workshop in Milan*, Università degli Studi di Milano
- June 9th 2024 *PDEs in Ancona*, Università Politecnica delle Marche
- June 14th 2024 *A Glimpse into PDEs*, Università degli Studi della Campania “Luigi Vanvitelli”
- July 25th 2024 *Second AMS-UMI International Joint Meeting*, Special Session B13 *Functional inequalities, shape optimization and elliptic PDEs*, Università degli Studi di Palermo
- December 18st 2024 *The 14th AIMS Conference on Dynamical Systems, Differential Equations and Applications*, Special Session SS96 *Evolutionary Equations Systems*, Abu Dhabi, United Arab Emirates
- March 11th 2026 *PDEs with Critical Nonlinearities and Non-Compactness Phenomena*, Osaka University
- *Contributed talks at conferences and schools*
 - August 25th 2009 Summer Courses in Mathematics SMI *Geometric Aspects in Nonlinear Analysis*, Cortona, Italy
 - August 12th 2010 Summer Courses in Mathematics SMI *Partial Differential Equations*, Cortona, Italy
 - January 23rd 2014 *School on Nonlinear Elliptic Problems*, Università di Milano-Bicocca
 - June 20th 2016 *Convegno Scientifico GNAMPA 2016*, Montecatini Terme, Italy

Posters

- May 30th/June 2nd 2011 Conference *Higher Order Equations in Geometry and Physics*, SISSA
- May 27th/June 1st 2013 *5th Women in Mathematics Summer School on Mathematical Theories towards Environmental Models*, The Abdus Salam ICTP
- June 17th/June 21st 2013 Conference *Recent Advances in Partial Differential Equations and Applications*, Università degli Studi di Milano
- November 26th 2013 Conference *Nonlinear Problems with Singular Data*, Accademia Nazionale dei Lincei
- September 16th 2015 *Riemann International School of Mathematics on Nonlinear Phenomena in Mathematics and Economics (A tribute to John Forbes Nash Jr.)*, Università degli Studi dell'Insubria (Varese, Italy)

Grants

- Coordinator of the research project *Equazioni differenziali nonlineari in casi limite e disuguaglianze ottimali* financially supported by GNAMPA (*Gruppo Nazionale per l'Analisi Matematica, la Probabilità e le loro Applicazioni*) for the year 2015
- *European Women in Mathematics* and *European Mathematical Society* funding for the organization of the 2016 EWM-EMS Summer School at the Institut Mittag-Leffler
- *Clay Mathematics Institute enhancement and partnership grant*, funding for the organization of the 2016 EWM-EMS Summer School *Geometric and Physical aspects of Trudinger-Moser type inequalities*, Institut Mittag-Leffler
- Grant funded by GNAMPA (*Gruppo Nazionale per l'Analisi Matematica, la Probabilità e le loro Applicazioni*) to participate in the 2016 EWM-EMS Summer School *Geometric and Physical aspects of Trudinger-Moser type inequalities*, June 27th/July 1st 2016, Institut Mittag-Leffler
- Grant funded by GNAMPA (*Gruppo Nazionale per l'Analisi Matematica, la Probabilità e le loro Applicazioni*) to participate in the *X Workshop on Nonlinear Differential Equations*, September 4th/8th 2017, Universidade de Brasília
- *Piano di Sostegno per la Ricerca* funded by Università degli Studi di Milano for the A.Y. 2017/2018
- FFABR (*Fondo per il Finanziamento delle Attività Base di Ricerca*) funded by MIUR (Ministero dell'Istruzione dell'Università e della Ricerca) for the year 2018
- *Piano di Sostegno per la Ricerca* funded by Università degli Studi di Milano for the A.Y. 2018/2019
- Coordinator of the research project *Nonlinear equations and sharp limiting inequalities* financially supported by GNAMPA (*Gruppo Nazionale per l'Analisi Matematica, la Probabilità e le loro Applicazioni*) for the year 2019
- Grant funded by GNAMPA (*Gruppo Nazionale per l'Analisi Matematica, la Probabilità e le loro Applicazioni*) to participate in the *Workshop Geometric and Analytical Aspects of Nonlinear Elliptic Equations and Related Evolution Problems*, May 10th/15th 2020, Casa Matemática Oaxaca (CMO), Oaxaca (cancelled due to Covid-19 pandemic)
- FAR Impulso funded by Università degli Studi di Modena e Reggio Emilia for the years 2020 and 2021
- Grant funded by GNAMPA (*Gruppo Nazionale per l'Analisi Matematica, la Probabilità e le loro Applicazioni*) to participate in the *XII Workshop on Nonlinear Differential Equations*, September 11th/15th 2023, Universidade de Brasília
- Grant funded by GNAMPA (*Gruppo Nazionale per l'Analisi Matematica, la Probabilità e le loro Applicazioni*) to partially support the 10-day scientific visit of Masato Hashizume (Osaka University)
- Mobility Actions B2 - FAR 2023 funded by Università degli Studi di Modena e Reggio Emilia to support the 1-week scientific visit of Vieri Benci (Università di Pisa)
- Mobility Actions B2 - FAR 2024 funded by Università degli Studi di Modena e Reggio Emilia to support the organization of the *XIII Workshop in Nonlinear Differential Equations* to be held in Modena in September 2025
- *European Women in Mathematics* funding for the organization of the 2026 EWM-EMS Summer School *Symmetry and Symmetry Breaking in Sweden*, July 20th/24th 2026, Institut Mittag-Leffler
- Grant funded by GNAMPA (*Gruppo Nazionale per l'Analisi Matematica, la Probabilità e le loro Applicazioni*) for the organization of the 2026 EWM-EMS Summer School *Symmetry and Symmetry Breaking in Sweden*, July 20th/24th 2026, Institut Mittag-Leffler
- *European Mathematical Society* funding for the organization of the 2026 EWM-EMS Summer School *Symmetry and Symmetry Breaking in Sweden*, July 20th/24th 2026, Institut Mittag-Leffler

Membership of research projects and groups

- Member of the national research project (PRIN 2009) *Metodi Variazionali e Topologici nello Studio di Fenomeni Nonlineari* financed by Ministero dell'Istruzione dell'Università e della Ricerca – Local Coordinator Prof. Bernhard Ruf (Università degli Studi di Milano), National Coordinator Prof. Vieri Benci (Università di Pisa)
- Member of the research project *PVE 407099/2013-1* financially supported by CNPq and Capes for the years 2014, 2015 and 2016 – Brazilian Coordinator Prof. João Marcos do Ó (Universidade Federal da Paraíba), Italian Coordinator Prof. Bernhard Ruf (Università degli Studi di Milano)
- Member of the research project *Casi limite per immersioni di tipo Sobolev: disuguaglianze ottimali e applicazioni* financially supported by GNAMPA (*Gruppo Nazionale per l'Analisi Matematica, la Probabilità e le loro Applicazioni*) for the year 2014 – Coordinator Prof. Cristina Tarsi (Università degli Studi di Milano)
- Member of the research project *Nonlinear problems and sharp limiting inequalities* financially supported by GNAMPA (*Gruppo Nazionale per l'Analisi Matematica, la Probabilità e le loro Applicazioni*) for the year 2016 – Coordinator Prof. Marta Calanchi (Università degli Studi di Milano)
- Member of the research project (*Piano di Sostegno per la Ricerca*) *Equazioni differenziali alle derivate parziali* funded by Università degli Studi di Milano for the A.Y. 2016/2017 – Coordinator Prof. Bernhard Ruf (Università degli Studi di Milano)
- Member of the research project *Nonlinear partial differential equation with nonlinearity of critical growth* financially supported by GNAMPA (*Gruppo Nazionale per l'Analisi Matematica, la Probabilità e le loro Applicazioni*) for the year 2017 – Coordinator Prof. Elide Terraneo (Università degli Studi di Milano)
- Member of the research project (*Piano di Sostegno per la Ricerca*) *Equazioni differenziali alle derivate parziali* funded by Università degli Studi di Milano for the A.Y. 2019/2020 – Coordinator Prof. Bernhard Ruf (Università degli Studi di Milano)
- Member of the research project (*Fondo di Ateneo per la Ricerca*) *Equazioni differenziali: problemi evolutivi, variazionali ed applicazioni* funded by Università degli Studi di Modena e Reggio Emilia for the year 2019
- Member of the research project *A tour on nonlinear world via variational methods* financially supported by GNAMPA (*Gruppo Nazionale per l'Analisi Matematica, la Probabilità e le loro Applicazioni*) for the year 2020 – Coordinator Prof. Cristina Tarsi (Università degli Studi di Milano)
- Member of the research project (*Fondo di Ateneo per la Ricerca*) *Partial Differential Equations and Calculus of Variations* funded by Università degli Studi di Modena e Reggio Emilia for the years 2020–2026
- Member of the research project *Interplay between parabolic and elliptic PDEs* financially supported by GNAMPA (*Gruppo Nazionale per l'Analisi Matematica, la Probabilità e le loro Applicazioni*) for the year 2023 – Coordinator Prof. Elide Terraneo (Università degli Studi di Milano)
- Member of the research project *New perspectives on Choquard equation through PDEs with local sources* financially supported by GNAMPA (*Gruppo Nazionale per l'Analisi Matematica, la Probabilità e le loro Applicazioni*) for the year 2024 – Coordinator Prof. Cristina Tarsi (Università degli Studi di Milano)
- Member of the research project *Existence and Symmetry Breaking via Nonsmooth Critical Point Theory* financially supported by GNAMPA (*Gruppo Nazionale per l'Analisi Matematica, la Probabilità e le loro Applicazioni*) for the year 2025 – Coordinator Prof. Francesca Colasuonno (Università degli Studi di Torino)
- Member of the research project *Structural degeneracy and criticality in (sub)elliptic PDEs* financially supported by GNAMPA (*Gruppo Nazionale per l'Analisi Matematica, la Probabilità e le loro Applicazioni*) for the year 2026 – Coordinator Federico Bernini (Università degli Studi di Milano Bicocca)

Organization activity

- Co-organizer of the 2016 EWM-EMS Summer School *Geometric and Physical aspects of Trudinger-Moser type inequalities*, Institut Mittag-Leffler, June 27th/July 1st 2016
- From 2017 to 2019, co-organizer of the weekly seminar *Seminari di Analisi Nonlineare*, Università degli Studi di Milano
- Co-organizer of the XI Brazilian-Italian Workshop on *Nonlinear Differential Equations*, Università degli Studi dell'Insubria (Varese), July 29th/August 2nd 2019
- Co-organizer of the Special Session PSS73 *Sharp inequalities and nonlinear differential equations* on the occasion of *The 13th AIMS Conference on Dynamical Systems, Differential Equations and Applications*, Atlanta from, June 5th/9th 2020
(cancelled due to Covid-19 pandemic)
- Co-organizer of the Special Session SS10 *Sharp inequalities and nonlinear differential equations* on the occasion of *The 13th AIMS Conference on Dynamical Systems, Differential Equations and Applications*, Wilmington from May 31st to June 4th 2023
- Co-organizer of the Special Session SS73 *Nonlinear elliptic and parabolic equations and related functional inequalities* on the occasion of *The 14th AIMS Conference on Dynamical Systems, Differential Equations and Applications*, Abu Dhabi from December 16th to December 20th 2024
- Co-organizer of the XIII Brazilian-Italian Workshop on *Nonlinear Differential Equations*, Università degli Studi di Modena e Reggio Emilia (Modena), September 1st/5th 2025
- Co-organizer of the 2026 EWM-EMS Summer School *Symmetry and Symmetry Breaking in Sweden*, Institut Mittag-Leffler, July 20th/24th 2026

Modena, March 23rd 2026