

Andrea Malchiodi: curriculum vitae

Research interests

Geometric Analysis, Partial Differential Equations, Variational Methods, Differential Geometry.

Education

S.I.S.S.A., Trieste, Italy. Ph.D. in Mathematical Analysis, October 2000. Thesis: Existence and multiplicity results for some problems in Riemannian Geometry, supervisor A. Ambrosetti. Note of distinction from the committee.

University of Milan, Italy. B.S. Physics, July 1996. Thesis: On the stability of spheres with respect to the variation of mean curvature, supervisor M. Rigoli. Grade 110/110 cum laude.

Career

Fulbright fellowship: academic year 2000-2001. Visiting Rutgers University, New Brunswick, NJ.

Institute for Advanced Study, Princeton, NJ, member: academic years 2001-2003.

Idoneità as *Professore associato* in mathematical analysis, University of Salerno, April 2003.

ETH, Zurich, Visitor, Fall Semester 2003.

S.I.S.S.A., Trieste, March 2004 - December 2004, associate (visiting) professor.

S.I.S.S.A., Trieste, December 2004 - September 2006, associate professor.

Idoneità as *Professore ordinario* in mathematical analysis, University of Milano Bicocca, January 2006.

S.I.S.S.A., Trieste, October 2006 - December 2014, Professor (on leave during 2013).

University of Warwick, January-December 2013, Professor.

Scuola Normale Superiore, Pisa, December 2014 - , Professor

Distinctions

Prize *Sunyer y Balaguer* 2005.

Prize *Carlo Miranda* 2005.

Caccioppoli Prize 2006.

ICM 2014, Sectional speaker.

Premio Amerio 2020.

Nachdiplom Lectures, FIM, ETH, Spring 2021.

Editorial activity

Calculus of Variations and Partial Differential Equations, Managing Editor, January 2007 - June 2021.

Communications in Contemporary Mathematics, Editor, January 2007 -

Analysis and Geometry in Metric Spaces, Editor, September 2012 -

Analysis in Theory and Applications, Editor, October 2013 -

Annali Scuola Normale Superiore, Classe di Scienze, January 2015 -

Publicacions Matemàtiques, January 2015 -

Progress in Nonlinear Differential Equations and Their Applications, Springer, 2018 -
 Rendiconti dell'Istituto di Matematica dell'Università di Trieste, editor, January 2009 - March 2011.
 Discrete and Continuous Dynamical Systems, January 2014 - February 2018
 Nonlinear Analysis, TMA, Editor, September 2011 - October 2017
 Journal of Dynamical and Control Systems, Editor, October 2012 - June 2019
 Revista Matematica Iberoamericana, Editor, January 2026 -

Service

October 2006 - November 2010: Director of graduate studies of the Sector of Mathematical Analysis at SISSA.
 November 2007 - November 2010: member of the governing board at SISSA.
 November 2010 - May 2012: head of the Sector of Functional Analysis at SISSA.
 May 2012 - December 2012: member of the Academic Senate at SISSA.
 October 2016 - May 2018 and December 2022 -: member of the Athenaeum's Council at Scuola Normale Superiore.
 November 2015 - October 2019: Member of the Scientific Committee of Indam.
 2021 - : Director of "Centro di Ricerca Matematica Ennio de Giorgi".

Funding

Progetto di Internazionalizzazione "Equazioni alle derivate parziali nello studio di problemi di analisi geometrica", November 2005 - October 2008. (Euros 17.000)
 Progetto GNAMPA "Equazioni di evoluzione geometriche", 2007, principal investigator. (Euros 8.000)
 Progetto FIRB "Analysis and Beyond", 2009-2013, principal investigator. (Euros 1.017.000)
 Progetto PRIN "Metodi variazionali e PDE non lineari", 2011-2013, principal investigator. (Euros 185.933)
 Progetto PRIN "Variational and perturbative aspects of nonlinear differential problems", 2013-2015, local coordinator.
 Project "Geometric Variational Problems", from Scuola Normale, 2015-2017.
 Progetto PRIN "Variational methods, with applications to problems in mathematical physics and geometry", 2016-2019, principal investigator (Euros 248.000)
 Project "Geometric problems with loss of compactness", from Scuola Normale, 2019-2022.
 Progetto PRIN "Variational and Analytical aspects of Geometric PDE", 2023-2026, principal investigator (Euros 261.000)

Organization of schools and workshops

Variational Problems in Nonlinear Analysis, Sissa, Trieste, April-May 2005
 Session "Geometric Analysis" at the joint UMI-SMF meeting, Turin, July 2006
 Partial Differential Equations in Geometry and Mathematical Physics, Cetraro (Cosenza), June 2007
 Focused trimester on Geometric flows and geometric operators, Centro de Giorgi, Pisa, May-July 2009
 Workshop "Loss of compactness in nonlinear problems", CIRM, Luminy, October 2009

Workshop "Differential and topological problems in modern theoretical physics", SISSA, Trieste, April 2010

Workshop "Metodi variazionali e perturbativi per equazioni differenziali nonlineari", Venice, January 2011

Workshop "Higher Order Equations in Geometry and Physics", SISSA, Trieste, May 2011.

Workshop "Sub-Riemannian Geometry and PDEs", Levico Terme, Trento, July 2012.

Workshop "A day in honor of Antonio Ambrosetti", Venice, July, 2012.

Workshop "A day in Analysis and Geometry", Univ. of Warwick, September 2013.

Member of Scient. Committee for the "International Workshop on Variational Problems and PDE's", Sao Paulo, Sept. 2013.

Member of Scient. Committee for "Recent developments of nonlinear PDEs", A.N.U., Canberra, Nov. 2013.

Member of Scient. Committee for the meeting "Geometric Analysis in Roscoff", Roscoff, June 2014.

Member of Scient. Committee for "Spin geometry and analysis on manifolds", CIRM, Luminy, Oct. 2014.

Thematic day on minimal surfaces in sub-Riemannian geometry, IHP, Paris, October 2014.

Workshop "Two-day meeting in honor of Antonio Ambrosetti", Venice, December 2014.

Conference in honour of F.Pacella, Cogne, June 2016.

France-Italy Meeting in Geometric Analysis, Centro De Giorgi, Pisa, February 2017.

Workshop and School in Nonlinear Analysis, Rome, June 2017.

Variational Methods in Analysis, Geometry and Physics, Pisa, February 2018.

A celebration day for the Journal *Calculus of Variations and PDEs*, Pisa, May 2018.

Recent trends in Geometric analysis, Pisa, June 2018.

CIME Summer School on Geometric Analysis, Cetraro, June 2018.

Variational problems, PDEs and applications, Pisa, January 2019.

Recent trends in Geometric analysis and applications, Centro de Giorgi, Pisa, November 2019.

Variational methods, with applications to problems in mathematical physics and geometry, Venice, November 2019.

Workshop on Variational problems, PDEs and applications, Pisa, January 2020

Workshop Geometric PDE and Applications to Problems in Conformal and CR Geometry, Hanzzhou (online), May 2021

Special Riemannian Metrics and Curvature Functionals, Pisa, June 2022

XXII Congresso UMI, Pisa, September 2023, member of the organizing committee.

Workshop: 50 years of Mountain Pass Theorem, Trieste, November 2023

Conformal and CR Geometry, Banff, December 2024.

Variational and Analytical aspects of Geometric PDE, Pisa, May 2025.

Topics in Geometric Analysis, Pisa, June 2025.

Morphogenesis and morphing: 200 years after Gauss, Pisa, October 2025.

Ph.D. Students

Cheikh Birahim Ndiaye (Ph.D. defended on Oct. 2007, Professor at Howard)
Mouhamed Moustapha Fall (Ph.D. defended on Oct. 2009, Humboldt Professor at Dakar)
Alessandro Selvitella (Ph.D. defended on Oct. 2010, Assistant Professor of Data Science and Applied Statistics at Fort Wayne)
Francesca De Marchis (Ph.D. defended on Oct. 2010, Associate Professor at Rome la Sapienza)
Andrea Mondino (Ph.D. defended on Sept. 2011, Professor at Oxford)
Serena Dipierro (Ph.D. defended on Oct. 2012, Professor at Perth)
Aleks Jevnikar (Ph.D. defended on Aug. 2015, Associate Professor at Udine)
Gabriele Mancini (Ph.D. defended on Aug. 2015, Tanure-track at Bari)
Luca Battaglia (Ph.D. defended on Aug. 2015, Tenure-track at Rome 3)
Matteo Rizzi (Ph.D. defended on Aug. 2016, Post-Doc at Giessen)
Dayana Pagliardini (Ph.D. defended on Dec. 2018, in co-supervision with M.Novaga, Teacher)
Sergio Cruz Blazquez (November 2017 - June 2021, in co-supervision with D.Ruiz, Assistant at Granada)
Claudio Afeltra (October 2017 - July 2023, post-doc at Trento)
Mattia Freguglia (December 2020 -)
Luciano Sciaraffia (December 2020 -)
Michele Caselli (November 2021 -)
Francesco Malizia (November 2022 -)

Undergraduate Students

Francesca De Marchis (SISSA, Master thesis defended in July 2007)
Andrea Mondino (SISSA, Master thesis defended in July 2008)
Alessandro Carlotto (Scuola Normale Superiore, Pisa, Master thesis defended in July 2010)
Aleks Jevnikar (SISSA, Master thesis defended in October 2011)
Andrew McLeod (Warwick, June 2013 - April 2014)
Stefano Giofrè (Università di Pisa, Master thesis defended in July 2016)
Gianmichele di Matteo (Università di Pisa, October 2016 - July 2017)
Roberto Albesiano (Scuola Galileiana, Padova, July 2017 - July 2018)
Claudio Afeltra (Scuola Normale Superiore, October 2017 - September 2018)
Giada Franz (Scuola Normale Superiore, October 2017 - July 2018)
Dario Rancati (Scuola Normale Superiore, October 2017 - July 2018)
Francesco Sala (Scuola Normale Superiore, October 2017 - September 2018)
Nicolò Cavalleri (Università di Pisa, March 2019 - September 2019)
Klevi Markaj (Università di Pisa, October 2020 -)
Giorgia Benassi (Scuola Normale Superiore, January 2022 - September 2022)
Salvatore Grezio (Università di Pisa, November 2022 - January 2-23)
Franco Grigoletto (January 2023 - September 2023)
Lorenzo Cortesi (October 2024 -)
Carmine Foggia (October 2024 -)

Postdocs mentoring

Fethi Mahmoudi (Oct. 2006 - July 2008, Assistant professor at Tunis)
Lorenzo Mazzieri (July 2009 - Oct. 2010, Associate Professor at Trento)
Giovanni Catino (Jan 2009 - Oct 2011, Associate Professor at Politecnico di Milano)
Vittorio Martino (Nov 2011 - Jan 2013, Ricercatore at Univ. of Bologna)
Norihisa Ikoma (Apr. 2013 - Dec. 2013, Accosiate Professor at Keio Univ.)
Raneri Mandel (November 2014 - June 2016)
Benjamin Sharp (October 2015 - July 2016)
Martin Mayer (May 2017 - October 2019)
Ruijun Wu (October 2018 - September 2020)
Aleks Jevnikar (February 2019 - January 2020)
William Borrelli (May 2019 - March 2-21)

Mattia Fogagnolo (October 2020 - September 2022)
Fritz Hiesmayr (November 2021 -)
Francesco Palmurella (November 2021 - June 2024)
Francesca Tripaldi (May 2023 - July 2024)
Lianjun Wang (February 2025 -)
Andrea Bisterzo (February 2025 -)
Giovanni Siclari (May 2025 -)

Pisa, July 2025