

CURRICULUM OF CARLO MANTEGAZZA

Carlo Mantegazza, born in Bollate (MI), Italy, August 1st 1970.
Full Professor of Mathematical Analysis from December 1st 2016
Department of Mathematics and Applications “R. Caccioppoli” & Scuola Superiore Meridionale
University of Napoli Federico II
Via Cintia, Monte S. Angelo, I-80126 Napoli, Italy

Office: +39(081)675751
Fax: +39(081)7662106
Email: c.mantegazza@sns.it
Homepage: <http://cvgmt.sns.it/HomePages/cm>

10th place at the Italian Mathematical Olympiad for High School students in 1988.

First place at the Italian Mathematical Olympiad in 1989.

Participation to the International Mathematical Olympiad in Braunschweig (DE) with the Italian team, summer 1989.

In 1988 and 1989 participation to the seminar of mathematics for high school students, held by the Scuola Normale Superiore in Cortona, Italy.

High School Degree in July 1989 with the result of 60/60.

First place ex-aequo at the selection for the Scuola Normale Superiore for the *Science Class*, 1989.

University Degree with the result 110/110 *cum laude* at the Math. Dept. of University of Pisa, Italy, discussing a thesis in mathematical analysis, “*Su Alcune Definizioni Deboli di Curvatura per Insiemi non Orientati*”, under the supervision of Prof. Luigi Ambrosio (advisor) and Prof. Giuseppe Buttazzo (co-advisor), both of University of Pisa, November 1993.

Degree of the Scuola Normale Superiore, December 1993.

Winner of a scholarship of the Italian National Institute for Higher Mathematics (INDAM), December 1993.

First place ex-aequo at the selection for PhD scholarships at the Scuola Normale Superiore, December 1993.

Honorable mention at the “Tricerri Prize” in 1995.

Winner of a permanent position of *Researcher in Mathematical Analysis* at the Scuola Normale Superiore in 1996 (till 2014).

Honorable mention at the “Iapichino Prize” in 1998.

Member of the SNS team achieving the second place at the *MathQuiz 2000*, mathematical problem contest organized by the CRM, Universidad Autonoma de Barcelona (ES), 2000.

Associate Professor Italian habilitation in 2002.

Awarded with “Bartolozzi Prize” in 2003.

Awarded with “Ferran Sunyer i Balaguer Prize” in 2010.

Full Professor Italian habilitation in 2013.

Perfezionamento – PhD in Mathematics at the Scuola Normale Superiore, with the result 70/70 *cum laude*, discussing a thesis in mathematical analysis, “*Smooth Geometric Evolutions of Hypersurfaces and Singular Approximation of Mean Curvature Flow*”, Advisor Prof. Luigi Ambrosio (SNS), November 2014.

Winner of a permanent position of *Associate Professor in Mathematical Analysis* at the Department of Mathematics and Applications “Renato Caccioppoli” of University of Napoli Federico II in 2014 (till 2016).

Winner of a permanent position of *Full Professor in Mathematical Analysis* at the Department of Mathematics and Applications “Renato Caccioppoli” of University of Napoli Federico II in 2016 (actual position).

Coordinator (with Gennaro Miele e Massimiliano Giorgio) of the Undergraduate Program – Scientific Area of the Scuola Superiore Meridionale of Napoli, since 2020.

RESEARCH ACTIVITY

Calculus of variations and geometric measure theory
Functionals depending on curvature
Nonlinear problems in Riemannian geometry
Geometric evolutions, in particular the *Ricci flow* and the *mean curvature flow*

DIDACTICS

1992/93

Collaboration to the course *Analysis I* at the Faculty of Engineering of University of Pisa (with Prof. Luigi Ambrosio).

1993/94

Collaboration to the course *Analysis II* at the Faculty of Engineering of University of Pisa (with Prof. Luigi Ambrosio).

1994/95

Assistant Teacher to the course *Analysis I* at the Comp. Sci. Dept. of University of Pisa (with Prof. Luciano Modica).

1995/96

Teacher of the course of *Real Analysis* for the first year students of the SNS.

1997/98

Assistant Teacher to the course *Analysis III* at the Math. Dept. of University of Pisa (with Prof. Antonio Marino).

Assistant Teacher to the course *Calculus* for the first year students of the SNS (with Prof. Franco Conti).

1998/99

Assistant Teacher to the course *Calculus* for the first year students of the SNS (with Prof. F. Conti).

1999/2000

Assistant Teacher to the course *Complex Analysis* for the second year students of the SNS (with Prof. Giuseppe Tomassini).

2000/2001

Assistant Teacher to the course *Mathematical Analysis* for the first year students of the SNS (with Prof. Mariano Giaquinta).

2001/2002

Assistant Teacher to the course *Mathematics II* for the second year students of the SNS (with Prof. Mariano Giaquinta).

Teacher of the course *Differential Geometry* for the third year students of the SNS (with Prof. Giovanni Gaiffi and Renata Scognamillo).

2002/2003

Assistant Teacher to the course *Differential Geometry* for the third year students of the SNS (with Prof. Giuseppe Tomassini).

Teacher of the PhD course *Motion by Curvature of Curves and Surfaces* at the SNS.

2004/2005

Assistant Teacher to the course *Analysis I* for the first year students of the SNS (with Prof. Luigi Ambrosio).

2005/2006

Assistant Teacher to the course *Introduction to Measure Theory and Probability* for the second year students of the SNS (with Prof. Luigi Ambrosio).

2006/2007

Teacher of the PhD course *Introduction to Ricci Flow* at the SNS.

2008/2009

Assistant Teacher to the course *Mathematics I* for the first year students of the SNS (with Prof. Fulvio Ricci).

2009/2010

Teacher of the PhD course *The Ricci Flow and the Poincaré Conjecture* at the Math. Dept. of University of Pisa.

2010/2011

Assistant Teacher to the course *Introduction to Measure Theory, Functional Analysis and Probability* for the third year students of the SNS (with Prof. Luigi Ambrosio).

2011/2012

Teacher of the course *Introduction to Riemannian Geometry* for the fourth/fifth year and PhD students of the SNS (with Dr. Lorenzo Mazzieri).

2012/2013

Teacher of the course *Selected Topics in Riemannian Geometry* for the fourth/fifth year and PhD students of the SNS (with Dr. Lorenzo Mazziere).

2013/2014

Teacher of the course *Riemannian Geometry* for the fourth/fifth year and PhD students of the SNS (with Dr. Lorenzo Mazziere).

Assistant Teacher to the course *Complements of Mathematics* for the first year students of the SNS (with Prof. Luigi Ambrosio).

2014/2015

Teacher of the course *Analysis II* for the first year students of Engineering of University of Napoli Federico II.

Teacher of the course *Introduction to Riemannian Geometry* for the fourth/fifth year and PhD students of the SNS (with Dr. Lorenzo Mazziere).

2015/2016

Teacher of the course *Analysis I* for the first year students of Engineering of University of Napoli Federico II.

Teacher of the course *Calculus of Variations* for the fourth/fifth year students of Mathematics of University of Napoli Federico II.

2016/2017

Teacher of the course *Analysis I* for the first year students of Engineering of University of Napoli Federico II.

Teacher of the course *Calculus of Variations* for the fourth/fifth year students of Mathematical Engineering and of Mathematics of University of Napoli Federico II.

Teacher of the PhD course *An Introduction to Mean Curvature Flow* at the Math. Dept. of University of Pisa.

Teacher of the PhD course *Fondamenti di Analisi Matematica (The Mean Curvature Flow)* at the Math. Dept. of University of Napoli Federico II.

2017/2018

Teacher of the course *Analysis I* for the first year students of Engineering of University of Napoli Federico II.

Teacher of the course *Calculus of Variations* for the fourth/fifth year students of Mathematical Engineering and of Mathematics of University of Napoli Federico II.

2018/2019

Teacher of the course *Analysis I* for the first year students of Engineering of University of Napoli Federico II.

Teacher of the course *Calculus of Variations* for the fourth/fifth year students of Mathematical Engineering and of Mathematics of University of Napoli Federico II.

2019/2020

Teacher of the course *Analysis I* for the first year students of Engineering of University of Napoli Federico II.

Teacher of the course *Riemannian Geometry* for the fourth/fifth year students of Mathematical Engineering and of Mathematics of University of Napoli Federico II.

2020/2021

Teacher of the course *Analysis I* for the first year students of Engineering of University of Napoli Federico II.

Teacher of the course *Riemannian Geometry* for the fourth/fifth year students of Mathematical Engineering and of Mathematics of University of Napoli Federico II.

Teacher of the *Seminar of Mathematics* for the first year students of the Scuola Superiore Meridionale of Napoli.

2021/2022

Teacher of the course *Riemannian Geometry* for the fourth/fifth year students of Mathematical Engineering and of Mathematics of University of Napoli Federico II.

Teacher of the *Seminar of Mathematics* for the first year students of the Scuola Superiore Meridionale of Napoli.

OTHER ACTIVITIES

Member of the scientific committee of the Italian Mathematical Olympiad, organized by the Scuola Normale Superiore and the Italian Mathematical Union (UMI), from 1990 to 2001.

Ordinary member of INDAM (GNAMPA). Participation to several research projects local (SNS, "Giovani Ricercatori"), national (PRIN, GNAMPA, FIRB) and international (ERC).

Member of several commissions for admission/Degree/PhD at the Scuola Normale Superiore, Scuola Superiore di Catania, Scuola Superiore Meridionale of Napoli and other universities (Pisa, Roma, Bologna, Catania, Milano, SISSA, Grenoble, Warwick, Napoli – Federico II, Copenhagen).

Collaboration to implement and administrate the first *WebServer* of the SNS, *www.sns.it*, of the *CvGmt at Pisa* Research Group, *cvgmt.sns.it* and of the *Math Group* at the SNS, *www.math.sns.it*.

Collaboration to implement and administrate the *WebServer* of didactics at the SNS, *dida.sns.it*.

Collaboration to the mathematical exposition *Oltre il Compasso* held in Pisa in the years 1992, 1995 and 1999, organized by Prof. Franco Conti and Enrico Giusti.

Organization with Prof. Giuseppe Buttazzo of the series of *Thursday Seminars* at the SNS–Math. Dept. of University of Pisa (IT), about the Calculus of Variations and Geometric Measure Theory, 1999–2003.

Organization with Prof. Riccardo Benedetti, of the series of *Seminars on Ricci Flow* at the Math. Dept. of University of Pisa (IT), 2000.

Undergraduate Advisor of Erich Monteleone, Math. Dept. University of Pisa, 2000.

Member of the Local Organizing Committee of the "First Joint International Meeting UMI – AMS" at Pisa, 2002.

Organization of the *Intensive Research Period on Geometric Analysis* at the Centro di Ricerca Matematica "Ennio De Giorgi" of the SNS, in collaboration with Prof. Giovanni Alberti and Mariano Giaquinta, 2003.

Organization of the *Seminar on Ricci Flow* at the Math. Dept. of University of Pisa (IT), with Prof. Riccardo Benedetti, 2004.

Organization of the *Analysis and Applied Mathematics Summer School* at the Math. Dept. of University of Roma "La Sapienza" (IT), with Prof. Adriana Garroni and Valeria Chiadò Piat, 2004.

Undergraduate Advisor of Ennio Fedrizzi, SNS, 2006.

Organization of the intensive research trimester *Geometric Flows and Geometric Operators* at the Centro di Ricerca Matematica "Ennio De Giorgi" of the SNS, in collaboration with Prof. Zindine Djadli and Andrea Malchiodi, 2009.

PhD Advisor of Giovanni Catino, Math. Dept. University of Pisa, 2009.

Coordinator of the Pisa local unit of the FIRB national research project "Analysis and Beyond" (National Coordinator: Prof. Andrea Malchiodi), 2009–2012.

PhD Advisor of Annibale Magni, SISSA, Trieste (IT), 2009.

Director and organizer of the CIME summer school *Ricci Flow and Geometric Applications* in Cetraro (IT), in collaboration with Prof. Riccardo Benedetti and Gérard Besson, 2010.

Organization of the workshop *Geometric Evolutions and Minimal Surfaces in Lorentzian Manifolds*, at the Centro di Ricerca Matematica “Ennio De Giorgi” of the SNS, in collaboration with Prof. Giovanni Bellettini, Matteo Novaga and Giandomenico Orlandi, 2010.

Organization of the workshop *Ricci Solitons Days in Pisa* at the Centro di Ricerca Matematica “Ennio De Giorgi” of the SNS, in collaboration with Prof. Luigi Ambrosio, Huai–Dong Cao and William Wylie, 2011.

Degree Thesis Advisor of Giovanni Mascellani, Math. Dept. University of Pisa, 2013.

Member of the PhD Commission of the Scuola Normale Superiore, 2014.

Organization of the *ERC School on Geometric Evolution Problems* at the Centro di Ricerca Matematica “Ennio De Giorgi” of the SNS, in collaboration with Prof. Luigi Ambrosio and Andrea Mennucci, 2014.

Member of the Editorial Board of the journal *Geometric Flows*, De Gruyter, 2014–2021.

Organization of the *Analysis Seminar* of Department of Mathematics and Applications “Renato Caccioppoli” of University of Napoli Federico II, since 2015.

Member of the PhD Commission of the Department of Mathematics and Applications “Renato Caccioppoli” of University of Napoli Federico II, since 2015.

Collaboration to implement and administrate the *WebServer* of the Department of Mathematics and Applications “Renato Caccioppoli” of University of Napoli Federico II, 2015–2018.

PhD Advisor of Laura Cremaschi, SNS, 2016

Organization of the workshop *Curves and Networks in Geometric Analysis* at the Centro di Ricerca Matematica “Ennio De Giorgi” of the SNS, in collaboration with Prof. Matteo Novaga and Giandomenico Orlandi, 2017.

Chief Editor (with Mauro Carfora) of the journal *Geometric Flows*, De Gruyter, from 2018 to 2021.

Degree Thesis Advisor of Francesca Oronzio, Department of Mathematics and Applications “Renato Caccioppoli” of University of Napoli Federico II, 2018.

Degree Thesis Advisor of Antonia Diana and Serena Della Corte, Department of Mathematics and Applications “Renato Caccioppoli” of University of Napoli Federico II, 2020.

Member of the Commission of the PhD in “Mathematical and Physical Sciences for Advanced Materials and Technologies” of the Scuola Superiore Meridionale of Napoli, since 2020.

Coordinator (with Gennaro Miele and Massimiliano Giorgio) of the Undergraduate Program – Scientific Area of the Scuola Superiore Meridionale of Napoli, since 2020.

PARTICIPATION TO MEETINGS, SCHOOLS AND VISITS TO OTHER UNIVERSITIES

1992

Visiting Student at the Math. Dept. of University of Tuebingen (DE), under the supervision of Prof. Rainer Nagel.

Participation to the *I International School on Calculus of Variations and Geometric Measure Theory* in Pisa (IT).

1993

Participation to the school *Calculus of Variations and Geometric Measure Theory* in Trento (IT).

1994

Two weeks at the Math. Dept. of University of Trento (IT), invited by Prof. Gabriele Anzellotti.

Participation to the conference *Nonlinear Partial Differential Equations Arising from Variational Problems* in Cortona (IT).

Participation to the meeting *Variational Methods for Discontinuous Structures* in Como (IT).

Invited speaker at the workshop *Features, Motion and Shape Recovery: Psychophysics and Computational Aspects* at the SNS, Pisa (IT).

Participation to the II National Meeting of the Italian Group *Differential Equations and Calculus of Variations* in Isola D'Elba (IT).

1995

Two months at the MIT in Cambridge (US), invited by Prof. Sanjoy Mitter.

1996

Participation to the meeting *Calculus of Variations* in Oberwolfach (DE).

1997

Participation to the CIME summer school *Calculus of Variations* in Cetraro (IT).

Invited speaker at the *II International School on Calculus of Variations and Geometric Measure Theory* in Pisa (IT).

Participation to the III National Meeting of the Italian Group *Differential Equations and Calculus of Variations* in Isola D'Elba (IT).

1998

Participation to the meeting *Calculus of Variations* in Oberwolfach (DE).

Three weeks at the Max Planck Institute in Leipzig (DE), invited by Prof. Stefan Müller.

Participation to the *III International School on Calculus of Variations and Geometric Measure Theory* in Pisa (IT).

1999

Seminar at the Math. Dept. of University of Trento (IT), invited by Prof. Silvano Delladio.

Invited speaker at the meeting *Differential Equations and Calculus of Variations* in Isola D'Elba (IT).

Seminar at the Math. Dept. of University of Roma II "Tor Vergata" (IT), invited by Prof. Giovanni Bellettini and Carlo Sinestrari.

2000

Participation to the *Giornate di Lavoro su Calcolo delle Variazioni e Teoria Geometrica della Misura* in Trento (IT).

Teacher of the minicourse *Smooth Geometric Evolutions of Curves* at the SISSA, Trieste (IT), invited by Prof. Gianni Dal Maso and Andrea Braides.

Three months at the École Normale Supérieure de Cachan, Paris (FR), invited by Prof. Jean-Michel Morel and Simon Masnou.

Invited speaker at the meeting *Nonlinear Analysis 2000*, Courant Institute, New York (US).

Invited speaker at the *Workshop on Geometric Analysis*, Freiburg (DE).

Invited speaker at the workshop *Mathematical Problems in Image Processing*, ICTP, Trieste (IT).

Seminar at the Math. Dept. of "Politecnico di Milano" (IT), invited by Prof. Franco Tomarelli and Ilaria Fragalà.

2001

Participation to the *Giornate di Lavoro su Calcolo delle Variazioni e Teoria Geometrica della Misura* in Trento (IT).

One month at the Math. Dept. of University of Barcelona (ES), invited by Prof. Xavier Cabré.

Participation to the meeting *The Mathematics of Ennio De Giorgi* in Pisa (IT).

Invited speaker at the meeting *Nonlinear Evolution Problems* in Oberwolfach (DE).

One month at Paris VI – Jussieu (FR), invited by Prof. Jean-Michel Morel and Simon Masnou.

Seminar at SISSA, Trieste (IT), invited by Prof. Gianni Dal Maso.

2002

Seminar at the Math. Dept. of University of Roma "La Sapienza" (IT), invited by Prof. Adriana Garroni.

Seminar at the Math. Dept. of University of Bologna (IT), invited by Prof. Giovanna Citti.

Seminar at the Math. Dept. of University of Roma II "Tor Vergata" (IT), invited by Prof. Giovanni Bellettini and Carlo Sinestrari.

Invited speaker at the meeting *Calculus of Variations* in Oberwolfach (DE).

Invited speaker at the meeting *Harmonic Maps, Minimal Surfaces and Geometric Flows* in Brest (FR).

Invited speaker at the meeting *Calculus of Variations in Nonlinear Phenomena* in Martina Franca (IT).

Invited speaker at the meeting *Recent Advances in Calculus of Variations and PDE's* in Pisa (IT).

2003

Participation to the *Giornate di Lavoro su Calcolo delle Variazioni e Teoria Geometrica della Misura* in Trento (IT).

Two weeks at the Math. Dept. of University of Barcelona (ES), invited by Prof. Xavier Cabré.

Participation to the meeting *Nonlinear PDE's* in OberWolfach (DE).

Participation to the school *Concentration Phenomena for Variational Problems* at the Math. Dept. of University of Roma "La Sapienza" (IT).

Participation to the *Summer school in Geometric Measure Theory* at the CIRM of Luminy (FR).

Teacher of the course *The Ricci Flow* at the University of Roma II "Tor Vergata" (IT), invited by Prof. Giovanni Bellettini and Prof. Carlo Sinestrari.

Seminar at the Math. Dept. of University of Torino (IT), invited by Prof. Francesca Da Lio.

Seminar at the Math. Dept. of University of Padova (IT), invited by Prof. Giovanni Colombo.

2004

Visiting Professor for a month at the Math. Dept. of University of Roma "La Sapienza" (IT), invited by Prof. Italo Capuzzo Dolcetta and Fabiana Leoni.

Participation to the *Workshop on Heat Equation and Curvature Flows* at the Math. Dept. of University of Roma "La Sapienza" (IT).

Seminar at the Math. Dept. of University of Nice (FR), invited by Prof. Luis Almeida and Frederic Robert.

Seminar at the Math. Dept. of University of Pisa (IT), invited by Prof. Mario Salvetti.

2005

Participation to the *Giornate di Lavoro su Calcolo delle Variazioni e Teoria Geometrica della Misura* in Trento (IT).

Invited speaker at the *One Day Workshop on Geometric Evolution Problems*, Centro di Ricerca Matematica "Ennio De Giorgi" of the SNS, Pisa (IT).

2006

Invited speaker at the special session *Global Analysis on Manifolds* of the joint meeting UMI/SIMAI "Mathematics and its Applications" in Torino (IT).

Participation to the ICM 2006 in Madrid (ES).

Invited speaker at the conference *Nonlinear Evolution Problems*, Centro di Ricerca Matematica "Ennio De Giorgi" of the SNS, Pisa (IT).

Seminar at the Math. Dept. of University of Roma "La Sapienza" (IT), invited by Prof. Eugenio Montefusco.

Seminar at the Math. Dept. of University of Roma II "Tor Vergata" (IT), invited by Prof. Enrico Valdinoci.

Seminar at the Math. Dept. of University of Roma "La Sapienza" (IT), invited by Prof. Italo Capuzzo Dolcetta and Isabeau Birindelli.

Invited speaker at the workshop *Geometric Evolutions and Applications*, Centro di Ricerca Matematica "Ennio De Giorgi" of the SNS, Pisa (IT).

2007

Seminar at the Math. Dept. of Universidad Autonoma de Barcelona (ES), invited by Prof. Joan Porti.

Seminar at the Institut Fourier of University of Grenoble (FR), invited by Prof. Zindine Djadli.

Seminar at the Math. Dept. of University of Milano (IT), invited by Prof. Bernhard Ruf.

Seminar at the Math. Dept. of University of Pisa (IT), invited by Prof. Valentino Magnani.

Teacher of the minicourse *Introduction to Mean Curvature Flow* at the Institut Fourier of University of Grenoble (FR), invited by Prof. Gérard Besson and Zindine Djadli.

2008

Seminar at the CRM, Universidad Autonoma de Barcelona (ES), invited by Prof. Joan Porti.

Visiting Professor for three months at the CRM, Universidad Autonoma de Barcelona (ES), invited by Prof. Joan Porti.

Visiting Professor for a month at the Institut Henri Poincaré in Paris (FR), invited by Prof. Gérard Besson.

2009

Seminar at the Math. Dept. of University of Roma "La Sapienza" (IT), invited by Prof. Italo Capuzzo Dolcetta and Fabiana Leoni.

Participation to the *Giornate di Lavoro su Calcolo delle Variazioni e Teoria Geometrica della Misura* in Trento (IT).

Seminar at the Math. Dept. of "Università dell'Insubria", Como (IT), invited by Prof. Alberto Setti.

Seminar at the ETH of Zurich (CH), invited by Prof. Michael Struwe.

Teacher of the minicourse *Motion of Curves by Mean Curvature* at SISSA, Trieste (IT), invited by Prof. Andrea Malchiodi.

Seminar at the Math. Dept. of University of Pavia (IT), invited by Prof. Francesco Bonsante.

Seminar at the Math. Dept. of University of Padova (IT), invited by Prof. Martino Bardi and Matteo Novaga.

Seminar at the Math. Dept. of University of Milano "Bicocca" (IT), invited by Prof. Alessandro Ghigi.

Teacher of the minicourse *Lectures on Mean Curvature Flow* related to the research trimester *Geometric Flows and Geometric Operators* at the Centro di Ricerca Matematica "Ennio De Giorgi" of the SNS, Pisa (IT).

Participation to the conference *Lack of compactness in nonlinear problems*, at the CIRM of Luminy (FR).

Seminar at the Math. Dept. of "Università dell'Insubria", Como (IT), invited by Prof. Alberto Setti and Stefano Pigola.

2010

Invited speaker to the *Giornate di Lavoro su Calcolo delle Variazioni e Teoria Geometrica della Misura* in Trento (IT).

Seminar at the CRM, Universidad Autonoma de Barcelona (ES), invited by Prof. Manuel Castellet and Xavier Cabré.

Seminar at the Math. Dept. of "Università dell'Insubria", Como (IT), invited by Prof. Alberto

Setti and Stefano Pigola.

Seminar at the Math. Dept. of University of Warwick (UK), invited by Prof. Peter Topping.

Invited speaker to the workshop *Extrinsic Geometric Flows* in Valencia (ES).

Seminar at the Math. Dept. of University of Bologna (IT), invited by Prof. Alberto Parmeggiani and Stefano Francaviglia.

Visiting Professor at the Institut Fourier of University of Grenoble (FR), invited by Prof. Gérard Besson and Zindine Djadli.

Seminar at the Math. Dept. of University of Amiens (FR), invited by Prof. Alberto Farina.

2011

Seminar at the Math. Dept. of University of Pisa (IT), invited by Prof. Valentino Magnani.

Participation to the conference *Flots Géométriques*, at the CIRM of Luminy (FR).

Organization of the workshop *Ricci Solitons Days in Pisa* at the Centro di Ricerca Matematica “Ennio De Giorgi” of the SNS, Pisa (IT), in collaboration with Prof. Luigi Ambrosio, Huai-Dong Cao and William Wylie, 2011.

Invited speaker to the conference *Geometry in Bicocca*, at the Math. Dept. of University of Milano “Bicocca” (IT).

Participation to the *Workshop on Geometric Analysis*, at the ICMS of Edinburgh (UK).

Seminar at the Math. Dept. of University of Magdeburg (DE), invited by Prof. Miles Simon.

Seminar at the Math. Dept. of University of Münster (DE), invited by Prof. Esther Cabezas–Rivas.

Seminar at the Institut Fourier of University of Grenoble (FR), invited by Prof. Zindine Djadli.

2012

Seminar at the Math. Dept. of University of Pisa (IT), invited by Prof. Valentino Magnani.

Visiting Professor at the Math. Dept. of University of Nice (FR), invited by Prof. Nicola Gigli.

Participation to the ICTP-ESF conference *Geometric Analysis* at the ICTP of Trieste (IT).

Invited speaker at the conference *Mostly Maximum Principle*, at the Math. Dept. of University of Roma “La Sapienza” (IT).

Seminar at the Math. Dept. of University of Padova (IT), invited by Prof. Matteo Novaga and Pierpaolo Soravia.

Seminar at the Math. Dept. of University of Warwick (UK), invited by Prof. Peter Topping.

Invited speaker at the conference *Geometric PDE's*, at the Institut Henri Poincaré in Paris (FR).

Visiting Professor at the Institut Fourier of University of Grenoble (FR), invited by Prof. Gérard Besson and Zindine Djadli.

2013

Participation to the *Giornate di Lavoro su Calcolo delle Variazioni e Teoria Geometrica della Misura* in Trento (IT).

Seminar at the Math. Dept. of University of Roma II “Tor Vergata” (IT), invited by Prof. Daniele Castorina and Gabriella Tarantello.

Invited speaker at the conference *Gregorio Ricci Curbastro. Da Einstein a Perelman* at the “Istituto Veneto di Scienze, Lettere ed Arti” in Venezia (IT).

Invited speaker at the conference *PDE Days: Geometric PDEs* at the University of Giessen (DE).

Participation to the conference *Partial Differential Equations* in Oberwolfach (DE).

Invited speaker at the conference *Qualitative and Geometric Aspects of Elliptic PDE's* at the CRM, Universidad Autonoma de Barcelona (ES).

Invited speaker at the *Brussels–London Geometry Seminar* at the Math. Dept. of Univ. Libre de Bruxelles (BE).

2014

Invited speaker at the conference *2nd Geometry Day in Como* at the Math. Dept. of “Università dell’Insubria”, Como (IT).

Invited speaker at the conference *Giornata di Geometria Milano–Torino* at the Math. Dept. of University of Milano (IT).

Seminar at the Math. Dept. of University of Pisa (IT).

Invited speaker at the *Conference on PDEs in Geometry and Physics* at the Math. Dept. of University of Notre Dame (US).

Seminar at the SNS, Pisa (IT).

Invited speaker at the workshop *Methodes geometriques et variationnelles pour des EDPs non–lineaires* at the Institut C. Jordan of University of Lyon (FR).

Invited speaker at the workshop *New Trends in Differential Geometry 2014* in Villasimius (IT).

Seminar at the Math. Dept. of University of Roma II “Tor Vergata” (IT).

Seminar at the Math. Dept. of University of Roma “La Sapienza” (IT), invited by Prof. Italo Capuzzo Dolcetta and Fabiana Leoni.

Seminar at the Math. Dept. of University of Roma “La Sapienza” (IT), invited by Prof. Filomena Pacella.

Teacher of the course *Introduction to Mean Curvature Flow* at the Math. Dept. of University of Bologna (IT), invited by Prof. Giovanna Citti and Stefano Francaviglia.

Seminar at the Math. Dept. of University of Napoli Federico II (IT), invited by Prof. Nicola Fusco and Gioconda Moscariello.

Seminar at the Math. Dept. of University of Milano (IT), invited by Paolo Mastrolia.

Seminar at the Math. Dept. of University of Tolosa (FR), invited by Prof. Jerome Bertrand.

Seminar at the Math. Dept. of “Politecnico di Milano” (IT), invited by Giovanni Catino.

2015

Seminar at the Math. Dept. of University of Padova (IT), invited by Daniele Castorina.

Visiting Professor at the Math. Dept. of Universitat Politècnica de Catalunya, Barcelona (ES), invited by Prof. Xavier Cabré.

Seminar at the Math. Dept. of University of Milano “Bicocca” (IT), invited by Dr. Michele Riboldi.

Seminar at the Math. Dept. of University of Pavia (IT), invited by Prof. Francesco Bonsante.

Invited speaker at the *Workshop on Geometric Flows* at Granada (ES).

Participation to the INDAM conference *Chromatic and colored structures in geometry and statistical physics 2015* in Cortona (IT).

Participation to the conference *An afternoon of mathematics with Louis Nirenberg* at the Math. Dept. of University of Roma II "Tor Vergata" (IT).

Seminar at the Math. Dept. of Universitat Politècnica de Catalunya, Barcelona (ES), invited by Prof. Xavier Cabré.

Seminar at the Math. Dept. of University of Pisa (IT).

Seminar at the Math. Dept. of University of Napoli Federico II (IT).

2016

Seminar at the Math. Dept. of University of Münster (DE), invited by Prof. Christoph Böhm.

Teacher of the minicourse *Basics of Mean Curvature Flow* at the *Winter School on Geometric Evolution Equations* in Regensburg (DE).

Seminar at the Math. Dept. of University of Padova (IT), invited by Dr. Daniele Castorina.

Seminar at the Math. Dept. of University of Luxembourg (L).

Participation to the workshop *Un pomeriggio per Filomena Pacella* at the Math. Dept. of University of Roma "La Sapienza" (IT).

Seminar at the Math. Dept. of University of Camerino (IT), invited by Dr. Silvia Benvenuti.

Seminar at SISSA, Trieste (IT), invited by Prof. Claudio Arezzo and Nicola Gigli.

Participation to the workshop *New Trends in Calculus of Variations* at the "Accademia dei Lincei" in Roma (IT).

Invited speaker at the workshop *Geometric Analysis in Samothrace, a tribute to Gérard Besson* in Samotraccia (GR).

Participation to the summer school *Geometric Analysis on Riemannian and Singular Metric Measure Spaces* in Como (IT).

Invited speaker at the *Pisa–Hokkaido Workshop: Perspectives on Ricci flow, the dispersive equation, and related topics* at the Math. Dept. of University of Pisa (IT).

2017

Seminar at the Institut Fourier of Université Grenoble Alpes (FR), invited by Prof. Gérard Besson.

Invited speaker at the *France–Italy Meeting in Geometric Analysis*, Centro di Ricerca Matematica "Ennio De Giorgi" of the SNS, Pisa (IT).

Visiting Professor (Chair ENS–UGA) at the Institut Fourier of Université Grenoble Alpes (FR).

Invited speaker at the workshop *Geometric Analysis on Smooth and Non–Smooth Spaces* at SISSA, Trieste (IT).

Invited speaker at the workshop *Calculus of Variations and Partial Differential Equations* at the Math. Dept. of University of Napoli Federico II (IT).

2018

Seminar at the Math. Dept. of University of Roma "La Sapienza" (IT), invited by Prof. Isabeau Birindelli.

Seminar at the Math. Dept. of University of Pavia (IT), invited by Prof. Francesco Bonsante.

Seminar at the Math. Dept. of "Politecnico di Milano" (IT), invited by Prof. Giovanni Catino and Franco Tomarelli.

Seminar at the Math. Dept. of University of Modena (IT), invited by Dr. Gianpaolo Leonardi.

Seminar at the Math. Dept. of University of Parma (IT), invited by Prof. Alessandra Lunardi.

Invited speaker at the workshop *Recent advances in Geometric Analysis*, Centro di Ricerca Matematica "Ennio De Giorgi" of the SNS, Pisa (IT).

Teacher of the minicourse *Motion by curvature of networks in the plane* at the *International School on Extrinsic Curvature Flows*, ICTP, Trieste (IT).

Participation to the workshop *From Optimal Control to Maximum Principle* in Agropoli (IT).

2019

Participation to the meeting *Alessio Figalli, Fields medallist 2018* alla SNS, Pisa (IT).

Seminar at the Math. Dept. of University of Trento (IT), invited by Prof. Lorenzo Mazzieri.

Seminar at the Scuola Superiore di Catania (IT).

Seminar at the Math. Dept. of University of Toulouse (FR), invited by Prof. Jerome Bertrand and Max Fathi.

Invited speaker at the *International Conference on Elliptic and Parabolic Problems* in Gaeta (IT).

Invited speaker at the workshop *Analytic and Geometric Aspects of PDEs* at "Politecnico di Milano" (IT).

Invited speaker at the workshop *Trends in Modern Geometry 2019* at the Yau Math. Science Center of Tsinghua Univ. in Beijing (CN).

Seminar for high school students at the University of Napoli Federico II (IT).

Invited speaker at the workshop *Geometric Analysis, Submanifolds and Geometry of PDE's* at the "Politecnico di Torino" (IT).

2020

Seminar at the "Campus Matematico Fisico Scientifico" for high school students at Bardonecchia (IT).

Seminar at the Math. Dept. of University of Firenze (IT), invited by Prof. Fabio Podestà.

Invited speaker at the *Mini-Workshop on Mean Curvature Flow* at the Math. Dept. of University of Copenhagen (DK).

Participation to the *Giornate di Lavoro su Calcolo delle Variazioni e Teoria Geometrica della Misura* in Trento (IT).

Online seminar for the Math. Dept. of University of Pisa (IT), invited by Prof. Maria Stella Gelli.

2021

Seminar for high school students at the University of Napoli Federico II (IT).

Invited speaker (online) at the conference *Two nonlinear days in Urbino 2021* (IT).
Seminar at the Scuola Superiore Meridionale of Napoli.

PUBLICATIONS

1. C. Mantegazza, *Curvature varifolds with boundary*, J. Diff. Geom. **43**, 807–843, 1996.
2. G. Alberti & C. Mantegazza, *A note on the theory of SBV functions*, BUMI **11-B**, 375–382, 1997.
3. L. Ambrosio & C. Mantegazza, *Curvature and distance function from a manifold*, J. Geom. Anal. **8**, 723–748, 1998.
4. I. Fragalà & C. Mantegazza, *On some notions of tangent space to a measure*, Proc. Roy. Soc. Edinburgh Sect. A **129A**, 331–342, 1999.
5. L. Ambrosio, C. De Lellis & C. Mantegazza, *Line energies for gradient vector fields in the plane*, Calc. Var. **9**, 327–355, 1999.
6. I. Fonseca & C. Mantegazza, *Second order singular perturbation models for phase transitions*, SIAM J. Math. Anal. **31**, 1121–1143, 2000.
7. C. Mantegazza, *Smooth geometric evolutions of hypersurfaces*, GAFA **12**, 138–182, 2002.
8. C. Mantegazza & A. C. Mennucci, *Hamilton–Jacobi equations and distance functions on Riemannian manifolds*, Appl. Math. Optim. **47**, 1–25, 2003.
9. C. Mantegazza, M. Novaga & V. M. Tortorelli, *Motion by curvature of plane networks*, Annali Sc. Norm. Super. Pisa Cl. Sci. **3**, 235–324, 2004.
10. M. Eminentì & C. Mantegazza, *Some properties of the distance function and a conjecture of De Giorgi*, J. Geom. Anal. **14**, 267–279, 2004.
11. C. Mantegazza, *Evolution by curvature of networks of curves in the plane*, Progress in Nonlin. Diff. Eqs. and Appl. **59**, 95–109, 2004.
12. G. Bellettini, C. Mantegazza & M. Novaga, *Singular perturbations of mean curvature flow*, J. Diff. Geom. **75**, 403–431, 2007.
13. M. Eminentì, G. La Nave & C. Mantegazza, *Ricci solitons – The equation point of view*, Manuscripta Math. **127**, 345–367, 2008.
14. A. Magni & C. Mantegazza, *Some remarks on Huisken’s monotonicity formula for mean curvature flow*, in “Singularities in Nonlinear Evolution Phenomena and Applications” (M. Novaga & G. Orlandi eds.), CRM Series of Center “Ennio De Giorgi”, Pisa, 157–169, 2009.
15. M. Caldarelli, G. Catino, Z. Djadli, A. Magni, & C. Mantegazza, *On Perelman’s dilaton*, Geom. Dedicata **145**, 127–137, 2010.
16. G. Catino & C. Mantegazza, *Evolution of the Weyl tensor under the Ricci flow*, Ann. Inst. Fourier **61**, 1407–1435, 2011.
17. C. Mantegazza, *Lecture Notes on Mean Curvature Flow*, Birkhäuser Verlag, 2011.
18. C. Mantegazza & L. Martinazzi, *A note on quasilinear parabolic equations on manifolds*, Annali Sc. Norm. Super. Pisa CL. Sci. **11**, 857–874, 2012.
19. G. Catino, C. Mantegazza & L. Mazzièri, *On the global structure of conformal gradient solitons*

- with nonnegative Ricci tensor*, Commun. Contemp. Math. **14**, 1250045, 12 pp, 2012.
20. G. Catino, C. Mantegazza, L. Mazzieri & M. Rimoldi, *Locally conformally flat quasi-Einstein manifolds*, J. Reine Angew. Math. (Crelle's Journal) **675**, 181-189, 2013.
 21. A. Magni, C. Mantegazza & E. Tsatis, *Flow by mean curvature inside a moving ambient space*, J. Evol. Eqs. **13**, 561-576, 2013.
 22. H.-D. Cao, G. Catino, Q. Chen, C. Mantegazza & L. Mazzieri, *Bach-flat gradient steady Ricci solitons*, Calc. Var. **49**, 125-138, 2014.
 23. N. Gigli & C. Mantegazza, *A flow tangent to the Ricci flow via heat kernels and mass transport*, Advances in Math. **250**, 74-104, 2014.
 24. C. Mantegazza, G. Mascellani & G. Uraltsev, *On the distributional Hessian of the distance function*, Pacific J. Math. **270**, 151-166, 2014.
 25. A. Magni & C. Mantegazza, *A note on Grayson's theorem*, Rend. Semin. Mat. Univ. Padova **131**, 263-279, 2014.
 26. G. Catino, C. Mantegazza & L. Mazzieri, *A note on Codazzi tensors*, Math. Ann **362**, 629-638, 2015.
 27. G. Catino, C. Mantegazza & L. Mazzieri, *Locally conformally flat ancient Ricci flows*, Analysis & PDE **8**, 365-371, 2015.
 28. L. Cremaschi & C. Mantegazza, *Short-time existence of the second order renormalization group flow in dimension three*, Discrete Contin. Dyn. Syst. – Series A **35**, 5787-5798, 2015.
 29. C. Mantegazza & R. Müller, *Perelman's entropy functional at type I singularities of the Ricci flow*, J. Reine Angew. Math. (Crelle's Journal) **703**, 173-199, 2015.
 30. A. Magni, C. Mantegazza & M. Novaga, *Motion by curvature of planar networks II*, Annali Sc. Norm. Super. Pisa CL. Sci. **15**, 117-144, 2016.
 31. R. Benedetti & C. Mantegazza (editors), *Ricci Flow and Geometric Applications – Lecture notes from the CIME Summer School held in Cetraro, June 28 – July 3 2010*, Lecture Notes in Mathematics/CIME Foundation Subseries **2166**, Springer, 2016.
 32. C. Mantegazza, *Problemi di Analisi I dal corso del primo anno alla Scuola Normale Superiore di Pisa*, Amazon, 2016.
 33. C. Mantegazza, M. Novaga & A. Pluda, *Motion by curvature of networks with two triple junctions*, Geom. Flows. **2**, 18-48, 2016.
 34. C. Mantegazza & V. M. Tortorelli (editors), *Corso di Analisi Matematica - Ennio De Giorgi, SNS 1991/1992 - Notes by Vincenzo Maria Tortorelli (with an appendix by Luigi Ambrosio)*, Quaderni dell'Accademia Pontaniana **63**, Napoli, 2016.
 35. G. Catino, L. Cremaschi, Z. Djadli, C. Mantegazza & L. Mazzieri, *The Ricci-Bourguignon flow*, Pacific J. Math. **287**, 337-370, 2017.
 36. D. Castorina & C. Mantegazza, *Ancient solutions of semilinear heat equations on Riemannian manifolds*, Atti Accad. Naz. Lincei Rend. Lincei Mat. Appl. **28**, 85-101, 2017.

37. P. Baldi, E. Haus & C. Mantegazza, *Networks self-similarly moving by curvature with two triple junctions*, Atti Accad. Naz. Lincei Rend. Lincei Mat. Appl. **28**, 323-338, 2017.
38. C. Mantegazza, S. Mongodi & M. Rimoldi, *The Cotton tensor and the Ricci flow*, Geom. Flows **2**, 49-71, 2017.
39. R. Benedetti & C. Mantegazza, *La congettura di Poincaré e il flusso di Ricci*, Rivista dell'UMI – Matematica, Cultura e Società **2**, 245-289, 2017.
40. P. Baldi, E. Haus & C. Mantegazza, *On the classification of networks self-similarly moving by curvature*, Geom. Flows **2**, 125-137, 2017.
41. P. Baldi, E. Haus & C. Mantegazza, *Non-existence of Theta-shaped self-similarly shrinking networks moving by curvature*, Communications in PDE **43**, 403-427, 2018.
42. F. Angrisani, G. Ascione, C. Leone & C. Mantegazza, *Appunti di calcolo delle variazioni*, Amazon, 2019.
43. C. Mantegazza, M. Novaga & A. Pluda, *Lectures on curvature flow of networks*, Contemporary Research in Elliptic PDEs and Related Topics, Springer INdAM Series **33**, 369-417, 2019.
44. P. Baldi, E. Haus & C. Mantegazza, *Existence of a lens-shaped cluster of surfaces self-shrinking by mean curvature*, Math. Ann. **375**, 1857-1881, 2019.
45. D. Castorina, C. Mantegazza & B. Sciunzi, *A Liouville theorem for superlinear heat equations on Riemannian manifolds*, Milan J. Math. **87**, 303-313, 2019.
46. G. Catino & C. Mantegazza, *Quesiti a Risposta Multipla di Analisi Matematica 1*, Esculapio, 2020.
47. D. Castorina & C. Mantegazza, *Ancient solutions of superlinear heat equations on Riemannian manifolds*, Commun. Contemp. Math. **23**, 2050033 (16 pages), 2021.
48. C. Mantegazza, *Some elementary questions in the calculus of variations*, Rend. Semin. Mat. Univ. Padova **145**, 107-115, 2021.
49. L. Ambrosio, C. Mantegazza & F. Ricci, *Complementi di Matematica*, Edizioni della Normale, 2021.
50. C. Mantegazza, A. Pluda & M. Pozzetta, *A survey of the elastic flow of curves and networks*, Milan J. Math **89**, 59-121, 2021.
51. C. Mantegazza & M. Pozzetta, *The Łojasiewicz-Simon inequality for the elastic flow*, Calc. Var. **60**, 2021
52. S. Della Corte, A. Diana & C. Mantegazza, *Global existence and stability for the modified Mullins-Sekerka and surface diffusion flow*, Math. Engineering **4**, 2022.
53. D. Castorina, G. Catino & C. Mantegazza, *A triviality result for semilinear parabolic equations*, Math. Engineering **4**, 2022.
54. C. Mantegazza & M. Pozzetta, *Asymptotic convergence of evolving hypersurfaces*, to appear in Revista Matematica Iberoamericana.
55. G. Ascione, D. Castorina, G. Catino & C. Mantegazza, *A matrix Harnack inequality for semilinear heat equations*, to appear in Math. Engineering.

56. C. Mantegazza, M. Novaga, A. Pluda & F. Schulze, *Evolution of networks with multiple junctions*, 2016, Preprint.
57. C. Mantegazza, M. Novaga & A. Pluda, *Type-0 singularities in the network flow – Evolution of trees*, 2021, Preprint.
58. D. Castorina, G. Catino & C. Mantegazza, *Semilinear Li & Yau inequalities*, 2022, Preprint.
59. L. Cremaschi & C. Mantegazza, *The Hamilton’s theorem for the Ricci–Bourguignon flow*, in preparazione.
60. C. Mantegazza & L. Mazzieri, *Approximation of Ricci solitons*, in preparazione.

NOTES

1. *Varifold con seconda forma fondamentale e bordo*, 1994 (in italian).
2. *Universal interpolation inequalities*, 2002.
3. *Curves homothetically shrinking by curvature*, 2009 (with Annibale Magni).
4. *Notes on the distance function from a submanifold*, 2010.
5. *Some entropies for mean curvature flow*, 2013.
6. *On the minimality of the potential function of a gradient shrinking Ricci soliton*, 2016.
7. *On C^2 umbilical hypersurfaces*, 2021.

Carlo Mantegazza
 Mathematical Analysis
 Department of Mathematics and Applications “Renato Caccioppoli”
 University of Napoli Federico II
 Via Cintia, Monte S. Angelo, I-80126 Napoli, Italy
 Office: +39(081)675751
 Fax: +39(081)7662106
 Email: c.mantegazza@sns.it
 Homepage: <http://cvgmt.sns.it/HomePages/cm>