

Curriculum Vitae of Luca Rondi

Vital data

Name and surname	Luca Rondi
Place and date of birth	Trieste, Italy, on 5 September 1972
Citizenship	Italian
Affiliation	Università degli Studi di Pavia Dipartimento di Matematica “Felice Casorati” via Ferrata 5, 27100 Pavia Italy
Telephone number	+ 39 0382 985690
E-mail address	luca.rondi@unipv.it

Current position (since 1 MAY 2021)

Associate Professor of Mathematical Analysis at the Dipartimento di Matematica “Felice Casorati” of the Università degli Studi di Pavia, Italy.

Awards

30 DECEMBER 2013

Italian National Scientific Habilitation as Full Professor of Mathematical Analysis, Probability and Mathematical Statistics. Renewed on 27 JULY 2018 and on 28 NOVEMBER 2023.

Professional activities

15 SEPTEMBER 2018 – 30 APRIL 2021

Associate Professor of Mathematical Analysis, Dipartimento di Matematica “Federigo Enriques”, Università di Milano, Italy.

21 DECEMBER 2012 – 14 SEPTEMBER 2018

Associate Professor of Mathematical Analysis, Università di Trieste, Italy.

FALL 2007 TERM

Visiting Assistant Professor, School of Mathematics, University of Minnesota, Minneapolis, USA.

3 SEPTEMBER 2001 – 20 DECEMBER 2012

Assistant Professor (Ricercatore Universitario) of Mathematical Analysis, Università di Trieste, Italy.

28 AUGUST 2000 – 27 MAY 2001

Dunham Jackson Assistant Professor, School of Mathematics, University of Minnesota, Minneapolis, USA.

NOVEMBER 1999 – JUNE 2000

Postdoc research assistant, Institut für Industriemathematik, Johannes Kepler Universität of Linz, Austria.

Education

22 OCTOBER 1999

Ph.D. in Mathematics, Scuola Internazionale Superiore di Studi Avanzati (SISSA), Trieste, Italy.

Ph.D. thesis: *Uniqueness and Optimal Stability for the Determination of Multiple Defects by Electrostatic Measurements.*

Supervisor: Professor Giovanni Alessandrini.

NOVEMBER 1996 – OCTOBER 1999

Ph.D. program in Mathematics, Scuola Internazionale Superiore di Studi Avanzati (SISSA), Trieste, Italy.

13 MARCH 1996

Degree in Mathematics (summa cum laude), Università di Trieste, Italy.

Degree thesis: *Stabilità per il problema inverso dei crack in un corpo non omogeneo.*

Supervisor: Professor Giovanni Alessandrini.

Publications list

- 1) G. Alessandrini and L. Rondi, *Stable determination of a crack in a planar inhomogeneous conductor*, SIAM J. Math. Anal. **30** (1998) 326–340.
- 2) L. Rondi, *Uniqueness and stability for the determination of boundary defects by electrostatic measurements*, Proc. Roy. Soc. Edinburgh Sect. A **130** (2000) 1119–1151.
- 3) L. Rondi, *Optimal stability estimates for the determination of defects by electrostatic measurements*, Inverse Problems **15** (1999) 1193–1212.
- 4) G. Alessandrini and L. Rondi, *Optimal stability for the inverse problem of multiple cavities*, J. Differential Equations **176** (2001) 356–386.
- 5) L. Rondi and F. Santosa, *Enhanced Electrical Impedance Tomography via the Mumford-Shah Functional*, ESAIM Control Optim. Calc. Var. **6** (2001) 517–538.

- 6) L. Rondi, *Uniqueness for the determination of sound-soft defects in an inhomogeneous planar medium by acoustic boundary measurements*, Trans. Amer. Math. Soc. **355** (2003) 213–239.
- 7) M. Di Cristo and L. Rondi, *Examples of exponential instability for inverse inclusion and scattering problems*, Inverse Problems **19** (2003) 685–701.
- 8) L. Rondi, *Unique determination of non-smooth sound-soft scatterers by finitely many far-field measurements*, Indiana Univ. Math. J. **52** (2003) 1631–1662.
- 9) G. Alessandrini, L. Del Piero and L. Rondi, *Stable determination of corrosion by a single electrostatic boundary measurement*, Inverse Problems **19** (2003) 973–984.
- 10) G. Alessandrini and L. Rondi, *Determining a sound-soft polyhedral scatterer by a single far-field measurement*, Proc. Amer. Math. Soc. **133** (2005) 1685–1691.
- 11) L. Rondi, *Optimal stability of reconstruction of plane Lipschitz cracks*, SIAM J. Math. Anal. **36** (2005) 1282–1292.
- 12) M. Di Cristo, L. Rondi and S. Vessella, *Stability properties of an inverse parabolic problem with unknown boundaries*, Ann. Mat. Pura Appl. (4) **185** (2006) 223–255.
- 13) L. Rondi, *A remark on a paper by Alessandrini and Vessella*, Adv. in Appl. Math. **36** (2006) 67–69.
- 14) L. Rondi, *Unique continuation from Cauchy data in unknown non-smooth domains*, Ann. Sc. Norm. Super. Pisa Cl. Sci. (5) **5** (2006) 189–218.
- 15) L. Rondi, *A variational approach to the reconstruction of cracks by boundary measurements*, J. Math. Pures Appl. (9) **87** (2007) 324–342.
- 16) M. Di Cristo and L. Rondi, *Exponential instability for inverse elliptic problems with unknown boundaries*, J. Phys.: Conf. Ser. **73** (*Inverse Problems in Applied Sciences — towards breakthrough*) (2007) 012005 (18 pp).
- 17) L. Rondi, *Stable determination of sound-soft polyhedral scatterers by a single measurement*, Indiana Univ. Math. J. **57** (2008) 1377–1408.
- 18) L. Rondi, *Reconstruction in the inverse crack problem by variational methods*, European J. Appl. Math. **19** (2008) 635–660.
- 19) L. Rondi, *On the regularization of the inverse conductivity problem with discontinuous conductivities*, Inverse Probl. Imaging **2** (2008) 397–409.
- 20) G. Alessandrini, L. Rondi, E. Rosset and S. Vessella, *The stability for the Cauchy problem for elliptic equations*, Inverse Problems **25** (2009) 123004

(47pp).

- 21) L. Rondi, *Reconstruction of material losses by perimeter penalization and phase-field methods*, J. Differential Equations **251** (2011) 150–175.
- 22) L. Rondi and F. Santosa, *Analysis of an Inverse Problem Arising in Photolithography*, Math. Models Methods Appl. Sci. **22** (2012) 1150026 (30pp).
- 23) W. Ring and L. Rondi, *Reconstruction of cracks and material losses by perimeter-like penalizations and phase-field methods: numerical results*, Interfaces Free Bound. **13** (2011) 353–371.
- 24) G. Menegatti and L. Rondi, *Stability for the acoustic scattering problem for sound-hard scatterers*, Inverse Probl. Imaging **7** (2013) 1307–1329.
- 25) J. Li, H. Liu, L. Rondi and G. Uhlmann, *Regularized Transformation-Optics Cloaking for the Helmholtz Equation: From Partial Cloak to Full Cloak*, Comm. Math. Phys. **335** (2015) 671–712.
- 26) L. Rondi and M. Sini, *Stable determination of a scattered wave from its far-field pattern: the high frequency asymptotics*, Arch. Ration. Mech. Anal. **218** (2015) 1–54.
- 27) L. Rondi, *Continuity properties of Neumann-to-Dirichlet maps with respect to the H -convergence of the coefficient matrices*, Inverse Problems **31** (2015) 045002 (24pp).
- 28) L. Rondi, F. Santosa and Z. Wang, *A variational approach to the inverse photolithography problem*, SIAM J. Appl. Math. **76** (2016) 110–137.
- 29) H. Liu, M. Petrini, L. Rondi and J. Xiao, *Stable determination of sound-hard polyhedral scatterers by a minimal number of scattering measurements*, J. Differential Equations **262** (2017) 1631–1670.
- 30) L. Rondi, *A Friedrichs-Maz’ya inequality for functions of bounded variation*, Math. Nachr. **290** (2017) 1830–1839.
- 31) L. Rondi, *Discrete approximation and regularisation for the inverse conductivity problem*, Rend. Istit. Mat. Univ. Trieste **48** (2016) 315–352.
- 32) H. Liu, L. Rondi and J. Xiao, *Mosco convergence for $H(\text{curl})$ spaces, higher integrability for Maxwell’s equations, and stability in direct and inverse EM scattering problems*, J. Eur. Math. Soc. (JEMS) **21** (2019) 2945–2993.
- 33) M. G. Mora, L. Rondi and L. Scardia, *The equilibrium measure for a nonlocal dislocation energy*, Comm. Pure Appl. Math. **72** (2019) 136–158.
- 34) J. A. Carrillo, J. Mateu, M. G. Mora, L. Rondi, L. Scardia and J. Verdera,

- The ellipse law: Kirchhoff meets dislocations*, Comm. Math. Phys. **373** (2020) 507–524.
- 35) K. Modin, A. Nachman and L. Rondi, *A Multiscale Theory for Image Registration and Nonlinear Inverse Problems*, Adv. Math. **346** (2019) 1009–1066.
- 36) M. Di Cristo and L. Rondi, *The distance from the boundary in a Riemannian manifold: regularity up to a conformal change of the metric*, Indiana Univ. Math. J. **70** (2021) 1283–1302.
- 37) M. Di Cristo and L. Rondi, *Interior decay of solutions to elliptic equations with respect to frequencies at the boundary*, Indiana Univ. Math. J. **70** (2021) 1303–1334.
- 38) J. A. Carrillo, J. Mateu, M. G. Mora, L. Rondi, L. Scardia and J. Verdera, *The equilibrium measure for an anisotropic nonlocal energy*, Calc. Var. Partial Differential Equations **60** (2021) 109 (28pp).
- 39) J. Mateu, M. G. Mora, L. Rondi, L. Scardia and J. Verdera, *A maximum-principle approach to the minimisation of a nonlocal dislocation energy*, Mathematics in Engineering **2** (Special issue *Variational Models in Elasticity*) (2020) 253–263.
- 40) J. Mateu, M. G. Mora, L. Rondi, L. Scardia and J. Verdera, *Explicit minimisers of some nonlocal anisotropic energies: a short proof*, Izv. Math. **85** (2021) 468–482.
- 41) L. Rondi, E. Sincich and M. Sini, *Stable determination of a rigid scatterer in elastodynamics*, SIAM J. Math. Anal. **53** (2021) 2660–2689.
- 42) A. Felisi and L. Rondi, *Full discretization and regularization for the Calderón problem*, preprint 2021.
- 43) J. Mateu, M. G. Mora, L. Rondi, L. Scardia and J. Verdera, *Stability of ellipsoids as the energy minimizers of perturbed Coulomb energies*, SIAM J. Math. Anal. **55** (2023) 3650–3676.
- 44) J. Mateu, M. G. Mora, L. Rondi, L. Scardia and J. Verdera, *Energy minimisers of perturbed dislocation energies*, Nonlinear Anal. **231** (Special issue *Variational Models for Discrete Systems*) (2023) 113014 (13pp).
- 45) M. Fornoni and L. Rondi, *Mosco convergence of Sobolev spaces and Sobolev inequalities for nonsmooth domains*, Calc. Var. Partial Differential Equations **62** (2023) 15 (30pp).
- 46) J. Mateu, M. G. Mora, L. Rondi, L. Scardia and J. Verdera, *Explicit minimisers for anisotropic Coulomb energies in 3D*, Adv. Math. **434** (2023) 109333 (28pp).

- 47) L.Rondi, *On unique determination of polyhedral sets*, Axioms **12** (11) (Special issue *Mathematical Methods in Waves-Based Inverse Problems at Different Scales*) (2023) 1035 (16pp).

Research interests

Partial differential equations

Inverse problems

Scattering problems

Calculus of Variations

Long visits for scientific collaboration

IMA, University of Minnesota, Minneapolis, USA (20 April – 2 June 1999)

Hokkaido University, Sapporo, Japan (31 January – 9 February 2002)

IMA, University of Minnesota, Minneapolis, USA (23 April – 4 May 2007)

MSRI, Berkeley, USA (8 November 2010 – 8 December 2010)

University of California Irvine, Irvine, USA (4 – 16 March 2012)

Institut Mittag-Leffler, Stockholm, Sweden (1 – 11 May 2013)

University of Bath, UK (26 February – 11 March 2017)

Grants and funding of research projects

Individual grants and coordination of research projects

PRIN projects

Coordinator of the Research Unit of the Università degli Studi di Pavia of the two-years research project PRIN 2022 *Inverse problems in PDE: theoretical and numerical analysis*, coordinator Prof. Giovanni Alberti (Università degli Studi di Genova), funded by Ministero dell'Università e della Ricerca, Italy, and the European Union through Next Generation UE.

Budget of the research unit: 68.000 euros

GNAMPA projects

Coordinator of the 2008 annual research project *Metodi variazionali applicati*

a problemi inversi funded by GNAMPA, INdAM, Italy.

Coordinator of the 2009 annual research project *Misurazioni di tipo ottimale per la stabilità di problemi inversi* funded by GNAMPA, INdAM, Italy.

Coordinator of the 2011 annual research project *Problemi inversi per le equazioni alle derivate parziali* funded by GNAMPA, INdAM, Italy.

Coordinator of the 2017 annual research project *Analisi di problemi inversi: stabilità e ricostruzione* funded by GNAMPA, INdAM, Italy.

Coordinator of the 2019 annual research project *Proprietà delle soluzioni di equazioni alle derivate parziali e applicazioni ai problemi inversi* funded by GNAMPA, INdAM, Italy.

Local competitive projects

Annual individual research project *Identificazione e ottimizzazione di frontiere* funded by the Università di Trieste through Progetto Giovani Ricercatori – year 2001.

18 months individual research project *Analisi di problemi inversi* funded by the Università di Trieste through Finanziamento per Ricercatori di Ateneo – FRA 2009.

Travel grants

Travel grant to participate to the Workshop “Dirichlet-to-Neumann Maps: Spectral Theory, Inverse Problems and Applications”, held in Oaxaca, Mexico, 29 May – 3 June 2016, funded by GNAMPA, INdAM, Italy.

Travel grant to participate to the Workshop “Reconstruction Methods for Inverse Problems”, held in Banff, Canada, 23 – 28 June 2019, funded by GNAMPA, INdAM, Italy.

Participation to research projects

PRIN projects

Two-years research project PRIN 2002 *Problemi inversi per equazioni alle derivate parziali*, coordinator Prof. Giovanni Alessandrini, funded by Ministero dell’Istruzione, dell’Università e della Ricerca, Italy.

Two-years research project PRIN 2004 *Analisi matematica nei problemi inversi*, coordinator Prof. Giovanni Alessandrini, funded by Ministero dell’I-

struzione, dell'Università e della Ricerca, Italy.

Two-years research project PRIN 2006 *Problemi al contorno inversi*, coordinator Prof. Giovanni Alessandrini, funded by Ministero dell'Università e della Ricerca, Italy.

Two-years research project PRIN 2008 *Analisi Matematica nei Problemi Inversi per le Applicazioni*, coordinator Prof. Giovanni Alessandrini, funded by Ministero dell'Istruzione, dell'Università e della Ricerca, Italy.

Three-years research project PRIN 2017 *Direct and inverse problems for partial differential equations: theoretical aspects and applications*, coordinator Prof. Andrea Cianchi, funded by Ministero dell'Istruzione, dell'Università e della Ricerca, Italy.

GNAMPA projects

2006 annual research project *Problemi al contorno inversi*, coordinator Prof. Giovanni Alessandrini, funded by GNAMPA, INdAM, Italy.

2007 annual research project *Problemi inversi nelle equazioni alle derivate parziali per le applicazioni*, coordinator Prof. Giovanni Alessandrini, funded by GNAMPA, INdAM, Italy.

2012 annual research project *Problemi inversi con frontiere incognite*, coordinator Dr. Eva Sincich, funded by GNAMPA, INdAM, Italy.

2014 annual research project *Problemi Inversi per Equazioni e Sistemi alle Derivate Parziali*, coordinator Dr. Michele Di Cristo, funded by GNAMPA, INdAM, Italy.

2015 annual research project *Problemi al contorno inversi e sovradeterminati per equazioni alle derivate parziali*, coordinator Prof. Edi Rosset, funded by GNAMPA, INdAM, Italy.

2016 annual research project *Problemi Inversi per Equazioni Differenziali*, coordinator Prof. Michele Di Cristo, funded by GNAMPA, INdAM, Italy.

2018 annual research project *Problemi inversi per equazioni alle derivate parziali*, coordinator Prof. Elisa Francini, funded by GNAMPA, INdAM, Italy.

2022 annual research project *Problemi inversi per equazioni alle derivate parziali*, coordinator Prof. Matteo Santacesaria, funded by GNAMPA, INdAM, Italy.

2023 annual research project *Problemi inversi per equazioni alle derivate parziali e applicazioni*, coordinator Prof. Andrea Aspri, funded by GNAMPA, INdAM, Italy.

Local competitive projects

Two-years research project *Problemi inversi*, coordinator Prof. Giovanni Alessandrini, funded by the Università di Trieste, through Fondo per la Ricerca di Ateneo – FRA 2012.

Two-years research project *Problemi inversi per PDE, unicità, stabilità, algoritmi*, coordinator Prof. Giovanni Alessandrini, funded by the Università di Trieste through Fondo per la Ricerca di Ateneo – FRA 2014.

Two-years research project *Problemi Inversi, dalla stabilità alla ricostruzione*, coordinator Prof. Giovanni Alessandrini, funded by the Università di Trieste through Fondo per la Ricerca di Ateneo – FRA 2016.

Conferences organization

Minisymposium *Discrete-like inverse problems: analysis and numerics* at AIP 2009 *Conference on Applied Inverse Problems* (Wien, Austria, 20 – 24 July 2009), in collaboration with Dr. Michele Di Cristo.

Minisymposium *Inverse problems for partial differential equations* at SIAM Conference on Analysis of Partial Differential Equations (Miami, USA, 7–10 December 2009).

Minisymposium *Unique continuation and inverse problems* at AIP 2019 *Applied Inverse Problems Conference* (Grenoble, France, 8 – 12 July 2019).

Special Session *Inverse Problems* at the *AMS-UMI International Joint Meeting* (Palermo, Italy, 23 – 26 July 2024), in collaboration with Prof. Jingni Xiao.

Invited seminars

Invited short courses at conferences/schools

Workshop *Reconstruction Methods for Inverse Problems* (Rome, Italy, 2018, 4 hours course)

2021 International School on Inverse Problems in Geophysics on the shore of the Lario Lake (online, 2021, 2 hours course)

2023 International School on Inverse Problems in Geophysics on the shore of the Lario Lake (Como, Italy, 2023, 2 hours course)

Invited seminars at conferences

Conference on the Inverse Problem for the identification of discontinuity and related problems (Sapporo, Japan, 2002)

Workshop *Complex Analysis and Inverse Problems* (Paris, France, 2003)

Third conference on Inverse Problems, Control and Shape Optimization PICO'06 (Nice, France, 2006)

Workshop *Inverse Problems: Recent Progress and New Challenges* (Banff, Canada, 2008)

Conference INDI2011 *Interfaces and Discontinuities in Solids, Liquids and Crystals* (Gargnano, Italy, 2011)

Workshop *Analytic and Geometric Methods in Medical Imaging* (Cambridge, UK, 2011)

Conference *Perspectives in Phase Space Analysis of Partial Differential Equations* (Bertinoro, Italy, 2011)

Conference *Differential equations, inverse problems and control theory* (Cortona, Italy, 2013)

Inverse Problems Follow-up Meeting (Cambridge, UK, 2014)

Conference *PDE's, Inverse Problems and Control Theory* (Bologna, Italy, 2014)

Conference *Reconstruction and Stability Issues in Inverse Problems* (Paris, France, 2015)

Conference *New advances in PDE's, Inverse Problems and Control Theory* (Parma, Italy, 2015)

Workshop *Dirichlet-to-Neumann Maps: Spectral Theory, Inverse Problems and Applications* (Oaxaca, Mexico, 2016)

Workshop *Mathematical and Numerical Modeling in Optics* (Minneapolis, USA, 2016)

Conference *Partial Differential Equations and Applications* (Bologna, Italy, 2017)

Conference *Nonlocal interactions: Dislocations and beyond* (Bath, UK, 2018)

Workshop *Recent advances in Phase-Field modeling: from Engineering to Biology* (Pavia, Italy, 2019)

Workshop *Reconstruction Methods for Inverse Problems* (Banff, Canada, 2019)

Workshop PHAME2022 *PHase field MEthods in applied sciences* (Rome, Italy, 2022)

Workshop *Inverse problems and applications* (Grenoble, France, 2022)

Workshop *Inverse Problems in the Desert* (Abu Dhabi, UAE, 2022)

Invited seminars at universities and research institutes

University of Minnesota, Minneapolis, USA, 1999

Johannes Kepler Universität of Linz, Austria, 1999

Ludwig Maximilians Universität of München, Germany, 1999

University of Tokyo, Japan, 2002

Università degli Studi di Udine, Italy, 2003

Università degli Studi di Firenze, Italy, 2004

Università degli Studi di Roma “La Sapienza”, Italy, 2004

INRIA, Sophia Antipolis, France, 2006

Università degli Studi di Firenze, Italy, 2007

University of Minnesota, Minneapolis, USA, 2007

Karl Franzens Universität of Graz, Austria, 2007

University of Minnesota, Minneapolis, USA, 2007

Politecnico di Milano, Italy, 2008

Università degli Studi di Milano, Italy, 2009

Karl Franzens Universität of Graz, Austria, 2009

Mathematical Sciences Research Institute, Berkeley, USA, 2010

Università di Bologna, Italy, 2011

Università degli Studi di Milano, Italy, 2011
University of Minnesota, Minneapolis, USA, 2012
University of California Irvine, Irvine, USA, 2012
University of Primorska, Koper, Slovenia, 2012
Universidad Autónoma de Madrid, Madrid, Spain, 2012
The University of North Carolina at Charlotte, USA, 2012
Johann Radon Institute for Computational and Applied Mathematics (RICAM), Linz, Austria, 2013
Universität Würzburg, Germany, 2013
École Polytechnique, Palaiseau, France, 2013
Hong Kong Baptist University, Hong Kong, China, 2015
University of Bath, UK, 2017
University of Jyväskylä, Finland, 2017
Università degli Studi di Milano, Italy, 2017
Université de Reims Champagne-Ardenne, France, 2018
Kanazawa University, Japan, 2018
Johann Radon Institute for Computational and Applied Mathematics (RICAM), Linz, Austria, 2019
Università degli Studi di Genova, Italy, 2019
University of California Irvine, Irvine, USA, (online), 2023
Università degli Studi di Modena e Reggio Emilia, Italy, 2024

Invited short talks at conferences or invited talks at minisymposia

GAMM-Jahrestagung 2000 (Göttingen, Germany, 2000) at the minisymposium *Regularization Methods for Inverse Problems in Differential Equations*

Conference on Applied Inverse Problems: Theoretical and Computational Aspects (Montecatini Terme, Italy, 2001) at the minisymposium *Determination of Defects from Overdetermined Measurements*

Meeting *Inverse Problems in Wave Scattering and Impedance Tomography* (Oberwolfach, Germany, 2003)

ICIAM03 *International Congress on Industrial and Applied Mathematics 2003* (Sydney, Australia, 2003) at the minisymposium *Inverse Scattering — The Inverse Obstacle Problem*

Meeting *Inverse and Direct Problems* (Cortona, Italy, 2005)

2006 *SIAM Annual Meeting* (Boston, USA, 2006) at the minisymposium *Inverse Problems for Parabolic Equations*

AIP 2007 *Conference on Applied Inverse Problems 2007: Theoretical and Computational Aspects* (Vancouver, Canada, 2007) at the minisymposium *Inverse Problems in Thermal Imaging*

AIP 2007 *Conference on Applied Inverse Problems 2007: Theoretical and Computational Aspects* (Vancouver, Canada, 2007) at the minisymposium *Determination of defects from boundary measurements*

AIP 2007 *Conference on Applied Inverse Problems 2007: Theoretical and Computational Aspects* (Vancouver, Canada, 2007) at the minisymposium *Identification of defects and cracks*

AIP 2009 *Conference on Applied Inverse Problems 2009* (Wien, Austria, 2009) at the minisymposium *New Developments in Geometric Inverse Problems*

8th *AIMS Conference on Dynamical Systems, Differential Equations and Applications* (Dresden, Germany, 2010) at the special session *Inverse Problems*

ICIAM 2011 *International Congress on Industrial and Applied Mathematics 2011* (Vancouver, Canada, 2011) at the minisymposium *Recent Advances in Inverse Problems for Partial Differential Equations*

10th *AIMS Conference on Dynamical Systems, Differential Equations and Applications* (Madrid, Spain, 2014) at the special session *Inverse Problems in PDE and Geometry*

10th *AIMS Conference on Dynamical Systems, Differential Equations and Applications* (Madrid, Spain, 2014) at the special session *Microlocal Analysis and the Inverse Conductivity Problem*

AIP 2015 *Applied Inverse Problems Conference* (Helsinki, Finland, 2015) at the minisymposium *Stability estimates for inverse problems*

Workshop *Analysis and Numerics of Acoustic and Electromagnetic Problems* (Linz, Austria, 2016)

Conference *100 Years of the Radon Transform* (Linz, Austria, 2017) at the minisymposium *Tomographic Reconstruction of Discontinuous Coefficients*

AIP 2019 *Applied Inverse Problems Conference* (Grenoble, France, 2019) at the minisymposium *Computational methods for inverse problems*

AIP 2019 *Applied Inverse Problems Conference* (Grenoble, France, 2019) at the minisymposium *Anisotropic inverse problems and asymptotics*

SIAM Conference on Imaging Science IS22 (online, 2022) at the minisymposium *Mathematical Imaging at the Small Scale: Modeling, Analysis and Applications*

Conference IPMS 2022 *Inverse Problems: Modelling and Simulation* (Malta, 2022) at the minisymposium *Electrical Impedance Tomography: Theory and Applications*

Conference IPMS 2024 *Inverse Problems: Modelling and Simulation* (Malta, 2024) at the minisymposium *In Memoriam: Professor Pierre Célestin Sabatier (1935–2023)*

Other professional activities

VOLUME 1 (2023) – PRESENT

Member of the Editorial Board of the journal *Communications on Analysis and Computation* (CAC) published by the *American Institute of Mathematical Sciences* (AIMS).

ACADEMIC YEAR 2013/14 – ACADEMIC YEAR 2018/19

Member of the Academic Board of the Doctorate School in “Earth Science and Fluid Mechanics” of the Università di Trieste (XXIX – XXXII cycles)

ACADEMIC YEAR 2017/18 – ACADEMIC YEAR 2019/20

Member of the Academic Board of the Doctorate School in “Earth Science, Fluid Dynamics, and Mathematics. Interactions and Methods” of the Università degli Studi di Trieste, Italy (XXXIII cycle)

Member of the review panel in applied mathematics of the Academy of Finland and the Research Council for Natural Sciences and Engineering for Academy Projects Funding, Academy Research Fellows and Postdoctoral Researchers (September 2016 call, LT16Math3 panel)

Member of the review panel in mathematics of the Academy of Finland (Research Council for Natural Sciences and Engineering) for Academy Projects funding, Academy Projects funding for early-career researchers, Academy Research Fellows and Postdoctoral Researchers (September 2018 call, LT18Math panel)

Referee of a research grant application for the Hertha Firnberg-Program funded by the Austrian Science Fund (FWF) (year 2010)

Referee of a research grant application for the FONDECYT Regular 2018 Grant Competition funded by the Chilean National Science and Technology Commission (CONICYT – Chile)

Referee (rapporteur) for the Ph.D. thesis in Mathématiques appliquées by Mikhail Isaev at École Polytechnique, Palaiseau, France (November 2013)

External reviewer for the admission competition to the Ph.D. program I4WORLD - Imaging and Characterisation for a Sustainable World of the University of Oulu, Finland (30 November 2022 call).

Member of the committee for the evaluation of applications for a two years post doc position at the Dipartimento di Matematica of the Università degli Studi di Milano, call DR 3476/2018 on 15/10/2018.

Member of the committee for the admission competition to the Doctoral School in Mathematical Sciences of the Università degli Studi di Milano (academic year 2019/2020, XXXV cycle).

Università di Trieste member of the committee for the admission procedure to the fellowships for Master students in Mathematics offered by SISSA, Trieste (years 2010 and 2016)

Referee for the following journals: Inverse Problems, SIAM Journal on Mathematical Analysis, SIAM Journal on Applied Mathematics, SIAM Journal on Numerical Analysis, Inverse Problems and Imaging, Annals of Mathematics, Archive for Rational Mechanics and Analysis, Journal de Mathématiques Pures et Appliquées, Journal of the European Mathematical Society, Transactions of the American Mathematical Society, Communications in Partial Differential Equations, Journal of Differential Equations, Calculus of Variations and Partial Differential Equations, Mathematical Methods in the Applied Sciences, Annali di Matematica Pura e Applicata, Nonlinear Analysis, Numerische Mathematik, ESAIM Mathematical Modelling and Numerical Analysis, International Mathematics Research Notices, Discrete and Continuous Dynamical Systems Series S, Zeitschrift für Analysis und ihre Anwen-

dungen, *Applicable Analysis*, *Mathematics in Engineering*, *Communications in Mathematical Sciences*, *Journal of Mathematical Analysis and Applications*, *Milan Journal of Mathematics*, *Journal of Mathematical Physics*, *Journal of Inverse and Ill-Posed Problems*, *Rendiconti dell'Istituto di Matematica dell'Università di Trieste*, *Inverse Problems in Science and Engineering*, *Analysis and Mathematical Physics*, *Applied Mathematics-A Journal of Chinese Universities*, *Mathematical Modelling and Analysis*, *Applied Numerical Mathematics*

Mentoring activity

Postdoc

Daniela Di Donato (Università di Pavia, 1 April 2024 – present)

Master thesis in Mathematics

Alice Cherini (Università di Trieste, 2008/09)

Giulia Fonda (Università di Trieste, 2009/10)

Cristiano Guida (Università di Trieste, 2009/10)

Giorgio Menegatti (Università di Trieste, 2011/12)

Michele Petrini (Università di Trieste, 2012/13)

Anna Dessenibus (Università di Trieste, 2014/15)

Alessandro Felisi (Università di Milano, 2019/20)

Matteo Fornoni (Università di Milano, 2019/20)

First degree thesis in Mathematics

Deborah Agbedjro (Università di Trieste, 2006/07)

Giulia Fonda (Università di Trieste, 2007/08)

Gaia Pavoni (Università di Trieste, 2007/08)

Irene Ferro-Casagrande (Università di Trieste, 2009/10)

Giulia Favaro (Università di Trieste, 2011/12)

Internship for the master degree in Mathematics

Giovanno Marcelo Renato Cárdenas (Università di Trieste, 2012/13)

Fabio Pezzolo (Università di Trieste, 2017/18)

Courses

FALL 2000 TERM (University of Minnesota, Minneapolis, USA)

MATH 1142 *Short Calculus*

SPRING 2001 TERM (University of Minnesota, Minneapolis, USA)

MATH 1142 *Short Calculus*

MATH 1151 *Precalculus II*

ACADEMIC YEAR 2006–2007 (Università di Trieste)

Analisi 5 (Corso di Laurea in Matematica, 6 ECTS)

FALL 2007 TERM (University of Minnesota, Minneapolis, USA)

MATH 2374 *IT Multivariable Calculus and Vector Analysis*

ACADEMIC YEAR 2007–2008 (Università di Trieste)

Elementi di Analisi Superiore (Corso di Laurea in Fisica, 6 ECTS)

ACADEMIC YEAR 2008–2009 (Università di Trieste)

Analisi Matematica II (Corso di Laurea in Fisica, 9 ECTS)

ACADEMIC YEAR 2009–2010 (Università di Trieste)

Analisi Matematica II (Corso di Laurea in Fisica, 9 ECTS)

ACADEMIC YEAR 2010–2011 (Università di Trieste)

Analisi Matematica II (Corso di Laurea in Fisica, 9 ECTS)

ACADEMIC YEAR 2011–2012 (Università di Trieste)

Analisi Superiore 2 (Corso di Laurea Magistrale in Matematica, 6 ECTS)

Analisi Matematica II - part B (Corso di Laurea in Fisica, 6 ECTS)

ACADEMIC YEAR 2012–2013 (Università di Trieste)

Analisi Superiore 2 (Corso di Laurea Magistrale in Matematica, 6 ECTS)

Equazioni Differenziali (Corso di Laurea Magistrale in Matematica, 6 ECTS)

ACADEMIC YEAR 2013–2014 (Università di Trieste)

Analisi Superiore 2 (Corso di Laurea Magistrale in Matematica, 6 ECTS)

Analisi Matematica II - part B (Corso di Laurea in Fisica, 9 ECTS)

ACADEMIC YEAR 2014–2015 (Università di Trieste)

Analisi Superiore 2 (Corso di Laurea Magistrale in Matematica, 6 ECTS)

Analisi Matematica II - part B (Corso di Laurea in Fisica, 9 ECTS)

ACADEMIC YEAR 2015–2016 (Università di Trieste)

Analisi Superiore 2 (Corso di Laurea Magistrale in Matematica, 6 ECTS)

Analisi Matematica II - part B (Corso di Laurea in Fisica, 9 ECTS)

ACADEMIC YEAR 2016–2017 (Università di Trieste)

Analisi Superiore 2 (Corso di Laurea Magistrale in Matematica, 6 ECTS)

Analisi Matematica II - part B (Corso di Laurea in Fisica, 9 ECTS)

ACADEMIC YEAR 2017–2018 (Università di Trieste)

Analisi Superiore 2 - part A (Corso di Laurea Magistrale in Matematica, 2 ECTS)

Analisi 3 - modulo A (Corso di Laurea in Matematica, 6 ECTS)

Analisi Matematica II - part A (Corso di Laurea in Fisica, 9 ECTS)

ACADEMIC YEAR 2018–2019 (Università di Milano)

Analisi Matematica 1 (Corso di Laurea in Fisica, 5 ECTS)

Matematica del Continuo (Corso di Laurea in Informatica per la Comunicazione Digitale, 8 ECTS)

ACADEMIC YEAR 2019–2020 (Università di Milano)

Analisi Matematica 1 (Corso di Laurea in Matematica, 5 ECTS)

Matematica del Continuo (Corso di Laurea in Informatica per la Comunicazione Digitale, 8 ECTS)

ACADEMIC YEAR 2020–2021 (Università di Milano)

Analisi Matematica 1 (Corso di Laurea in Matematica, 5 ECTS)

Matematica del Continuo (Corso di Laurea in Informatica per la Comunicazione Digitale, 8 ECTS)

ACADEMIC YEAR 2020–2021 (Università di Pavia)

Analisi Matematica 2 - part B (Corso di Laurea in Ingegneria Elettronica)

e Informatica, 3 ECTS)

ACADEMIC YEAR 2021–2022 (Università di Pavia)

Calculus (Bachelor of Science in Artificial Intelligence, 12 ECTS)

Analisi Matematica 2 - part B (Corso di Laurea in Ingegneria Elettronica e Informatica, 3 ECTS)

ACADEMIC YEAR 2022–2023 (Università di Pavia)

Calculus (Bachelor of Science in Artificial Intelligence, 12 ECTS)

Analisi Matematica 2 - part B (Corso di Laurea in Ingegneria Elettronica e Informatica, 3 ECTS)

ACADEMIC YEAR 2023–2024 (Università di Pavia)

Calcolo delle Variazioni - parte B (Corso di Laurea Magistrale in Matematica, 3 ECTS)

Calculus - part B (Bachelor of Science in Artificial Intelligence, 6 ECTS)

Matematica (Corso di Laurea in Scienze Biologiche, 6 ECTS)

Exercise sessions for advanced courses

ACADEMIC YEAR 2018–2019 (Università di Milano)

Analisi Reale (Corso di Laurea Magistrale in Matematica, 3 ECTS)

ACADEMIC YEAR 2019–2020 (Università di Milano)

Analisi Reale (Corso di Laurea Magistrale in Matematica, 3 ECTS)

ACADEMIC YEAR 2020–2021 (Università di Milano)

Analisi Matematica 4 (Corso di Laurea in Matematica, 2 ECTS)

Other information

Departmental service

14/2/2022 – PRESENT

Student Affairs Committee of the Bachelor of Science in Artificial Intelligence of the Università di Pavia

6/11/2015 – 14/9/2018

Didactic Committee of the Corso di Studi in Matematica of the Università di Trieste

23/1/2013 – 18/10/2015

Institutional Coordinator of International Mobility (Erasmus programme) for the Dipartimento di Matematica e Geoscienze of the Università di Trieste

3/2/2013 – 5/11/2015

Self-evaluation, periodic evaluation and accreditation (AVA) Committee of the Corso di Studi in Matematica of the Università di Trieste

ACADEMIC YEAR 2002/03 – ACADEMIC YEAR 2017/18

Contact person for the Erasmus exchange agreement with the Universidad de Granada, Spain, for the Corso di Studi in Matematica of the Università di Trieste

Languages

Italian (mother tongue)

English

Computer programs

MatLab