

Gianpaolo Piscitelli

Born in Maddaloni (CE), 29/03/1989.

Dipartimento di Matematica e Applicazioni “R. Caccioppoli”,
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PRESENT POSITION

Sep 21 - present **Assistant Professor (Ricercatore a tempo determinato - Lettera A)**, Università degli Studi di Napoli Federico II.

PAST POSITIONS

Sep 20 - Sep 21 **Post-Doc Resercher (Assegnista di ricerca)**, Università degli Studi di Cassino e del Lazio Meridionale.

Dec 18 - Aug 20 **Post-Doc Research Fellow (Borsista di ricerca)**, Università degli Studi di Cassino e del Lazio Meridionale.

Dic 17 - Dic 18 **Post-Doc Research Fellow**, Universidade de Lisboa.

EDUCATION

Mar 14 - Jul 17 **Ph.D. in Mathematics and Computer Sciences** (MIUR grant), **Università degli Studi di Napoli Federico II**. Thesis: *Optimization problems for nonlinear eigenvalues*, advisor prof. Vincenzo Ferone. Date of defense: 24/10/2017.
Committee: prof. Salvatore Angelo Marano, prof. Adele Ferone, prof. Carlo Nitsch.
PhD thesis referee: prof. Paolo Salani, prof. Maria Francesca Betta.

Mar 15 - Jul 15 **National Italian license as certified teacher in high schools in Mathematics, Physics and Applied Mathematics**, Università degli Studi di Napoli Federico II. Thesis in Physics Didactics: *Percorso didattico di base sulla meccanica quantistica*. Advisor prof. Italo Testa. Date of defense: 24/07/2015. Graduation grade: 100/100.
Courses: *Didactics and Special Pedagogy, Learning Methods Pedagogy, Planning and Evaluation of educational actions, Didactics of Mathematics, Didactics of Physics, Informatics didactics Technologies*.

Nov 10 – Oct 12 **Master’s degree in Mathematics, Università degli Studi di Napoli Federico II**. Thesis in Mathematical Analysis: *On the regularity of solution of second order elliptic equations*, advisor prof. Anna Verde. Date of defense 24/07/2013. Graduation grade: 110/110 cum laude.
Courses: *Foundation and advanced techniques in Mathematical Analysis, Calculus of Variations, Partial Differential Equations, Mathematical Physics, Numerical Analysis, Financial Mathematics, Geometry, Physics*.

Nov 07 – Oct 10 **Bachelor's degree in Mathematics** (ADISU grant), **Università degli Studi di Napoli Federico II**. Thesis in Mathematical Analysis: *On heat equation: existence, uniqueness and regularity theorems*, advisor: prof. Carlo Nitsch. Date of defense: 25/11/2010. Graduation grade: 110/110 cum laude.
Fundamentals of *Mathematical Analysis, Mathematical Physics, Numerical Analysis, Probability and Statistics, Physics, Geometry, Algebra, Mathematical Logic*.

ABROAD VISITING RESEARCH PERIODS

Dec 17 - Dec 18 University of **Lisbon (Portugal)**, invited by Prof. P. Freitas.
Mar 17 - Apr 17 University of **Cologne (Germany)**, invited by Prof. B. Kawohl.

FURTHER TITLES

Sep 20 - Sep 21 **Post-Doc Resercher (Assegnista di ricerca)** "*Dimensionamento di reti cellulari per il supporto simultaneo di comunicazioni di tipo URLLC e eMBB*", founded by MiSE-Fondi Sviluppo e Coesione 2014-2020 through the project "SUMMA: Smart Urban Mobility Management", **Università degli Studi di Cassino e del Lazio Meridionale**.

Giu 19 - Set 21 **Cultore della materia in Analisi Matematica**, Università degli Studi di Cassino e del Lazio Meridionale.

Dec 18 - Aug 20 **Post-Doc Research Fellow** "*Problemi di ottimizzazione per gli autovalori di operatori nonlineari*" (10.12.19 - 31.08.20) e "*Problemi di ottimizzazione per gli autovalori di operatori nonlineari e loro applicazioni*" (10.12.18 - 09.12.19), founded by MIUR throughout the Progetto di Eccellenza of Dipartimento di Ingegneria Elettronica e Informatica "Maurizio Scarano", **Università degli Studi di Cassino e del Lazio Meridionale**.

Dic 17 - Dic 18 **Post-Doc Research Fellow** "*Extremal spectral quantities and related problems*", founded by Fundação para a Ciência e a Tecnologia through project PTDC/MAT-CAL/4334/2014, **Universidade de Lisboa**.

Mar 14 - Jul 17 **PhD Scholarship** for the PhD course in Mathematics and Computer Sciences (MIUR grant), **Università degli Studi di Napoli Federico II**.

Nov 07- Oct 10 **Bachelor scholarship** for the bachelor degree in Mathematics at Università degli Studi di Napoli Federico II.

COMMUNICATIONS

Invited talk (scheduled) **Shape optimizations of nonlinear eigenvalues and torsional rigidity on domains with holes**, *Quantitative and qualitative aspects of nonlinear PDE's*, Bari, 05-09/09/2022.

Invited talk (scheduled) **Sharp estimates for the first eigenvalue of the anisotropic Robin-p-Laplacian eigenvalue problems**, *Two days of PDEs in heterogeneous and irregular structures*, Roma, 23-24/06/2022.

Invited talk (scheduled) **Sharp estimates for the first eigenvalue of the anisotropic Robin-p-Laplacian eigenvalue problems**, *Shape Optimization, related topics and applications*, Roskoff (Francia), 13-17/06/2022.

Talk **The Monotonicity Principle for Nonlinear Conductivity Inverse Problems**, *SIAM Conference on Imaging Science (IS22)*, Berlino (on line), 21-25/03/2022.

Poster **The Steklov-Dirichlet Laplacian eigenvalue problem on convex sets with spherical hole**, *C.I.M.E. course "Convex Geometry"*, Cetraro (CS), 30/08-03/09/2021.

- Talk **The pseudo-orthogonality for graph 1-Laplacian eigenvalues and applications to higher Cheeger constants and data clustering**, *Mini-courses in Mathematical Analysis 2021*, Padova (da remoto), 21-25/07/2021.
- Talk **The Monotonicity Principle for Tomography of Nonlinear Conducting Materials**, *Multi-scale Analysis: Thematic Lectures and Meeting (MATHLEC-2021)*, International Centre for Theoretical Sciences of the Tata Institute of Fundamental Research (ICTS-TIFR), Bengaluru (India) (da remoto), 15-19/02/2021.
- Talk **Sharp estimates for the first p-Laplacian eigenvalue and for the p-torsional rigidity on domain with holes**, *Mini-courses in Mathematical Analysis 2020, Padova (online)*, 14-17/09/2020.
- Poster **Sharp estimates for the first p-Laplacian eigenvalue and the p-torsional rigidity on convex sets with holes**, *Mathematics for Mechanics*, Prague (CZ), 29/10-01/11/2019.
- Talk **Sharp estimates for the first p-Laplacian eigenvalue and the p-torsional rigidity on convex sets with holes**, *Shape Optimization and Isoperimetric and Functional Inequalities*, Levico Terme (TN), 23-27/09/2019.
- Poster **Sharp estimates for the first p-Laplacian eigenvalue and the torsional rigidity on convex sets with holes**, *Mathematical Modeling for Science and Engineering*, Napoli, 11-13/09/2019.
- Invited talk **Symmetry and asymmetry results for some classes of nonlinear eigenvalue problems**, *INDaM Intensive Period 2019, Shape Optimization, control and inverse problems of PDEs*, Napoli, 10-11/07/2019.
- Symposium organization Symposium organizer of **Young Researcher Minisymposium in the INDaM Intensive Period 2019, Shape Optimization, control and inverse problems of PDEs**, Napoli, 10-11/07/2019.
- Invited talk **Sharp estimates for the first Laplacian eigenvalue and the torsional rigidity on double connected sets**, *International Conference on Elliptic and Parabolic Problems*, Gaeta (LT), 20-24/05/2019.
- Invited talk **A sharp weighted anisotropic Poincare inequality for convex domains**, *Week-end on Variational Methods and Differential Equations*, Catania, 14-15/12/2018.
- Talk **A sharp weighted anisotropic Poincare inequality for convex domains**, *Topics in Nonlinear Analysis: Calculus of Variations and PDEs*, Lisboa, 10-12/10/2018.
- Poster **Some estimates for higher eigenvalues of nonlinear operators**, *Nonlinear Analysis and PDEs in Caserta*, Caserta, 10-14/09/2018.
- Poster **Some estimates for higher eigenvalues of nonlinear operators**, *C.I.M.E. course "Geometry of PDE's and related problems"*, Cetraro (CS), 19-23/06/2017.
- Poster **On a saturation phenomenon for a nonlinear nonlocal eigenvalue problem**, *Partial Differential Equations and Related Topics*, Alghero (SS), 12-16/09/2016.
- Poster **On a saturation phenomenon for a nonlinear nonlocal eigenvalue problem**, *New Trends in Calculus of Variations*, Accademia dei Lincei, Roma, 27/05/2016.
- Poster **On a saturation phenomenon for a nonlinear nonlocal eigenvalue problem**, *Geometric aspects of PDE's and functional inequalities*, Cortona (Ar), 28-30/04/2016.

SEMINARS

Shape optimizations of nonlinear eigenvalues and torsional rigidity on domains with holes, Università degli studi di Napoli Federico II, Napoli, 17/01/2022.

The Monotonicity Principle for Tomography of Nonlinear Conducting Materials, *Seminario su invito del prof. Ravi Prakash*, Universidad de Concepción, Concepción (Cile) (on line) <https://www.youtube.com/watch?v=MjQYOHHdSbs>, 16/03/2021.

Laboratorio di Matematica per la crittografia e l'Analisi dei dati, *Incontro con INNOVA per il trasferimento tecnologico*, Cassino (FR), 16/01/2019.

Risultati di simmetria e di asimmetria per alcune classi di problemi agli autovalori non lineari, *Incontri di Matematica per giovani ricercatori*, Università degli studi di Napoli Federico II, Napoli, 02/05/2017.

On a saturation phenomenon for a nonlinear nonlocal eigenvalue problem, *Seminario su invito del prof. Bernd Kawohl*, Università di Colonia (Germania), 13/03/2017.

Unique continuation for fully nonlinear elliptic equations, *Scuola Matematica Interuniversitaria, Regularity Techniques and Geometrical Aspects in Nonlinear PDE*, Cortona (AR), 28/07 – 14/08/2014.

SCHOOLS ATTENDED

C.I.M.E. course “Convex Geometry”, Cetraro (CS), 30/08-03/09/2021.

Attended course: S. Artstein, *Asymptotic geometric analysis*; G. Bianchi, P. Gronchi, *Symmetrizations*; A. Colesanti, D. Hug, *Geometric and analytic inequalities*; M. Ludwig, *Valuations on convex bodies and convex functions*, D. Yang, *Isoperimetric and Minkowski problems in the L^p Brunn-Minkowski theory*.

CIRM school "Shape Optimization, Spectral Geometry and Calculus of Variations", CIRM - Centre International de Rencontres Mathématiques, Marsiglia (France) 29/03-02/04/2021.

Attended course: Jimmy Lamboley, *Introduction to shape optimization*; Bruno Colbois e Pedro Freitas, *Spectral geometry*; Almut Burchard, *Geometric and isoperimetric inequalities*; Charles Dapogny e Édouard Oudet, *Numerical analysis of these problems*.

C.I.M.E. course “Geometry of PDE's and related problems”, Cetraro (CS), 19-23/06/2017.

Attended courses: Xavier Cabré, *Stable solutions to some elliptic problems: minimal cones, the Allen-Cahn equation, and blow-up solutions*; Antoine Henrot, *Isoperimetric inequalities for eigenvalues of the Laplacian*; Daniel Peralta-Salas, *Topological aspects of critical points and level sets in elliptic PDE*; Wolfgang Reichel, *Symmetry properties for solutions of higher-order elliptic boundary value problems*; Henrick Shahgholian, *Recent trends in Free Boundary Regularity*.

School and Workshop “PDEs and Applications”, Napoli, 8-12/02/2016.

Attended course: Giuseppe Buttazzo, *Optimization problems in mass transport theory*; Giuseppe Mingione, *A primer on nonlinear Calderon-Zygmund theory*; Enzo Orsingher, *Fractional calculus and some applications to stochastic processes*.

Mini-courses in Mathematical Analysis 2015, Padova, 22-26/06/2015.

Attended courses: Martin Costabel, *On the inf-sup constant of the divergence*; Yehuda Pinchover, *On optimal Hardy inequalities for second-order elliptic operators*; Paolo Salani, *Geometric properties of elliptic and parabolic PDE's*; Joan Verdera, *The vorticity and aggregation equations, and singular integrals*.

Scuola Matematica Interuniversitaria, Cortona (AR), 28/07 – 14/08/2014.

Attended course: Alberto Farina e Ovidiu Savin, *Regularity Techniques and Geometrical Aspects in Nonlinear PDE*.

ERC School “Geometric Functional Inequalities and Shape Optimization”, Napoli, 9-13/09/2013.

Attended courses: Dorin Bucur, *Shape Optimization and Isoperimetric inequalities*; Francesco Maggi, *The rigidity problem for symmetrization inequalities*; Massimiliano Morini, *An isoperimetric problem with long-range interactions*.

REFEREEING ACTIVITIES

Referee for

- **Advances in Difference Equations;**
- **MDPI Journal - Mathematics;**
- **Proc. A Royal Soc. Edinburgh.**

Reviewer for **Zentralblatt Math.**

TEACHING ACTIVITIES

2021/22

Teaching assistantship (8 hours) of **Analisi Matematica I**, Industrial Chemistry Bachelor's degree, Università degli Studi di Napoli Federico II, course held by prof. Francesco Chiacchio.

Seminarial activities (3 hours) of **Introduzione all'Analisi Matematica**, Piano Nazionale Lauree Scientifiche, Università degli Studi di Napoli Federico II, course held by prof. MariaRosaria Posteraro.

Teaching course (72 hours) of **Analisi Matematica I**, Aerospace and Mechanical Engineering Bachelor's degree course, Università degli Studi di Napoli Federico II.

Teaching course (24 hours) with prof. Antonio Corbo Esposito of **Metodi Matematici per l'Ingegneria**, Industrial Engineering Bachelor's degree course, Università degli Studi di Cassino e del Lazio Meridionale.

A.A. 2020/21

Teaching course (24 hours) with prof. Antonio Corbo Esposito of **Metodi Matematici per l'Ingegneria**, Industrial Engineering Bachelor's degree course, Università degli Studi di Cassino e del Lazio Meridionale.

Teaching course (24 hours) with prof. Luisa Faella and **teaching assistantship** (40 hours) of **Analisi Matematica II**, Industrial Engineering Bachelor's degree course, Università degli Studi di Cassino e del Lazio Meridionale.

Teaching assistantship (26 hours) of **Analisi Matematica I**, Industrial Engineering Bachelor's degree, Università degli Studi di Cassino e del Lazio Meridionale, course held by prof. Luisa Faella.

A.A. 2019/20

Teaching assistantship (70 hours) of **Analisi Matematica II**, Industrial Engineering Bachelor's degree, Università degli Studi di Cassino e del Lazio Meridionale, course held by prof. Luisa Faella.

Teaching course (25 hours) of **Analisi Funzionale**, Metodi, modelli e tecnologie per l'Ingegneria **PhD course**, Università degli Studi di Cassino e del Lazio Meridionale.

Co-Teaching course (6 hours) with PhD. Domenico Angelo La Manna of **Introduzione alle Large Deviations**, Metodi, modelli e tecnologie per l'Ingegneria **PhD course**, Università degli Studi di Cassino e del Lazio Meridionale.

Teaching assistantship (2 hours) of **Analisi Matematica II**, Industrial Engineering Bachelor's degree (based in Frosinone), Università degli Studi di Cassino e del Lazio Meridionale, course held by prof. Roberto Alicandro.

Teaching assistantship (20 hours) of **Analisi Matematica I**, Industrial Engineering Bachelor's degree, Università degli Studi di Cassino e del Lazio Meridionale, course held by prof. Luisa Faella.

Tutoring supervision (10 hours) of **Precorsi di Matematica**, Engineering Didactics Area, Università degli Studi di Cassino e del Lazio Meridionale, course held by prof. Antonio Corbo Esposito.

A.A. 2018/19

Teaching assistantship (4 hours) of **Analisi Matematica II**, Civil and Environment Engineering Bachelor's degree and Computer and Telecommunication Engineering, Università degli Studi di Cassino e del Lazio Meridionale, course held by prof. Antonio Corbo Esposito.

Teaching assistantship (36 hours) of **Analisi Matematica II**, Industrial Engineering Bachelor's degree, Università degli Studi di Cassino e del Lazio Meridionale, course held by prof. Luisa Faella.

Teaching assistantship (20 hours) of **Analisi Matematica I**, Industrial Engineering Bachelor's degree, Università degli Studi di Cassino e del Lazio Meridionale, course held by prof. Luisa Faella.

Seminarial activities (12 ore) of **Introduzione all'Analisi Matematica**, Piano Nazionale Lauree Scientifiche, Università degli Studi di Napoli Federico II, course held by prof. Flavia Giannetti.

Teaching assistantship (12 hours) of **Metodi Matematici per l'Ingegneria**, Automation and Computer Engineering Bachelor's degree, Università degli Studi di Cassino e del Lazio Meridionale, course held by prof. Cristina Trombetti.

A.A. 2017/18

Teaching course (72 hours) of **Analisi Matematica I**, Aerospace and Mechanics Engineering Bachelor's degree, Università degli studi di Napoli Federico II.

A.A. 2016/17

Seminarial activities (6 hours) of **Introduzione all'Analisi Matematica**, Piano Nazionale Lauree Scientifiche, Università degli Studi di Napoli Federico II, course held by prof. Guido Trombetti.

Tutoring activities (50 hours) of **Analisi Matematica I**, Mathematics Bachelor's degree, Università degli Studi di Napoli Federico II, courses held by prof. Cristina Trombetti e prof. Angelo Alvino.

Teaching assistantship (20 hours) of **Metodi Matematici per l'Ingegneria**, Computer Engineering Bachelor's degree, Università degli Studi di Napoli Federico II, course held by prof. Carlo Nitsch.

A.A. 2015/16

Teaching assistantship (20 hours) of **Introduzione all'Analisi Matematica**, Piano Nazionale Lauree Scientifiche, Università degli Studi di Napoli Federico II, course held by prof. Guido Trombetti.

Teaching assistantship (12 hours) of **Introduzione alla Meccanica quantistica mediante polarizzazione**, Piano Nazionale Lauree Scientifiche, Università degli Studi di Napoli Federico II, course held by prof. Italo Testa.

Tutoring activities (40 hours) of **Analisi Matematica II**, Mathematics Bachelor's degree, Università degli Studi di Napoli Federico II, course held by prof. Nicola Fusco.

Tutoring activities (10 hours) of **Analisi Matematica I**, Mathematics Bachelor's degree, Università degli Studi di Napoli Federico II, courses held by prof. Cristina Trombetti e prof. Angelo Alvino.

Teaching assistantship (20 hours) of **Metodi Matematici per l'Ingegneria**, Computer Engineering Bachelor's degree, Università degli Studi di Napoli Federico II, course held by prof. Carlo Nitsch.

SCIENTIFIC INTERESTS

The research activity consists mainly in the study of the analytical and geometric properties of nonlinear eigenvalue and of the associated elliptic or parabolic equations. They are treated:

- Laplacian, p -Laplacian (and other generalizations) eigenvalue problems in bounded domains;
- Mixed eigenvalue problems in double connected domains;
- Nonlocal eigenvalue problems in which the associated Euler-Lagrange equations depend on the values the unknown function assumes on the whole domain;
- Anisotropic variational problems, in which Finsler metrics take the place of the Euclidean metric;
- Spectral theory problems on graphs;
- Inverse problems and imaging algorithms;

with different boundary conditions (Dirichlet, Neumann, Robin, Stekloff).

Particularly, the optimal shapes for the first and higher eigenvalues with prescribed geometric constraints (on volume, perimeter, quermassintegral) are of interest in suitable classes of sets.

Eventually, other general research objectives are the improvement of the actual analytic-geometric technique and methods to solve the studied problems.

PUBLICATIONS

A - Papers

1. A. Corbo Esposito, G. Piscitelli. **The Pseudo-orthogonality for Graph 1-Laplacian Eigenvectors and Applications to Higher Cheeger Constants and Data Clustering.** *Front. Math. China (on line)*.
2. A. Tamburrino, G. Piscitelli, Z. Zhou. **The Monotonicity Principle for Magnetic Induction Tomography.** *Inverse Problems* 37.095003 (2021), 20pp.
3. A. Corbo Esposito, L. Faella, G. Piscitelli, R. Prakash, A. Tamburrino. **Monotonicity Principle in Tomography of Nonlinear Conducting Materials.** *Inverse Problems* 37.045012 (2021), 25pp.
4. G. Paoli, G. Piscitelli, R. Sannipoli. **A stability result for the Steklov Laplacian Eigenvalue Problem with a spherical obstacle.** *Comm. Pure Appl. Anal.* 20.1 (2021), 145-158.
5. F. Della Pietra, G. Piscitelli. **An optimal bound for nonlinear eigenvalues and torsional rigidity on domains with holes.** *Milan J. Math.* 88 (2020), 373–384.
6. G. Paoli, G. Piscitelli, L. Trani. **Sharp estimates for the first Laplacian eigenvalue and for the torsional rigidity on convex sets with holes.** *ESAIM Control Optim. Calc. Var.* 26.111 (2020), 15 pp.
7. F. Della Pietra, G. Piscitelli. **Saturation phenomena for some classes of nonlinear nonlocal eigenvalue problems.** *Atti Accad. Naz. Lincei Rend. Lincei Mat. Appl.* 31.1 (2020), 131-150.
8. G. Piscitelli. **The anisotropic ∞ -Laplacian eigenvalue problem with Neumann boundary conditions.** *Differential Integral Equations* 32.11-12 (2019), 705–734.
9. F. Della Pietra, N. Gavitone, G. Piscitelli. **On the second eigenvalue of some nonlinear anisotropic elliptic operators.** *Bull. Sci. Math.* 155 (2019), 10-32.
10. F. Della Pietra, N. Gavitone, G. Piscitelli. **A sharp weighted anisotropic Poincaré inequality for convex domains.** *C. R. Acad. Sci. Paris* 355.7 (2017), 748–752.
11. F. Della Pietra, G. Piscitelli. **A saturation phenomenon for a nonlinear nonlocal eigenvalue problem.** *NoDEA Nonlinear Differential Equations Appl.* 23.6.62 (2016), 18 pp.

12. G. Piscitelli. **A nonlocal anisotropic eigenvalue problem.** *Differential Integral Equations* 29.11-12 (2016), 1001–1020.
13. G. Piscitelli. **Convex symmetrization for anisotropic elliptic equation with a lower order term.** *Rend. Acc. Sc. fis. mat. Napoli LXXXI.2* (2014), 249-264.

B - Preprints

14. F. Della Pietra, G. Piscitelli. **Sharp estimates for the first Robin eigenvalue of nonlinear elliptic operators.** *ArXiv* (2022), 1-24.
15. A. Corbo Esposito, L. Faella, G. Piscitelli, R. Prakash, A. Tamburrino. **The p-Laplace “signature” for quasilinear electrical conductivity problems.** *Preprint* (2022), 1-57.
16. N. Gavitone, G. Piscitelli. **A Monotonicity result for the first Steklov-Dirichlet Laplacian eigenvalue.** *ArXiv* (2021), 1-11.
17. N. Gavitone, G. Paoli, G. Piscitelli, R. Sannipoli. **An Isoperimetric inequality for the first Steklov-Dirichlet Laplacian eigenvalue of convex sets with a spherical hole.** *ArXiv* (2021), 1-15.

C - Volumes

18. D. A. La Manna, G. Piscitelli. **Precorsi di Matematica.** *Area didattica di Ingegneria* (2020), 44 p. ISBN: 9788890974816.

D - Thesis

19. **Optimization problems for nonlinear eigenvalues.** *Tesi per il Dottorato di ricerca in Scienze Matematiche e Informatiche* (2017), *Università degli Studi di Napoli Federico II*.
20. **Percorso didattico di base sulla meccanica quantistica.** *Tesi per il Tirocinio Formativo Attivo, per il conseguimento dell’abilitazione all’insegnamento di Matematica e Fisica classe A049* (2015), *Università degli Studi di Napoli Federico II*.
21. **On the regularity of solutions of second order elliptic equations.** *Tesi per la Laurea magistrale in Matematica* (2013), *Università degli Studi di Napoli Federico II*.
22. **Sull'equazione del calore: teoremi di esistenza, unicità e regolarità.** *Tesi per la Laurea in Matematica* (2010), *Università degli Studi di Napoli Federico II*.

RESEARCH PROJECTS

Coordinator of the research project “Stime ottimali per alcuni funzionali di forma”, founded with 4500 € by **INdAM-GNAMPA 2022**, from 16/05/2022 to 31/05/2023.

Participant to the research project “Direct and inverse problems for partial differential equations: theoretical aspects and applications”, founded by **PRIN-MIUR 2017**, principal investigator prof. Andrea Cianchi (Firenze).

Participant to the project “SUMMa: Smart Urban Mobility Management”, founded by **MiSE-Fondi Sviluppo e Coesione 2014-2020**, principal investigator prof. Stefano Buzzi, from 21/09/2020 to present.

Participant to the research project **GNAMPA 2020** “Analisi variazionale di materiali elastici: statica, dinamica e ottimizzazione”, founded by **INdAM**, principal investigator PhD. Riccardo Scala (Università degli Studi di Siena), from 01/05/2020 to 31/12/2021.

Participant to the research project **GNAMPA 2019** “Equazioni alle derivate parziali e disuguaglianze funzionali: proprietà geometriche e qualitative”, founded by **INdAM**, principal investigator prof. Barbara Brandolini (Università degli Studi di Napoli Federico II), from 11/03/2019 to 10/03/2020.

Participant to **Progetto di eccellenza 2018-2022** “Sistemi distribuiti intelligenti” of Dipartimento di Ingegneria Elettrica e dell’Informazione “M. Scarano”, founded by **MIUR**, principal investigator prof. Stefano Chiaverini (Università degli studi di Cassino e del Lazio Meridionale), dal 10/12/2018 al 31/08/2020.

Participant to the research project PTDC/MAT-CAL/4334/2014, funded by **Fundação para a Ciência e a Tecnologia**, principal investigator prof. Pedro Freitas, from 07/12/2017 to 06/12/2018.

Member of the research group **Grupo de Física Matemática (GFM)** at Universidade de Lisboa, from 07/12/2017 to 31/12/2018.

Participant to the research project **GNAMPA 2017** “Equazioni alle derivate parziali e disuguaglianze geometriche: aspetti qualitativi e quantitativi”, principal investigator prof. Giulio Ciraolo (Università degli Studi di Palermo), from 14/03/2017 to 13/3/2018.

Participant to the project **PRIN 2015** “Partial differential equations and related analytic-geometric inequalities”, founded by **MIUR**, principal investigator prof. Andrea Cianchi (Università degli Studi di Firenze), from 05/02/2017 to 05/02/2020.

Member of **Unione Matematica Italiana (UMI)**, from 01/01/2016 to present.

Support activities for preparation of deliverables and for writing research report for the project with **L.R. 5/2002 annualità 2007** project “Disuguaglianze isoperimetriche e stabilità”, funded by **Regione Campania**, principal investigator prof. C. Nitsch (Università degli studi di Napoli Federico II), from 01/11/2015 to 30/11/2015.

Member of **Istituto Nazionale di Alta Matematica "Francesco Severi" (INDAM)**, from 01/01/2015 ad oggi.

Participant to the Research Project **FIRB 2013** “Geometrical and qualitative aspects of PDEs”, funded by **MIUR**, principal investigator prof. Elvise Berchio (Politecnico di Torino), from 01/04/2014 - 14/09/2017.

Participant to the research project **PRIN 2012** “Equazioni alle derivate parziali di tipo ellittico e parabolico: aspetti geometrici, disuguaglianze collegate e applicazioni”, founded by **MIUR**, principal investigator prof. Andrea Cianchi (Università degli Studi di Firenze), from 08/03/2014 to 07/03/2017.

REFEREEING ACTIVITIES

Referee for

- **Advances in Difference Equations;**
- **Proceedings of the Royal Society of Edinburgh Section A: Mathematics.**

Reviewer for

- **Zentralblatt Math;**
- **Mathematical Reviews.**

ADDITIONAL INFORMATIONS

Language: Italian (mothertongue), English (fruent, Cambridge PET certification Nov 13 & Nov 15), Portuguese (basic), German (basic), French (basic).

Good competence in the use and management of Apple MacOS X e Windows (ECDL, Dic 05) operating system and main applications.

San Felice a Cancellò (CE), 31/05/2022

Signature

