# Paola Rubbioni

# Curriculum Vitae

Dept. of Mathematics and Computer Science, University of Perugia
Via L. Vanvitelli, 1 – 06123 Perugia (Italy)
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Personal Data, Academic Position, and Research ID's

Born on 16.09.1968; Italian citizenship; married, 3 kids

Associate Professor - SD: MATH-03/A - Analisi matematica, University of Perugia

ORCID ID: https://orcid.org/0000-0002-9433-345X Web of Science ResearcherID: AAA-9968-2019

Scopus ID: 6507244618

#### Research Interests

Solutions of differential equations and inclusions with impulses and delay. Stability of solutions for functional differential and integro-differential equations. Optimal solutions of integro-differential equations and inclusions.

#### **Funded Research Projects**

**Associated Investigator** of project PRIN2022 "Nonlinear differential problems with applications to real phenomena"

**Coordinator** of project GNAMPA 2013 "Metodi Topologici per Problemi Differenziali Nonlineari ed applicazioni"

**Coordinator** of project "Giovani Ricercatori 2000" Ateneo di Perugia, Inclusioni Differenziali Funzionali in Spazi di Banach

**Member** of projects PRIN2009, PRIN2007, PRIN2005, PRIN2003 - Equazioni Differenziali Ordinarie e Applicazioni

**Member** of projects GNAMPA 2001-2005, 2011-2017, 2019-2022

#### Organization of International Conferences (last 5 years)

 Recent Advances in Nonlinear Differential Problems and Applications (RANDPA 2025), Perugia, 04-06/06/2025

- Minisimposium ``Qualitative Theory and Applications of Boundary Value Problems for Nonlinear ODEs and PDEs (MS ID-22)", within the 9th European Congress of Mathematics, Sevilla, Spain, 15-19/07/2024
- Two Days Workshop on Nonlinear Analysis @ MS Teams, online via MS Teams, 2-3/09/2021
- Minisimposium ``Topological Methods in Differential Equations (MS ID-13)", within the 8th European Congress of Mathematics, Portorož, Slovenia, 20-26/06/2021

#### Member of Scientific Committees of International Conferences

- International Workshop on Nonlinear Analysis and its Applications IWNAA 2025, Ankara, Turkey, 3-5/09/2025
- Recent Advances in Nonlinear Differential Problems and Applications (RANDPA 2025), Perugia, 04-06/06/2025
- International Workshop on Nonlinear Analysis & its Applications, Badshahithaul (Tehri Garhwal), India, 14-16/12/2023

#### Invited Talks at International Conferences (last 5 years)

**Invited** speaker at: Functional Analysis: Theory and applications, Genova, February 19-22, 2025. Title: *Optimal* solutions and asymptotic stability for differential equations involving Volterra integral

**Main** speaker at: Topological Methods for Nonlinear Analysis and Dynamical Systems, Firenze, 27-28/09/2024. Title: *Optimal solutions and asymptotic stability to differential problems with Volterra-type distributed delay* 

**Main** speaker at: Functional Analysis: Methods and Applications (FAMA2024), Amantea and Rende (Cosenza), 06-08/06/2024. Title: *Differential problems with distributed delay: existence and asymptotic stability of solutions* 

**Plenary** speaker at: International Workshop on Nonlinear Analysis & its Applications, Badshahithaul (Tehri Garhwal), India (virtual), December 14-16, 2023. Title: *Differential equations with distributed delay: existence and asymptotic stability of solutions* 

**Main** speaker at: The 14th international conference on Fixed Point Theory and its Applications, Brasov, Romania, July 11-14, 2023. Title: *Solutions to differential equations with distributed delay* 

**Main** speaker at: Workshop su Equazioni Differenziali Ordinarie non lineari, Messina, January 12-13, 2023. Title: *Asymptotic stability of solutions of differential equations with distributed delay* 

**Invited** speaker at: Equadiff 15, Brno, Repubblica Ceca, July 11-15, 2022, Minisymposium ODE-07 Asymptotic theory of differential and integral equations. Title: *Asymptotic stability of solutions of differential equations with delay* 

**Invited** speaker at: Topological Methods in Nonlinear Analysis: Recent Advances, Professeur Andrzej Granas Memorial Conference, Montréal, Canada, and <u>online</u>, July 4-8, 2022. Title: *Existence and asymptotic stability of solutions of differential equations with delay* 

#### Scientific and Educational Seminars (last 5 years)

- Scientific seminar ``Existence and asymptotic stability of solutions to differential equations with distributed delay: a topological approach", within the Summer Semester of the International Meetings on Differential Equations and Their Applications (IMDETA), online via Zoom, organized by the Institute of Mathematics, Faculty of Technical Physics, Information Technology and Applied Mathematics, Lodz University of Technology, Poland 17/04/2024
- Educational seminar (interdisciplinary seminar of PLS) "Modelli matematici: Guida per politici e
  decision makers, sfida alla libertà dell'uomo", Liceo Scientifico "Sansi-Leonardi-Volta" in Spoleto
  (online for other high schools) 12/03/2024
- Scientific seminar ``A topological approach to some differential problems arising from applied science models", within the period as visiting professor at the Department of Mathematics and Computer Science of the University of Calabria - 22/03/2023
- Scientific seminar "A unified approach to the study of some equations arising from models of applied sciences", within the Seminari of the Department of Mathematics and Informatics of the University of Florence, Florence - 16/12/2022

#### Member of editorial boards of international journals

- . Fixed Point Theory ISSN 1583-5022 (Print); ISSN 2066-9208 (Online);
- . Journal of Function Spaces (06/2021-12/2022) ISSN: 2314-8896 (Print); ISSN: 2314-8888 (Online);
- . Studia Universitatis Babeş-Bolyai Mathematica ISSN: 2065-961x.

#### Recent Publications

- \* Rubbioni P., Existence of optimal periodic strategies in a model with nonlocal spatiotemporal dispersal, J. Math. Anal. Appl. (2025), https://doi.org/10.1016/j.jmaa.2025.130095
- Cardinali T.; Matucci S.; Rubbioni P.; Uniform asymptotic stability of a PDE's system arising from a flexible robotics model, Math. Methods Appl. Sci. 48 (2025), no. 11, 11242-11251, DOI: 10.1002/mma.10961
- Rubbioni, P.; Optimal Solutions for a Class of Impulsive Differential Problems with Feedback Controls and Volterra-Type Distributed Delay: A Topological Approach. Mathematics 2024, 12, 2293, DOI: 10.3390/math12142293
- Cardinali, T.; Matucci, S.; Rubbioni, P.; Controllability of nonlinear integral equations of Chandrasekhar type, J. Fixed Point Theory Appl. 24:58 (2022), DOI:10.1007/s11784-022-00974-5.
- Precup, R.; Rubbioni, P.; Stationary solutions of Fokker-Planck equations with nonlinear reaction terms in bounded domains, Potential Anal. 57 (2022), no. 2, 181–199, DOI: 10.1007/s11118-021-09911-6

- Rubbioni, P.; Solvability for a Class of Integro-Differential Inclusions Subject to Impulses on the Half-Line, Mathematics 2022, 10(2), 224, DOI: 10.3390/math10020224
- Rubbioni, P.; Asymptotic stability of solutions for some classes of impulsive differential equations with distributed delay, Nonlinear Anal. Real World Appl. 61 (2021), 103324, DOI: 10.1016/j.nonrwa.2021.103324
- Cardinali, T.; Rubbioni, P.; Hereditary Evolution Processes Under Impulsive Effects. Mediterr. J. Math. 18, 91 (2021), DOI: 10.1007/s00009-021-01730-8
- Cardinali, T.; Rubbioni, P.; Existence theorems for generalized nonlinear quadratic integral equations via a new fixed point result, Discr. Cont. Dyn. Sys. Series S, 13, No. 7, 1947-1955 (2020), DOI: 10.3934/dcdss.2020152

#### PhD activity

2021/22-today	Member of the Collegio Docenti of Dottorato in Matematica, Informatica, Statistica, Firenze-Perugia-Indam, Curriculum di MATEMATICA, from XXXVII ciclo
2020/21; 2024/25	Commissioner in the PhD final examination of the Dottorato in Matematica, Informatica, Statistica, Firenze-Perugia-Indam, Curriculum di MATEMATICA
2021/22- 2022/23	Teacher of a 15 hours-slot to ``Topological Methods for Differential Equations'', PhD program of Dottorato in Matematica, Informatica, Statistica, Firenze-Perugia-Indam, Curriculum di MATEMATICA, XXXVII ciclo and XXXVIII ciclo
2020/21	Teacher of a 15 hours-slot to ``EDO semilineari in spazi di Banach e applicazioni", PhD program of Dottorato in Matematica, Informatica, Statistica, Firenze-Perugia-Indam, Curriculum di MATEMATICA, XXXVI ciclo
2021	<ul> <li>Referee to the PhD Thesis by</li> <li>Dr. Francesco Salvatore Genoese, supervisor Prof. Filippo Domenico Cammaroto, University consortium Catania-Messina-Palermo</li> <li>Dr. Hajer Garbout, supervisor Prof. Afif Ben Amar, Ecole doctorale des sciences fondamentales, Université de Sfax, Tunisie</li> </ul>
2008-2009	Supervisor of the PhD Thesis by Dr. Francesco Portigiani (defended: 12/02/2009), University of Modena e Reggio Emilia

# **Institutional Teaching Activity**

2018/19-today	Mathematical Analysis - mod.l, Degree in Informatics
2022/23-today	Mathematical Analysis Ist, Degree in Physics
2023/24-today	Complex Analysis, Second cycle degree course in Mathematics (co-teaching)
2023/24	Mathematics 2, Degree in Chemistry
2000/01-2021/22	Mathematical Analysis IInd, Degree in Computer Science and Electronic Engineering

2018/19 Mathematics 1, Degree in Chemistry

2014/15 Mathematics and Statistics, Degree in Biological Sciences

2000/01-2011/12 Mathematics 2, Degree in Mechanical Engineering

## Other Teaching Activity

- Introductory courses for the engineering degrees, 2013/14, 2015/16-2022/23
- Co-teacher of "Didattica della Matematica per Ingegneria" for "Tutorato di Ingegneria", Department of Engineering, University of Perugia, project INGEGNERIA.POT, 2019/20
- Collaborator for the didactics of the courses ``Analisi Matematica I'' and ``Metodi Matematici per l'Ingegneria'', Degree in Electronic Engineering and Mechanical Engineering, Faculty of Engineering, University of Perugia, 1996/97
- Supply teacher of Mathematics and Physics at some High Schools, 1993/94-1996/97
- Temporary Professor of ``Analisi Matematica I" and ``Analisi Matematica II", Corso di Diploma
   Universitario in Ingegneria Aerospaziale, Faculty of Engineering, University of Perugia, 1992/93

## Other Professional Activity and Information

- Professor of the course "Progettazione didattica in ambito matematico II" (4 CFU) for the Enabling Courses 2023/24 - class A026, and for the Enabling Courses 2024/25 - classes A026 and A047
- Departmental manager of the Licei Matematici project and, consequently, contact person for the Licei Matematici network for Umbria since 28/09/23
- Commissioner in a competition for a position of Associate Professor (2024)
- Commissioner in some competitions for position of Researcher (RTDB) for the Universities of Palermo (2023), Florence (2020), Polytechnical University of Ancona (2018)
- Beneficiary of funding FFABR (Fondo per il Finanziamento delle Attività Base di Ricerca): Ricercatori year 2017
- Member of the register of auditors of MIUR, years 2013, 2014
- Referee for international scientific projects
- Referee for international journals
- Reviewer for Mathematical Reviews and Zentralblatt fur Mathematik
- Member of the European Mathematical Society (EMS)
- Member of the Unione Matematica Italiana (UMI), of the UMI group "Teoria dell'Approssimazione e Applicazioni (TAA)", and of the UMI group "Licei Matematici".
- Member of the Istituto Nazionale di Alta Matematica (INdAM), Gruppo Nazionale per l'Analisi Matematica, la Probabilità e le loro Applicazioni (GNAMPA), sez. 1. Equazioni Differenziali e Sistemi Dinamici