Sandra Carillo

Associate Professor
Qualified for Full Professor Position in Mathematical Physics
Department of Basic and Applied Sciences for Engineering
Università di Roma "La Sapienza"

Qualifications

- **Master in Physics**, Università degli Studi di Roma "La Sapienza", Rome, Italy.

- **Ph.D. in Applied Mathematics**, University of Waterloo, Waterloo, Ontario, Canada.

Professional Experience

- **C.N.R. (Italian National Reasearch Council) Research fellow**, calls 203.01.28 & 203.01.38, (Mathematics), Appl. Math. Dept., University of Waterloo, Waterloo, Ontario, Canada.

- **Assistant Professor ("Ricercatore Universitario")** tenure-track position, then, after 3 years, permanent position, Faculty of Engineering, University of Rome "La Sapienza". July, 2 1983 – Febbruary, 28 2002, (Mathematical Physics) and, later (Mathematical Analysis), Faculty of Engineering, University of Rome "La Sapienza".

- **Associate Professor** tenure-track position, then, after 3 years, permanent position, since March 2002 to the present time, Faculty of Civil and Industrial Engineering, University of Rome "La Sapienza".

- **Productivity bonus**, years **2011**, **2013** and **2018**, referring to the **Scientific and Educational Activities carried out in the three-year periods** 2008-2010 and 2010-2012, and also in year 2018.

- Year **2022 Winner of Regional Research Price** (2000 Euro) *for researchers and research fellows to strengthen their professional condition and enhance the* **system of research in Lazio**, official call published n. G05411 published on 05/05/2022.

- Anno **2024 Best Paper Presentation Award** *The 2nd International Conference on Mathematical Analysis, Applications and Computational Simulation (2024 ICMAACS)*, December 6 - 8, 2024, Shanghai, China.

"Visiting Professor"

- Appl. Math. Dept., University of Waterloo, Waterloo, Ontario, Canada (varie visite);

- Mathematics Department, University of Paderborn, Germany (various different visits);

- Mathematics Department, University of Colorado at Colorado Springs (UCCS), Colorado Springs, Colorado, U.S.A. (various different visits);

- Department of Applied Mathematics, The Hong Kong Polytechnic University, Hong Kong, China;

- Department of Natural Sciences, Engineering, and Mathematics, Mid Sweden University, Sundsvall, Sweden (various different visits);

- Institute of Mathematics, University of Zürich, Zürich, Switzerland.

- Department of Mathematics, Physics and Electrical Engineering, Northumbria University, Newcastle upon Tyne, UK.

- over 130 **invited lectures Seminars and Conferences** (international Conferences, mainly).

Scientific Publications

39 Co-authors and their nationality: (15 not italian)
5 Germany, 2 Poland, 1 Great Britain, 1 Switzerland,
1 China, 1 France, 1 ex Soviet Union (Novosibirsk),
1 Ireland, 1 U.S.A., 1 Netherland.

h-index = 16   Scopus

106 pubblicazioni, di cui

- **1 pubblicazione didattica; 1 "altro";**

- **1 Relazione annuale del Comitato di Monitoraggio, Facoltà di Ingegneria Civile e Industriale Sapienza Università di Roma;**

- **7 Relazioni annuali del Commissione Paritetica Docenti-Studenti, Facoltà di Ingegneria Civile e Industriale Sapienza Università di Roma;**

- **62 (+ 1 in. press) indicizzati da Web of Science**[1] **(1982-2022) + 2 (to appear soon);**

- **1 articolo indicizzato da** *Chinese Web of Science* **(su Acta Mathematica Sinica, Springer-Verlag);**

- **60 (+ 18 preprints) articoli indicizzati da Scopus (7 non indicizzati su Web of Science) con 669 citazioni al 01.11.2024; N.ro totale citazioni Web of Science (1982-2023) 597, il 16.04.2024.**

- **totale 69 (+ 2 in corso di stampa) pubblicazioni indicizzate da Web of Science o Scopus.**

---

[1]l'abbonamento di Sapienza Università di Roma, non permette di vedere 3 articoli ed inizia nel 1985 escludendo la pubbl. 1, sulla rivista **Physical Review, A (Classe 1)** con 57 citazioni su Scopus (il 24.05.2023) e 59 su Web of Science.

- **74 (+ 1 Volume di Proceedings Springer, Editor) pubblicazioni su MathSciNet (tra cui 4 articoli originali su Riviste o volumi internazionali NON indicizzate né ISI né Scopus)**

- **1 Tesi di Dottorato (Ph.D.), recensita da MathSciNet, pubblicata in Canada, (con copia depositata presso la Biblioteca Nazionale, Ottawa, Canada), ProQuest LLC, Thesis - disponibile online;**

- **1 articolo di rassegna recensito su MathSciNet;**

- **3 articoli originali** *isubmitted* **2 articoli in stesura.**

- **Editor di 7 Volumi: 4 Atti di Convegni Internazionali, 2 Book of Abstracts, e di 1 Volume Speciale in memoria di V. Boffi,** *Lecture notes of the abecsderian school of side*, **American Mathematical Society Series on Contemporary Mathematics (CONM) (in prog).**

- **Inoltre, 105** *Abstracts* **di interventi (di cui 74 nel periodo 2010 –2023). di comunicazioni a Convegni e/o Conferenze su invito.**

"Editorial Activities"

- **Editorial Board Member, International Journal Applied Numerical Mathematics, Elsevier, Amsterdam, Boston, London, (Q1).**

- **Editorial Board Member, International Journal Open Communications in Nonlinear Mathematical Physics,** *OCNMP is a diamond open access journal with no APC's*, **new Journal, Episciences.**

- **Editorial Board Member, International Journal Axioms, MDPI, Basel, Switzerland.**

- **Editorial Board Member, International Journal Mathematics, MDPI, Basel, Switzerland.**

- **Editor of 5 Volumes:**

  - **4 Proceedings Volumes of International Conferences,**
    - **Nonlinear Evolution Equations an Dynamical Systems, Springer-Verlag Editore, S. Carillo, O. Ragnisco Ed.s (1990);**
    - **Evolution Equations and Materials with Memory, Publishing house "La Sapienza"University, D. Andreucci, S.Carillo, M. Fabrizio, P. Loreti, D. Sforza Ed.s (2011);**
    - *MASCOT2018 Proceedings Book*, **IMACS Series in Computational and Applied Mathematics, S. Carillo, C. Conti, D. Mansutti, F. Pitolli, R.M. Spitaleri, Ed.s., Vol. 22, 2019.**
    - *Lecture notes of the abecsderian school of side*, **American Mathematical Society Series on Contemporary Mathematics (CONM), S. Carillo, G.Filipuk, G. Gubbiotti, e F. Zullo Ed.s, in progress, 2025.**

- the Special Volume: *A selection of scientific papers by Vinicio C. Boffi*, **Publishing house "La Sapienza" University, (2014).**

- **Guest Editor di 8 Special Issues of the International Journals:**

  - **Discrete and Continuous Dynamical Systems-Series B, American Institute of Mathematical Sciences (2014).**

  - **Meccanica, Springer-Verlag, (2017).**

  - **Mathematics and Computers in Simulation, Elsevier (2020).**

  - **Rendiconti di Matematica e delle sue Applicazioni,** *Special Issue celebrating Umberto Mosco's Birthday*, **Sapienza Università Editrice, D. Andreucci, R. Capitanelli, S. Carillo, M.R. Lancia, M.A. Vivaldi Ed.s, October 2020.**

  - **Meccanica,** *Special Issue "The centennial of Becker (1922): Recent trends in the analysis of dissipative, compressible flows"*, **, Springer-Verlag, (2023).**

  - **Mathematics and Computers in Simulation, Elsevier (in progress).**

  - **Mechanics Research Communications (in prog)**

  - **Mathematical Physics Analysis and Geometry (in prog)**

Principal Scientific Responsibilities

- **Italian Principal investigator (PROPOSER) f the Bilateral Project (Contract n.92.00555.01 C.N.R .: bilateral agreement of scientific collaboration between Italy and Germany** *Non linear integrable systems: Hamiltonian and bi-Hamiltonian structure* **supported by the (italian National Research Council) C.N.R. and renewed in the Contract n. 95.01082.01**.

- **Principal investigator** of several **Faculty and University research projects**.

- Member of **Scientific Committee of 8 international Conferences** ((to organise 4 of these ones, she played the role of **Italian Principal investigator (PROPOSER)** ad hoc funding) sponsored by **C.N.R., G.N.F.M., Università "La Sapienza".**

- **I.N.F.N. Research Associate** since 2014, I.N.F.N. financially supports her scientific activity (participation to Conferences, visiting Professors, scientific equipment, organised talks , . . .)

- **Member of G.N.F.M. (Italian National Mathematical Physics Group)** since 1983, G.N.F.M. financially supports her scientific activity (participation to Conferences, visiting Professors, scientific equipment, invited talks organised, . . .)

- **Elected Member of the I.M.A.C.S. Board**, *International Association for Mathematics and Computers in Simulation* 2017–2020 and 2021–2024;

- **Elected Member of the AIMETA Board** *AIMETA, Italian Association for Theoretical and Applied Mechanics* 2014–2017, renewed 2018–2021 and 2022–2025;

- **Member of the Doctoral Committee PhD Program in Information and Communications Technologies - (ICT) since 2006**.

Principal Organisational Activities

- over 46 invited Visiting Professors, the vast majority from outside Italy, to spend research periods at the University of Rome "La Sapienza";

- A large number of seminars by both researchers of different nationalities;

- Various mini-courses for students of different PhD Programs (in Italian and in Eglish);

- 5 Conferences (for 4 of them she received *ad hoc* funding - Principal Investigator University calls years 2009, 2011 and 2017) organised respectively in 2010, 2012 and 2018. Currently organising the IMACS 2023 World Conference, Rome 11-15, September 2023.

- 3 Workshops (2012 and 2014) and June 2025 (in progress);

- 16 Minisymphosia in National and International Conferences (since 2004).

Courses Taught

University of Rome "La Sapienza", Engineering Faculty **2309** examinations filed in the system ONLY Academic Year 2008/09 - 2017/18 counting ONLY exams as Examination Committee President (excluding Academic Year 1983/84 - 2007/08 not filed)

- "Teaching Assistant", Appl. Math. Dept., University of Waterloo, Waterloo, Ontario, Canada (2 different Courses Calculus and Advanced O.D.E.s)

- Complementary notions and Exercises "Esercitazioni" (Mathematical Methods for Engineering and Rational Mechanics) 1983-2001.

- DOCTORATE COURSES

  – Nonlinear ordinary differential equations: perturbative methods & applications (taught in English), Doctorate in "Mathematical Models for Engineering, Electromagnetics and Nanosciences"

  – Mathematical Physics (PhD Program in Electronic Engineering, later ICT).

- BACHELOR'S DEGREES COURSES
  (FIVE AND THREE-YEAR DEGREE PROGRAMS) since 1991/92

  – Mathematical Analysis I (Electronic, Telecommunication and Building Engineering),

  – Mathematical Analysis II (Electronic, Telecommunication, Building-Architectural, Clinic, Aerospace and Management Engineering)

  – Mathematical Physics (Civil Engineering).

- MASTER DEGREE COURSES since Academic Year 2002/03

- Mathematical Physics (Master Program in Electronic Engineering)
- Mathematical Methods for Biomedical Applications (Master Programs in Biomedical Engineering)
- Applied Mathematics (Master Programs in Electronic Engineering and in Biomedical Engineering)
- Mathematical and Algebraic Methods (Master Programs in Biomedical Engineering)

- **II LEVEL MASTER COURSES** since Academic Year 2020/21

  - **SEMINARS SERIES ON PERTURBATION METHODS** in the course ptics and quantum information

---

Thesis supervisor and
Tutor of Undergraduate Excellence Program

- **Bachelor's Degree Thesis supervisor in Clinical Engineering (program completed in December 2013)** Title: *A mechanical model of a climbing plant.* **Candidate: Vittorio Viri.**

- **Tutor of Undergraduate Excellence Program, Bachelor's Degree in Electronic Engineering**
  Academic Year 2014/15 &2015/16 (II - III years of his Bachelor's Degree's Program)
  Title: *A Analytical and Symbolic Methods in Applied Mathematics.* **Candidate Fabio De Rubeis.**

Referee for International Journals

Languages :

- **English (qualified to teach mathematics courses in English in all English-speaking Universities, since obtained her PhD from University of Waterloo, Ontario, Canada admission requirement: TOEFL exam passed)**

- **French ("intermediate" A2 - selfevaluated)**

- **German ("intermediate" B1 - selfevaluated)**