

**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”

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**Qualifications**

- **Master in Physics**, Università degli Studi di Roma “LA SAPIENZA”, Rome, Italy.
  - **Ph.D. in Applied Mathematics**, University of Waterloo, Waterloo, Ontario, Canada.
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**Professional Experience**

- **C.N.R. (Italian National Research 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 – February, 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.
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**“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).

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## Scientific Publications

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**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<sup>1</sup> (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.

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<sup>1</sup>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 *submitted* 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 abcsderian 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 7 Volumes:
  - 4 Proceedings Volumes of International Conferences,
    - Nonlinear Evolution Equations and Dynamical Systems, Springer-Verlag Editore, (1990);
    - Evolution Equations and Materials with Memory, Publishing house “La Sapienza” University, (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 abcsderian 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)
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## Principal Scientific Responsibilities

- Italian Principal investigator (PROPOSER) of 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.
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## 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 English);
  - 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).
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## 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)