

Sandra Carillo
Associate Professor
Qualified for Full Professor in Mathematical Physics
Department of Basic and Applied Sciences for Engineering
SAPIENZA University of Rome

Qualifications

- **Master in Physics**, Università degli Studi di Roma.
 - **Ph.D. in Applied Mathematics**, University of Waterloo, Waterloo, Ontario, Canada.
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Professional Experience

- **C.N.R. (Italian Research Council) Research fellow**, calls 203.01.28 e 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.
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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.
 - 110 *invited lectures* Seminars and Conferences (international ones, in large majority).
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Scientific Publications

25 Co-authors & Nationalities

5 Germany, 1 Great Britain, 1 Switzerland,
1 China, 1 France, 1 ex U.R.S.S. (Novosibirsk),
1 Ireland, 1 U.S.A., 13 Italy.

h-index = 13 Scopus

75 publications, filed as follows

- 1 educational publication (Mathematics);
- 54 (+ 2 recently published +1 in press) articles in Web of Science (1982-2019);
- 1 article in *Chinese Web of Science* (Acta Mathematica Sinica, Springer-Verlag);
- 46 (+ 2 going to appear in Scopus +1 in press) articles in Scopus (6 not in Web of Science);
- totale 60 (+ 3 going to appear in Scopus) publications in Web of Science or Scopus.
- 60 (+ 1 Volume di Proceedings Springer, Editor) publications in MathSciNet (tra cui 4 articles originali su Riviste o volumi internazionali NOT in Web of Science or Scopus)
- 1 Ph.D. Thesis, refereed in MathSciNet, published in Canada, (filed in the National Canadian Library, Ottawa, Canada), ProQuest LLC, Thesis - available online;
- 1 review article in MathSciNet;
- 2 *submitted* articles.
- 69 riassunti (di cui 49, periodo 2010 – 2019) di comunicazioni a Convegni e/o Conferenze su invito non comparse su Volumi di Atti.

Editorial Activities

- **Editorial Board Member**, International Journal **Axioms**, MDPI, Basel, Switzerland.
- **Editorial Board Member**, International Journal **Mathematics**, MDPI, Basel, Switzerland.
- **Editor** of the Volumes:
 - 3 International Proceedings Books, 1 Book of Abstracts, in turn:
 - **NEEDS 1987**, Springer-Verlag, (1990);
 - **EEMM 2010**, Publishing house “La Sapienza” Università, (2011);
 - **MASCOT 2018 Proceedings**, IMACS Series in Computational and Applied Mathematics, Vol. 22 (2019).
 - **MASCOT 2018 Book of Abstracts**, IMACS Series in Computational and Applied Mathematics, Vol. 21 (2018).
 - the Special Volume: *A selection of scientific papers by Vinicio C. Boffi*, Publishing house “La Sapienza” Università, (2014);

- **Guest Editor** of 3 **Special Issues** of the International Journals:
 - Discrete and Continuous Dynamical Systems-Series B, (2014);
 - Meccanica, Springer-Verlag, (2017);
 - Mathematics and Computers in Simulation, (2020), in press.
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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;
 - **Elected Member of the AIMETA Board** *AIMETA, Italian Association for Theoretical and Applied Mechanics* 2014-2017, renewed 2018-2021, Secretary General since 2019;
 - **Member of the Doctoral Committee PhD Program in Information and Communications Technologies - (ICT)..**
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Principal Organisational Activities

- **40 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);
- 4 Conferences (*ad hoc* funded - **Principal Investigator** 2009, 2011 and 2017) organised respectively in 2010, 2012, 2018 and the 4th will take place in October, 2020.
- 2 Workshops (2012 and 2014);
- **16 Minisymposia** in National and International Conferences (since 2004).

Visiting Professor

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- 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.
- 108 *invited lectures* Seminars and Conferences (international ones, in large majority).

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 and Academic Year 2015/16 (II and III years of his Bachelor's Degree's Program) Title: *Analytical and Symbolic Methods in Applied Mathematics.*
Candidate Fabio De Rubeis.

Scientific Journals Referee's Activity

- MathSciNet.
- Applicable Analysis.
- Applied Mathematics Letters.
- Boundary Value Problems.
- Discrete and Continuous Dynamical Systems - Series B.
- Journal of Mathematical Analysis and Applications.
- Journal of Mathematical Physics.
- Journal of Nonlinear Mathematical Physics.
- Mathematical Methods in the Applied Sciences.
- Meccanica.

- Numerical Algorithms.
- Reports on Mathematical Physics.
- Systems & Control Letters.
- Waves in Random and Complex Media.
- Zeitschrift fuer Angewandte Mathematik und Physik (ZAMP)
- Applied Numerical Mathematics.
- SIAM Journal on Mathematical Analysis (SIMA).
- Annali dell'Università di Ferrara.

Courses Taught

University of Waterloo, Waterloo, Ontario, Canada

- **Teaching Assistant**, Calculus, Appl. Math. Dept.
- **Teaching Assistant**, Advanced Ordinary Differential Equations, Appl. Math. Dept.

Engineering Faculty, University of Rome "La Sapienza", Rome, Italy

- 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 *Mathematical Models for Engineering, Electromagnetics and Nanosciences*
 - **Mathematical Physics**, Doctorate *Electronic Engineering*.
 - **Perturbative and qualitative methods: tools to solve nonlinear problems**, Doctorate *Information and Communications Technologies - (ICT)*,
- **BACHELOR'S DEGREES COURSES**
(**FIVE AND THREE-YEAR DEGREE PROGRAMS**) since 1991/92
 - **Mathematical Analysis I** (Electronics, Telecommunications & Construction Engineering),
 - **Mathematical Analysis II** (Electronics, Telecommunication, Construction, Clinic, Aerospace and Management Engineering)
 - **Mathematical Physics** (Civil Engineering).
- **MASTER DEGREE COURSES** since Academic Year 2002/03
 - **Mathematical Physics** (Master Prog.s in Electronic & Mechanical Engineering)
 - **Mathematical Methods in Biomedical Appl.s** (Master Prog. in Biomedical Eng.)
 - **Applied Mathematics** (Master Prog.s in Electronic & Biomedical Engineering)
 - **Mathematical and Algebraic Methods** (Master Prog.s in Biomedical Engineering)