Sandra Carillo

Associate Professor
Qualified for Full Professor Position in Mathematical Physics

SSD M A T 0 7 Mathematical Physics

Department of Basic and Applied Sciences for Engineering

University of Rome "LA SAPIENZA", Italy

Qualifications

- **Master in Physics**, "La Sapienza" University of Rome, Italy .
- **Ph.D. in Applied Mathematics**, University of Waterloo, Waterloo, Ontario, Canada.

Professional Experience

- **C.N.R.** (Italian Reasearch Council) **Research fellow**, call 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 tenured Faculty of Engineering, University of Rome "La Sapienza".
- **Associate Professor** (tenure-track and, after 3 years permanent position) since March 2002, 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 & 2010-2012, and in 2018.

Visiting Professor

- Appl. Math. Dept., University of Waterloo, Waterloo, Ontario, Canada (various different visits);
- 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).

Scientific Publications

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22 Co-authors and their nationality:

**5 Germany, 1 Great Britain, 1 Switzerland,
1 China, 1 France, 1 ex U.R.S.S. (Novosibirsk)
1 Ireland, 1 U.S.A., 10 Italy.**

> *h-index* = 11 *Scopus & Web of Science*

75 publications, filed as follows

- 1 educational publication (Mathematics)
- 48 publications + 3 *in press* indexed by Web of Science (1982-2018)
- 1 article indexed by *Chinese Web of Science* (Acta Mathematica Sinica, Springer-Verlag)
- 44 + 2 *in press* articles indexed by Scopus (6 not filed by ISI)
- totally 54 publications indexed by Web of Science or Scopus.
- 55 publications on MathSciNet (including 4 original articles on international journals or volumes NOT indexed neither by Web of Science nor by Scopus).
- 1 Ph.D. Thesis (Ph.D.), reviewed by MathSciNet, published in Canada, (with a copy filed at the National Library, Ottawa, Canada), ProQuest LLC, Thesis - available online, ISBN 978- 0315-49213-4.
- 1 review article reviewed in MathSciNet.
- 3 articles in press (2018) and 1 submitted for publication.
- 62 summaries (including 44, in the time period 2010 - 2018) of talks, invited and / or accepted, in Cconferences (not associated to Proceedings Volumes)

"Editorial Activities"

- Member of the **Editorial Board** the International Journal **Axioms**, MDPI, Basel, Switzerland.
- **Editor** of 4 Volumes:
  - 3 Proceedings Volumes of International Conferences,
    - Nonlinear Evolution Equations an Dynamical Systems, Springer-Verlag Editore, (1990);
    - Evolution Equations and Materials with Memory, Publishing house "La Sapienza" Università, (2011);
    - IMACS Proceedings, (2019), in progress.
  - 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**, American Institute of Mathematical Sciences (2014);
  - **Meccanica**, Springer-Verlag, (2017);
  - **Mathematics and Computers in Simulation**, Elsevier (2019), in progress.

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 the **Scientific Committee** of **8 international Conferences** (to organise 4 of these ones, she played the role of **Principal investigator** ad hoc funding) sponsored by **C.N.R., G.N.F.M.-I.N.d.A.M., University "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, invited talks organised, …)
- **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 (***IMACS denotes the "International Association for Mathematics and Computers in Simulation"*, 2017- 2020;
- **Elected Member of the AIMETA Board (***AIMETA*, *denotes the "Italian Association for Theoretical and Applied Mechanics")* 2014-2017, renewed 2018-2021;
- **Member of the Doctoral Committee PhD Program in Information and Communications Technologies - (ICT)**.

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 foreign and Italian researchers;
- Various **mini-courses** for students of different PhD Programs;
- **3 Conferences** (for which she received ad hoc funding - **Principal Investigator,** *University calls* years 2009, 2011 and 20171) in 2010, 2012 and 2018;
- **2 Workshops** (in 2012 and in 2014);
- **15 Minisymphosia** in National and International Conferences (2004 -2019).

Courses offered

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 present on the informatised system - INFOSTUD)

- **"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.

- **2 DOCTORATE COURSES**
    - (**Nonlinear ordinary differential equations: perturbative methods & applications** (offered in English) **Ph. D. Program in "Mathematical Models for Engineering, Electromagnetics and Nanosciences"**
    - Course: **Mathematical Physics (Ph. D. Program in Electronic Engineering)**.

- **BACHELOR'S DEGREES COURSES (FIVE AND THREE-YEAR DEGREE PROGRAMS)** since Academic Years 1991/92
    - Mathematical Analysis I (Electronic Engineering, Telecommunication Engineering, Building-Architectural Engineering),
    - Mathematical Analysis II (Building-Architectural Engineering, Clinic Engineering, Construction Engineering architecture, Clinical Engineering, Aerospace, Energy, 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 Electronic Engineering and in Biomedical Engineering)
    - Applied Mathematics (Master Programs in Electronic Engineering and in Biomedical Engineering)
    - Mathematical and Algebraic Methods (Master Program in Biomedical Engineering)

Thesis supervisor and Tutor of Undergraduate Excellence Program

- **Bachelor's Degree Thesis supervisor** in Clinical Engineering (achieved 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 year of his Bachelor's Degree's Program)
Title: *Analytical and Symbolic Methods in Applied Mathematics*
Candidate Fabio De Rubeis.

Reviewer for the Scientific Journals

- 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.
- MathSciNet.

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