

CARLANGELLO LIVERANI

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- **Personal Information.**

Liverani Carlangelo. ORCID: <https://orcid.org/0000-0001-8683-4871>

Born 30-06-1956 in Bologna, Italy. Italian.

Url: <https://carlangelo-liverani.github.io>

- **Education.**

- B.A. in Physics, *cum laude*, Università di Bologna, 1980 (Advisor: G. Turchetti).
- Ph.D. in Mathematics, Rutgers University, 1988 (Advisor: J.L. Lebowitz).

- **Current Position.**

- Full Professor, University of Rome *Tor Vergata* (since 2001).
- Visiting Professor, University of Maryland, USA, 2026.

- **Previous Positions.**

- Associate Prof., University of Rome *Tor Vergata* (1999-2001).
- Ricercatore, University of Rome *Tor Vergata* (1988-1999).
- Postdoc, University of New York at Stony Brook, USA (1992).
- Postdoc, University of Arizona, Tucson, Arizona (1989).
- **One month visiting positions:** Université Paris Dauphine (2018); Université Lille (2017); Centre Interfacultaire Bernoulli, École Polytechnique Fédérale de Lausanne (2013); Université Paris Dauphine (2010); Ecole Normale Supérieure, Paris (2008); Université Paris Dauphine (2008); CIRM, Marseille (2007); Penn State University (2007); Université Paris Dauphine (2006); Université Paris XIII (2006); University of Maryland (2006); Université Paris VII (2004); Courant Institute (2001).
- **Longer visiting positions:** University of Maryland, one semester (2024). CARMIN senior position, joint IHP–IHES, Paris (2017), six months. Fields Institute, Toronto (2010), four months. CNRS Researcher, France (2005), three months. IHES, Paris (2001), six months.

- **Fellowships and Awards.**

- Elected member of the Italian National Academy (Accademia dei Lincei) (2021).
- Elected member of the Academia Europaea (2020).
- 2019 International Prize *Cataldo Agostinelli ed Angiola Gili Agostinelli* for Mechanics or Mathematical Physics assigned by the Italian National Academy.
- PI of *Stochastic properties of dynamical systems*, PRIN 2022NTKXCX (Italian Project of National Relevance), 2023-2025
- PI of *Regular and stochastic behavior in dynamical systems*, PRIN 2017S35EHN (Italian Project of National Relevance), 2019-2021
- Local coordinator *Teorie geometriche e analitiche dei sistemi Hamiltoniani in dimensioni finite e infinite*, PRIN 2010JJ4KPA_009 (Italian Project of National Relevance), 2013-2016.
- PI of *Macroscopic Laws and Dynamical Systems* (MALADY, ERC AdG 246953), 2010-2015. <http://maladyerc.wordpress.com>.
- PI of *Dynamical Systems and applications*, PRIN 2007B3RB3EY (Italian Project of National Relevance), 2007-2009,
- Co-PI of GDRE Grefi-Mefi (Groupement de Recherche Européen), 2005-2008,
- PI of *Interacting Dynamical Systems*, INDAM Grant, 2003,

- **Editorial Board membership.**

Memberships in Editorial Boards of International Journals

- Analysis & PDE (2026-present; Borad member)
- Ergodic Theory and Dynamical Systems (2000–2025; Board member);

Memberships in Editorial Boards of National Journals

- Rendiconti di Matematica e delle sue applicazioni (since 2016; Governing Editorial Board member);
- Bollettino Unione Matematica Italiana (since 2013; Editorial Committee member);

Past Memberships in Editorial Boards

- Communications in Mathematical Physics (2015–2026; Associate Editor);
- Nonlinearity (2002–2014 Associate Editor. 2015–2019; Co-Editor in Chief);
- Journal of Dynamical and Control Systems (2014–2019; Associate Editor);
- Journal of Statistical Physics (2013–2018; Board member);
- Discrete and Continuous Dynamical Systems (2003–2015; Associate Editor).
- Mathematical Physics Electronic Journal (2002–2010; Associate Editor)

- **Supervision of graduate students and postdoctoral fellows.** Ph.D. students: M. Giampieri (2005– Roma Tor Vergata), M. Discendenti (2010–Roma Tre), P. Giulietti (2010–Roma La Sapienza), R. Castorrini (2020–GSSI L’Aquila), N. Kiamari (2020–Roma Tre), S. Jain (2023–Roma Tor Vergata), G. Canestrari (2024–Roma Tor Vergata).

Postdocs: R. Aimino, O. Butterley, B. Carvalho, A. Castro, S. Chen, J. De Simoi, P. Eslami, I. Morris, C. Poquet, M. Stenlund, Y. Su, D. Terhesiu, D. Volk.

- **Teaching Activities.** Since 1990 I taught an average of 160 hours per year in algebra, analysis, geometry, mechanics and dynamical systems. In addition, I taught several Ph.D. courses and at least 15 summer schools.

- **Organization of scientific meetings (latest).**

- *New directions in thermodynamic formalism*, CIRM, Marseille, 22–26 June, 2026, Scientific Committee.
- *Interacting particle systems and related fields*, CIRM, Marseille, 22–26 September, 2025, Scientific Committee.
- *Macroscopic Behavior of Deterministic Systems*, Brin Mathematics Research Center, Maryland, USA, 9–12 September, 2024. Coorganized with Stefano Olla.
- *Probabilistic techniques for random and time-varying dynamical systems*, CIRM, Marseille, 3–7 October 2022, Scientific Committee.
- *The International Congress of Mathematicians 2022 (virtual)*. Core member of the Dynamics Panel.
- Co-organizer of the *Dynamical Systems session of the 20th International Congress on Mathematical Physics (ICMP)*, Geneva 2021.
- Organizer with W. Bahsoun, V. Baladi and M. Demers: *Dynamics, Transfer Operators, and Spectra*. Semester at the Bernoulli Center, EPFL, Lausanne, 01/2021–06/2021.
- Organizer with A. Sorrentino and O. Butterley: *Regular and stochastic behaviour in dynamical systems*. Rome, Italy 12/02/2020–14/02/2020.
- Organizer with F. Bracci, A. Celletti, A. Sorrentino: *Dynamical Systems: from geometry to mechanics*, Rome, February 5–8, 2019.
- Organizer with Giovanni Forni: *Analytical Methods in classical and quantum systems*. Centro De Giorgi, Pisa, 27 June–2 July 2016.
- Organizer with P. Balint, H. Bruin, I. Melbourne, D. Terhesiu: *Mixing Flows and Averaging Methods*, ESI, Wien, April to May 2016.
- Organizer, with I. Melbourne, G. Pavliotis, S. Olla: *Moyennisation et homogenisation dans les systèmes déterministes et stochastiques*. Marseille, CIRM, 11–15 May 2015.
- Organizer, with Stefano Olla and Lai-Sang Young: *Workshop on the Fourier Law and Related Topics* April 4–8, 2011. Fields Institute, Toronto, Canada.

- **Institutional responsibilities**

- Member of the Brin Prize selection Committee (2018-2023).
- Since 2021-2024: Director of the **Ph.D. Program** of Department of Mathematics, Tor Vergata.
- Member of the Scientific Council of the Center for Mathematics and Theoretical Physics (2010–present). <http://cmtp.uniroma2.it>.
- Member of the Scientific Committee of the GNMF. The GNFM represents all the Italian Mathematical Physicists. (2009-20012). <http://www.altamatematica.it/gnfm/>.
- Italian coordinator of the Grefi-Mefi GDRE, 2005-2008 (more than 300 people involved between Italy and France). <http://www.altamatematica.it/it/node/127>.
- Member of the *Steering Committee* of the European Science Foundation Program *Probabilistic methods in Non-Hyperbolic Dynamics* (PRODYN) (1998-2002).

- **Selected Papers**

1. *Heat equation from a deterministic dynamics*; G. Canestrari, C.Liverani, S. Olla. *Inventiones Mathematicae*, DOI: 0.1007/s00222-026-01429-1.
2. *Quantitative statistical properties of two-dimensional partially hyperbolic systems*, R. Castorrini, C.Liverani. *Advances in Mathematics*, 409, Part A, 1-122 (2022)
3. *Parabolic dynamics and Anisotropic Banach spaces*; P. Giulietti, C. Liverani *Journal of the European Mathematical Society*, **21**, no. 9, 2793–2858 (2019).
4. *Limit Theorems for Fast-slow partially hyperbolic systems*; J. de Simoi, C. Liverani *Inventiones Mathematicae*, **213**, 3, 811–1016 (2018).
5. *Exponential Decay of Correlations for Finite Horizon Sinai Billiard Flows*; V. Baladi, M. Demers, C. Liverani *Inventiones Mathematicae*, **211**, 1, pp. 39–177 (2018).
6. *Statistical properties of mostly contracting fast-slow partially hyperbolic systems*; J. de Simoi, C. Liverani *Inventiones Mathematicae*, **206**, 1, (2016) 147–227.
7. *Anosov Flows and Dynamical Zeta Functions*; P. Giulietti, C. Liverani, M. Pollicott *Annals of Mathematics*, **178**, 2 (2013) 687–773. **G** 110. AMS 35.
8. *Toward the Fourier law for a weakly interacting anharmonic crystal*; C. Liverani, S. Olla *Journal of the American Mathematical Society*, **25** (2012) 555–583.
9. *On contact Anosov flows.*; C. Liverani *Ann. of Math.* 159 (2004), no. 3, 1275–1312.
10. *Decay of correlations*; C. Liverani *Ann. of Math.* 142 (1995), no. 2, 239–301.

The full list of papers, preprints and some expository lectures is available at <https://carlangelo-liverani.github.io/pubblicazioni.html>.