

CARLANGELLO LIVERANI

Mathematics Department, University of Rome *Tor Vergata*,
Via della Ricerca Scientifica,
Rome, 00133 Italy
Phone: 0039-06-72594694; Fax: 0039-06-72594699
e-mail: liverani@mat.uniroma2.it
web-page: <http://www.mat.uniroma2.it/~liverani>

- **Personal Information.**

Liverani Carlangello. ORCID: <https://orcid.org/0000-0001-8683-4871>
Url: <http://www.mat.uniroma2.it/~liverani>

- **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).

- **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*: 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 Socio Corrispondente of the Accademia Nazionale dei Lincei (2021).
- Elected member of the Academia Europaea (2020).
- Elected Fellow of the Institute of Physics, UK (2004).
- 2019 International Prize *Cataldo Agostinelli ed Angiola Gili Agostinelli* for Mechanics or Mathematical Physics assigned by the Italian National Academy.
- Invited speaker at the International Congress of Mathematicians 2018. Section 9: Dynamical Systems and O. D. E. and Section 11: Mathematical Physics.
- PI of *Regular and stochastic behaviour 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 Activity.**¹

- *Memberships in Editorial Boards of International Journals*
- Communications in Mathematical Physics (2015–2020; Associate Editor);

¹As the editorial titles vary, I use *board member* for journals in which I have no specific duties, *Associate Editor* for the journals where I have handling papers responsibilities and more specific titles for managerial responsibilities.

- Ergodic Theory and Dynamical Systems (2000–2023; 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

- 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. Castorriani (GSSI L’Aquila), N. Kiamari (Roma Tre), S. Jain (Roma Tor Vergata), G. Giovanni Canestrari (Roma Tor Vergata). Postdocs: R. Aimino, O. Butterley, J. De Simoi, P. Eslami, I. Morris, C. Poquet, D. Terhesiu, D. Volk. Also, I had important interactions with several other PhD and Postdocs although I was not their official advisor.
- **Teaching Activities.** Since 1990 I taught courses 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 (main events).**
 - Co-organizer of the Dynamical Systems session of the International Congress on Mathematical (ICM), Saint Petersburg 2022.
 - 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 homogénéisation 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).
 - Member of the Advisory board of the Centre for Nonlinear Mathematics and Applications at Loughborough, UK (2017–present).
 - Member of the Scientific Council of the Center for Mathematics and Theoretical Physics (2010–present). <http://cmt.uniroma2.it>.
 - Member of the Scientific Committee of the GNMF. The GNMF represents all the Italian Mathematical Physicists. (2009–2012). <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>.
 - Since 2005: member of the **Ph.D. committee** of the Mathematics Department, University of Rome Tor Vergata.
 - Since 2005: director of the **INDAM research unit at Tor Vergata**.
 - Member of the *Steering Committee* of the European Science Foundation Program *Probabilistic methods in Non-Hyperbolic Dynamics* (PRODYN) (1998–2002).

- **Reviewing activities**

- *Reviewer for the following Institutions:* European Research Council (Europe); Agence Nationale de la Recherche (France); Australian Research Council (Australia); FWF Austrian Science Fund (Vienna, Austria); Ministero dell’Istruzione, dell’ Università e della Ricerca (Italy); National Commission for Scientific & Technological Research (FONDECYT, Santiago, Chile); Natural Sciences and Engineering Research Council (Canada); Royal Society (London, England); OTKA (Hungary); Chalmers University of Technology, (Sweden); University of Bristol (England); Bryn Mawr College (Pennsylvania, U.S.A.); Michigan State University (Michigan, U.S.A.); Queen Mary London University (London, England); University of Maryland (MD, USA); Université de la Méditerranée (Marseille, France); University of Massachusetts Amherst, (Massachusetts, U.S.A.); University of Houston, (Houston, U.S.A.); University of Padua (Italy); TATA Institute of Fundamental Research (India); The Hebrew University of Jerusalem (Israel); University of Stony Brook (USA); Leverhulme Trust (UK).
- *Reviewed (often regularly) for about 50 different Journals among which:* Acta Mathematica; Advances in Mathematics; Annales de l’I.H.P. Probabilités et Statistiques; Annales Scientifique de l’Ecole Normale Supérieure; Annals of Mathematics; Annals of Probability; Annali della Scuola Normale di Pisa; Cambridge Journal of Mathematics; Communications in Mathematical Physics; Duke Mathematical Journal; Inventiones Mathematicae; Journal of Modern Dynamics; Journal of the American Mathematical Society; Journal of the Mathematical Society of Japan; Memoirs of the American Mathematical Society; Probability Theory and Related Fields; Proceedings of the AMS; SIAM Journal on Control and Optimization; Transactions of the AMS.

- **Members of scientific Societies.** Socio Corrispondente of the Accademia Nazionale dei Lincei (2021). Member of the Academia Europaea (2020). Fellow of the Institute of Physics, UK (2004). American Mathematical Society, USA (since 1984). Unione Matematica Italiana (since 2007). International Association of Mathematical Physics (since 2007). European Mathematical Society (since 2017).

MAIN 20 PUBLICATIONS

1. *Deterministic walks in random environment;*
C. Liverani, R. Aimino
Annals of Probability, Volume **48**, Number 5, 2212–2257 (2020).
2. *Parabolic dynamics and Anisotropic Banach spaces;*
P. Giulietti, C. Liverani
Journal of the European Mathematical Society, **21**, no. 9, 2793–2858 (2019).
3. *Limit Theorems for Fast-slow partially hyperbolic systems;*
J. de Simoi, C. Liverani
Inventiones Mathematicae, **213**, 3, 811–1016 (2018). Cit. **G** 11. AMS 3.
4. *Exponential Decay of Correlations for Finite Horizon Sinai Billiard Flows;*
V. Baladi, M. Demers, C. Liverani
Inventiones Mathematicae, **211**, 1, pp. 39–177 (2018).
5. *Statistical properties of mostly contracting fast-slow partially hyperbolic systems;*
J. de Simoi, C. Liverani
Inventiones Mathematicae, **206**, 1, (2016) 147–227.
6. *Anosov Flows and Dynamical Zeta Functions;*
P. Giulietti, C. Liverani, M. Pollicott
Annals of Mathematics, **178**, 2 (2013) 687–773.
7. *Toward the Fourier law for a weakly interacting anharmonic crystal;*
C. Liverani, S. Olla
Journal of the American Mathematical Society, **25** (2012) 555–583.

8. *Energy transfer in a fast-slow Hamiltonian system*;
D. Dolgopyat, C. Liverani
Communications in Mathematical Physics, **308**, 1, 201–225 (2011).
9. *Random Walk in Markovian Environment*;
Dmitry Dolgopyat and Gerhard Keller, C. Liverani
Annals of Probability, **36**, Number 5 (2008), 1676–1710.
10. *Uniqueness of the SRB measure for piecewise expanding weakly coupled map lattices in any dimension*;
G.Keller, C.Liverani
Communications in Mathematical Physics, **262**, 1, 33–50, (2006).
11. *Banach Spaces adapted to Anosov Systems*;
S.Gouezel, C.Liverani
Ergodic Theory and Dynamical Systems, **26**, 1, 189–217, (2006).
12. *On Contact Anosov flows*;
C.Liverani
Annals of Mathematics, **159**, 3, 1275–1312 (2004).
13. *Ruelle-Perron-Frobenius spectrum for Anosov maps*;
M.Blank and G.Keller, C.Liverani
Nonlinearity, **15**, n.6, pp. 1905–1973 (2002).
14. *Stability of the Spectral Gap for transfer operators*;
G.Keller, C.Liverani
Annali della Scuola Normale di Pisa, Classe di Scienze (4) Vol. XXVIII, pp. 141–152 (1999).
15. *A Probabilistic Approach to Intermittency*;
B. Saussol, S.Vaienti, C.Liverani
Ergodic Theory and Dynamical Systems, **19**, pp. 671–685 (1999).
16. *Central Limit Theorem for Deterministic Systems*;
C.Liverani
International Conference on Dynamical Systems, Montevideo 1995, a tribute to Ricardo Mañe,
Pitman Research Notes in Mathematics Series, **362**, editors F.Ledrappier, J.Levovicz, S.Newhouse,
pp. 56–75 (1996).
17. *Decay of Correlations*;
C.Liverani
Annals of Mathematics, **142**, pp. 239–301 (1995).
18. *Ergodicity in Hamiltonian Systems*
M. Wojtkowski, C.Liverani
Dynamics Reported, **4**, C.K.R.T. Jones, U.Kirchgraber, H.O.Walther eds., Springer-Verlag,
Berling, Heidelberg, New York, pp. 130–202, (1995).
19. *Ergodic Systems of n Balls in a Billiard Table*;
L. Bunimovich, C.Liverani, S. Pellegrinotti and Y.Suhov
Communications in Mathematical Physics, **146**, pp. 357–396, (1992).
20. *Potential on the Two-Torus for which the Hamiltonian Flow is Ergodic*;
V. Donnay, C.Liverani
Communications in Mathematical Physics, **135**, pp. 267–302, (1991).

The full list is available at <http://www.mat.uniroma2.it/~liverani/pubbl.html>.