

Prof. Lamberto Rondoni

PLACE AND DATE OF BIRTH: Italy, 12 February 1960

ADDRESS: Dipartimento di Scienze Matematiche, Politecnico di Torino, Corso Duca degli Abruzzi 24, 10129 Torino, Italy.

Tel.: +39 011 564 7533; ***Fax.:*** +39 011 564 7599; ***email:*** lamberto.rondoni@polito.it

RESEARCH FIELDS:

1. Boltzmann equation; singular integral equations; transport of particles in various kinds of media. Existence theorems, analytical solutions and numerical simulations.
2. Stochastic processes; applications to chemical kinetics. Theorems on stationary states, pattern formation, numerical simulations and biological applications.
3. Dynamical systems and nonequilibrium statistical mechanics; hydrodynamic models; fluctuation relations; molecular dynamics.

EDUCATION:

- Virginia Polytechnic Institute & State University, Ph.D. in Mathematics, Mathematical-Physics program, (Summer 1991);

Thesis: ``A Stochastic Treatment of Reaction and Diffusion"; Advisor: R.F. Streater

- Virginia Polytechnic Institute & State University, Master of Science in Physics, (Spring 1990); Advisor: P.F. Zweifel
- Virginia Polytechnic Institute & State University, Master of Science in Mathematics, (Spring 1990); Advisor: W. Greenberg
- Università degli Studi di Bologna, Laurea in Ingegneria Nucleare, (10 December 1986);

Thesis: ``Effetti delle Superfici e delle Discontinuità nei Processi di Trasporto" (Surface effects and discontinuities in transport processes) Advisor: V.G. Molinari

POSITIONS HELD:

Professore Ordinario (Full Professor), Mathematical Physics, Politecnico di Torino, since 1 January 2014.

Professore Straordinario (equivalent to Full Professor), Mathematical Physics, Politecnico di Torino, 1 January 2011 - 31 December 2013.

Professore Associato (Associate Professor), Mathematical Physics, Politecnico di Torino, 1 November 1999 - 31 December 2010.

Ricercatore Universitario (Lecturer), Mathematical Physics, Politecnico di Torino, 1 September 1995 - 31 October 1999.

Research Associate, The University of New South Wales, School of Physics, 1 September 1992 - 31 August 1995.

Post Doctoral Fellow, Center for Transport Theory and Mathematical Physics, Department of Physics, Virginia Polytechnic Institute & State University, Academic year 1991/92.

Analyst, Computing Center, Virginia Polytechnic Institute & State University, July - October 1991

CONVENER AND LECTURER FOR MORE THAN 20 UNDERGRADUATE and POSTGRADUATE LEVEL SUBJECTS, IN U.S., AUSTRALIA and ITALY.

GRADUATE AND POSTGRADUATE SUPERVISION

8 SUPERVISED PHD THESES (2003-2014)

10 SUPERVISED MASTERS THESES (2008-2014)

6 SUPERVISED BACHELOR THESES (2003-2014)

12 SUPERVISED POST-DOCTORAL AND OTHER POST-GRADUATE FELLOWS (1997-2013)

LEADERSHIP AND ENGAGEMENT

18 ACADEMIC VISITS to major international institutions, including King's College, London Mathematical Society, Niels Bohr Institute, Rockefeller University, Université Libre de Bruxelles, Eotvos University, Ecole Normale Supérieure de Lyon, Max Planck Institute and the Chinese Academy of Sciences.

ORGANISER OF 12 MEETINGS AND CONFERENCES, NATIONALLY AND INTERNATIONALLY (2001-2013) on MATHEMATICAL PHYSICS and DYNAMICAL SYSTEMS.

MORE THAN 40 INVITED LECTURES GIVEN, NATIONALLY AND INTERNATIONALLY, IN ITALY, EUROPE, ASIA, U.S. AND AUSTRALIA.

REFeree FOR MORE THAN 20 PROFESSIONAL JOURNALS, including Nature, Journal of Statistical Physics, Physica A, Physica D, Journal of Physics A, Physical Review Letters, Physical Review E, Journal of Statistical Mechanics, Chaos and Journal of Chemical Physics

MEMBER OF A NUMBER OF ACADEMIC COMMITTEES, INCLUDING the National Committee for editing of Mathematics and Physics admission test for Architecture students, the Interuniversity Centre for admission of Engineering and Architecture students, the Management Board of the Mathematics Department at Politecnico di Torino and others.

Currently I am the Coordinator for the Ph.D. programme in Pure and Applied Mathematics (Joint programme of Politecnico di Torino and University of Torino).

PUBLICATIONS:

About 120 peer-reviewed papers, 5 edited books, 3 books

RECENT COMPETITIVE FUNDING (2008-2015):

Title: Transport phenomena in nano-structured materials

Funded by: ELTEK GROUP S.p.A. (nanotech multinational)

Partners: Dipartimento di Scienze Matematiche of Politecnico di Torino and ELTEK GROUP S.p.A.

Amount: **62K euro** (one two years postdoc + overheads)

Years: 2013-2014

Project number: 315/2012. *This roughly corresponds to an Australian Linkage initiative.*

Title: Nonequilibrium statistical mechanics at small scales

Funded by: Italian Ministry of University and Research and by Politecnico di Torino

Partners: Dipartimento di Scienze Matematiche of Politecnico di Torino

Amount: **44,514.11 Euro**

Years: 2011-2013

Project number: 2009PYYZM5_003 (Ministry), 629/2011 (Politecnico).

This is an internal competitive grant.

Title: Quantum Isotopic Sieving Through Carbon Nanotubes

Funded by: Italian Institute of Technology

Partners: Italian Institute of Technology and Politecnico di Torino

Amount: **45K Euro**

Years: 2010-2013

Title: Applied models in non-equilibrium statistical mechanics

Funded by: Lagrange-CRT Foundation

Partners: Institute for Scientific Interchange and Politecnico di Torino

Amount: **45K euro**

Years: 2010-2013

Title: Rarenoise, Low-Probability, Large Fluctuations Of The Noise In Detectors Of Gravitational Waves

funded by: ERC (European Research Council)

Partners: INFN, Politecnico di Torino, CNR

Amount: **1 Million Euros**

Years: 2008-2013

Project number: GRANT AGREEMENT: ERC 202680

Prior to 2008, I have been also successful in various **national and international** grant applications, including international linkage grants and funding for conferences and lecture series in Italy and abroad.

Ten most cited publications according to Scopus

* Relevant to the present proposal

*Marconi, U.M.B., Puglisi, A., **Rondoni, L.**, Vulpiani, A. Fluctuation-dissipation: Response theory in statistical physics (2008), *Physics Reports*, 461 (4-6), pp. 111-195. Cited 201 times. ****NOTE: This is a highly cited paper and is indicated by Web of Science as within the top 1% of its academic field.****

*Morris, G.P., **Rondoni, L.** Periodic orbit expansions for the Lorentz gas (1994), *Journal of Statistical Physics*, 75 (3-4), pp. 553-584. Cited 50 times.

Evans, D.J., Searles, D.J., **Rondoni, L.** Application of the Gallavotti-Cohen fluctuation relation to thermostated steady states near equilibrium (2005), *Physical Review E*, 71 (5), art. no. 056120, . Cited 48 times.

*Lloyd, J., Niemeyer, M., **Rondoni, L.**, Morriss, G.P. The nonequilibrium Lorentz gas (1995) 5 (3), *Chaos*, pp. 536-551. Cited 47 times.

Rondoni, L., Mejía-Monasterio, C. Fluctuations in nonequilibrium statistical mechanics: Models, mathematical theory, physical mechanisms (2007), *Nonlinearity*, 20 (10), pp. R1-R37. Cited 41 times.

Searles, D.J., **Rondoni, L.**, Evans, D.J. The steady state fluctuation relation for the dissipation function (2007), *Journal of Statistical Physics*, 128 (6), pp. 1337-1363. Cited 36 times.

Morriss, G.P., **Rondoni, L.** Definition of temperature in equilibrium and nonequilibrium systems (1999), *Physical Review E*, 59 (1), pp. R5-R8. Cited 36 times.

*Cohen, E.G.D., **Rondoni, L.** Note on phase space contraction and entropy production in thermostatted hamiltonian systems (1998), *Chaos*, 8 (2), pp. 357-365. Cited 36 times.

Lepri, S., **Rondoni, L.**, Benettin, G. The Gallavotti-Cohen fluctuation theorem for a nonchaotic model (2000), *Journal of Statistical Physics*, 99 (3-4), pp. 857-872. Cited 33 times.

Rondoni, L., Cohen, E.G.D. Gibbs entropy and irreversible thermodynamics (2000), *Nonlinearity*, 13 (6), pp. 1905-1924. Cited 30 times.

Publications in reverse chronological order (2016-2010)

Journal Articles

1. Adamo Paolo, Colangeli Matteo, **Rondoni Lamberto** (2016). *Role of ergodicity in the transient Fluctuation Relation and a new relation for a dissipative non-chaotic map*. CHAOS, SOLITONS AND FRACTALS, vol. 83, p. 54-66, ISSN: 0960-0779, doi: 10.1016/j.chaos.2015.11.025
2. Salari Lucia, **Rondoni Lamberto**, Giberti Claudio, Klages Rainer (2015). *A simple non-chaotic map generating subdiffusive, diffusive, and superdiffusive dynamics*. CHAOS, vol. 25, ISSN: 1054-1500, doi: 10.1063/1.4926621
3. Auletta Gennaro, **Rondoni Lamberto**, Vulpiani Angelo (2015). *About the maximum entropy principle in non equilibrium statistical mechanics*. INDIAN OCEAN REVIEW OF SCIENCE AND TECHNOLOGY, p. 1-9, ISSN: 2312-1874
4. Paul O'Hara, **Lamberto Rondoni** (2015). *Brownian Motion in Minkowski Space*. ENTROPY, vol. 17, p. 3581-3594, ISSN: 1099-4300, doi: 10.3390/e17063581
5. Mukherjee Sayan, Palit Sanjay Kumar, Banerjee Santo, Ariffin M.R.K., **Rondoni Lamberto**, Bhattacharya D.K. (2015). *Can complexity decrease in congestive heart failure?* PHYSICA. A, vol. 439, p. 93-102, ISSN: 0378-4371, doi: 10.1016/j.physa.2015.07.030
6. Ansalone Patrizio, Chinappi Mauro, **Rondoni Lamberto**, Cecconi Fabio (2015). *Driven diffusion against electrostatic or effective energy barrier across α -hemolysin*. THE JOURNAL OF CHEMICAL PHYSICS, vol. 143, ISSN: 0021-9606, doi: 10.1063/1.4933012
7. Stuart J Davie, Owen G Jepps, **Lamberto Rondoni**, James C Reid, Debra J Searles (2014). *Applicability of optimal protocols and the Jarzynski equality*. PHYSICA SCRIPTA, vol. 89, p. 1-5, ISSN: 0031-8949, doi: 10.1088/0031-8949/89/04/048002
8. Matteo Colangeli, **Lamberto Rondoni**, Antonella Verderosa (2014). *Focus on some nonequilibrium issues*. CHAOS, SOLITONS AND FRACTALS, vol. 64, p. 2-15, ISSN: 0960-0779, doi: 10.1016/j.chaos.2014.03.002
9. Sergio Chibbaro, **Lamberto Rondoni**, Angelo Vulpiani (2014). *On the Foundations of Statistical Mechanics: Ergodicity, Many Degrees of Freedom and Inference*. COMMUNICATIONS IN THEORETICAL PHYSICS, vol. 62, p. 469-475, ISSN: 0253-6102, doi: 10.1088/0253-6102/62/4/04
10. Devagnik Dasgupta, Debra J. Searles, **Lamberto Rondoni**, Stefano Bernardi (2014). *Sieving of H₂ and D₂ Through End-to-End Nanotubes*. COMMUNICATIONS IN THEORETICAL PHYSICS, vol. 62, p. 541-549, ISSN: 0253-6102, doi: 10.1088/0253-6102/62/4/11
11. Belousov Roman, De Gregorio Paolo, **Rondoni Lamberto**, Conti Livia (2014). *Statistical distribution of bonding distances in a unidimensional solid*. PHYSICA. A, vol. 412, p. 19-31, ISSN: 0378-4371, doi: 10.1016/j.physa.2014.06.006

12. Livia Conti, Claudia Lazzaro, Gagik Karapetyan, Michele Bonaldi, Matteo Pegoraro, Ram-Krishna Thakur, Paolo De Gregorio, **Lamberto Rondoni** (2014). *Thermal noise of mechanical oscillators in steady states with a heat flux*. PHYSICAL REVIEW E, STATISTICAL, NONLINEAR, AND SOFT MATTER PHYSICS, vol. 90, p. 1-9, ISSN: 1539-3755, doi: 10.1103/PhysRevE.90.032119
13. S. Bonella, G. Ciccotti, **L. Rondoni** (2014). *Time reversal symmetry in time-dependent correlation functions for systems in a constant magnetic field*. EUROPHYSICS LETTERS, vol. 108, p. 1-3, ISSN: 0295-5075, doi: 10.1209/0295-5075/108/60004
14. M. Colangeli, M. Pizzi, **L. Rondoni** (2013). *Current in a quantum driven thermostatted system with off-diagonal disorder*. PHYSICA. A, vol. 392, p. 2977-2987, ISSN: 0378-4371, doi: 10.1016/j.physa.2013.03.011
15. Livia Conti, Paolo De Gregorio, Gagik Karapetyan, Claudia Lazzaro, Matteo Pegoraro, Michele Bonaldi, **Lamberto Rondoni** (2013). *Effects of breaking vibrational energy equipartition on measurements of temperature in macroscopic oscillators subject to heat flux*. JOURNAL OF STATISTICAL MECHANICS: THEORY AND EXPERIMENT, vol. 2013, ISSN: 1742-5468, doi: 10.1088/1742-5468/2013/12/P12003
16. Matteo Colangeli, **Lamberto Rondoni** (2013). *Fluctuations in quantum one-dimensional thermostatted systems with off-diagonal disorder*. JOURNAL OF STATISTICAL MECHANICS: THEORY AND EXPERIMENT, vol. 2013, ISSN: 1742-5468, doi: 10.1088/1742-5468/2013/02/P02009
17. Luca Mesin, Flavio Canavero, **Lamberto Rondoni** (2013). *Reduction of Protein Networks Models by Passivity Preserving Projection*. COMMUNICATIONS IN THEORETICAL PHYSICS, vol. 60, p. 247-257, ISSN: 0253-6102, doi: 10.1088/0253-6102/60/2/18
18. Debra J. Searles, Barbara Johnston, Denis Evans, **Lamberto Rondoni** (2013). *Time Reversibility, Correlation Decay and the Steady State Fluctuation Relation for Dissipation*. ENTROPY, vol. 15, p. 1503-1515, ISSN: 1099-4300, doi: 10.3390/e15051503
19. Evans D. J., Williams S.R., **Rondoni L.** (2012). *A mathematical proof of the zeroth “law” of thermodynamics and the nonlinear Fourier “law” for heat flow*. THE JOURNAL OF CHEMICAL PHYSICS, vol. 137, p. 1-8, ISSN: 0021-9606, doi: 10.1063/1.4766734
20. Banerjee S., **Rondoni L.** (2012). *Addendum to “Spatiotemporal evolution in a (2 + 1)-dimensional chemotaxis model” [Physica A 391 (2012) 107–112]*. PHYSICA. A, vol. 391, p. 4061-4062, ISSN: 0378-4371, doi: 10.1016/j.physa.2011.07.053
21. Chibbaro S., **Rondoni L.**, Vulpiani A. (2012). *Considerazioni sui fondamenti della Meccanica Statistica*. ISONOMIA, vol. 2, p. 119-133, ISSN: 2037-4348
22. Conti L., De Gregorio P., Bonaldi M., Borrielli A., Crivellari M., Karapetyan G., Poli C., Serra E., Thakur R.K., **Rondoni L.** (2012). *Elasticity of mechanical oscillators in nonequilibrium steady states: Experimental, numerical, and theoretical results*. PHYSICAL REVIEW E, STATISTICAL,

NONLINEAR, AND SOFT MATTER PHYSICS, vol. 85, p. 1-9, ISSN: 1539-3755, doi: 10.1103/PhysRevE.85.066605

23. Colangeli M, **Rondoni L.** (2012). *Equilibrium, fluctuation relations and transport for irreversible deterministic dynamics*. PHYSICA D-NONLINEAR PHENOMENA, vol. 241, p. 681-691, ISSN: 0167-2789, doi: 10.1016/j.physd.2011.12.005

24. Colangeli M., **Rondoni L.**, Vulpiani A. (2012). *Fluctuation-dissipation relation for chaotic non-Hamiltonian systems*. JOURNAL OF STATISTICAL MECHANICS: THEORY AND EXPERIMENT, vol. 2012, p. 1-12, ISSN: 1742-5468, doi: 10.1088/1742-5468/2012/04/L04002

25. Banerjee S., Pizzi M., **Rondoni L.** (2012). *Modulation of output power in the spatio-temporal analysis of a semi conductor laser*. OPTICS COMMUNICATIONS, vol. 285, p. 1341-1346, ISSN: 0030-4018, doi: 10.1016/j.optcom.2011.10.069

26. **L Rondoni**, S Pigolotti (2012). *On Γ - and μ -space descriptions: Gibbs and Boltzmann entropies of symplectic coupled maps*. PHYSICA SCRIPTA, vol. 86, p. 058513-1-058513-4, ISSN: 0031-8949, doi: 10.1088/0031-8949/86/05/058513

27. Banerjee S., Misra A.P., **Rondoni L.** (2012). *Spatiotemporal evolution in a $(2 + 1)$ -dimensional chemotaxis model*. PHYSICA. A, vol. 391, p. 107-112, ISSN: 0378-4371, doi: 10.1016/j.physa.2011.07.053

28. Giberti C., **Rondoni L.** (2011). *Anomalies and absence of local equilibrium, and universality, in one-dimensional particle systems*. PHYSICAL REVIEW E, STATISTICAL, NONLINEAR, AND SOFT MATTER PHYSICS, vol. 83, p. 1-14, ISSN: 1539-3755, doi: 10.1103/PhysRevE.83.041115

29. **Rondoni L.** (2011). *Complessità e relazionalità nelle scienze matematiche, fisiche e naturali*. NUOVA UMANITÀ, vol. 196-197, p. 531-545, ISSN: 2240-2527

30. Igarashi A., **Rondoni L.**, Botrugno A., Pizzi M. (2011). *Nonlinear Diffusion and Transient Osmosis*. COMMUNICATIONS IN THEORETICAL PHYSICS, vol. 56, p. 352-366, ISSN: 0253-6102, doi: 10.1088/0253-6102/56/2/28

31. De Gregorio P., **Rondoni L.**, Bonaldi M., Conti L. (2011). *One-dimensional models and thermomechanical properties of solids*. PHYSICAL REVIEW. B, CONDENSED MATTER AND MATERIALS PHYSICS, vol. 84, p. 1-4, ISSN: 1098-0121, doi: 10.1103/PhysRevB.84.224103

32. Colangeli M., Klages R., De Gregorio P., **Rondoni L.** (2011). *Steady state fluctuation relations and time reversibility for non-smooth chaotic maps*. JOURNAL OF STATISTICAL MECHANICS: THEORY AND EXPERIMENT, p. 1-22, ISSN: 1742-5468, doi: 10.1088/1742-5468/2011/04/P04021

33. Banerjee S., **Rondoni L.**, Mukhopadhyay S., Misra A. P. (2011). *Synchronization of spatiotemporal semiconductor lasers and its application in color image encryption*. OPTICS COMMUNICATIONS, vol. 284, p. 2278 -2291, ISSN: 0030-4018, doi: 10.1016/j.optcom.2010.12.077

34. Banerjee S., **Rondoni L.**, Mukhopadhyay S. (2011). *Synchronization of time delayed*

semiconductor lasers and its applications in digital cryptography. OPTICS COMMUNICATIONS, vol. 284, p. 4623-4634, ISSN: 0030-4018, doi: 10.1016/j.optcom.2011.06.009

35. U. MARINI BETTOLO MARCONI, A. PUGLISI, **RONDONI L.**, A. VULPIANI (2010). *Des fluctuations à la dissipation*. POUR LA SCIENCE, vol. 388 - février 2010, p. 44-50, ISSN: 0153-4092

36. O. G. JEPPI, **RONDONI L.** (2010). *Deterministic thermostats, theories of nonequilibrium systems and parallels with the ergodic condition*. JOURNAL OF PHYSICS. A, MATHEMATICAL AND THEORETICAL, vol. 43, p. 1-42, ISSN: 1751-8113, doi: 10.1088/1751-8113/43/13/133001

37. A. PUGLISI, S. PIGOLOTTI, **RONDONI L.**, A. VULPIANI (2010). *Entropy production and coarse-graining in Markov processes*. JOURNAL OF STATISTICAL MECHANICS: THEORY AND EXPERIMENT, p. P05015-1-P05015-25, ISSN: 1742-5468, doi: 10.1088/1742-5468/2010/05/P05015

38. L. CONTI, M. BONALDI, **RONDONI L.** (2010). *RareNoise: non-equilibrium effects in detectors of gravitational waves*. CLASSICAL AND QUANTUM GRAVITY, vol. 27, p. 084032-1-084032-9, ISSN: 0264-9381, doi: 10.1088/0264-9381/27/8/084032

39. S. BANERJEE, A. P. MISRA, P. K. SHUKLA, **RONDONI L.** (2010). *Spatiotemporal chaos and the dynamics of coupled Langmuir and ion-acoustic waves in plasmas*. PHYSICAL REVIEW E, STATISTICAL, NONLINEAR, AND SOFT MATTER PHYSICS, vol. 81, p. 046405-1-046405-9, ISSN: 1539-3755, doi: 10.1103/PhysRevE.81.046405

Book Chapters

40. Laura Stricker, **Lamberto Rondoni** (2015). Microscopic Models for Vibrations in Mechanical Systems Under Equilibrium and Non-equilibrium Conditions. In: Santo Banerjee, Lamberto Rondoni. Understanding Complex Systems Applications of Chaos and Nonlinear Dynamics in Science and Engineering. vol. 4, p. 3-30, Berlin: Springer - Verlag, ISBN: 9783319170367, doi: 10.1007/978-3-319-17037-4_1

41. **Rondoni Lamberto** (2015). Teorie e modelli scientifici. Significato e irriducibilità. In: Marco Bernardoni Sergio Rondinara. Teoria, modello. ROMA:Città Nuova, ISBN: 978-88-311-2004-3

42. Paolo Adamo, Roman Belousov, **Lamberto Rondoni** (2014). Fluctuation-Dissipation and Fluctuation Relations: From Equilibrium to Nonequilibrium and Back. In: Angelo Vulpiani, Fabio Cecconi, Massimo Cencini, Andrea Puglisi, Davide Vergni. Lecture Notes in Physics; Large Deviations in Physics. vol. 885, p. 93-133, Heidelberg:Springer New York Heidelberg Dordrecht London, ISBN: 9783642542503, doi: 10.1007/978-3-642-54251-0_4

43. **Lamberto Rondoni**, Paul O'Hara (2014). Sulla presenza di intenzionalità e finalismo nel quadro della fisica contemporanea. In: Sergio Rondinara. Scelte razionali, intenzionalità, fini. p. 107-137, ROMA:Città Nuova, ISBN: 9788831135078

44. Matteo Colangeli, **Lamberto Rondoni** (2013). Fluctuation Relations and Nonequilibrium

Response for Chaotic Dissipative Dynamics. In: Santo Banerjee; Lamberto Rondoni. Understanding Complex Systems - Applications of Chaos and Nonlinear Dynamics in Science and Engineering - Vol. 3. p. 3-38, Heidelberg:Springer Verlag Germany:

45. J. C. Reid, S. R. Williams, D. J. Searles, **L. Rondoni**, D. J. Evans (2013). Fluctuation relations and the foundations of statistical thermodynamics: a deterministic approach and numerical demonstration. In: R. Klages, W. Just, C. Jarzynski. Nonequilibrium statistical physics of small systems: Fluctuation Relations and Beyond. p. 57-82, WEINHEIM:Wiley, ISBN: 9783527410941

46. **L. Rondoni**, O. G. Jepps (2013). Fluctuation relations in small systems: exact results from the deterministic approach. In: R. Klages W. Just C. Jarzynski. Nonequilibrium statistical physics of small systems. p. 83-114, WEINHEIM:Wiley, ISBN: 9783527410941

47. **Rondoni L.** (2011). Rispetto e ricerca scientifica: confronto fra le matematiche cinese e occidentale. In: Il Rispetto, Regola di Vita. p. 59-60, Torino:Lions International

48. **RONDONI L.** (2010). COMPLESSITÀ, CAOS E LA PRESUNTA SUPREMAZIA DELL'INFORMAZIONE SULLA MATERIA. In: R. PRESILLA; S. RONDINARA EDD.. Scienze fisiche e matematiche: istanze epistemologiche e ontologiche. p. 249-282, ROMA:Città Nuova, ISBN: 9788831135047

49. Cvitanovic P., Artuso R., **Rondoni L.**, Spiegel E.A. (2010). Transporting densities. In: Cvitanović P., R. Artuso R., Mainieri R., Tanner G., Vattay G.. Chaos: Classical and Quantum. vol. I: Deterministic Chaos, p. 311-330, Copenhagen:Niels Bohr Institute

Conference Proceedings

50. **Lamberto Rondoni** (2014). Relazione e complessità nelle scienze della natura. In: Natural relationality and environmental awareness. p. 61-65, ROMA:ENEA, ISBN: 9788882863081, Castel Gandolfo, 4-6 April 2014

51. Irene Donato, Giovanni Petri, Martina Scolamiero, **Lamberto Rondoni**, Francesco Vaccarino (2013). Decimation of Fast States and Weak Nodes: Topological Variation via Persistent Homology Proceedings of the European Conference on Complex Systems 2012. In: Springer Proceedings in Complexity Proceedings of the European Conference on Complex Systems 2012. vol. II, p. 295-301, BERLINO: Springer

52. De Gregorio P., **Rondoni L.**, Adamo P, Bonaldi M., Borrielli A., Serra E., Conti L., Hajj R., Karapetyan G., Thakur R. K., Poli C. (2011). Gravitational wave detectors are driven away from thermodynamic equilibrium: why should we care. In: 2011 Gravitational Waves and Experimental Gravity. p. 183-186, The Gioi, La Thuille, 20-27 March 2011

Scholarly Books

53. Sergio Chibbaro, **Lamberto Rondoni**, Angelo Vulpiani (2014). Reductionism, Emergence and Levels of Reality. p. 1-180, Heidelberg:Springer New York Heidelberg Dordrecht London, ISBN: 9783319063607, doi: 10.1007/978-3-319-06361-4

Edited Books

- 54.** Santo Banerjee, **Lamberto Rondoni** (editors) (2015). Applications of Chaos and Nonlinear Dynamics in Science and Engineering. Lamberto Rondoni. UNDERSTANDING COMPLEX SYSTEMS, vol. 4, p. 1-304, BERLIN:Springer - Verlag, ISBN: 9783319170367, ISSN: 1860-0832
- 55.** Santo Banerjee, **Lamberto Rondoni** (editors) (2013). Applications of Chaos and Nonlinear Dynamics in Science and Engineering . vol. 3, Heidelberg: Springer Verlag Germany:Tiergartenstrasse 17, D 69121 Heidelberg Germany:011 49 6221 3450, EMAIL: g.braun@springer.de, INTERNET: <http://www.springer.de>, Fax: 011 49 6221 345229, ISBN: 9783642340161
- 56.** Banerjee S., **Rondoni L.**, Mitra M. (editors) (2012). Applications of Chaos and Nonlinear Dynamics in Science and Engineering . Di -. vol. 2, Berlin: Springer Verlag Germany:Tiergartenstrasse 17, D 69121 Heidelberg Germany:011 49 6221 3450, EMAIL: g.braun@springer.de, INTERNET: <http://www.springer.de>, Fax: 011 49 6221 345229, ISBN: 9783642293283
- 57.** Banerjee S., Mitra M., **Rondoni L.** (editors) (2011). Applications of Chaos and Nonlinear Dynamics in Engineering. Di -. vol. 1, p. 1-347, BERLIN:Springer, ISBN: 9783642219214

Edited Special Issues

- 58.** Liu Fei, **Rondoni Lamberto**, Tang Lei-Han, Yan-Ting Wang, Zhou Hai-Jun (editors) (2014). Special Issue on Small Systems: nonequilibrium phenomena and anomalous behaviour. Di Liu Fei, Rondoni Lamberto, Tang Lei-Han, Yan-Ting Wang,Zhou Hai-Jun. COMMUNICATIONS IN THEORETICAL PHYSICS, vol. 62, p. 443-633, Bristol:IOP publishing, ISSN: 0253-6102