
Curriculum vitae et studiorum

– Prof. Alessandro Giuliani –

- **Personal data:** Born in La Spezia (Italy), on Oct 24, 1978. Citizenship: Italian.
- **Education:**
 - *Laurea* in Physics (cum laude), Univ. Roma Sapienza, Sept 2001. Advisor: Prof. G. Gallavotti.
 - PhD in Physics, Univ. Roma Sapienza, Jan 2005. Advisors: Prof. G. Gallavotti and Prof. V. Mastropietro.
- **Positions:**
 - Postdoc (Univ. Roma Tor Vergata, Sept 2004 to Aug 2005)
 - *Instructor* (Princeton University, Sept 2005 to Jul 2007)
 - Researcher in Mathematical Physics (Univ. Roma Tre, Jan 2007 to Mar 2013)
 - Associate Professor in Mathematical Physics (Univ. Roma Tre, Apr 2013 to Aug 2017)
 - Full Professor in Mathematical Physics (Univ. Roma Tre, since Sept 2017)
- **Prizes, honours and responsibilities:**
 - 1999, *E. Persico* Prize, Accademia Nazionale dei Lincei.
 - 2004, Junior Research Fellowship, Erwing Schrödinger Institute for Mathematical Physics.
 - 2006, Ann. H. Poincaré prize for the paper “Fermi liquid behavior in the 2D Hubbard model at low temperatures”
 - 2009, winner of an **ERC StG** (European Research Council Starting Independent Grant) for the project *Collective Phenomena in Classical and Quantum Many Body Systems*
 - since 2009, Scientific Secretary of the Center for Mathematics and Theoretical Physics
 - 2011, *A. Di Braccio* Prize, Accademia Nazionale dei Lincei.
 - 2012, IUPAP Young Scientist Prize
 - from 2014 to 2018, Editor-in-chief of *Mathematical Physics, Analysis and Geometry*

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- from 2015 to 2020, elected member of the Executive Committee of the *International Association of Mathematical Physics*
 - 2015, *B. Finzi* Prize for Mechanics, Istituto Lombardo, Accademia di Scienze e Lettere
 - 2016, winner of an **ERC CoG** (European Research Council Consolidator Grant) for the project *Universality in Condensed Matter and Statistical Mechanics*.
 - from 2017 to 2021, national coordinator for Italy of the LYSM, *Laboratorio Ypatia di Scienze Matematiche* (italo-french research net, funded by INdAM, CNRS, AME and ECM)
 - since 2021 to 2023, Director of the IRL (International Research Lab) LYSM, funded by INdAM and CNRS, and, starting from 2024, Deputy Director
 - 2017, Ann. Inst. Poincaré Prize for the paper “Height fluctuations in interacting dimers”
 - since 2018, Editor-in-chief of *Journal of Statistical Physics*.
 - from 2019 to 2022, local coordinator of the Roma Tre unit of the PRIN research project *Mathematical Quantum Matter*.
 - since 2019, Associate Editor for *Communications in Mathematical Physics*
 - since 2019, Associate Editor for *Probability and Mathematical Physics*
 - from 2019 to 2022, seconded to the *Centro Linco Interdisciplinare B. Segre*, Accademia Nazionale dei Lincei

• **Selected scientific visits:**

- 2002, 2003, 2004, 2008 and 2009, Rutgers University, by invitation of Prof. Joel L. Lebowitz.
- 2004, Erwing Schrödinger Institute for Mathematical Physics, winner of a Junior Research Fellowship.
- 2005, Institute des Hautes Etudes Scientifiques
- 2007, 2008, 2009 and 2015 Princeton University, by invitation of Prof. Elliott H. Lieb
- 2008, Department of Physics, Washington University in St. Louis, by invitation of Prof. Z. Nussinov.
- 2008 and 2014, Max Planck Institute for Mathematical Sciences, Leipzig, by invitation of Prof. Stefan Müller and Felix Otto
- 2009 and 2012, Hausdorff Center for Mathematics, Bonn, Germany, by invitation of Prof. Stefan Müller and B. Schlein

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- 2009, Laboratoire de Physique Théorique, ENS/Paris
 - 2010, Institute des Hautes Etudes Scientifiques, by invitation of Prof. Joel L. Lebowitz
 - 2011 and 2013, Institute for Advanced Studies, Princeton, USA, by invitation of Prof. Thomas Spencer.
 - 2014, McGill University, Canada, by invitation of Prof. V. Jaksic.
 - 2015-2016, Univ. Lyon-1, Francia, CNRS visiting fellow.
 - 2017, Institute des Hautes Etudes Scientifiques, by invitation of Prof. H. Duminil-Copin.
 - 2018, Newton Institute for Mathematical Sciences, Cambridge UK
 - 2020, Institute des Hautes Etudes Scientifiques, by invitation of Prof. H. Duminil-Copin and Prof. S. Rychkov.

• **Selected talks:**

- 2003, *Coupled Map Lattices*, IHP, Paris.
- 2003, 2004, 2005, 2007, 2008, 2009, 2013, 2015, 2016 Mathematical Physics Seminar, Rutgers Univ.
- 2003, 2006, 2008, 2009, 2013, 2015, 2016 Mathematical Physics Seminar, Princeton Univ.
- 2005, *Dynamics and fluctuations in extended systems*, IHP, Paris.
- 2007, Séminaire de Physique Statistique, SPhT/CEA/Saclay.
- 2007, StatPhys23, Genova.
- 2008, Theoretical Physics Seminar, Washington Univ. in St. Louis.
- 2008, SIAM Conference on Mathematical Aspects of Materials Science, Philadelphia.
- 2008, 2009, 2013, 2017, 99th, 101st, 109th and 118th Statistical Mechanics Meeting, Rutgers Univ.
- 2009, XVI International Congress on Mathematical Physics, Prague.
- 2010, Les Houches Summer School
- 2010, QMath11, Hradec Kralove (Plenary Speaker).
- 2011, M³Q, Bressanone, Italy, (Plenary Speaker).
- 2011, Graphita, L'Aquila, Italy (Keynote Speaker).
- 2012, Centre de Recherches Mathématiques, Montreal CA, Workshop on Quantum Many Body Systems
- 2012, ICMP, Aalborg, Denmark.

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- 2013, Mark Kac Seminar, Utrecht Univ.
 - 2013, Analytical Aspects of Mathematical Physics, ETH Zürich.
 - 2014, Roma, Italy, Accademia Nazionale dei Lincei, workshop on ‘La meccanica razionale di Amaldi e Levi-Civita’.
 - 2014, Fields Institute, Toronto, Canada, Conference on Nonlinearity, Transport, Physics, and Patterns
 - 2015, 2016, IHP Paris, France, Workshop on Inhomogeneous Random Systems
 - 2016, StatPhys26, Lyon, France
 - 2016, QMath13, Atlanta, Georgia USA (Plenary Speaker)
 - 2017, Mathematical Congress of the Americas, Montreal, Canada
 - 2018, International Congress on Mathematical Physics, Montreal, Canada (Plenary Speaker)
 - 2019, XXI Congresso dell’Unione Matematica Italiana, Pavia, Italia (Plenary Speaker)
 - 2022, International Congress of Mathematicians, Mathematical Physics Session

• **Research projects:**

- Coordinator of the Roma Tre unit of the PRIN project 2022 *Mathematical Interacting Quantum Fields*. Total funding: 250 806 euro, national coordinator Prof. V. Mastropietro.
- Principal Investigator of the ERC CoG project *Universality in Condensed Matter and Statistical Mechanics* for the period 2017-2021 (Grant agreement no.: 724939; total funding: 1 235 875 €). Web site: http://www.mat.uniroma3.it/users/giuliani/public_html/erc_CoG/index.html
- National coordinator for Italy, then Director, then Deputy Director of the International French-Italian Research Laboratory LYSM, for the period 2017-2025 (Total funding: 480 000 €)
- Principal Investigator of the ERC StG project *Collective Phenomena in Classical and Quantum Many Body Systems* for the period 2010-2014 (Grant agreement no.: 239694; total funding: 650 000 euro). Web site: http://www.mat.uniroma3.it/users/giuliani/public_html/erc/index.html
- Coordinator of the Roma Tre unit of the PRIN project 2017 *Mathematical Quantum Matter*. Total funding: 236 340 euro, national coordinator Prof. V. Mastropietro.

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- Member of the PRIN project 2010-11 *Teorie geometriche e analitiche dei sistemi Hamiltoniani in dimensioni finite e infinite*. Total funding: 506 946 euro, national coordinator Prof. B. Dubrovin.
 - Member of the PRIN project 2008 *Classical and statistical mechanics*. Total funding: 4500 euro, national coordinator Prof. G. Gallavotti.
 - Member of the National Science Foundation projects, grant n. PHY-0139984 and PHY-0652854 on *The quantum-mechanical many-body problem and statistical mechanics*. Total funding: \$200 000, period: 2005-2007, Principal investigator: Prof. Elliott H. Lieb.
 - Member of the PRIN project 2002 *Sistemi dinamici in meccanica classica e problemi di evoluzione in meccanica statistica classica e quantistica*. Total funding: 310 000 euro, national coordinator Prof. G. Jona-Lasinio.

- **Editorial responsibilities:**

- *Associate Editor* of Communications in Mathematical Physics (since 2019)
- *Associate Editor* of Probability and Mathematical Physics (since 2019)
- *Editor-in-chief* of Journal of Statistical Physics (since 2018)
- *Editor-in-chief* of Mathematical Physics, Analysis and Geometry (from 2014 to 2018)
- *Associate Editor* of Journal of Statistical Physics (from 2014 to 2018)

- **Organization of conferences, workshops and schools:**

- Scientific director of the CIME summer school 2010 *Quantum Many Body Systems*, Cetraro, Italia.
- Organizer of the international conference *Seminal Interactions between Mathematics and Physics*, Accademia Nazionale dei Lincei, Roma, Sept 22-25, 2010.
- Organizer of the international conference *Mechanics: classical, statistical and quantum*, Univ. Roma Sapienza, Jul 2-5, 2012.
- Organizer of the international conference *Mathematics and Quantum Physics*, Accademia Nazionale dei Lincei, Roma, Jul 8-12, 2013.
- Organizer of the Mini-Symposium on Phase Transition, *International Conference on Applied Mathematics*, Heraklion, Creta (Grecia), Sept 16-20, 2013.

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- Organizer of the international conference *Solid Math*, SISSA Trieste, Jun 16-18, 2014.
 - Organizer of the international conference *Selected Problems in Mathematical Physics*, La Spezia, Sept 1-5, 2014.
 - Organizer of the international conference *Recent Results and Open Problems in Mathematical Physics*, GSSI L'Aquila, Feb 13, 2015.
 - Organizer of the trimester INdAM: *Mathematics and Physics at the crossroads*, Roma, Jun 6 to Sept 30, 2016.
 - Organizer of the EMS-IAMP summer school in Mathematical Physics: *Universality, Scaling Limits and Effective Theories*, Roma, Jul 11-15, 2016.
 - Organizer of the international workshop: *Condensed Matter and Critical Phenomena*, LNF Frascati, Sept 5-7, 2016.
 - Organizer of the international conference *Dynamics and Hydrodynamic limits in Statistical Mechanics*, Univ. Roma Tre, Jan 20-21, 2017.
 - Organizer of the international conference *Advances in Mathematics and Theoretical Physics* Accademia Nazionale dei Lincei, Roma, Sept 19-22, 2017.
 - Organizer of the EMS-IAMP summer school in Mathematical Physics: *Universality in Probability Theory and Statistical Mechanics*, Ischia, Jun 11-15, 2018.
 - Organizer of the 4-months program *Scaling limits, rough paths, quantum field theory*, Newton Institute, Cambridge UK, Sept 3 to Dec 21, 2018.
 - Organizer of the summer school and workshop *Quantum Transport and Universality: From Topological Materials to Quantum Hydrodynamics*, Univ. Roma Tre, Sept 16-20, 2019 (summer school) and Accademia Nazionale dei Lincei, Sept 23-25, 2019 (workshop).
 - Organizer of the workshop *Inhomogeneous Random Systems*, thematic day on *Emergent CFTs in statistical mechanics*, Institut Curie, Paris, January 29, 2020.
 - Organizer of the thematic session on *Equilibrium Statistical Mechanics* at the *International Congress on Mathematical Physics*, Geneva, Switzerland, August 2-7, 2021
 - Organizer of the conference *Advances in Classical, Quantum and Statistical Mechanics*, in honor of Giovanni Gallavotti's 80th birthday, Università degli Studi Roma Tre, May 11-13, 2022.

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- Organizer of the workshop *Quantum Transport: Disorder, Interactions and Integrability*, Roma, Accademia Nazionale dei Lincei, January 26-27, 2023.
 - Organizer of the conference *Universality in Condensed Matter and Statistical Mechanics*, Università degli Studi Roma Tre, February 6-8, 2023.

- **Other responsibilities:**

- PhD coordinator of the PhD program in Mathematics, Università degli Studi Roma Tre, since 2022
- Elected member of the Executive Committee of the *International Association of Mathematical Physics*, from 2015 to 2020.
- Scientific secretary of the *Center for Mathematics and Theoretical Physics*, since 2009.
- Local coordinator of the National Mathematics Olympics, Roma Tre section, from 2012 to 2019.
- Member of the selection committee of the PhD in Mathematics, 2012, 2013, 2014 and 2021.

- **Teaching:**

- 2003, TA for Electromagnetism and Optics, Univ. Roma Sapienza, and for Differential Equations and Mechanics, Univ. Roma Tre.
- 2005, PhD Minicourse: “Introduction to the Renormalization Group”, Univ. Bologna.
- 2005, 2006: Instructor for Physics 103 (General Physics I), Princeton Univ.
- 2006, 2007: Instructor for Physics 104 (General Physics II), Princeton Univ.
- 2007, Calculus 2, Univ. Roma Tre.
- 2008, PhD Minicourse: “The Bose gas”, Univ. Roma Tre and Tor Vergata.
- 2008, 2009: Calculus, Univ. Roma Tre.
- 2018, 2019: Mathematics I for Geologists, Univ. Roma Tre
- 2022, 2023: Mathematics II for Geologists, Univ. Roma Tre
- 2008, Partial Differential Equations, Univ. Roma Tre.
- 2009, 2011, 2013, 2014, 2019, 2021, 2022, 2023, 2024: Statistical Mechanics, Univ. Roma Tre.
- 2011, 2012, 2013, 2015, 2017, 2018: Analytical Mechanics, Univ. Roma Tre.
- 2015, 2017, 2018: Advanced Analytical Mechanics, Univ. Roma Tre.

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- Advisor for several master students, PhD students and postdocs:
 - **Master students:** G. Cava, L. De Carlo, S. Del Vecchio, M. Marcozzi, P. Milanesi, E. Pulvirenti, S. Fabbri, G. Lipardi, B. Renzi, A. Santini, S. Fabbri.
 - **PhD students:** G. Antinucci, G. Cava, S. Cenatiempo, I. Jauslin, B. Renzi, S. Fabbri, G. Lipardi.
 - **Postdocs:** R. Greenblatt, M. Correggi, Z. Wang, D. Monaco, C. Erignoux, S. Ott, M. Falconi, R. Reuvers, D. Fermi, G. Scola, G. Cava, G. Marcelli.

- Author of **67 publications** and 4 preprints, available at

http://www.mat.uniroma3.it/users/giuliani/public_html/physics/pubblicazioni.html

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