

CURRICULUM VITAE of VIERI MASTROPIETRO

Personal Data

- Firenze, 11 luglio 1966. Italian; address Roma Via Urbana 108, 00184
- Full professor of Mathematical physics at the University of Milano, Math Dept.

Highlights

- More than 125 scientific papers, 25 in Communications in Mathematical Physics, 19 in Physical Review B, 12 in Journal of Statistical Physics 7 in Journal in Mathematical Physics 5 in Annales H. Poincaré' 4 in Reviews in Mathematical Physics 3 in Physical Review Letters, 3 in Europhysics Letters, 3 in Journal of Physics A, 2 in Phys Rev D, 2 in J High Energy Physics 2 in Nonlinearity, 2 in Communications in Pure and Applied Analysis, 2 in Nuclear Physics B, 2 in Physica D, 1 in Physics Reports, 1 in Journal de Mathmatiques Pures et Appliques, 1 in Annali Scuola Normale, 1 in Phys Rev E, etc; 3 books.
- Invited speaker al the *International Congress of Mathematicians ICM2010*, Hyderabad, India (most important math conference worldwide)
- Plenary speaker al the *International Conference of Mathematical Physics ICMP2009* Prague; plenary at American Mathematical Society-UMI conference Palermo 2024.
- Annales Poincarè Prize 2006 mathematical physics (with G.Benfatto and A.Giuliani);Annales Poincarè Prize 2018 probability (with A.Giuliani and F.Toninelli); Persico Prize of the“Accademia dei Lincei” (1987 ed 1989)
- ICMP 2018. Montreal Laudatio for Giovanni Gallavotti-Poincare’ prize.
- Director of the PHD program in mathematical sciences of the university of Milano (2015-2021); Director of the Seminario Matematico e Fisico di Milano (2015-2018)
- Member of the Institute of Advanced Study, School of Math, Princeton (2022)
- Member of the Scientific Direction of the GNFM (Gruppo Nazionale Fisica Matematica)
- Principal investigator of PRIN Mathematical Quantum Matter 2019-2022 (286000euro)
- h factor scholar 32 Cit. 2610; scopus 24

Positions

- 1990 Laurea in Fisica, Roma La Sapienza (G Gallavotti)
- 1993 Phd in Physics, Pisa (G. Gallavotti)
- 1993-1996 INDAM and CNR postdoc
- 1996-2000 Researcher in Mathematical Physics at Tor Vergata University
- 2000 3 months Chercheur at CNRS-Ecole Politecnique, Paris
- 2000-2012 Associate Professor in Mathematical Physics at the Tor Vergata University
- 2012-now Full Professor in Mathematical Physics of the University of Milan

Teaching

- 1996-2000 Meccanica Razionale;
- 2000-2012 Meccanica Razionale; Metodi e Modelli per la matematica applicata; Metodi matematici per l’ingegneria;
- 2012-2022 Fisica Matematica 3 (Matematica); Meccanica Statistica (matematica); Teoria Statistica dei Campi 1 e 2 (Fisica)

Editorial activity

- Editor of Annales Henri Poincaré'(Birkhauser) since 2008, section ”Multiscale methods of Mathematical Condensed Matter”
- Managing Editor of the Milan Journal of Mathematics (Birkhauser) since 2015.
- Editor of Communications in Pure and Applied Analysis (2002-2010)

Visits (last 15 years)

- 15/4- 15/5 2002 School of Mathematics, Institute for Advanced Study, Princeton, USA.
- 25/3-6/4 2003 GeorgiaTech, Atlanta, US.

- 15/4-15/5 2003 School of Mathematics, Institute for Advanced Study, Princeton, USA.
- 1/9- 12/9 2003. Erwin Schroedinger Institute, Vienna
- 10/5/2005-30/5/2005 Heriot-Watt University, Edimburgo (2005)
- 27/11/2005- 23/12/2005, School of Mathematics, Institute for Advanced Study, Princeton, US
- 17/10/2007-3/12/2007 Erwin Schroedinger Institute, Vienna
- 10/10/2008-31/10/2008, Rutgers University, New Brunswick,US
- 1/11 2009-15/11 2009, Brasilia University, Center of Condensed matter
- 17/11/2009-15/12 2009 Rutgers University,New Brunswick,USA
- 15/11- 15/12 2011 Institute for Advanced study, Princeton
- 7/4- 15/4 2013, GeorgiaTech, Atlanta, USA
- 15/4- 15/5 2013 Rutgers University, New Brunswick, USA
- 1/10- 30/10 2014 Short term visiting professor, International Institute of Physics, Natal (Brasile)
- 16/12- 22/12/2014 Institute for Advanced studies, Princeton
- 11/10- 24/10/2016 Institute for Advanced studies, Princeton
- 30/4- 14/5/2017 Institute for Advanced studies, Princeton
- 1/12- 7 2017 Gatech Atlanta
- 17-14/1/2016. Tel Aviv University (Ron Pelleg)
- 1/1-20/4/2022 Member, Institute for Advanced studies, Princeton

Organized conferences (selection)

- Program "Applications of the Renormalization group" at tha Schroedinger Institut di Vienna (with H. Grosse, G. Gentile, G. Huisken) (2007)
- Les Houches Summer school 2010 "Quantum theory from small to large scales" (with J. Frohlich, W. de Roeck, M. Salmhofer)
- CIME School "Quantum many body systems" Cetraro 2010 (with A.Giuliani e J. Yngvason.)
- international Conference LNF-CMTP "Quantum Field Theory aspects of Condensed Matter physics" Laboratori Nazionali di Frascati September 6-9 2011 (with M.Lombardo ed M. Vozmediano)
- International Conference LNF-CMTP "Mechanics: Classical, Statistical and Quantum" Roma, la Sapienza, June 2-5 2012 (with A. Giuliani e G.Gentile)
- International Conference LNF-CMTP "Disordered Systems and Random Matrix Theory, Un. Roma 3 March 14-15, 2013 (with A. Giuliani and M. Lombardo)
- Recent results and open problems in mathematical physics, 13-2-2015, GSSI, L'Aquila (with E. Presutti, A. Giuliani)
- Localization and reducibility in Hamiltonian PDEs and Quantum Mechanics Milano, December 16-18, 2015 (with Bambusi e Noja)
- Section "Condensed Matter" at the International Conference of Mathematical Physics 2015, 27/7-1/8 2015 Santiago Cile (with S. Warzel).
- Advisory Board Member and organizer of the session Many body at QMATH13, 8,11 october 2016, Atlanta, USA. (with G Berkolaiko, R Frank, B Nachtergaele, M Ruskai, S Warzel)
- INdAM-CMTP-INFN Intensive trimester Mathematics and Physics at the Crossroads Laboratori Nazionali di Frascati-INFN and INdAM, Roma, Italy June 6–September 30, 2016
- Workshop Condensed Matter and Critical Phenomena Laboratori Nazionali di Frascati-INFN, Italy, September 5-7, 2016 (with Giuliani e Pizzo)
- Localization and reducibility in Hamiltonian PDEs and Quantum Mechanics Unimi, Milano, December 16-18, 2015
- EMS IAMP Summer School in Mathematical Physics Universality, Scaling Limits and Effective Theories July 11 15, 2016, Roma (Italy) (with Correggi, Giuliani Pizzo)
- Quantum Transport and Universality From Topological Materials to Quantum Hydrodynamics. Workshop, accademia dei Lincei 23-25 settembre (2019)
- QMATH 15, Sep 12-16 2022, UC DAVIS; organization of the session new Topics in Math Phys (with J Moore)
- Mathematical Quantum Matter 9-11 2023, Unimi, Milano

Grants

- Principal investigator of PRIN Mathematical Quantum Matter 2019-2022 (286000euro)
- Senior member of ERC Starting Grant CoMBoS-239694 (P.I G.Giuliani) 2009
- Senior member of ERC Consolidator Grant 2016 (P.I G.Giuliani) UniCoSM - Universality in Condensed Matter and Statistical Mechanics

Invited speaker (selection)

- 6-9/2000 Invited speaker a *International Conference of Mathematical Physics ICMP2000*,
- 18/12-20/12 2005. Statistical Mechanics Conference”, Rutgers University, New Brunswick, USA. Anomalies and Ward Identities in lattice spin models
- 9/4-15/4 2006. ”The Rigorous Renormalization Group”, Oberwolfach, Germania. Non perturbative anomalies in QFT
- 25/6-18/6 2006. th AIMS international conference”, Poitiers, Francia. Renormalization Group approach to PDE
- 18/9-22/9, 2006 ”III international conference on Exact Renormalization Group”, Lefkada (Grecia). Rigorous construction of the Tomonaga model
- 14/12-20/12, 2006 ”Conference of statistical physics”, Trieste. Rigorous construction of the Ashkin-Teller model
- 12/11-18/11 2007. ”Renormalization in Quantum Field Theory, Statistical Mechanics and Condensed Matter”, ESI, Vienna. Schwinger-Dyson equations, Ward Identities and anomalies in nonperturbative RG
- 27/3 2008. Swiss Physical Society-Manep meeting”, Ginevra. Proof of Fermi liquid behavior in the 2D Hubbard model”
- 30/9-3/10 2008 ”Quantum many-body systems: Bose-Einstein condensation”, Centre de Recherches Mathematiques di Montreal. 2D Hubbard model on a the square and the honeycomb lattice
- 5/10/2008 ”Probability session” (D.Brydges and A.Kenyon) ”American Mathematical Society Western Section Meeting” alla British Columbia University, Vancouver. Extended scaling relation for planar spin models
- 6-10/10/2008 ”The renormalization group and statistical mechanics”, Pacific Institute for Mathematical Sciences, Vancouver. Rigorous Construction of the ground state correlations of the Hubbard model on the honeycomb lattice
- 1-7/8/2009 International Conference of Mathematical Physics, Prague. Universality, Ising models, and the non renormalization of the quantum anomalies.
- 16-18/6/2010 Renormalization: algebraic, geometric and probabilistic aspects, Institut Camille Jordan (Lyon) Developments in the theory of universality
- 26/8-30/8/2010 International Congress of Mathematicians, Hyderabad. Universality, Phase transition and extended scaling relations
- 28/5-1/6 2012 Quantum Many-Body Systems CRM, Vancouver Universal properties of graphene
- 8/6-10/6 2012 Journee Jacques Magnen Ecole Polytechnique, Parigi, Francia. The vanishing of Beta function by Ward Identities)
- 12/5-14/5 2013 Rutgers University, USA. The 109th Statistical Mechanics Conference. Universal Conductivity Properties In Many Body Physics.
- 27/5-31/5 2013 Analytical aspects of mathematical Physics, ETH, Zurigo. Universality Results in Statistical Physics
- 16/9-20/9 2013. International Conference on Applied Mathematics, Heraklion, Universality results in statistical physics
- 5/5-6/5 2014 New frontiers for Majorana fermions from condensed to dark matter. INFN Frascati National Laboratories. Majorana fermions and universality
- 1/9-5/9 2014 Selected Problems in Mathematical Physics La Spezia. Localization in an interacting quasi periodic fermionic chain.
- 14/12-16/12 2014. Rutgers University, USA The 112th Statistical Mechanics Conference.Localization in many body interacting quasi-periodic chain e Laudatio for G. Gallavotti.
- 13/7-17/7 2015 ”Quantum many-body systems, random matrices, and disorder” Schroedinger Institut, Vienna. Localization for interacting quasi periodic fermions.

- 5/6-18/6 2016 "Quantum non-equilibrium phenomena" International Institute of Physics, Natal, Brasil. Title; Localization of interacting fermions with quasi-random disorder
- 3/8-9/8 2016 " Conference on Interactions and Topology in Dirac Systems" International Center Theoretical Physics, Trieste. Title: Universal transport properties of interacting lattice Dirac systems
- 8-11 october 2016 Atlan ta QMath13: Mathematical Results in Quantum Physics. Localization of Interacting Fermions in the Aubry-Andr Model
- 20-24 February 2017: Trieste Quantum Days. Sissa Localization of interacting fermions with quasi-random disorder
- 7-9 May 2017 Rutgers University, USA The 117th Statistical Mechanics Conference. Localization in coupled chain with quasi-random disorder
- 29 may-2 june 2017 Mathematical Aspects of Disordered Systems. ETH-Zurigo MADS Workshop / Summer School Localization of interacting fermions with quasi-periodic disorder
- 7 june-9 july 2017 Geometry of integrable systems. Sissa; Trieste Time evolution of a solvable quantum many body system
- 10 july-14 july 2017 Conference on many body localization. ICTP; Trieste Interacting Fermions with Quasi-random Disorder: A Quantum KAM
- 6 july-10 november 2017 The Message of Quantum Science II. ZIF, Bielefeld Universality in Dirac materials
- 24-28 march 2018 Current Problems in theoretical Physics, Vietri (Italy). Anomalies, Constructive QFT and Universality in solid state physics
- 23-28 July 2018. ICMP 2018. Montreal (Ca). Laudatio for Giovanni Gallavotti-Poincare' prize.
- 3-7 September 2018, Newton Institute. Renormalisation in quantum field theory and in stochastic partial differential equations: a gentle introduction and some recent developments. Cambridge (UK). Universality in solid state physics and Constructive Renormalization Group
- 3-5 October 2018, Critical Phenomena in Statistical Mechanics and Quantum Field Theory. Princeton Center for Theoretical Physics, Princeton (US). Small Divisors, Diophantine Numbers and Interacting Quantum Many Body Systems
- April 8 - 12 2019, Many-body theory, random operators and matrices matrices. Mittag Institute, Stoccolma. Persistence of gaps in the interacting anisotropic Hofstadter model
- 12.14 May 2019, 121st Statistical Mechanics Conference, Rutgers, New Brunswik Universality and Renormalization Group for Hall insulators
- 20.23 May 2019, Quasiperiodicity and Fractality in Quantum Statistical Physics. Rutgers University, New Brunswik Persistence of gaps in the anisotropic Hofstdter model
- 3-7 JUNE 2019, Ergodicity breaking in quantum physics. Galileo Gailei institut Persistence of gaps in the anisotropic Hofstdter model
- 23-25 September 2019 Quantum Transport and Universality From Topological Materials to Quantum Hydrodynamics Acccademia dei Lincei Roma Anomaly non renormalization in interacting weyl semimetals
- Emergent CFTs in statistical mechanics. 29 Jaunary 2020, Amphi Curie, Paris. Universality in Ising, Vertex, Dimers and beyond.
- 5-9 July 2021 ECT Trento Relativistic fermions in flatland
- SISSA Trieste, September 27 October 1, 2021 Exact Quantisation
- 26-27 1 2023, Quantum Transport: Disorder, Interactions and Integrability,Lincei, Roma Quantum Transport and small divisors
- 6-8, 2, 2023 Universality in Condensed Matter and Statistical Mechanics, Roma3. Anomaly cancellation condition

PHD students

- A.Giuliani (2005) Now full Professor in Rome 3; P.Falco (2006) Now Professor at university of California; M. Porta (2010) Now full professor at Sissa; Postdoc M. Gallone 2020 (Now Sissa).

PHD Courses

- *Lecture Course on the Renormalization Group*, Heriot-Watt University, Edimburgo (2005)

- *Lecture course on Renormalization Group*, University of Brasilia, Center of Condensed matter (2009)
- *Summer school on current topics in Mathematical Physics* ESI, Vienna, 16- 24 10 2011. *Universality and Critical behavior in Luttinger and Dirac liquids.*
- *Ravello GNFM school in Mathematical Physics*. 9-14 September 2019. Renormalization Group and the universality problem

Seminars (selection, since 2002)

- 24/4 2002 Statistical mechanics seminar at the Institute for Advanced Studies, Princeton. Title: Renormalization Group and Ward identities for interacting fermionic systems.
- 20/5 2005. Durham University, UK. Title: Renormalization Group construction of quantum field theories
- 30/4 2008 Colloquium in Theoretical physics at the AlbaNova and Nordita universities, Stockholm. Title:Luttinger and Fermi liquids: a Constructive Renormalization Group approach
- 8/10/ 2008 University of British Columbia probability seminar. The Hubbard model on the square and honeycomb lattice by functional integral methods
- 16/10 2008 Mathematical Physics seminar, Rutgers university. Extended scaling relations for planar lattice spin models
- 26/3 2009 Instituto de Ciencia de Materiales de Madrid. Rigorous construction of ground state correlation in graphene
- 29/9/2009 ETH, Zurich. Theoretical Physics seminar. Universal relations and Ward Identities in interacting Ising models, spin chains and graphene models
- 1/12/2009 Princeton University, Mathematical Physics seminar. Universal Relations for Non Solvable Statistical Models
- 3/12/2009 Rutgers university, Mathematical Physics seminar . Developments in the theory of universality
- 7/12/2011 Princeton University, Statistical Physics seminar. Universal conductivity in graphene: some rigorous result and open problems
- 8/12/2011 Rutgers university, Mathematical Physics seminar . Universal conductivity in graphene
- 18/4/2012 KTH/Nordita/SU seminar in theoretical physics. Stockholm.
Universal conductivity in graphene
- 12/4/2013 GeorgiaTech, Atlanta,USA Universal Conductivity Properties In Many Body Physics
- 6/4/2013 MATH PHYS Seminar, Princeton university, USA. Universal finite size corrections and the central charge in non solvable Ising models
- 12/4/2013 GeorgiaTech, Atlanta,USA Universal Conductivity Properties In Many Body Physics
- 16/4/2013 MATH PHYS Seminar, Princeton university, USA.Universal finite size corrections and the central charge in non solvable Ising models.
- 25/4/2013 MATH PHYS Seminar, Rutgers university, USA Conductivity In The XXZ Heisenberg Chain With Next To Nearest Neighbor Interaction
- 9/5 2014 The BFZ Seminar in Analysis - Basel, Fribourg, Zurich, Zurich University, Universality in graphene and Weyl semimetals.
- 20/10/2014 International Institute Physics Natal, Brasile.
Universal Conductivity Properties in Graphene and Weyl semimetals
- 18/2/2015 Height fluctuations for interacting dimers , INFN Theory group seminars, Firenze
- 12/2/2015. Small divisors in an interacting fermionic quasi-periodic chain. Gran Sasso Science Center GSSI, L'Aquila
- 21/10 2015. Localization-Delocalization transition in an interacting quasi-periodic fermionic chain. ICTP/SISSA Statistical Physics seminar, ICTP, Trieste
- 19/5/2016 Zurich University Localization in interacting fermionic chain with quasi random disorder
- 18/10/2016 Princeton Mathematical Physics Seminar. Localization of interacting fermions with quasi random disorder
- 20/10/2016 Rutgers Mathematical physics conference "Steady States in the non local Luttinger Model"
- 22/05/2017 Sissa Mathematical Colloquium: Localization of interacting quantum particles with quasi-random disorder

- 21-1-2019 Horowitz seminar on Probability, Ergodic Theory and Dynamical Systems at Tel Aviv University. Rigorous Renormalization Group approach to universality in spin and dimer models
- 2-12-2019 Geneve university. Math Phys seminar Rigorous Renormalization Group approach to universality in spin and dimer models Renormalization Group approach to universality in non-integrable systems
- 10/3/2022 An Introduction to Grassmann integrals with applications to statistical mechanics- Institute for Advanced Study, Princeton
- 29/3/2022 Mathematical Physics Seminar, Princeton university, "Anomaly non-renormalization on a lattice"
- 10/5/2022 IAMP seminar. Anomalies and non-perturbative QFT
- 6/4/2023 Math Phys seminar, Gatech Atlanta. Vanishing of the anomaly in lattice chiral gauge theory

20 selected publications

- Giuliani, Alessandro, Mastropietro, Vieri, Porta, Marcello (2021). Anomaly Non-renormalization in Interacting Weyl Semimetals. *COMMUNICATIONS IN MATHEMATICAL PHYSICS*, vol. 384, p. 997-1060
- Giuliani, Alessandro, Mastropietro, Vieri, Rychkov, Slava (2021). Gentle introduction to rigorous Renormalization Group : a worked fermionic example. *JOURNAL OF HIGH ENERGY PHYSICS*, vol. 2021, p. 1-109
- Giuliani, Alessandro, Mastropietro, Vieri, Toninelli, Fabio Lucio (2020). Non-integrable Dimers: Universal Fluctuations of Tilted Height Profiles. *COMMUNICATIONS IN MATHEMATICAL PHYSICS*, vol. 377, p. 1883-1959
- Antinucci, Giovanni, Mastropietro, Vieri, Porta, Marcello (2018). Universal Edge Transport in Interacting Hall Systems. *COMMUNICATIONS IN MATHEMATICAL PHYSICS*, vol. 362, p. 295-359,
- A. Giuliani, V. Mastropietro, M. Porta (2017). Universality of the Hall Conductivity in Interacting Electron Systems. *COMMUNICATIONS IN MATHEMATICAL PHYSICS*, vol. 349, p. 1107-1161,
- E. Langmann, J. L. Lebowitz, V. Mastropietro, P. Moosavi (2017). Steady States and Universal Conductance in a Quenched Luttinger Model. *COMMUNICATIONS IN MATHEMATICAL PHYSICS*, vol. 349, p. 551-582,
- V. Mastropietro (2017). Localization in Interacting Fermionic Chains with Quasi-Random Disorder. *COMMUNICATIONS IN MATHEMATICAL PHYSICS*, vol. 321, p. 283-309
- V. Mastropietro (2015). Localization of interacting fermions in the Aubry-Andre'model. *PHYSICAL REVIEW LETTERS*, vol. 115, p. 1-5, ISSN: 0031-9007
- G. Benfatto, V. Mastropietro, P. Falco (2014). Universality of one-dimensional Fermi Systems, I. Response functions and critical exponents. *COMMUNICATIONS IN MATHEMATICAL PHYSICS*, 330, pages153215 (2014)
- A. Giuliani, V. Mastropietro, M. Porta (2012). Universality of Conductivity in Interacting Graphene. *COMMUNICATIONS IN MATHEMATICAL PHYSICS*, vol. 311, p. 317-355
- G. Benfatto, P. Falco, V. Mastropietro (2010). Universal Relations for Nonsolvable Statistical Models. *PHYSICAL REVIEW LETTERS*, vol. 104, 075701
- A. Giuliani, V. Mastropietro (2009). The Two-Dimensional Hubbard Model on the Honeycomb Lattice. *COMMUNICATIONS IN MATHEMATICAL PHYSICS*, vol. 293, p. 301-346
- G. Benfatto, P. Falco, V. Mastropietro (2009). Extended Scaling Relations for Planar Lattice Models. *COMMUNICATIONS IN MATHEMATICAL PHYSICS*, vol. 292, p. 569-605
- G. Benfatto, P. Falco, V. Mastropietro (2009). Massless Sine-Gordon and Massive Thirring Models: Proof of Coleman's Equivalence. *COMMUNICATIONS IN MATHEMATICAL PHYSICS*, vol. 285, p. 713-762
- BENFATTO G, FALCO P, MASTROPIETRO V (2007). Functional integral construction of the massive Thirring model: verification of axioms and massless limit. *COMMUNICATIONS IN MATHEMATICAL PHYSICS*, vol. 1, p. 67-118
- Benfatto G, Mastropietro V (2005). Ward identities and chiral anomaly in the Luttinger liquid. *COMMUNICATIONS IN MATHEMATICAL PHYSICS*, vol. 258, p. 609-655

- MASTROPIETRO V (2004). Ising models with four spin interaction at criticality. COMMUNICATIONS IN MATHEMATICAL PHYSICS, vol. 244, p. 595-642
- BENFATTO G, MASTROPIETRO V (2002). On the density-density critical indices in interacting Fermi systems. COMMUNICATIONS IN MATHEMATICAL PHYSICS, vol. 231, p. 97-134
- GENTILE G, MASTROPIETRO V (2001). Renormalization group for fermions: a review on mathematical results. PHYSICS REPORTS, vol. 352, p. 273-437
- MASTROPIETRO V (1999). Small denominators and anomalous behaviour in the incommensurate Holstein-Hubbard model. COMMUNICATIONS IN MATHEMATICAL PHYSICS, vol. 201, p. 81-115

Books

- V.Mastropietro: Non perturbative renormalization World Scientific (2008)
- Quantum Theories from Small to Large Scales. J. Frohlich, V. Mastropietro, W. de Roeck, M. Salmhofer, L. Cugliandolo, eds. Les Houches School of Physics, Session 95 Oxford University Press
- Quantum many body systems A.Giuliani, J.Yngvason V.Mastropietro ed. Springer (2012).
- Luttinger Model: The First 50 Years and Some New Directions V.Mastropietro, D. Mattis. World Scientific (2013)

Articles (extendef list)

- V Mastropietro Vanishing of the anomaly in lattice chiral gauge theory Annales Henri Poincar, 1-35, 2023
- V. Mastropietro Anomaly cancellation in the lattice effective electroweak theory, Journal of Mathematical Physics 64 (3), 032303
- V Mastropietro, M Porta Multi-channel Luttinger Liquids at the Edge of Quantum Hall Systems V Mastropietro, M Porta Communications in Mathematical Physics 395 (3), 1097-1173 2 2022
- V Mastropietro, Nonperturbative renormalization of the lattice Sommerfield vector model Physical Review D 105 (11), 114502 2022
- V Mastropietro, Vanishing of Drude Weight in Interacting Fermions on with Quasi-Periodic Disorder Journal of Statistical Physics 186 (3), 36 2022
- V Mastropietro Anomaly cancellation condition in an effective nonperturbative electroweak theory Physical Review D 103 (1), 013009 4 2021
- A Giuliani, V Mastropietro, S Rychkov Gentle introduction to rigorous Renormalization Group: a worked fermionic example A Giuliani, V Mastropietro, S Rychkov Journal of High Energy Physics 2021 (1), 1-112
- A Giuliani, V Mastropietro, FL Toninelli Non-integrable dimers: Universal fluctuations of tilted height profiles Communications in Mathematical Physics 377 (3), 1883-1959
- V.Mastropietro Stability of Weyl semimetals with quasiperiodic disorder Phys. Rev. B 102, 045101 (2020)
- V.Mastropietro Emergent Adler-Bardeen theorem Journal of High Energy Physics 2020 (3), 1-18
- A Giuliani, V Mastropietro, M Porta Quantization of the interacting Hall conductivity in the critical regime Journal of Statistical Physics (2020) 180:332365
- A Giuliani, V Mastropietro, M Porta Anomaly non-renormalization in interacting Weyl semimetals COMMUNICATIONS IN MATHEMATICAL PHYSICS, vol. 384, p. 997-1060 2022
- V Mastropietro Persistence of gaps in the interacting anisotropic Hofstadter model Physical Review B 99 (15), 155154 2 2019
- F Bonetto, V Mastropietro Non-integrable fermionic chains near criticality EPL (Europhysics Letters) 125 (2), 27002 (2019)
- G Antinucci, V Mastropietro, M Porta Universal edge transport in interacting Hall systems Communications in Mathematical Physics 362 (1), 295-359 7 2018
- V Mastropietro, M Porta Canonical Drude weight for non-integrable quantum spin chains Journal of Statistical Physics 172 (2), 379-397, 2018
- V Mastropietro, M Porta Spin Hall insulators beyond the helical Luttinger model Physical Review B 96 (24), 245135 6 2017

- V. Mastropietro Interacting spinning fermions with quasirandom disorder *Annalen der Physik* 529 (7), 1600270, 2017
- E Langmann, JL Lebowitz, V Mastropietro, P Moosavi Time evolution of the Luttinger model with non-uniform temperature profile *Phys. Rev B* 2017
- V. Mastropietro Coupled identical localized fermionic chains with quasirandom disorder *Phys. Rev. B* 95, 075155 (2017)
- A. Giuliani, V. Mastropietro, F. Lucio Toninelli (2017). Haldane relation for interacting dimers. *JOURNAL OF STATISTICAL MECHANICS: THEORY AND EXPERIMENT*, vol. 2017, 034002,
- A. Giuliani, V. Mastropietro, F.L. Toninelli (2017). Height fluctuations in interacting dimers. *ANNALES DE L'INSTITUT HENRI POINCARÉ-PROBABILITÉS ET STATISTIQUES*, vol. 53, p. 98-168, ISSN: 0246-0203, doi: 10.1214/15-AIHP710
- V. Mastropietro (2017). Localization in Interacting Fermionic Chains with Quasi-Random Disorder. *COMMUNICATIONS IN MATHEMATICAL PHYSICS*, vol. 321, p. 283-309
- E. Langmann, J.L. Lebowitz, V. Mastropietro, P. Moosavi (2017). Steady States and Universal Conductance in a Quenched Luttinger Model. *COMMUNICATIONS IN MATHEMATICAL PHYSICS*, vol. 349, p. 551-582
- A. Giuliani, V. Mastropietro, M. Porta (2017). Universality of the Hall Conductivity in Interacting Electron Systems. *COMMUNICATIONS IN MATHEMATICAL PHYSICS*, vol. 349, p. 1107-1161
- V. Mastropietro (2016). Dense gaps in the interacting Aubry-Andr model. *PHYSICAL REVIEW. B*, vol. 93, p. 1-8,
- V. Mastropietro (2016). Interacting spinning fermions with quasi-random disorder. *ANNALEN DER PHYSIK*
- V. Mastropietro (2016). Localization in the ground state of an interacting quasi-periodic fermionic chain. *COMMUNICATIONS IN MATHEMATICAL PHYSICS*, vol. 342, p. 217-250, ISSN: 0010-3616, doi: 10.1007/s00220-015-2498-2
- F. Bonetto, V. Mastropietro (2016). Quantum Phase Transition in an Interacting Fermionic Chain. *ANNALES HENRI POINCARÉ*, vol. 17, p. 459-495
- A. Giuliani, V. Mastropietro , F. Toninelli (2015). Height fluctuations in non-integrable classical dimers. *EUROPHYSICS LETTERS*, vol. 109, p. 1-5,
- V. Mastropietro (2015) Localization of interacting fermions in the Aubry-Andre'model. *PHYSICAL REVIEW LETTERS*, vol. 115, p. 1-5, ISSN: 0031-9007
- V. Mastropietro, Z. Wang (2015). Quantum quench for inhomogeneous states in the nonlocal Luttinger model. *PHYSICAL REVIEW. B, CONDENSED MATTER AND MATERIALS PHYSICS*, vol. 91, p. 1-6
- V. Mastropietro (2014). Interacting Weyl semimetals on a lattice. *JOURNAL OF PHYSICS. A, MATHEMATICAL AND THEORETICAL*, vol. 47, p. 1-20,
- G. Benfatto, P. Falco, V. Mastropietro (2014). Universality of One-Dimensional Fermi Systems, II : The Luttinger Liquid Structure. *COMMUNICATIONS IN MATHEMATICAL PHYSICS* 330, pages217282 (2014)
- G. Benfatto, V. Mastropietro, P. Falco (2014). Universality of one-dimensional Fermi Systems, I. Response functions and critical exponents. *COMMUNICATIONS IN MATHEMATICAL PHYSICS*, 330, pages153215 (2014)
- V. Mastropietro (2014). Weyl semimetallic phase in an interacting lattice system. *JOURNAL OF STATISTICAL PHYSICS*, vol. 157, p. 830-854
- V. Mastropietro (2013). Conductivity in the Heisenberg chain with next-to-nearest-neighbor interaction. *PHYSICAL REVIEW E, STATISTICAL, NONLINEAR, AND SOFT MATTER PHYSICS*, vol. 87, p. 1-8
- A. Giuliani, V. Mastropietro (2013). Universal Finite Size Corrections and the Central Charge in Non-solvable Ising Models. *COMMUNICATIONS IN MATHEMATICAL PHYSICS*, ISSN: 0010-3616, doi: 10.1007/s00220-013-1752-8
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