Publication List Mohamed El Hedi Bahri

Address: 17 Cherry Brook Drive, Princeton, NJ, 08540

Publications And Pre-Prints

- Bahri, M. E. H., and Y. Sinai. "Statistical Mechanics of Freely Fluctuating Two-Dimensional Elastic Crystals." *Journal of Statistical Physics* 180.1 (2020): 739-748. (In honor of Joel L. Lebowitz)
- "Emergent Reflection Symmetry In Thermally Fluctuating Monoclinic Elastic Membranes". Authors: M.E.H. Bahri, S. Sarkar, A. Košmrlj.
- "Mechanical Properties of Fluctuating Elastic Membranes Under Uni-Axial Tension". Authors: M.E.H. Bahri, S. Sarkar, A. Košmrlj. - posted to the arxiv: https://arxiv.org/abs/2209.09350
- "Statistical Mechanics of Nano-Tubes". Authors: S. Sarkar, M.E.H. Bahri, A. Košmrlj. - in preparation for publication. (ready for private communication)
- "Statistical Mechanics of Odd Elastic Membranes". Authors: M.E.H. Bahri, S. Sarkar, D.A. Matoz-Fernandez, A. Košmrlj. - in preparation for publication. (ready for private communication)
- Thesis: "Thermal Fluctuations of Active and Anisotropic Elastic Membranes". - Author: M.E.H. Bahri. Adviser: Andrej Košmrlj.

Aleksei Bykov

Elenco delle pubblicazioni e della tesi di dottorato presentate con la domanda

1. A. Bykov Ultraviolet finite non-local Hamiltonian perturbation Quantum Field Theories and their weak adiabatic limit, arXiv:2211.10349
2. E. Sysoeva, A.Bykov Recurrence relation for instanton partition function in SU(N) gauge theory, JHEP 220(2023), arXiv:2209.14949.
3. A.Bykov Adiabatic limits and renormalization in quantum spacetime, tesi di dottorato in Matematica, Università degli studi di Roma “Tor Vergata”, A.A. 2019-2020

Chiara Caracciolo

Pubblicazioni

- **"Invariant KAM tori: from theory to applications to exoplanetary systems"** U. Locatelli, C. Caracciolo, M. Sansottera, M. Volpi, In: Baù, G., Di Ruzza, S., Páez, R.I., Penati, T., Sansottera, M. (eds) New Frontiers of Celestial Mechanics: Theory and Applications. I- CELMECH 2020., Springer Proceedings in Mathematics & Statistics, vol 399. Springer, Cham., 2023
- **"A numerical criterion evaluating the robustness of planetary architectures; applications to the υ Andromedæ system"**, U. Locatelli, C. Caracciolo, M. Sansottera, M. Volpi, Volume: Multi-scale (time and mass) dynamics of space objects, Proceedings IAU Symposium No. 364, A. Celletti, C. Beaugé, C. Gales, A. Lemaître, eds., 2022
- **"Librational KAM tori in the secular dynamics of the υ Andromedæ planetary system"**, C. Caracciolo, U. Locatelli, M. Sansottera, M. Volpi, Monthly Notices of the Royal Astronomical Society, 510, 2147–2166, 2022
- **"Normal form for lower dimensional elliptic tori in Hamiltonian systems"**, C. Caracciolo, Mathematics in Engineering, 4(6), 1–40, 2022
- **"Elliptic tori in FPU non-linear chains with a small number of nodes**, C. Caracciolo, U. Locatelli, Communications in Nonlinear Science and Numerical Simulation, 97, 105759, 2021
- **"On the stability in the neighborhood of invariant elliptic tori**, C. Caracciolo, Ph.D. thesis, University of Rome “Tor Vergata", 2021
- **"Computer-assisted estimates for Birkhoff normal forms**, C. Caracciolo, U. Locatelli, Journal of Computational Dynamics, 7(2), 425–460, 2020

14/04/2023

Elenco delle pubblicazioni e della tesi di dottorato di Tiziano Gaudio.

1. S. Carpi, T. G., L. Giorgetti, R. Hillier. *Haploid algebras in C*-tensor categories and the Schellekens list*. Accepted by Communications in Mathematical Physics, 2023. arXiv.org link: https://arxiv.org/abs/2211.12790

2. T. Gaudio. *On the correspondence between graded-local conformal nets and vertex operator superalgebras with applications*. PhD Thesis, Lancaster University, pp. 129, 2021. DOI: https://doi.org/10.17635/lancaster/thesis/1369

3. S. Carpi, T. G., R. Hillier. *Classification of unitary vertex subalgebras and conformal subnets for rank-one lattice chiral CFT models*. Journal of Mathematical Physics, vol. 60, issue 9, 2019. Selected as an *Editor's Pick*. DOI: https://doi.org/10.1063/1.5094581

Data

15/04/2023

Elenco delle Pubblicazioni Presentate

[1] S. Giaccari and R. Volpato, *A fresh view on string orbifolds,* JHEP **01**, 173 (2023) doi:10.1007/JHEP01(2023)173 [arXiv:2210.10034 [hep-th]].

[2] M. Cvitan, P. Dominis Prester, S. Giaccari, M. Paulišić and I. Vuković, *Gauging the higher-spin-like symmetries by the Moyal product,* JHEP **06**, 144 (2021) doi:10.1007/JHEP06(2021)144 [arXiv:2102.09254 [hep-th]].

[3] L. Bonora, M. Cvitan, P. Dominis Prester, S. Giaccari, M. Paulišić and T. Štemberga, *Axial gravity: a non-perturbative approach to split anomalies,* Eur. Phys. J. C **78**, no.8, 652 (2018) doi:10.1140/epjc/s10052-018-6141-1 [arXiv:1807.01249 [hep-th]].

[4] L. Bonora, M. Cvitan, P. Dominis Prester, S. Giaccari, M. Paulišić and T. Štemberga, *Worldline quantization of field theory, effective actions and L_∞ structure,* JHEP **04**, 095 (2018) doi:10.1007/JHEP04(2018)095 [arXiv:1802.02968 [hep-th]].

[5] L. Bonora, M. Cvitan, P. Dominis Prester, S. Giaccari and T. Štemberga, *One-loop effective actions and higher spins. Part II,* JHEP **1801**, 080 (2018) doi:10.1007/JHEP01(2018)080 [arXiv:1709.01738 [hep-th]].

[6] L. Bonora, M. Cvitan, P. Dominis Prester, A. Duarte Pereira, S. Giaccari and T. Štemberga, *Axial gravity, massless fermions and trace anomalies,* Eur. Phys. J. C **77**, no. 8, 511 (2017) doi:10.1140/epjc/s10052-017-5071-7 [arXiv:1703.10473 [hep-th]].

[7] L. Bonora, M. Cvitan, P. Dominis Prester, S. Giaccari, B. Lima de Souza and T. Štemberga, *One-loop effective actions and higher spins,* JHEP **612**, 084 (2016) doi:10.1007/JHEP12(2016)084 [arXiv:1609.02088 [hep-th]].

[8] S. Giaccari and L. Modesto, *Nonlocal supergravity,* Phys. Rev. D **96**, no. 6, 066021 (2017) doi:10.1103/PhysRevD.96.066021 [arXiv:1605.03906 [hep-th]].

[9] S. Giaccari, L. Modesto, L. Rachwał and Y. Zhu, *Finite Entanglement Entropy of Black Holes,* Eur. Phys. J. C **78**, no.6, 459 (2018) doi:10.1140/epjc/s10052-018-5942-6 [arXiv:1512.06206 [hep-th]].

[10] P. Donà, S. Giaccari, L. Modesto, L. Rachwał and Y. Zhu, *Scattering amplitudes in super-renormalizable gravity,* JHEP **1508**, 038 (2015) doi:10.1007/JHEP08(2015)038 [arXiv:1506.04589 [hep-th]].

[11] L. Bonora, S. Giaccari and B. Lima de Souza, *Trace anomalies in chiral theories revisited,* JHEP **1407**, 117 (2014) doi:10.1007/JHEP07(2014)117 [arXiv:1403.2606 [hep-th]].

[12] L. Bonora and S. Giaccari, *Weyl transformations and trace anomalies in N=1, D=4 supergravities,* JHEP **1308**, 116 (2013) doi:10.1007/JHEP08(2013)116 [arXiv:1305.7116 [hep-th]].

[13] S. G. Giaccari, *Conformal symmetry in String Field Theory and 4D Field Theories,* PhD thesis (Supervisor: Prof. Loriano Bonora)

Presentiamo qui di seguito l' elenco delle pubblicazioni e della tesi di dottorato presentate dal sottoscritto per la candidature ad un posto di ricercatore universitario a tempo determinato:

Tesi di Dottorato (2016) "Phase Transitions Theory and applications to Biophysics "

1. *Experimental detection of long-distance interactions between biomolecules through their diffusion behavior: Numerical study,* Ilaria Nardecchia,Lionel Spinelli, Jordane Preto, Matteo Gori, Elena Floriani,Sebastien Jaeger, Pierre Ferrier, and Marco Pettini. **Phys. Rev. E 90, 022703 (2014) .**
2. *Persistent Homology analysis of Phase Transitions*, Irene Donato,Matteo Gori, Marco Pettini, Giovanni Petri, Sarah De Nigris, Roberto Franzosi,Francesco Vaccarino. **Phys. Rev. E 93, 052138 (2016)**.
3. *Topological origin of phase transitions in the absence of critical points of the energy landscape*, Matteo Gori, Roberto Franzosi, Marco Pettini. **J. Stat. Mech.,9, 093204 (2018)**
4. *Out-of-equilibrium collective oscillation as phonon condensation in a model protein*, Ilaria Nardecchia, Mathias Lechelon, Jeremi Torres, Valeria Gilib- erti, Michele Ortolani, Philippe Nouvel, Matteo Gori, Irene Donato, Jordane Preto, Luca Varani, Marco Pettini. **Phys. Rev. X, 8(3), 031061 (2018)**
5. *Collective behavior of oscillating electric dipoles*, Simona Olmi, Matteo Gori, Irene Donato, Marco Pettini. **Sci. Rep. 8(1), 15748 (2018)**
6. *On the origin of Phase Transitions in the absence of Symmetry-Breaking*, Giulio Pettini, Matteo Gori, Roberto Franzosi, Cecilia Clementi, Marco Pettini. **Physica A, 516, 376-392 (2019)**
7. *Coherent Riemannian-geometric description of Hamiltonian order and chaos with Jacobi metric*, Loris Di Cairano, Matteo Gori, Marco Pettini. **Chaos 29, 123134 (2019)**
8. *Geometrical Aspects in the Analysis of Microcanonical Phase-Transitions,* Ghofrane Bel-Hadj-Aissa,MG, V. Penna, G. Pettini, R. Franzosi. **Entropy 2020, 22, 380 (2020)**
9. *Hamiltonian chaos and differential geometry of configuration space–time*, Loris Di Cairano, Matteo Gori, Giulio Pettini, Marco Pettini. **Physica D, 422, 132909 (2021).**
10. *Topology and phase transitions: A first analytical step towards the def inition of sufficient conditions*, Loris Di Cairano, Matteo Gori, Marco Pettini. **Entropy 23 (11), 1414 (2021)**
11. *Experimental evidence for long-distance electrodynamic intermolecular forces*, Mathias Lechelon, Yoann Meriguet, Matteo Gori, Sandra Ruffenach, Ilaria Nardecchia, Elena Floriani, Dominique Coquillat, Frédéric Teppe, Sébastien Mailfert, Didier Marguet, Pierre Ferrier, Luca Varani, James Sturgis, Jeremie Torres, Marco Pettini. **Sci. Adv. 8 (7), eabl5855 (2022)**
12. *Topological theory of phase transitions*, Matteo Gori, Roberto Franzosi, Giulio Pettini, Marco Pettini. **J. of Phys. A 55 (37), 375002 (2022)**

Luogo e Data: Arlon (Belgio) 15/04/2023

Il Dichiarante

List of publications

1) Localization of Generalized Wannier Bases Implies Chern Triviality in Non-periodic Insulators (with Massimo Moscolari and Gianluca Panati). Annales Henri Poincare 24, 895{930 (2023).
https://doi.org/10.1007/s00023-022-01232-7

2) Purely linear response of the quantum Hall current to space-adiabatic perturbations (with Domenico Monaco). Lett. Math. Phys. 112, 91 (2022).
https://doi.org/10.1007/s11005-022-01574-7

3) From charge to spin: analogies and di erences in quantum transport coe cients (with Domenico Monaco). J. Math. Phys. 63, 072102 (2022).
https://doi.org/10.1063/5.0089786

4) Improved energy estimates for a class of time-dependent perturbed Hamiltonians. Lett. Math. Phys. 112, 51 (2022).
https://doi.org/10.1007/s11005-022-01543-0

5) A new approach to transport coe cients in the quantum spin Hall e ect (with Gianluca Panati and Stefan Teufel).Annales Henri Poincare 22, 1069{1111 (2021).
https://doi.org/10.1007/s00023-020-00974-6 .

6) Spin conductance and spin conductivity in topological insulators: analysis of Kubo-like terms (with Gianluca Panati and Clement Tauber). Annales Henri Poincare 20, 2071{2099 (2019).
https://doi.org/10.1007/s00023-019-00784-5 .

7) The Haldane model and its localization dichotomy (with Domenico Monaco, Massimo Moscolari and Gianluca Panati). Rendiconti di Matematica e delle sue Applicazioni 39, 307{327 (2018).
http://www1.mat.uniroma1.it/ricerca/rendiconti/ARCHIVIO/2018(2)/307-327.pdf .

Ph.D. thesis

A mathematical analysis of spin and charge transport in topological insulators , University of Rome, \La Sapienza" (2018). Click here to download my Ph.D. thesis.

Preprints

Adiabatic evolution of low-temperature many-body systems (with R. L. Greenblatt, M. Lange, and M. Porta). Preprint available at arXiv:2211.16836 . Submitted to Communications in Mathematical Physics.

Scientific activity

• M. Bisi, **R. Travaglini**, A BGK model for mixtures of monoatomic and polyatomic gases with discrete internal energy, *Physica A: Statistical Mechanics and its Applications* **547**, 124441, 2020.
• J. M. S. Oliveira, A. J. Soares, **R. Travaglini**, Kinetic models leading to pattern formation in the response of the immune system. *Special issue of Rivista di Matematica della Università di Parma in memory of Giampiero Spiga Accepted for pubblication*

In progress

• J. M. S. Oliveira, **R. Travaglini**, Pattern formation from kinetic models for Multiple Sclerosis. *In preparation*

• G. Martalò, A.J. Soares, **R. Travaglini**, A consistent BGK model for a mixture undergoing a chemical reaction. *In preparation*

• G. Martalò, **R. Travaglini**, Derivation of a nonlinear reaction diffusion model for a gas mixture and Turing instability analysis . *In preparation*

• M. Menale **R. Travaglini**, Action of an external field over a kinetic structure: a model for autoimmunity. *In preparation*

Funded projects

• *Mathematical Modeling of Multi-scale Control Systems: applications to human diseases*, FCT Grant for Scientific Research and Technological Development Projects, from 01-04-2023 to 28-02-2026.
P.I.: Cristiana João Soares da Silva, Budget: 249 756,120 €, Role: member

• *Kinetic equations, macroscopic models and applications*, Italian National Group of Mathematical Physics (GNFM-INdAM) Grant for Young Researchers, 2021-2022.
P.I.: G. Martalò, Budget: 2800 €, Role: member

Merits

Grantee of INdAM Postdoctoral fellowship 2022-2023

Research visits

University of Parma, Italy, Feb. 27 - Mar. 5 2023, Hosted by Prof. M. Bisi.

Talks

• *Derivation of reaction-diffusion models from kinetic equations applied to biology*, Mar. 22 2023, Braga, Portugal.

• *Reaction-diffusion systems derived from kinetic models for autoimmune diseases*, Conference Dynamical Systems Applied to Biology and Natural Science, Feb. 5-9 2023, Bilbao, Spain.

• *Derivation from kinetic models and study of reaction-diffusion systems for reacting mixtures of gases*, Nov. 7-9 2022, Granada, Spain.

• *Reaction-diffusion systems derived from kinetic models for gas mixtures applied to autoimmune diseases*, Oct. 17 2022, Parma, Italy.

• **Invited speaker** *Reaction-diffusion systems derived from kinetic models for reacting mixtures of monatomic and polyatomic gases*, COST Action CA18232 – Mathematical models for interacting dynamics on networks, Sorbonne Université, Apr. 20-22 2022, Paris, France

• *Reaction-diffusion equations derived from kinetic models and their Turing instability*, Conference of SIMAI - Italian Society of Applied and Industrial Mathematics, Aug. 30 - Sept. 3 2021, Parma, Italy.

• *An optimal control problem for degradation of waste in landfills under anaerobic conditions*, Conference Dynamical Systems Applied to Biology and Natural Science, Feb. 4-7 2020, Trento, Italy.

• Seminars at Mathematical Physics School at Ravello (Itlay), in September 2019, 2020, 2021.

Posters

A BGK model for mixtures of monatomic and polyatomic gases with discrete internal energy levels, Summer School "Trails in kinetic theory: foundational aspects and numerical methods", Hausdorff Research Institute for Mathematics, Bonn (Germany) May 20-24 2019.

Teaching activity

Oct 2019 – Jun 2021 **Tutoring activity,** Tutoring for the course of Mathematical Methods for the Biotechnology degree course and for the course of Algebra for the Mathematics degree course. Activities: Exercises for students, Assistance during the examination

Science communication experiences

Sept 2018 – Present **Member of Scientificast,**
`https://www.scientificast.it/author/rominatravaglini/`
Writing of **blog articles** about Mathematics, recording of interviews and participation to the **podcast**.
Collaboration with the **publishing house De Agostini**: writing of deepening articles addressed to middle school teachers.

Giu 2022 **High school orientation seminar** *Mathematics and other stories* `https://www.youtube.com/watch?v=iqKeVJYJQC0`

Apr 2021 **Participation to Famelab 2021** Section of Genova, Italy. `https://life.unige.it/Famelab-2021-Genova-vincitori`

Jan 2019 – Feb 2020 **Guide to the interactive exhibition Pythagoras and his theorem,** for middle school pupils, Università degli Studi di Parma, Italy

Personal skills

Languages **English**: Level **B2** First Certificate in English issued by "Cambridge Institute".

Management Good skills of **expression**, **interaction** with the public and with the working group. **Problem Solving,** ability to investigate and critical attitude towards problems to be solved both individually and in group

Digital Good competence in building **Matlab** codes for solving ODEs and PDEs problems numerically. Mastery of the **Latex** language for documents, papers and posters.

europass Curriculum vitae

PERSONAL INFORMATION Jacopo Viti

ACADEMIC POSITIONS

Jan 2023–present
Research associate (Post-doc)
University of Florence, Italy
On leave form a permanent teaching position at Italian Ministry of Education and Merit.

Aug 2017 – Sep 2022
Research Leader in Statistical Physics
International Institute of Physics (IIP), Natal, Brazil.

Feb 2016 – Sep 2022
Assistant Professor
Federal University of Rio Grande do Norte (UFRN), Natal, Brazil.
Affiliated to the mathematics department of the School of Science and Technology (ECT).

Oct 2014 – Feb 2016
Research Associate (Post-doc)
Max Planck Institute for the Physics of Complex Systems (MPIPKS), Dresden, Germany.
Independent post-doc in the group of Prof. R. Moessner.

Oct 2012 – Sep 2014
Research Associate (Post-doc)
LPT-École Normale Supérieure, Paris, France.
Supervisor: Prof. D. Bernard.

EDUCATION

2008–2012
PhD in Statistical Physics
SISSA, Trieste, Italy
Thesis title: *'Universal properties of two-dimensional percolation'*, Advisor: Prof. G. Delfino.

2005–2008
Laurea Specialistica (Master) in Physics
University of Florence, Florence, Italy
Thesis title: *'Entanglement entropy in two-dimensional conformal field theories' (in italian)*, Advisor: Dr. A. Cappelli, Mark: 110/110 (cum laude).

2001–2005
Laurea Magistrale (Bachelor) in Physics
University of Florence, Florence, Italy
Thesis title: *'La precessione di Thomas e le sue applicazioni'*, Advisor: Prof. G. Longhi, Mark: 110/110 (cum laude).

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VISITING POSITIONS

Jan 2020 – Jun 2021 INFN Researcher at Florence University (Florence, Italy)

Jul 2024 – Dec 2024 Jean D'Alembert junior fellowship (Paris-Saclay University, Paris)

ADDITIONAL INFORMATION

Italian Habilitations (ASN) Full Professor FIS 02/A2—Physics of fundamental interactions—(until 07/01/2027), Associate Professor FIS 02/B2—Physics of matter—(until 10/05/2025).

Grants 2019-2023, Bolsista de produtividade CNPQ (Personal fellowship awarded by the Brazilian national research agency)

Referee activity Referee for JHEP, JSTAT, JPhys A, PRA, PRB, PRE, PRL, PRR, SciPost

Research activity (keywords) Statistical Mechanics and Critical Phenomena, Conformal Field Theory, Quantum Dynamics and Entanglement, Lattice Models.

Civil Status Married with one son

PERSONAL SKILLS

Mother tongue Italian

Other languages

	UNDERSTANDING		SPEAKING		WRITING
	Listening	Reading	Spoken interaction	Spoken production	
English	C2	C2	C2	C2	C2
Portuguese	C2	C2	C2	C2	C2
French	B1	B1	B1	B1	B1
German	A1	A1	A1	A1	A1

Levels: A1 and A2: Basic user – B1 and B2: Independent user – C1 and C2: Proficient user
Common European Framework of Reference for Languages

Digital competences

SELF-ASSESSMENT				
Information Processing	Communication	Content creation	Safety	Problem solving
Proficient user	Proficient user	Proficient user	Proficient user	Proficient user

Digital competences - Self-assessment grid

Computer skills – Proficient user (professional): Linux, Mathematica

Driving license B

TEACHING AND SUPERVISING ACTIVITY

Undergraduate level *From February 2016 to April 2022*, I taught the semestral courses (one per semester) *Calculo* (Calculus), *Vetores e Geometria Analítica* (Vectors and Analytic Geometry) and *Álgebra Linear* (Linear Algebra), for 1st and 2nd year undergraduates respectively. The total number of teaching hours per year is 120h/semester, including exams. The total amount of students attending each course is around 200 for each semester. The courses are mandatory for first and second year students at the School of Science and Technology of UFRN.

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Graduate level

- *July 2019-December 2019:* I taught the graduate course (60h/semester) *Teoria dos grupos e álgebras de Lie* (Group Theory and Lie Algebras) for graduate students at the Physics department of the UFRN. The course introduces elementary notions of Lie Algebras and Lie Groups.
- *February 2019-June 2019:* I taught the graduate course (60h/semester) *Teoria dos campos I* (Quantum Field Theory I) for graduate students at the Physics department of the UFRN. The course introduces the basic computational tools of Quantum Field Theory.
- *February 2018-June 2018:* I taught the graduate course (60h/semester) *Teoria dos campos II* (Quantum Field Theory II) for graduate students at the Physics department of the UFRN. The course introduces the concepts of scaling and renormalization.
- *February 2017:* Topic course on 'Some aspects of quantum transport', three invited lectures (10h) at the PhD School 'Statistical Field Theory Lectures', GGI, Florence, Italy.

Projects for Postdocs

- *Dr. Ivar Lyberg (two papers), 2016-2018; 'Monte Carlo study of vertex models'*. Now working for Nordic Investment Bank (Tallin, Estonia).
- *Dr. Máté Lencses (three papers), 2018-2020; 'Entanglement in 1+1 QFTs and Truncated Conformal Space Approach'*. Now at Budapest University.
- *Dr. Filiberto Ares (four papers), 2018-2021; 'Fluctuations in quantum spin chains'*. Now at SISSA (Italy).

Master students

- *Bruno Enrique Nogueira*; '*Conectividades no Modelo de Potts Crítico Bidimensional'* (March 2020)

ORGANIZATION ACTIVITY

International Conferences

- *March 2022 (postponed due to the pandemic):* Organizer together with P. Calabrese (SISSA, Italy), O. Castro-Alvaredo (City London, UK), M. Rajapbour (UFF, Brazil) and S. Ryu (Chicago, USA) of the conference *'Entanglement measures in many-body systems'*, two weeks, approx. 60 participants. The conference is hosted by the IIP.
- *June 2020 (postponed due to the pandemic):* Organizer together with H. Babujian (Yerevan), B. Conrey (AMS), G. Mussardo (SISSA), X. De la Ossa (Oxford), G. Sierra (Madrid), H. Mosavati (IMPA) of the conference *'Number theory and Physics'*, two weeks, approx. 50 participants. The conference is hosted by the IIP.
- *May 2019:* Organizer together with B. Doyon (Kings College, UK), J. Dubail (CNRS, France), G. Mussardo (SISSA, Italy), M. Rajapbour (UFF, Brazil) of the conference *'Emergent hydrodynamics in low-dimensional systems'*, three weeks, approx. 60 participants. The conference is hosted by the IIP.
- I also contributed in the local organization and secured financial support through the CAPES agency (http://www.capes.gov.br/index.php) for the following programs held at IIP: 'New Trends in Integrable models' (Aug 2016-Nov 2016), 'Finite Systems in Nonequilibrium: From Quantum Quenches to the Formation of Strong Correlations' (Sep 2017), 'Number theory and physics' (Jun 2020).

Schools

- *From February 2020:* Organizer together with P. Calabrese (SISSA, Italy), A. Cappelli (INFN Florence, Italy), J. Dubail (CNRS, France), F. Essler (Oxford, UK), C. Morais-Smith (Utrecht, Netherlands) and A. Trombettoni (Trieste, Italy) of the *'Statistical Field Theory School'* at GGI (Florence, Italy)

TALKS IN INTERNATIONAL CONFERENCES

Fall 2022 — Invited to the programs 'Number theory and physics' at the Simons Center for Geometry and Physics, Stony Brook University, USA and 'Integrability in String, Field, and Condensed Matter Theory' at KITP, Santa Barbara, USA; both declined for family reasons.

Oct 2021 — 'Entanglement negativity in 2d CFTs and Z3 Riemann surfaces', invited talk at the conference 'Mathematical harmony and the quantum world, celebrating 60 years of Denis Bernard', LPT-ENS Paris, France

May 2021 — 'Geometrical correlators in 2d CFTs: an introduction with some open problems', invited talk at the conference 'Bootstat 2021: conformal bootstrap and statistical models', Institut Pascal, Orsay, France.

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Oct 2019 'Emptiness formation probability and the Painlevé V equation in the Ising spin chain', invited talk presented during the conference 'The beauty of theoretical physics, celebrating 60 years of Giuseppe Mussardo', ICTP, Trieste, Italy.

Jul 2019 'Logarithmic correlations in statistical mechanics', invited talk presented during the program 'Random Geometry and Multifractality in Condensed Matter and Statistical Mechanics', IIP, Natal, Brazil.

Oct 2018 'Exact logarithmic correlations in critical percolation', invited talk presented during the program 'Exactly Solvable Model', Simon Center for Geometry and Physics, Stony Brook University, USA.

Jun 2018 'Exact logarithmic correlations in critical percolation', invited talk presented during the program 'Entanglement in Quantum Systems', GGI, Florence, Italy.

Jun 2018 'Exact logarithmic correlations in critical percolation', invited talk presented at the Workshop 'Quantum spin chains and integrable models', IIP, Natal, Brazil.

Sep 2017 'Analytic solution of the Domain Wall Initial State', invited talk presented at the Workshop 'Finite Systems in Nonequilibrium: From Quantum Quenches to the Formation of Strong Correlations', IIP, Natal, Brazil.

Aug 2017 'Analytic solution of the Domain Wall Initial State', contributed talk presented at the Workshop 'Quantum Devices', IIP, Natal, Brazil.

Aug 2016 'Arctic curves in fermionic systems', invited talk presented at the Workshop 'Boundary degrees of freedom and thermodynamic of integrable models', IIP, Natal, Brazil.

Jul 2016 'Quantum dynamics after connecting two integrable spin chains', invited talk presented at the Workshop 'Quantum Systems out-of-equilibrium', IIP, Natal, Brazil.

Apr 2016 'Arctic curves in fermionic systems', invited talk presented at the Workshop 'Statistical Mechanics and Combinatorics', Simon Center for Geometry and Physics, Stony Brook, USA.

Jan 2016 'Inhomogeneous quenches and arctic curves in fermionic systems', contributed talk presented at the Workshop 'Mathematical aspects of quantum systems out-of-equilibrium', Isaac Newton Institute for Mathematics, Cambridge, UK.

Nov 2015 'Inhomogeneous quenches and arctic curves in fermionic systems', invited talk presented at the Workshop 'Quantum many-body systems out-of-equilibrium', Bad-Honnef, Germany.

Aug 2015 'Inhomogeneous quenches and arctic curves in fermionic systems', invited talk presented at the Workshop 'Strongly Coupled Field Theory for Condensed Matter', IIP, Natal, Brazil.

Apr 2015 'Non-equilibrium CFT (with impurities)', invited talk presented at the Workshop 'Statistical physics and low-dimensional systems', Pont-à-Mousson, France.

Mar 2014 'Imaginary Liouville Theory and applications', contributed talk presented at the Workshop 'Quantum Integrability, CFT and Topological Quantum Computation', IIP, Natal, Brazil.

Apr 2013 'The three-point connectivity in the Q-color Potts model', invited talk presented at the Workshop 'Conformal Invariance in Continuous and Discrete Systems', Simon Center for Geometry and Physics, Stony Brook, USA.

Mar 2013 'Non-equilibrium thermal transport in the Quantum Ising chain', contributed talk presented at the Workshop 'MECO, 38-th European Conference for the Middle European Cooperation in Statistical Physics', ICTP, Trieste, Italy.

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Apr 2012 'Field Theory approach to percolation and the Potts model', contributed talk presented at the Workshop '2012 British Mathematical Colloquium', Kent University, UK.

Sep 2012 'Universal properties of two-dimensional percolation', contributed talk presented at the conference '8th Bologna workshop on CFT and Integrable models', Bologna, Italy.

INVITED SEMINARS

Mar 2022 'The $\hbar \to 0$ limit of the Entanglement Entropy', GQFI-WST seminar series, Potsdam AEI (Germany), Gent (Belgium), Warsaw (Poland).

May 2021 'Dynamics of Entanglement in low dimensional systems', Florence (Italy).

Mar 2021 'Dynamics of Entanglement in low dimensional systems', Genoa (Italy)

Dec 2020 'Entanglement entropies in 2d CFTs and the bootstrap', SISSA (Italy)

Nov 2020 'Entanglement dynamics in 1+1 dimensions', online seminar at City University London, London, UK.

Jul 2020 'Entanglement oscillations near a Quantum Critical Point', online seminar at International Institute of Physics, Natal, Brazil.

Jan 2020 'Emptiness formation probability and the Painlevé V equation in the Ising spin chain', seminar at Racah Institute for Theoretical Physics, Jerusalem, Israel.

Jun 2018 'Exact logarithmic correlations in critical percolation', seminar at Oxford Physics Department, Oxford, UK.

Jan 2018 'Logarithmic correlations in the Ising model', seminar at Florence University, Florence, Italy.

Dec 2017 'Analytic solution of the Domain Wall initial state', seminar at UFF, Niteroi, RJ, Brazil.

Sep 2017 'Logarithmic correlations in the Ising model', seminar at ICTP-SAIFR, São Paulo, Brazil.

Jul 2017 'Logarithmic correlations in the Ising model', seminar at Lorraine University, Nancy, France.

Feb 2017 'Quantum Quenches near a quantum critical point', seminar at SISSA, Trieste, Italy.

Feb 2017 'Arctic curves in fermionic systems', seminar at Florence University, Florence, Italy.

Apr 2016 'Dimers on the honeycomb lattice', seminar at Simon Center for Geometry and Physics, Stony Brook, USA.

Aug 2015 'Inhomogeneous quenches and arctic curves in fermionic systems', seminar at UFRN, Natal, Brazil.

Nov 2014 'Non-equilibrium steady states in quantum spin chains', seminar at TUD, Dresden, Germany.

May 2014 'Non-equilibrium steady states in quantum spin chains', seminar at Pisa University, Pisa, Italy.

Apr 2014 'Non-equilibrium steady states in quantum spin chains', seminar at MPIPKS, Dresden, Germany.

Sep 2012 'A Field Theory approach to percolation and phase separation in two dimensions', seminar at LPTMS, Orsay, France.

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Jun 2012 ’Universal properties of two-dimensional percolation’, seminar at LPT-ENS, Paris, France.

Sesto Fiorentino, 17/4/2023