

FEDERICO RICCI TERSENGHI

Curriculum Vitae

SURNAME AND NAME: **Ricci Tersenghi, Federico**
PLACE AND DATE OF BIRTH: [REDACTED]
CITIZENSHIP: Italian
CURRENT POSITION: Full Professor in Theoretical Physics
(SSD FIS/02, SC 02/A2)
at Sapienza University of Rome
00139 Roma (Italy)
E-MAIL: **federico.ricci@uniroma1.it**
SPOKEN LANGUAGES: Italian (native), Spanish (as native),
English (fluent), French (moderate)

Education

1990 – 1995 Graduate studies in Physics at the Physics Department of the University of Rome “La Sapienza” with an average mark of 29.94/30.
July 14, 1995. Degree on Physics Cum Laude. Thesis advisor: [REDACTED].
November, 1995 Ranked first at the admission test for the Ph.D program at Scuola Normale Superiore in Pisa.
November, 1995 – October, 1998 Ph.D. student in Physics at the Physics Department of the University of Rome “La Sapienza”. Thesis on *Off-equilibrium dynamical studies in disordered systems*. Advisor: Prof. [REDACTED]. **March 15, 1999** Ph.D. degree in Physics.
November, 1998 – October, 2000 Post-Doc at the Condensed Matter Group of the “Abdus Salam” International Center for Theoretical Physics (ICTP) in Trieste (Italy).

Academic appointments

November, 2000 – October, 2001 Visiting Scientist at the Condensed Matter Group of the “Abdus Salam” International Center for Theoretical Physics (ICTP) in Trieste (Italy).
September, 2001 – February, 2002 Contract for scientific collaboration within the research group of Prof. Giorgio Parisi at Sapienza University of Rome.
March, 2002 – 2010 Assistant Professor (Ricercatore) at the Physics Department of Sapienza University of Rome (SSD FIS/02).
May – June, 2006 Invited to the Isaac Newton Institute in Cambridge (UK) for the programme on “*Principles of the Dynamics of Non-Equilibrium Systems*”.
2007 Invited as a Visiting Assistant Researcher to the University of California at Berkeley for 7 months (January 15 – August 15, 2008). For personal reasons he had to decline the invitation.
2011 – February, 2020 Associate Professor at the Physics Department of Sapienza University of Rome (SSD FIS/02, SC 02/A2).
March – April, 2012 Visiting Professor for one month at the LPTMS of Université Paris Sud.
February – March, 2015 Visiting Professor for one month at Insitut Henri Poincaré, Paris.

March – April, 2016 Visiting Professor for one month at the LPTMS of Université Paris Sud.
January – February, 2019 Invited to the Kavli Institute for Theoretical Physics in Santa Barbara (CA, USA) for the program entitled “*The rough high-dimensional landscape problem*”.
May 2019 Invited to the Galileo Galilei Institute for Theoretical Physics in Florence for the program entitled “*Breakdown of ergodicity in isolated quantum systems: from glassiness to localization*”.
March, 2020 – present Full Professor at the Physics Department of Sapienza University of Rome (SSD FIS/02, SC 02/A2).

Teaching experience

All following courses, unless differently specified, have been given at Sapienza University of Rome.

2021–2022 Lecturer of *Statistical Mechanics of Disordered Systems* (6 CFU, LM Fisica) and *Laboratorio di Fisica Computazionale I* (6 CFU, LT Fisica).
2020–2021 Lecturer of *Statistical Mechanics of Disordered Systems* (6 CFU, LM Fisica) and *Laboratorio di Fisica Computazionale I* (6 CFU, LT Fisica).
2019–2020 Lecturer of *Statistical Mechanics of Disordered Systems* (6 CFU, LM Fisica) and *Laboratorio di Fisica Computazionale I* (6 CFU, LT Fisica).
2018–2019 No teaching (sabbatical leave).
2017–2018 Lecturer of *Meccanica Statistica* (6 CFU, LM Matematica) and *Laboratorio di Fisica Computazionale I* (6 CFU, LT Fisica).
2016–2017 Lecturer of *Meccanica Statistica* (6 CFU, LM Matematica) and *Laboratorio di Fisica Computazionale I* (6 CFU, LT Fisica).
2015–2016 Lecturer of *Meccanica Statistica* (6 CFU, LM Matematica) and *Laboratorio di Fisica Computazionale I* (6 CFU, LT Fisica).
2014–2015 Lecturer of *Meccanica Statistica* (6 CFU, LM Matematica) and *Laboratorio di Fisica Computazionale I* (6 CFU, LT Fisica).
2013–2014 Lecturer of *Fisica* (6 CFU, LT Informatica) and *Laboratorio di Fisica Computazionale I* (6 CFU, LT Fisica).
2012–2013 Lecturer of *Fisica* (6 CFU, LT Informatica) and *Laboratorio di Fisica Computazionale I* (6 CFU, LT Fisica).
2011–2012 Lecturer of *Fisica* (6 CFU, LT Informatica) and *Laboratorio di Fisica Computazionale I* (6 CFU, LT Fisica).
2010–2011 Lecturer of *Laboratorio di Fisica Computazionale I* (6 CFU, LT Fisica).
2009–2010 Lecturer of *Laboratorio di Fisica Computazionale I* (6 CFU, LT Fisica).
2008–2009 Lecturer of *Laboratorio di Fisica Computazionale I* (6 CFU, LT Fisica).
2007–2008 Lecturer of *Laboratorio di Fisica Computazionale II* (6 CFU, LT Fisica) and *Calcolo delle Probabilità* (6 CFU, LT Fisica).
2006–2007 Lecturer of *Laboratorio di Fisica Computazionale II* (6 CFU, LT Fisica) and *Calcolo delle Probabilità* (6 CFU, LT Fisica).
2005–2006 Lecturer of *Laboratorio di Fisica Computazionale II* (6 CFU, LT Fisica) and *Calcolo delle Probabilità* (6 CFU, LT Fisica).
2004–2005 Lecturer of *Laboratorio di Fisica Computazionale II* (6 CFU, LT Fisica).
2003–2004 Lecturer of *Laboratorio di Fisica Computazionale II* (6 CFU, LT Fisica) and *Fisica*

Medica (6 CFU, LCU Medicina).

2002–2003 Teaching assistant to *Laboratorio di Fisica Computazionale I* and *Modelli e Metodi Matematici per la Fisica*, and Lecturer of the Ph.D. course *Physics of Disordered Systems*.

2000–2001 Teaching assistant to *Combinatorial Optimization, Algorithms and Random Structures*, at the “Abdus Salam” ICTP (Trieste, Italy).

Coauthor (with L.M. Barone, E. Marinari, G. Organtini) of the **textbook** *Programmazione Scientifica* (650 pages, in Italian) edited by Pearson Education (Milan, 2006) and of the **textbook** *Scientific Programming: C-language, algorithms and models in science* (712 pages) edited by World Scientific (Singapore, 2013). These books are meant as didactic support for 3 courses on Computational Physics (6 CFU each). Given the long selling performance of the former, a second edition has been published by Pearson in 2019.

Invited lecturer to the following International Schools of Physics:

- “*Advanced Cavity Applications*” at the Boulder School for Condensed Matter and Materials Physics on ‘Frustrated and Disordered Systems’. Boulder, Colorado (USA). July 3–28, 2017.
- “*Thermodynamics and out of equilibrium dynamics in disordered systems*” at the Spring College on the Physics of Complex Systems. ICTP, Trieste. April 10 – May 5, 2017.
- “*Open questions in the long-time dynamics of glassy systems*” at the Netadis Summer Retreat. Bovec (Slovenia). July 5–19, 2015.
- “*A statistical mechanics approach to optimization problems*” at the 2nd Asian-Pacific School on ‘Statistical Physics and Interdisciplinary Applications’. Beijing. March 3–14, 2008.
- “*Optimization and inference*” at the 1st Latin-American School and Conference on ‘Statistical Physics and Interdisciplinary Applications’. La Havana, Cuba. February 28 – March 12, 2005.

Honors and awards

2019 ‘Outstanding Referee’ award from American Physical Society.

2018 Award of \$2,500 from the Rice Family Fund for participating to the program “The Rough High-Dimensional Landscape Problem” in KITP (Santa Barbara, CA, USA).

2017 ‘Premialità’ (rewarding) by Sapienza University for the merits in teaching and research.

2016 Highest marks in the VQR 2011–2014 (evaluation of research quality).

2014 Abilitazione Scientifica Nazionale (national scientific qualification) to Full Professor in Theoretical Physics (SC 02/A2).

2012 Highest marks in the VQR 2004–2010 (evaluation of research quality).

2008 Prize “Tomassoni-Chisesi” of € 13,333 assigned by *Fondazione Roma Sapienza* for the relevant contributions given to the progress of Physics.

1992, 1994 Prize in Physics “E. Persico” assigned by the *Accademia Nazionale dei Lincei*.

Grants and projects

2020–2022 PI of the research project on “Out of equilibrium relaxation dynamics in complex landscapes: from the Sherrington-Kirkpatrick model to the spherical mixed p-spin model and the planted constraint satisfaction problems” funded by Sapienza University of Rome

with € 13,000.

- 2019–2021** PI of the research project on “Breaking the limits of hard problems by thermal and quantum fluctuations” funded by Sapienza University of Rome with € 14,500.
- 2019–2020** PI and Scientific Coordinator of the PRIN project “Statistical mechanics and complexity” (total budget € 600,000 and local budget € 107,000).
- 2018** PI of the FFABR (basic research funding) awarded by MIUR (€ 3,000).
- 2017–2019** PI of the research project on “Study of memory effects in the long time out of equilibrium dynamics of spin glass models” funded by Sapienza University of Rome with € 13,800.
- from 2016** National coordinator of the INFN Research Network on “Equilibrium and Non-Equilibrium Statistical Mechanics of disordered systems, paradigms and Applications: from the amorphous state to systems biology and brain functioning” (ENESMA).
- 2015–2017** PI of the research project on “Optimizing complex systems via biased dynamics and quantum fluctuations” funded by Sapienza University of Rome with € 9,000.
- 2014–2016** PI of the research project on “Numerical simulations of discrete approximations to spin glasses with continuous variables” funded by Sapienza University of Rome with € 13,000.
- 2013–2015** PI of the research project on “Inverse problems in complex Ising models” funded by Sapienza University of Rome with € 7,000.
- 2012–2013** PI of the research project on “Large scale numerical simulations of models with long range interactions” funded by Sapienza University of Rome with € 8,000.
- 2012–2013** PI of the research project on “Inverse Ising problem and graph reconstruction” funded by Sapienza University of Rome with € 12,000.
- 2010–2015** PI of the FIRB project on “Inference and optimization in complex systems: from the thermodynamics of spin glasses to message passing algorithms” funded with € 412,200.
- 2005** PI of “Progetto di Supercalcolo” INFN–CINECA project for parallel computing: roughly 30,000 hours awarded.
- 2002** PI of “Progetto Giovani Ricercatori” awarded by the Sapienza University of Rome (€ 5,500).
- 2016–2019** Participant to the PRIN (research project of national interest) on “Statistical mechanics and complexity” funded with € 440,000.
- 2012–2015** Participant to the PRIN (research project of national interest) on “Statistical mechanics of disordered and complex systems” funded with € 835,100.
- 2006–2008** Participant to the PRIN (research project of national interest) on “Complex problems in statistical mechanics and field theory” funded with € 221,000.
- 2004–2007** Participant to the ECC Integrated Project EVERGROW, with the role of coordinator of the workpackage on “Belief and survey”.
- 2002–2006** Participant to the ECC MTR Network DYGLAGEMEM.
- 2002–2006** Participant to the ECC MTR Network STIPCO.

Thesis supervised and reviewed

Supervisor of 24 undergraduate (B.Sc.) thesis and 36 master (M.Sc.) thesis in Physics.

Supervisor of the following 11 Ph.D. thesis in Physics:

- *Numerical study of the microscopic structure of jammed systems: from inferring their dynamics to finite size scaling* by [REDACTED] (2021).
- *Exploiting atypicality in the continuous coloring* by [REDACTED] (2021).

- *The mixed p-spin model: selecting, following and losing states* by [REDACTED] (2019).
- *On the optimal use of the Bethe approximation for models on graphs with loops* by [REDACTED] (2017).
- *Critical properties of disordered XY model on sparse random graphs* by [REDACTED] (2016).
- *Statistical physics of linear and bilinear inference problems* by [REDACTED] (2016).
- *Finite size corrections to disordered systems: mean field results and applications to finite dimensions* by [REDACTED] (2014).
- *Random magnets on random graphs* by [REDACTED] (2013).
- *Boolean constraint satisfaction problems for reaction networks* by [REDACTED] (2013).
- *Renormalization group and critical properties of long range models* by [REDACTED] (2012).
- *The multi p-spin model: comparing TAP states and out-of-equilibrium dynamics* by [REDACTED] (2006);

Currently supervising the Ph.D. thesis of [REDACTED] (from 2018), [REDACTED] (from 2019) and [REDACTED] (from 2019).

Reviewer and/or member of the final examination commission for the following Ph.D. thesis:

- [REDACTED], *Approximate inference on graphical models: message-passing, loop-corrected methods and applications*, Politecnico di Torino, July 28th 2021.
- [REDACTED], *Advanced statistical modeling and variable selection for protein sequences*, Sorbonne Universite, June 24th, 2021.
- [REDACTED], *Replicas in complex systems: applications to large deviations and neural networks*, Università degli Studi di Milano, October 27th, 2020.
- [REDACTED], *On the dynamics of descending algorithms in high-dimensional planted models*, Université Paris–Saclay, October 2nd, 2020.
- [REDACTED], *Algorithmic barrier in random constraint satisfaction problems*, ENS Paris, September 29th, 2020.
- [REDACTED], *Euclidean Correlations in Combinatorial Optimization Problems: A Statistical Physics Approach*, Università degli Studi di Milano, December 17th, 2019.
- [REDACTED], *Dynamics of randomly connected neural networks and inference in the presence of hidden nodes*, Norwegian University of Science and Technology, December 6th, 2018.
- [REDACTED], *Random Combinatorial Optimization Problems: Mean Field and Finite-Dimensional Results*, Università degli Studi di Milano, December, 2018.
- [REDACTED], *Coarsening and percolation in 2d kinetic Ising models & Quench dynamics of the isolated $p = 2$ spherical spin glass model*, Sorbonne Université, September 27th, 2018.
- [REDACTED], *Out of Equilibrium Statistical Physics of Learning*, Politecnico di Torino, April 9th, 2018.
- [REDACTED], *Phase diagram, jamming and glass transitions in the non-convex perceptron*, Université de Paris Sud XI (Orsay), October 6th, 2017.
- [REDACTED], *Statistical mechanics approaches to optimization and inference*, Politecnico di Torino, April 5th, 2017.
- [REDACTED]inone, *Following the evolution of metastable glassy states under external perturbations: compression and shear-strain*, ENS Paris and Università “La Sapienza” di Roma,

December 21st, 2015.

- [REDACTED], *Energy Landscape in 3-Dimensional Heisenberg Spin Glasses*, Universidad Complutense de Madrid, October 16th, 2015.
- [REDACTED], *Statistical physics and approximate message passing algorithms for sparse linear estimation problems in signal processing and coding theory*, ENS Paris, September 18th, 2015.
- [REDACTED], *Connectivity inference with asynchronously updated kinetic Ising models*, Aalto University, June, 2014.
- [REDACTED], *Statistical mechanics models for biological systems: cooperativity in biochemistry and affinity maturation of antibodies*, Università di Parma, March 11th, 2014.
- [REDACTED], *Inverse Inference in the Asymmetric Ising Model*, Université de Paris Sud XI (Orsay), February 22th, 2013.
- [REDACTED], *Spin glasses, the quantum annealing, colloidal glasses and crystals: exploring complex free-energy landscapes*, Universidad Complutense de Madrid, January 25th, 2013.
- [REDACTED], *The Renormalization Group for Disordered Systems*, Université de Paris Sud XI (Orsay) and Università “La Sapienza” di Roma, January 31st, 2012 (president of the commission).
- [REDACTED], *Rugged Free-Energy Landscapes in Disordered Spin Systems*, Universidad Complutense de Madrid, October 21st, 2011.
- [REDACTED], *Statistical physics of disordered networks. Spin Glasses on hierarchical lattices and community inference on random graphs*, Université de Paris Sud XI (Orsay), October 11th, 2011.
- [REDACTED], *New results on the spectral density of Random Matrices*, King’s College London, September 17th, 2010.
- [REDACTED], *Geometrie et inference dans l’optimization et en théorie de l’information*, Université de Paris Sud XI (Orsay), September 24th, 2007.

Publications

Author of **2** books:

L.M. Barone, G. Organtini, E. Marinari, F. Ricci-Tersenghi
PROGRAMMAZIONE SCIENTIFICA
650 pages, Pearson Education Italia (2006)
Second Edition published in 2019

L.M. Barone, G. Organtini, E. Marinari, F. Ricci-Tersenghi
SCIENTIFIC PROGRAMMING: C-LANGUAGE, ALGORITHMS AND MODELS IN SCIENCE
716 pages, World Scientific, Singapore (2013)

The full list of the scientific publications is at the end of this cv. Number of citations have been extracted from databases on 29/10/2020.

	Google Scholar	ISI-WoS	Scopus
Number of products	162	136	162
Total citations	5083	3289	3224
Citations per product	31.4	24.2	24.06
Hirsch (H) index	39	32	35
Normalized H index	1.86	1.52	1.67

Affiliations

- from 2010: Researcher associated to Consiglio Nazionale delle Ricerche (CNR).
- from 2009: Researcher associated to Istituto Nazionale di Fisica Nucleare (INFN).
- 2001–2009: Researcher associated to Istituto Nazionale di Fisica della Materia (INFM).
- 1995–2000: Researcher associated to Istituto Nazionale di Fisica Nucleare (INFN).

Conferences organized

- *Recent progress in glassy systems Marginally Stable Phases, Quantum Behaviour, Machine Learning and Mathematical Physics*. Les Houches, France. February 16–21, 2020.
- *Artificial Intelligence: Art or Science?*. SISSA, Trieste. November 12–13, 2019.
- *40 years of Replica Symmetry Breaking*. Sapienza University, Roma. September 10–13, 2019.
- *Disordered serendipidity: a glassy path to discovery*. Sapienza University, Roma. September 19–21, 2018.
- *SIF 101st National Congress*. Sapienza University, Roma. September 21–25, 2015. Roughly 600 participants.
- Workshop on *Critical Phenomena in Random and Complex Systems*. Villa Orlandi, Anacapri. September 9–12, 2014.
- School and workshop on *Spin Glass and Beyond: An old tool for new problems*. Cargese, France. August 25 - September 6, 2014.
- Autumn school on *Statistical physics, Optimization, Inference and Message-Passing algorithms*. Les Houches, France. September 30 – October 11, 2013.
The lectures notes have been collected in a book *Statistical Physics, Optimization, Inference, and Message-Passing Algorithms*, edited by F. Krzakala, F. Ricci-Tersenghi, L. Zdeborova, R. Zecchina, E. W. Tramel and L. F. Cugliandolo. Oxford University Press (2015).
- Meeting on *Bridging statistical physics and optimization, inference and learning*. Les Houches, France. February 20–24, 2012.
- *ECCS'08. The 5th European Conference on Complex Systems*. Hebrew University, Jerusalem. September 14–19, 2008. Roughly 300 participants.
- *Wandering with Curiosity in Complex Landscapes: A scientific conference in honor of Giorgio Parisi for his 60th birthday*. Sapienza University and Accademia dei Lincei, Roma. September 8–10, 2008. Roughly 200 participants.
- *EPS – CMD 22, 2008. The 22nd General Conference of the Condensed Matter Division of the European Physical Society*. Sapienza University, Roma. August 25–29, 2008. Roughly 600 participants.

- Conference on *Common Concepts in Statistical Physics and Computer Science*, satellite of STATPHYS 23. ICTP, Trieste. July 2–6, 2007.
- Meeting on *Statistical Physics of Glasses, Spin Glasses, Information Processing and Combinatorial Optimization*. Les Houches, France. February 20–24, 2006.
- Meeting on *Statistical Physics of Disordered Systems and its Applications*. Accademia dei Lincei, Roma. September 5–8, 2005.
- Meeting on *Statistical Physics of Glasses, Spin Glasses, Information Processing and Combinatorial Optimization*. Les Houches, France. January 31 – February 4, 2005.
- School and Conference on *Fundamental Aspects of Complexity*. ICTP, Trieste. September 6–10, 2004. More than 120 participants.
- Workshop on *Statistical Physics and Computational Problems: Beyond the Analogy*. Institut Henri Poincaré, Paris. June 14–16, 2004.

Experience as editor and reviewer

Associate editor for Journal of Statistical Physics.

Editor of the lecture notes *Statistical Physics, Optimization, Inference, and Message-Passing Algorithms*, edited by F. Krzakala, F. Ricci-Tersenghi, L. Zdeborova, R. Zecchina, E.W. Tramel and L.F. Cugliandolo. Oxford University Press (2015).

Guest Editor for the Special Issue on *Statistical Physics of Disordered Systems: from real materials to optimization and codes*, J. Phys. A **36** (2003) and for the Special Issue on *Disordered serendipity: a glassy path to discovery*, J. Phys. A (2019)

Referee for the following journals:

- Science
- Nature Physics
- Nature Communications
- Scientific Reports
- Proceeding of the National Academy of Science
- Physical Review X
- Physical Review Letters
- Physical Review B
- Physical Review E
- Europhysics Letters
- Journal of Physics A: Mathematical and General
- The European Physical Journal B
- Journal of Statistical Mechanics: Theory and Experiment
- Journal of Statistical Physics
- Physica A
- Nuclear Physics B
- Frontiers in Physics
- Plos One
- Entropy
- PLOS Computational Biology

- SIAM Journal on Discrete Mathematics
- IEEE Transactions on Information Theory
- Journal of Experimental Algorithmics

APS **Outstanding Referee** in 2019.

Publons **Peer Review Award** in 2019 (top 1% of reviewers in Physics and Cross-Field).

Publons **Peer Review Award** in 2018 (top 1% of reviewers in Physics).

Publons **Peer Review Award** in 2017 (top 1% of reviewers in Mathematics).

Data available at <http://publons.com/a/488125/>.

Reviewer for ANVUR, the Italian national agency for the evaluation of university and research, and for ANR, the French national research agency.

Oral presentations

- *Long-range vector spin glasses in a field at $T=0$: the Hessian spectrum has a pseudo-gap and undergoes a delocalization transition.*
Invited speaker at the school and workshop on Glassy Systems and Inter-Disciplinary Applications. Cargèse, France. June 28 – July 7, 2021.
Invited speaker at the workshop on Random Matrix Theory and Networks. June 8, 2021.
- *Effects of temperature chaos in the out of equilibrium dynamics of spin glass models.*
Invited speaker at the Simons Collaboration public seminar. May 5, 2021.
- *Phase transitions in inference problems and their algorithmic consequences.*
Invited lecturer at the Gran Sasso Science Institute, L'Aquila. April 22, 2021.
Invited speaker at the U. Minnesota and Northwestern joint online seminar on mathematical physics. April 21, 2021.
- *Statistical mechanics of random optimization and inference problems: from phase transitions to algorithmic behavior.*
Invited speaker at the workshop on 'Science of Data Science'. ICTP, Trieste. September 30 – October 4, 2019.
- *Limits of algorithms in random constraint satisfaction problems.*
Invited speaker at the summer school on 'Glasses, Jamming, and Slow Dynamics'. Beg-Rohu, France. June 24 – July 6, 2019.
- *Ergodicity breaking in off-equilibrium dynamics of glassy mean-field models.*
Invited speaker at the program entitled 'Breakdown of ergodicity in isolated quantum systems: from glassiness to localization'. Galileo Galilei Institute for Theoretical Physics, Florence. May 30, 2019.
- *Memories from the ergodic phase: the awkward dynamics of spherical mixed p -spin models.*
Invited speaker at the Simons Collaboration seminar. Ecole Normale Supérieure, Paris. April 11, 2019.
- *Unexpected behavior in out-of-equilibrium dynamics of mean field spin glasses.*
Invited speaker at the KITP conference on 'Rough Landscapes: From Physics to Algorithms'. University of California at Santa Barbara (USA). January 7–11, 2019.

- *Belief Propagation and Monte Carlo based algorithms to solve inference problems on sparse random graphs.*
Invited speaker at the workshop on ‘Applications of Partition Functions’. CIB-EPFL, Lausanne, Switzerland. November 12–16, 2018.
Invited speaker at the workshop on ‘Physics, Inference and Learning (PIL2018)’. Beijing, China. November 1–3, 2018.
Invited speaker at the workshop on ‘Statistical Physics and Machine Learning back together’. Cargese, France. August 20–31, 2018.
- *On the complex behaviour of disordered models in a field.*
Invited speaker at the Statistical Physics seminar. SISSA, Trieste. March 13, 2018.
- *Discussion on the talk “First steps towards a non-perturbative RG approach for spin glasses in finite dimensions” by Marco Tarzia.*
Invited speaker at the workshop on ‘Beyond Mean Field Theory: Renormalisation Group and Non Perturbative approaches to Disordered and Glassy Systems’. Sapienza University, Rome. January 3–5, 2018.
- *Advanced Cavity Applications.*
Invited lecturer at the 2017 Boulder School for Condensed Matter and Materials Physics on ‘Frustrated and Disordered Systems’. Boulder, Colorado (USA). July 3–28, 2017.
- *Thermodynamics and out of equilibrium dynamics in disordered systems.*
Invited lecturer at the Spring College on the Physics of Complex Systems. ICTP, Trieste. April 10 – May 5, 2017.
- *Community Detection via Semidefinite Programming.*
Invited speaker at the workshop on ‘Statistical physics, Learning, Inference and Networks’. Les Houches, France. February 26 – March 3, 2017.
- *Critical properties of the disordered XY model on random graphs.*
Invited speaker at the workshop on ‘Renormalization Group Theory of Disordered Systems’. Ecole Normale Supérieure, Paris. July 25–27, 2016.
- *Phase Transitions in Semidefinite Relaxations (a fast and robust algorithm for community detection).*
Invited speaker at the workshop on ‘Statistical Physics of Disordered Systems and Its Applications’ (SPDSA2017). Akiu Resort Hotel Sakan, Sendai, Japan. February 8–9, 2017.
Invited speaker at the workshop on ‘Phase transitions in discrete structures’. Goethe University, Frankfurt. July 25–29, 2016.
Invited speaker at the ‘Kolmogorov meets Turing’ workshop on ‘Stochastics, Optimization, Algorithms, and Games’. LUISS, Rome. May 18, 2016.
Invited speaker at the workshop on ‘Random Instances and Phase Transitions’. Simons Institute for the Theory of Computing, Berkeley, USA. May 4, 2016.
ANC seminar. Informatics Forum, Edinburgh. February 2, 2016.
Invited speaker at the International Meeting on High-Dimensional Data Driven Science. Mielparque, Kyoto. December 14–17, 2015.
- *Improved mean-field approximations for inferring marginals and model parameters.*
Invited speaker at the workshop on ‘New Frontiers in Non-equilibrium Physics’. YITP, Kyoto. July 21–24, 2015.
- *Open questions in the long-time dynamics of glassy systems.*
Invited lecturer at the Netadis Summer Retreat. Bovec (Slovenia). July 5–19, 2015.
- *Spin glasses in a field.*

- Invited speaker at the 113th Statistical Mechanics Conference. Rutgers University, New Jersey. May 10–12, 2015.
- *Steps to go beyond the Bethe approximation in disordered models: large deviations of critical correlations and loop corrections.*
Invited speaker at the workshop on ‘Critical Phenomena in Random and Complex Systems’. Villa Orlandi, Anacapri. September 9–12, 2014.
 - *A modified kinetic inverse Ising method for the inference of synaptic spatial structure and characteristic times.*
Invited speaker at the workshop on ‘Modelling and inference for dynamics in complex and disordered systems’. NORDITA, Stockholm. June 11–13, 2014.
 - *The analysis of BP guided decimation algorithm.*
Invited speaker at the EPSRC symposium on ‘Statistical Mechanics: Phase transitions in discrete structures and computational problems’. University Warwick, UK. May 5–9, 2014.
 - *A brief introduction to the inverse Ising problem and some algorithms to solve it.*
Golosino seminar. ESPCI, Paris. March 18, 2014.
 - *Mean-field method with correlations determined by linear response.*
Invited speaker at the 99th SIF National Congress. SISSA, Trieste. September 25, 2013.
 - *Making maximum entropy and linear response estimates consistent.*
Invited speaker at the workshop on ‘Statistical Physics of Disordered Systems and Its Applications’ (SPDSA2013). Akiu Resort Hotel Sakan, Sendai, Japan. March 20–21, 2013.
 - *Phase transitions and computational complexity: a physicist point of view.*
Invited speaker at the workshop on ‘Limits of Theorem Proving’. IASI–CNR, Rome. September 25–27, 2012.
 - *Some recent results on the inverse Ising problem.*
Invited speaker at the workshop on ‘Common Concepts in Machine Learning and Statistical Physics’. ICTP, Trieste. August 29–31, 2012.
 - *Adding loops to mean field approximation for disordered models.*
Séminaire du LPTMS, Université Paris Sud, France. April 3, 2012.
 - *Complex stochastic dynamics in spin glasses and optimization problems.*
Invited speaker at the 7th Vienna Central European Seminar on ‘Complex Stochastic Dynamics’. Vienna, Austria. November 26–28, 2010.
 - *Analytic description of an optimization algorithm: Beliefs Inspired Decimation.*
Invited speaker at the workshop on ‘Statistical physics of complexity, optimization and systems biology’. Les Houches, France. March 7–12, 2010.
 - *A glassy phase in the random field Ising model?*
Invited speaker at the workshop on ‘Techniques and Challenges from Statistical Physics’. Centre de Recerca Matemàtica, UAB, Barcelona. October 14–16, 2009.
 - *Replica Cluster Variational Method.*
Invited speaker at ‘Physics of Algorithms 2009’ Conference. Santa Fe, New Mexico. August 31 – September 4, 2009.
 - *Optimization problems statistical mechanics.*
ISC, CNR, Rome. April 16, 2009.
Mathematics Department, Third University of Rome. March 17, 2009.
Physics Department, Florence University. February 11, 2009.
 - *On message guided algorithms for solving constraint satisfaction problems.*
Invited speaker at the workshop on ‘Statistical Mechanics’. Institut Henri Poincaré, Paris.

December 8–12, 2008.

- *The (many) phase transitions in random constraint satisfaction problems.*
Invited speaker at the 5th European Conference on Complex Systems. Hebrew University, Jerusalem. September 14–19, 2008.
Invited speaker at the workshop on ‘Phase Transitions, Combinatorial Problems & Message Passing’. BIRS, Banff, Canada. June 8–13, 2008.
Invited speaker at the workshop on ‘Physics of distributed information systems’. NORDITA, Stockholm. May 15–17, 2008.
- *A statistical mechanics approach to optimization problems.*
Invited Lecturer at the 2nd Asian-Pacific School on ‘Statistical Physics and Interdisciplinary Applications’. Beijing. March 3–14, 2008.
Tokyo Institute of Technology, Tokyo. November 1, 2007.
Kyoto University, Kyoto. October 23, 2007.
- *On the solution-space geometry of random constraint satisfaction problems.*
IASI, CNR, Rome. June 16, 2006.
Seminario Interdipartimentale di Algoritmica, Dipartimento di Informatica, Univ. of Rome “La Sapienza”. April 3, 2006.
COSPICO 05, Common trends in statistical physics, information theory, and combinatorial optimization. ECCS’05 satellite meeting. Cité Internationale Universitaire de Paris. November 17, 2005.
- *Optimization and Inference.*
Invited Lecturer at the 1st Latin-American School and Conference on ‘Statistical Physics and Interdisciplinary Applications’. La Havana, Cuba. February 28 – March 12, 2005.
- *Temperature cycle experiments in numerical simulations of spin models.*
Invited speaker at the Workshop on ‘Lengthscales and Heterogeneous Dynamics in Glassy Materials’. New College, Oxford, UK. September 22–25, 2004.
- *Measuring the fluctuation-dissipation ratio with no perturbing field.*
Sphinx General Meeting. Hotel Capoboi, Villasimius, Sardinia. September 14–21, 2003.
- *On the nature of the low-temperature phase in discontinuous mean-field spin glasses.*
Les Houches DYGLAGEMEM/STIPCO Meeting. Les Houches, France. March 3–7, 2003.
- *Alternative solutions to diluted p -spin models and random XORSAT problems.*
Invited speaker at the International Conference on ‘Typical-case Complexity, Randomness and Analysis of Search Algorithms’. ICTP, Trieste. September, 2002.
- *Computational complexity and statistical mechanics.*
Universidad de Extremadura, Badajoz, Spain. April 4, 2002.
- *Unfrustrated models with a glass transition.*
Invited speaker at the International Congress on ‘Unifying Concepts in Glass Physics’. Accademia dei Lincei, Roma. February 27 – March 2, 2002.
- *Optimization and statistical mechanics.*
Univ. de La Habana, La Havana, Cuba. January, 2001.
- *Exact solutions for ferromagnetic and spin glass models on diluted hypergraphs.*
Invited speaker at the 2001 General SPHINX Conference. Castelvecchio Pascoli, Tuscany. August 29 – September 6, 2001.
- *Numerical simulations of glassy systems in the out-of-equilibrium regime.*
Invited speaker at the IV International Discussion Meeting on ‘Relaxations in Complex Systems’. Heraklion, Crete. June 17–24, 2001.

- *Geometrical properties of LDPC codes.*
Invited speaker at the Workshop on ‘Statistical Physics and Capacity-Approaching Codes’. ICTP, Trieste. May 21–25, 2001.
- *Statistical mechanics of combinatorial optimization problems.*
Invited speaker at VI Convegno Nazionale di Fisica Statistica e dei Sistemi Complessi. Parma. May 29–31, 2001.
Invited speaker at XX Convegno di Fisica Teorica e Struttura della Materia. Fai della Paganella, Trentino. March 25–28, 2001.
- *Chaotic, memory and cooling rate effects in spin glasses: Is the Edwards-Anderson model a good spin glass?.*
Invited speaker at the Fifth Claude Itzykson Meeting on ‘Dynamics of Nonequilibrium Systems’. CEA/Saclay, Paris. June 20–23, 2000.
- *Hyper-SAT: a 3-spin model on a hyper-graph.*
Invited speaker at the Research Workshop on ‘Graph Theory and Statistical Physics’. ICTP, Trieste. May 22–25, 2000.
- *Absence of aging in the remanent magnetization in Migdal-Kadanoff spin glasses.*
Les Houches Sphinx Meeting on ‘Statistical Physics of Glassy and Non-Equilibrium Systems.’ Les Houches, France. January 24–28, 2000.
- *Finite-dimensional spin glasses in the aging regime: replica symmetry breaking and ultrametricity.*
INFMeeting, Catania, Sicily. June 14–18, 1999.
- *Phase transition in a disordered model for the RNA secondary structure.*
Univ. de Barcelona. October 19, 1999.
Univ. Complutense de Madrid. April 14, 1999.
- *Violation of the fluctuation-dissipation relation in spin glasses.*
STATPHYS XX, Paris. July 20–24, 1998.
ICTP, Trieste. March 31, 1998.
- *Evidenze numeriche di rottura spontanea della simmetria di replica nei vetri di spin finitodimensionali.*
Dipartimento di Fisica. Università di Roma “La Sapienza”. November 25, 1997.
- *Simulazioni di un vetro di spin in 4, 6 ed 8 dimensioni.*
Dipartimento di Fisica. Università di Roma “La Sapienza”. April 16, 1997.

Administrative and management experience

- from 2019** Dean Deputy in the Commission for the Management of Faculty of Science classrooms.
- from 2012** Member of the *Collegio dei docenti* (Board of faculties) of the Ph.D. school in Physics at Sapienza University.
- 2011–2018** Member of the Physics Department *Team qualità*, controlling and reporting on the organization and the quality level of the teaching activities.
- 2012–2018** President of the *Commissione per la pianificazione della didattica* of the Physics Department, coordinating the assignment of teaching duties to all the members of the Physics Department (roughly 150 professors).
- 2011–2014** Member of the Faculty of Science board (*Commissione spazi*) for the optimization of the use of common areas and lecturing rooms.

- 2011–2013** Member of the Faculty of Science *Giunta di Facoltà* (restricted board assisting the Faculty Dean).
- 2008–2012** Person in charge of managing and optimizing the use of the 14 lecturing rooms of the Physics Department.
- 2004–2008** Member of the Faculty of Science board awarding research grants.

Scientific communication activities

- February 25-26, 2021** Two long lectures (3 hours each) on “Epidemic models and the analysis of epidemic data” organized by Scuola Normale Superiore in Pisa within the initiative *La matematica nel mondo contemporaneo* (Mathematics in the contemporary world) aimed at improving the formation of high school teachers.
- March–June, 2020** Intense activity in analysing data related to the Covid-19 epidemics and in communicating results of the analysis to a broad public through mass media.
- May 15, 2018** Invited speaker to a public science lecture on “I computer e le simulazioni numeriche da Fermi a oggi” (Computers and numerical simulations from Fermi times to nowadays) within the science festival “I mille nomi di Fermi” (The thousand names of Fermi) held at the Physics Department of Sapienza University of Rome.
- March 15, 2016** Invited speaker to a *Caffè Scienza* (café scientifique) entitled “Computo ergo sum: simulare il cervello” on recent advances in neural networks and machine learning, held at the ‘asSaggi science bookshop’ in Rome.
- May 31, 2015** Invited speaker to a *Caffè Scienza* (café scientifique) entitled “Computo ergo sum” on recent advances in neural networks, held in Matera, Italy.
- March 13, 2012** Invited speaker to a *Caffè Scienza* on “Computer and complexity” held at the ‘asSaggi science bookshop’ in Rome.
- 2007–2011** Co-organizer of a series of *Caffè Scienza* in Rome, roughly one per month.
- 2010** Author of the journalistic article “Optimizing by Passing Messages” published by Atomium Culture
- 2006** Author of the entry on “Simulazioni di processi fisici mediante calcolatore” (Computer simulations of physical processes) for the Treccani encyclopedia, the first Italian encyclopedia.
- 2005** Scientific supervision on the production by Sky Italia (italian broadcast network) of short cartoons explaining some every-day phenomena on a scientific basis.

Complete list of publications

- *The loop expansion around the Bethe solution at zero temperature predicts an upper critical dimension equal to 8 for spin glass models in a field*,
M.C. Angelini, C. Lucibello, G. Parisi, F. Ricci-Tersenghi and T. Rizzo,
preprint arXiv:2103.17080 (2021).
- *Finite size effects in the microscopic critical properties of jammed configurations: a comprehensive study of the effects of different types of disorder*,
P. Charbonneau, E. Corwin, C. Dennis, R. Diaz Hernández Rojas, H. Ikeda, G. Parisi and F. Ricci-Tersenghi,
Phys. Rev. E **104**, 014102 (2021).

- *How we are leading a 3-XORSAT challenge: From the energy landscape to the algorithm and its efficient implementation on GPUs*,
M. Bernaschi, M. Bisson, M. Fatica, E. Marinari, V. Martin-Mayor, G. Parisi and F. Ricci-Tersenghi,
Europhys. Lett. **133**, 60005 (2021).
- *Gradient descent dynamics in the mixed p -spin spherical model: finite-size simulations and comparison with mean-field integration*,
G. Folena, S. Franz and F. Ricci-Tersenghi,
J. Stat. Mech. 033302 (2021).
- *Spin-glass dynamics in the presence of a magnetic field: exploration of microscopic properties*,
I. Paga, Q. Zhai, M. Baity-Jesi, E. Calore, A. Cruz, L.A. Fernandez, J.M. Gil-Narvion, I. Gonzalez-Adalid Pemartin, A. Gordillo-Guerrero, D. Iñiguez, A. Maiorano, E. Marinari V. Martin-Mayor, J. Moreno-Gordo, A. Muñoz-Sudupe, D. Navarro, R.L. Orbach, G. Parisi, S. Perez-Gaviro, F. Ricci-Tersenghi, J.J. Ruiz-Lorenzo, S.F. Schifano, B. Seoane, A. Tarancon, R. Tripiccion and D. Yllanes,
J. Stat. Mech. 033301 (2021).
- *Temperature chaos is present in off-equilibrium spin-glass dynamics*,
M. Baity-Jesi, E. Calore, A. Cruz, L.A. Fernandez, J.M. Gil-Narvion, I. Gonzalez-Adalid Pemartin, A. Gordillo-Guerrero, D. Iñiguez, A. Maiorano, E. Marinari V. Martin-Mayor, J. Moreno-Gordo, A. Muñoz-Sudupe, D. Navarro, I. Paga, G. Parisi, S. Perez-Gaviro, F. Ricci-Tersenghi, J.J. Ruiz-Lorenzo, S.F. Schifano, B. Seoane, A. Tarancon, R. Tripiccion and D. Yllanes,
Communications Physics **4**, 74 (2021).
- *Inferring the particle-wise dynamics of amorphous solids from the local structure at the jamming point*,
R. Diaz, G. Parisi and F. Ricci-Tersenghi,
Soft Matter **17**, 1056 (2021).
- *SpaRTA Tracking across occlusions via partitioning of 3D clouds of points*,
A. Cavagna, S. Melillo, L. Parisi, and F. Ricci-Tersenghi,
IEEE Transactions on Pattern Analysis and Machine Intelligence **43**, 1394–1403 (2021).
- *Scaling law describes the spin-glass response in theory, experiments and simulations*,
Q. Zhai, I. Paga, M. Baity-Jesi, E. Calore, A. Cruz, L.A. Fernandez, J.M. Gil-Narvion, I. Gonzalez-Adalid Pemartin, A. Gordillo-Guerrero, D. Iñiguez, A. Maiorano, E. Marinari V. Martin-Mayor, J. Moreno-Gordo, A. Muñoz-Sudupe, D. Navarro, R.L. Orbach, G. Parisi, S. Perez-Gaviro, F. Ricci-Tersenghi, J.J. Ruiz-Lorenzo, S.F. Schifano, B. Seoane, A. Tarancon, R. Tripiccion and D. Yllanes,
Phys. Rev. Lett. **125**, 237202 (2020)
- *Solving the fully-connected spherical p -spin model with the cavity method: equivalence with the replica results*,
G. Gradenigo, M.C. Angelini, L. Leuzzi and F. Ricci-Tersenghi,
J. Stat. Mech. 113302 (2020).
- *Comment on ‘Real-space renormalization-group methods for hierarchical spin glasses’*,
M.C. Angelini, G. Parisi and F. Ricci-Tersenghi,
J. Phys. A: Math. Theor. **53**, 418001 (2020).
- *Rethinking mean-field glassy dynamics and its relation with the energy landscape: the sur-*

- prising case of the spherical mixed p -spin model*,
G. Folena, S. Franz and F. Ricci-Tersenghi,
Phys. Rev. X **10**, 031045 (2020).
- *Strong ergodicity breaking in aging of mean-field spin glasses*,
M. Bernaschi, A. Billoire, A. Maiorano, G. Parisi and F. Ricci-Tersenghi,
Proceedings of the National Academy of Sciences **117**, 17522–17527 (2020).
 - *How to iron out rough landscapes and get optimal performances: averaged gradient descent and its application to tensor PCA*,
G. Biroli, C. Cammarota and F. Ricci-Tersenghi,
J. Phys. A: Math. Theor. **53**, 174003 (2020).
 - *Spin Glasses in a Field Show a Phase Transition Varying the Distance among Real Replicas (And How to Exploit It to Find the Critical Line in a Field)*,
M. Dilucca, L. Leuzzi, G. Parisi, F. Ricci-Tersenghi and J.J. Ruiz-Lorenzo,
Entropy **22**, 250 (2020).
 - *Loop expansion around the Bethe solution for the random magnetic field Ising ferromagnets at zero temperature*,
M.C. Angelini, C. Lucibello, G. Parisi, F. Ricci-Tersenghi and T. Rizzo,
Proceedings of the National Academy of Sciences **117**, 2268–2274 (2020).
 - *The Mpemba effect in spin glasses is a persistent memory effect*,
M. Baity-Jesi, E. Calore, A. Cruz, L.A. Fernandez, J.M. Gil-Narvion, A. Gordillo-Guerrero, D. Iñiguez, A. Lasanta, A. Maiorano, E. Marinari V. Martin-Mayor, J. Moreno-Gordo, A. Muñoz-Sudupe, D. Navarro, G. Parisi, S. Perez-Gaviro, F. Ricci-Tersenghi, J.J. Ruiz-Lorenzo, S.F. Schifano, B. Seoane, A. Tarancon, R. Tripiccione and D. Yllanes,
Proceedings of the National Academy of Sciences **116**, 15350–15355 (2019).
 - *Monte Carlo algorithms are very effective in finding the largest independent set in sparse random graphs*,
M.C. Angelini and F. Ricci-Tersenghi,
Phys. Rev. E **100**, 013302 (2019).
 - *The random field XY model on sparse random graphs shows replica symmetry breaking and marginally stable ferromagnetism*,
C. Lupo, G. Parisi and F. Ricci-Tersenghi,
J. Phys. A: Math. Theor. **52**, 284001 (2019).
 - *Typology of phase transitions in Bayesian inference problems*,
F. Ricci-Tersenghi, G. Semerjian and L. Zdeborova,
Phys. Rev. E **99**, 042109 (2019).
 - *Biased landscapes for random constraint satisfaction problems*,
L. Budzynski, F. Ricci-Tersenghi and G. Semerjian,
J. Stat. Mech. 023302 (2019).
 - *A fast and accurate algorithm for inferring sparse Ising models via parameters activation to maximize the pseudo-likelihood*,
S. Franz, F. Ricci-Tersenghi and J. Rocchi,
preprint arXiv:1901.11325 (2019).
 - *Aging rate of spin glasses from simulations matches experiments*,
Janus Collaboration: M. Baity-Jesi, E. Calore, A. Cruz, L.A. Fernandez, J.M. Gil-Narvion, A. Gordillo-Guerrero, D. Iñiguez, A. Maiorano, E. Marinari V. Martin-Mayor, J. Monforte-Garcia, A. Muñoz-Sudupe, D. Navarro, G. Parisi, S. Perez-Gaviro, F. Ricci-Tersenghi, J.J. Ruiz-

- Lorenzo, S.F. Schifano, B. Seoane, A. Tarancon, R. Tripicciono and D. Yllanes, Phys. Rev. Lett. **120**, 267203 (2018).
- *One-loop topological expansion for spin glasses in the large connectivity limit*, M.C. Angelini, G. Parisi and F. Ricci-Tersenghi, Europhys. Lett. **121**, 27001 (2018).
 - *Dynamic variational study of chaos: spin glasses in three dimensions*, A. Billoire, L.A. Fernandez, A. Maiorano, E. Marinari, V. Martin-Mayor, J. Moreno-Gordo, G. Parisi, F. Ricci-Tersenghi and J.J. Ruiz-Lorenzo, J. Stat. Mech. 033302 (2018).
 - *An improved Belief Propagation algorithm finds many Bethe states in the random field Ising model on random graphs*, G. Perugini and F. Ricci-Tersenghi, Phys. Rev. E **97**, 012152 (2018).
 - *Comparison of Gabay-Toulouse and de Almeida-Thouless instabilities for the spin glass XY model in a field on sparse random graphs*, C. Lupo and F. Ricci-Tersenghi, Phys. Rev. B **97**, 014414 (2018).
 - *Loop expansion around the Bethe approximation through the M-layer construction*, A. Altieri, M.C. Angelini, C. Lucibello, G. Parisi, F. Ricci-Tersenghi and T. Rizzo, J. Stat. Mech. 113303 (2017).
 - *Numerical construction of the Aizenman-Wehr metastate*, A. Billoire, L.A. Fernandez, A. Maiorano, E. Marinari, V. Martin-Mayor, J. Moreno-Gordo, G. Parisi, F. Ricci-Tersenghi and J.J. Ruiz-Lorenzo, Phys. Rev. Lett. **119**, 037203 (2017).
 - *Matching Microscopic and Macroscopic Responses in Glasses*, Janus Collaboration: M. Baity-Jesi, E. Calore, A. Cruz, L.A. Fernandez, J.M. Gil-Narvion, A. Gordillo-Guerrero, D. Iñiguez, A. Maiorano, E. Marinari V. Martin-Mayor, J. Monforte-Garcia, A. Muñoz-Siduepe, D. Navarro, G. Parisi, S. Perez-Gaviro, F. Ricci-Tersenghi, J.J. Ruiz-Lorenzo, S.F. Schifano, B. Seoane, A. Tarancon, R. Tripicciono and D. Yllanes, Phys. Rev. Lett. **118**, 157202 (2017).
 - *Gauge-free cluster variational method by maximal messages and moment matching*, E. Dominguez, A. Lage-Castellanos, R. Mulet and F. Ricci-Tersenghi, Phys. Rev. E **95**, 043308 (2017).
 - *Improving variational methods via pairwise linear response identities*, J. Raymond and F. Ricci-Tersenghi, Journal of Machine Learning Research **18**(6), 1–36 (2017).
 - *Approximating the XY model on a random graph with a q-states clock model*, C. Lupo and F. Ricci-Tersenghi, Phys. Rev. B **95**, 054433 (2017).
 - *A simple analytical description of the non-stationary dynamics in Ising spin systems*, E. Dominguez, G. Del Ferraro and F. Ricci-Tersenghi, J. Stat. Mech. 033303 (2017).
 - *A statics-dynamics equivalence through the fluctuation-dissipation ratio provides a window into the spin-glass phase from nonequilibrium measurements*, Janus Collaboration: M. Baity-Jesi, E. Calore, A. Cruz, L.A. Fernandez, J.M. Gil-Narvion, A. Gordillo-Guerrero, D. Iñiguez, A. Maiorano, E. Marinari V. Martin-Mayor, J. Monforte-

- Garcia, A. Muñoz-Sudupe, D. Navarro, G. Parisi, S. Perez-Gaviro, F. Ricci-Tersenghi, J.J. Ruiz-Lorenzo, S.F. Schifano, B. Seoane, A. Tarancon, R. Tripiccione and D. Yllanes, Proceedings of the National Academy of Sciences **114**, 1838–1843 (2017).
- *The Backtracking Survey Propagation Algorithm for Solving Random K-SAT Problems*, R. Marino, G. Parisi and F. Ricci-Tersenghi, Nature Comm. **7**, 12996 (2016).
 - *Data quality for the inverse Ising problem*, A. Decelle, F. Ricci-Tersenghi and P. Zhang, J. Phys. A: Math. Theor. **49** 384001 (2016).
 - *Solving the inverse Ising problem by mean-field methods in a clustered phase space with many states*, A. Decelle and F. Ricci-Tersenghi, Phys. Rev. E **94**, 012112 (2016).
 - *Performance of a community detection algorithm based on semidefinite programming*, F. Ricci-Tersenghi, A. Javanmard and A. Montanari, J. Phys.: Conf. Ser. **699**, 01201 (2016).
 - *Phase Transitions in Semidefinite Relaxations*, A. Javanmard, A. Montanari and F. Ricci-Tersenghi, Proceedings of the National Academy of Sciences **113**, E2218–E2223 (2016).
 - *Egalitarianism in the rank aggregation problem: a new dimension for democracy*, P. Contucci, E. Panizzi, F. Ricci-Tersenghi and A. Sirbu, Qual. Quant. **50**, 1185–1200 (2016).
 - *Quasi equilibrium construction for the long time limit of glassy dynamics*, S. Franz, G. Parisi, F. Ricci-Tersenghi and P. Urbani, J. Stat. Mech. P10010 (2015).
 - *Multiple phases in modularity-based community detection*, C. Schülke and F. Ricci-Tersenghi, Phys. Rev. E **92**, 042804 (2015).
 - *Cross correlations of the American baby names*, P. Barucca, J. Rocchi, E. Marinari, G. Parisi and F. Ricci-Tersenghi, Proceedings of the National Academy of Sciences **112**, 7943–7947 (2015).
 - *Explicit generation of the branching tree of states in spin glasses*, G. Parisi, F. Ricci-Tersenghi and D. Yllanes, J. Stat. Mech. P05002 (2015).
 - *Infinite volume extrapolation in the one-dimensional bond diluted Levy spin-glass model near its lower critical dimension*, L. Leuzzi, G. Parisi, F. Ricci-Tersenghi and J.J. Ruiz-Lorenzo, Phys. Rev. B **91**, 064202 (2015).
 - *Inferring Synaptic Structure in presence of Neural Interaction Time Scales*, C. Capone, C. Filosa, G. Gigante, F. Ricci-Tersenghi and P. del Giudice, PLoS ONE 10, e0118412 (2015).
 - *The crossover region between long-range and short-range interactions for the critical exponents*, E. Brezin, G. Parisi and F. Ricci-Tersenghi, J. Stat. Phys. **157**, 855–868 (2014).
 - *Anomalous finite size corrections in random field models*,

- C. Lucibello, F. Morone, G. Parisi, F. Ricci-Tersenghi and T. Rizzo,
J. Stat. Mech. P10025 (2014).
- *Message passing and Monte Carlo algorithms: Connecting fixed points with metastable states*,
 A. Lage-Castellanos, R. Mulet and F. Ricci-Tersenghi,
Europhys. Lett. **107**, 57011 (2014).
 - *Finite size corrections to disordered Ising models on Random Regular Graphs*,
 C. Lucibello, F. Morone, G. Parisi, F. Ricci-Tersenghi and T. Rizzo,
Phys. Rev. E **90**, 012146 (2014).
 - *Relations between Short Range and Long Range Ising models*,
 M.C. Angelini, G. Parisi, and F. Ricci-Tersenghi,
Phys. Rev. E **89**, 062120 (2014).
 - *Large Deviations of Correlation Functions in Random Magnets*,
 F. Morone, G. Parisi, and F. Ricci-Tersenghi,
Phys. Rev. B **89**, 214202 (2014).
 - *Large Deviations in Monte Carlo Methods*,
 A. Pelissetto and F. Ricci-Tersenghi,
 in *Large Deviations in Physics, Lecture Notes in Physics* **885**, 161–191 (2014).
 - *The three dimensional Ising spin glass in an external magnetic field: the role of the silent majority*,
 Janus Collaboration: M. Baity-Jesi, R. A. Baños, A. Cruz, L.A. Fernandez, J.M. Gil-Narvion,
 A. Gordillo-Guerrero, D. Iñiguez, A. Maiorano, F. Mantovani, E. Marinari, V. Martin-Mayor,
 J. Monforte-Garcia, A. Muñoz-Sudupe, D. Navarro, G. Parisi, M. Pivanti, S. Perez-Gaviro,
 F. Ricci-Tersenghi, J.J. Ruiz-Lorenzo, S.F. Schifano, B. Seoane, A. Tarancon, P. Tellez,
 R. Tripiccione and D. Yllanes,
J. Stat. Mech. P05014 (2014).
 - *Diluted Mean-Field Spin-Glass Models at Criticality*,
 G. Parisi, F. Ricci-Tersenghi, and T. Rizzo,
J. Stat. Mech. P04013 (2014).
 - *Dynamical transition in the $D=3$ Edwards-Anderson spin glass in an external magnetic field*,
 Janus Collaboration: M. Baity-Jesi, R. A. Baños, A. Cruz, L.A. Fernandez, J.M. Gil-Narvion,
 A. Gordillo-Guerrero, D. Iñiguez, A. Maiorano, F. Mantovani, E. Marinari, V. Martin-Mayor,
 J. Monforte-Garcia, A. Muñoz-Sudupe, D. Navarro, G. Parisi, M. Pivanti, S. Perez-Gaviro,
 F. Ricci-Tersenghi, J.J. Ruiz-Lorenzo, S.F. Schifano, B. Seoane, A. Tarancon, P. Tellez,
 R. Tripiccione and D. Yllanes,
Phys. Rev. E **89**, 032140 (2014).
 - *Spatial correlation functions and dynamical exponents in very large samples of 4D spin glasses*,
 L. Nicolao, G. Parisi, and F. Ricci-Tersenghi,
Phys. Rev. E **89**, 032127 (2014).
 - *Searching for feasible stationary states in reaction networks by solving a Boolean constraint satisfaction problem*,
 A. Seganti, A. De Martino, and F. Ricci-Tersenghi,
Phys. Rev. E **89**, 022139 (2014).
 - *The statistical mechanics of random set packing and a generalization of the Karp-Sipser algorithm*,
 C. Lucibello and F. Ricci-Tersenghi,

- International Journal of Statistical Mechanics **2014**, 136829 (2014).
- *Pseudolikelihood Decimation Algorithm Improving the Inference of the Interaction Network in a General Class of Ising Models*,
A. Decelle and F. Ricci-Tersenghi,
Phys. Rev. Lett. **112**, 070603 (2014).
 - *Janus II: a new generation application-driven computer for spin-system simulations*,
Janus Collaboration: M. Baity-Jesi, R. A. Baños, A. Cruz, L.A. Fernandez, J.M. Gil-Narvion, A. Gordillo-Guerrero, D. Iñiguez, A. Maiorano, F. Mantovani, E. Marinari, V. Martin-Mayor, J. Monforte-Garcia, A. Muñoz-Sudupe, D. Navarro, G. Parisi, M. Pivanti, S. Perez-Gaviro, F. Ricci-Tersenghi, J.J. Ruiz-Lorenzo, S.F. Schifano, B. Seoane, A. Tarancon, P. Tellez, R. Tripiccionone and D. Yllanes,
Computer Physics Communications **185**, 550–559 (2014).
 - *Critical parameters of the three-dimensional Ising spin glass*,
Janus Collaboration: M. Baity-Jesi, R. A. Baños, A. Cruz, L.A. Fernandez, J.M. Gil-Narvion, A. Gordillo-Guerrero, D. Iñiguez, A. Maiorano, F. Mantovani, E. Marinari, V. Martin-Mayor, J. Monforte-Garcia, A. Muñoz-Sudupe, D. Navarro, G. Parisi, M. Pivanti, S. Perez-Gaviro, F. Ricci-Tersenghi, J.J. Ruiz-Lorenzo, S.F. Schifano, B. Seoane, A. Tarancon, P. Tellez, R. Tripiccionone and D. Yllanes,
Phys. Rev. B **88**, 224416 (2013).
 - *Finite size corrections to disordered systems on Erdős-Rényi random graphs*,
U. Ferrari, C. Lucibello, F. Morone, G. Parisi, F. Ricci-Tersenghi and T. Rizzo,
Phys. Rev. B **88**, 184201 (2013).
 - *Correcting beliefs in the mean-field and Bethe approximations using linear response*,
J. Raymond and F. Ricci-Tersenghi,
IEEE International Conference on Communications Workshops (ICC), pp.1429-1433 (2013).
 - *Boolean constraint satisfaction problems for reaction networks*,
A. Seganti, A. De Martino and F. Ricci-Tersenghi,
J. Stat. Mech. P09009 (2013).
 - *Comment on “Evidence of Non-Mean-Field-Like Low-Temperature Behavior in the Edwards-Anderson Spin-Glass Model”*,
A. Billoire, L.A. Fernandez, A. Maiorano, E. Marinari, V. Martin-Mayor, G. Parisi, F. Ricci-Tersenghi, J.J. Ruiz-Lorenzo and D. Yllanes,
Phys. Rev. Lett. **110**, 219701 (2013).
 - *Mean-field method with correlations determined by linear response*,
J. Raymond and F. Ricci-Tersenghi,
Phys. Rev. E **87**, 052111 (2013).
 - *Glassy critical points and random field Ising model*,
S. Franz, G. Parisi and F. Ricci-Tersenghi,
J. Stat. Mech. L02001 (2013).
 - *A note on weakly discontinuous dynamical transitions*,
S. Franz, G. Parisi, F. Ricci-Tersenghi, T. Rizzo and P. Urbani,
J. Chem. Phys. **138**, 064504 (2013).
 - *Replica cluster variational method: the replica symmetric solution for the 2D random bond Ising model*,
A. Lage-Castellanos, R. Mulet, F. Ricci-Tersenghi and T. Rizzo,
J. Phys. A: Math. Theor. **46**, 135001 (2013).

- *Ensemble renormalization group for disordered systems*,
M. C. Angelini, G. Parisi and F. Ricci-Tersenghi,
Phys. Rev. B **87**, 134201 (2013).
- *Compressed sensing with sparse, structured matrices*,
M.C. Angelini, F. Ricci-Tersenghi and Y. Kabashima
Proc. Fiftieth Annual Allerton Conference, p. 808 (2012).
- *Reconfigurable computing for Monte Carlo simulations: Results and prospects of the Janus project*,
Janus Collaboration: M. Baity-Jesi, R. A. Baños, A. Cruz, L.A. Fernandez, J.M. Gil-Narvion, A. Gordillo-Guerrero, M. Guidetti, D. Iñiguez, A. Maiorano, F. Mantovani, E. Marinari, V. Martin-Mayor, J. Monforte-Garcia, A. Muñoz-Sudupe, D. Navarro, G. Parisi, M. Pivanti, S. Perez-Gaviro, F. Ricci-Tersenghi, J.J. Ruiz-Lorenzo, S.F. Schifano, B. Seoane, A. Tarancon, P. Tellez, R. Tripiccione and D. Yllanes,
Eur. Phys. J. Special Topics **210**, 33–51 (2012).
- *The Bethe approximation for solving the inverse Ising problem: a comparison with other inference methods*,
F. Ricci-Tersenghi,
J. Stat. Mech. P08015 (2012).
- *Critical Slowing Down Exponents of Mode Coupling Theory*,
F. Caltagirone, U. Ferrari, L. Leuzzi, G. Parisi, F. Ricci-Tersenghi and T. Rizzo,
Phys. Rev. Lett. **108**, 085702 (2012).
- *A numerical study of the overlap probability distribution and its sample-to-sample fluctuations in a mean-field model*,
G. Parisi and F. Ricci-Tersenghi,
Phil. Mag. **92**, 341 (2012).
- *Characterizing and Improving Generalized Belief Propagation Algorithms on the 2D Edwards-Anderson Model*,
E. Dominguez, A. Lage-Castellanos, R. Mulet, F. Ricci-Tersenghi and T. Rizzo,
J. Stat. Mech. P12007 (2011).
- *Field Theory of Fluctuations in Glasses*,
S. Franz, G. Parisi, F. Ricci-Tersenghi and T. Rizzo,
Eur. Phys. J. E, **34**, 102 (2011).
- *Sample-to-sample fluctuations of the overlap distributions in the three-dimensional Edwards-Anderson spin glass*,
Janus Collaboration: R. Alvarez Baños, A. Cruz, L.A. Fernandez, J.M. Gil-Narvion, A. Gordillo-Guerrero, M. Guidetti, D. Iñiguez, A. Maiorano, F. Mantovani, E. Marinari, V. Martin-Mayor, J. Monforte-Garcia, A. Muñoz-Sudupe, D. Navarro, G. Parisi, S. Perez-Gaviro, F. Ricci-Tersenghi, J.J. Ruiz-Lorenzo, S.F. Schifano, B. Seoane, A. Tarancon, R. Tripiccione and D. Yllanes,
Phys. Rev. B **84**, 174209 (2011).
- *Replica Field Theory of the Dynamical Transition in Glassy Systems*,
S. Franz, G. Parisi, F. Ricci-Tersenghi and T. Rizzo,
arXiv:1105.5230 (2011).
- *Inference algorithm for finite-dimensional spin glasses: Belief Propagation on the dual lattice*,
A. Lage-Castellanos, R. Mulet, F. Ricci-Tersenghi and T. Rizzo,
Phys. Rev. E **84**, 046706 (2011).

- *Critical behaviour of large scale dynamical heterogeneities in glasses: a complete theory*,
S. Franz, G. Parisi, F. Ricci-Tersenghi and T. Rizzo,
preprint arXiv:1008:0996, proceedings of the conference StatphysHK, Hong-Kong, July 2010.
- *On the Solution-Space Geometry of Random Constraint Satisfaction Problems*,
D. Achlioptas, A. Coja-Oghlan and F. Ricci-Tersenghi,
Random Struct. Alg. **38**, 251–268 (2011).
- *Bond diluted Levy spin-glass model and a new finite size scaling method to determine a phase transition*,
L. Leuzzi, G. Parisi, F. Ricci-Tersenghi and J.J. Ruiz-Lorenzo,
Phil. Mag. **91**, 1917–1925 (2011).
- *Entropic long range order in a 3D spin glass model*,
M.C. Angelini and F. Ricci-Tersenghi,
J. Stat. Mech. P02002 (2011).
- *No spin glass phase in ferromagnetic random-field random-temperature scalar Ginzburg-Landau model*,
F. Krzakala, F. Ricci-Tersenghi, D. Sherrington and L. Zdeborova
J. Phys. A: Math. Theor. **44**, 042003 (2011).
- *Being Glassy Without Being Hard to Solve*,
F. Ricci-Tersenghi
Science **330**, 1639 (2010).
- *Properties of the perturbative expansion around the mode-coupling dynamical transition in glasses*,
S. Franz, G. Parisi, F. Ricci-Tersenghi and T. Rizzo,
arXiv:1001.1746 (2010).
- *Finite size scaling of the de Almeida-Thouless instability in random sparse networks*,
H. Takahashi, F. Ricci-Tersenghi and Y. Kabashima,
Phys. Rev. B **81**, 174407 (2010).
- *A Non-Disordered Glassy Model with a Tunable Interaction Range*,
F. Liers, E. Marinari, U. Pagacz, F. Ricci-Tersenghi and V. Schmitz,
J. Stat. Mech. L05003 (2010).
- *Elusive Glassy Phase in the Random Field Ising Model*,
F. Krzakala, F. Ricci-Tersenghi and L. Zdeborova,
Phys. Rev. Lett. **104**, 207208 (2010).
- *Replica cluster variational method*,
T. Rizzo, A. Lage-Castellanos, R. Mulet and F. Ricci-Tersenghi,
J. Stat. Phys. **139**, 375 (2010).
- *On the cavity method for decimated random constraint satisfaction problems and the analysis of belief propagation guided decimation algorithms*,
F. Ricci-Tersenghi and G. Semerjian,
J. Stat. Mech. P09001 (2009).
- *Ising Spin-Glass Transition in a Magnetic Field Outside the Limit of Validity of Mean-Field Theory*,
L. Leuzzi, G. Parisi, F. Ricci-Tersenghi and J.J. Ruiz-Lorenzo,
Phys. Rev. Lett. **103**, 267201 (2009).
- *Random Formulas Have Frozen Variables*,
D. Achlioptas and F. Ricci-Tersenghi,

- SIAM J. Comput. **39**, 260 (2009).
- *Dilute one-dimensional spin glasses with power law decaying interactions*,
L. Leuzzi, G. Parisi, F. Ricci-Tersenghi and J.J. Ruiz-Lorenzo,
Phys. Rev. Lett. **101**, 107203 (2008).
 - *Mosaic length and finite interaction-range effects in a one dimensional random energy model*,
S. Franz, G. Parisi and F. Ricci-Tersenghi,
J. Phys. A. **41**, 324011 (2008).
 - *Entropic effects in the very-low-temperature regime of diluted Ising spin glasses with discrete couplings*,
T. Jörg and F. Ricci-Tersenghi,
Phys. Rev. Lett. **100**, 177203 (2008).
 - *Clusters of solutions and replica symmetry breaking in random k -satisfiability*,
A. Montanari, F. Ricci-Tersenghi and G. Semerjian,
J. Stat. Mech. P04004 (2008).
 - *Solving Constraint Satisfaction Problems through Belief Propagation-guided decimation*,
A. Montanari, F. Ricci-Tersenghi and G. Semerjian,
Proceedings of the 45th Annual Allerton Conference on Communication, Control, and Computing (Monticello, IL, USA), 352–359 (2007).
 - *Gibbs States and the Set of Solutions of Random Constraint Satisfaction Problems*,
F. Krzakala, A. Montanari, F. Ricci-Tersenghi, G. Semerjian and L. Zdeborova,
Proceedings of the National Academy of Sciences **104**, 10318–10323 (2007).
 - *The stable set problem and the thinness of a graph*,
C. Mannino, G. Oriolo, F. Ricci and S. Chandran,
Operations Research Letters **35**, 1–9 (2007).
 - *On the Solution-Space Geometry of Random Constraint Satisfaction Problems*,
D. Achlioptas and F. Ricci-Tersenghi,
STOC '06: Proceedings of the thirty-eighth annual ACM symposium on Theory of computing (Seattle, WA, USA), 130–139 (2006).
 - *Off-equilibrium confined dynamics in a glassy system with level-crossing states*,
B. Capone, T. Castellani, I. Giardina and F. Ricci-Tersenghi,
Phys. Rev. B **74**, 144301 (2006).
 - *Multivesicular release at developing schaffer collateral-CA1 synapses: An analytic approach to describe experimental data*,
F. Ricci-Tersenghi, F. Minneci, E. Sola, E. Cherubini and L. Maggi,
J. Neurophysiol. **96**, 15–26 (2006).
 - *Aging, memory and rejuvenation: some lessons from simple models*,
F. Krzakala and F. Ricci-Tersenghi,
J. Phys: Conf. Series **40**, 42–49 (2006).
 - *Spin glass models with ferromagnetically biased couplings on the Bethe lattice: analytic solutions and numerical simulations*,
T. Castellani, F. Krzakala and F. Ricci-Tersenghi,
Eur. Phys. J. B **47**, 99–108 (2005).
 - *Edwards-Anderson spin glasses undergo simple cumulative aging*,
A. Maiorano, E. Marinari and F. Ricci-Tersenghi,
Phys. Rev. B **72**, 104411 (2005).
 - *Cooling-schedule dependence of the dynamics of mean-field glasses*,

- A. Montanari and F. Ricci-Tersenghi,
Phys. Rev. B **70**, 134406 (2004).
- *Non-equilibrium critical dynamics of the ferromagnetic Ising model with Kawasaki dynamics*,
C. Godreche, F. Krzakala and F. Ricci-Tersenghi,
J. Stat. Mech. P04007 (2004).
 - *Instability of one-step replica-symmetry-broken phase in satisfiability problems*,
A. Montanari, G. Parisi and F. Ricci-Tersenghi,
J. Phys. A **37**, 2073–2091 (2004).
 - *Aging dynamics of heterogeneous spin models*,
A. Montanari and F. Ricci-Tersenghi,
Phys. Rev. B **68**, 224429 (2003).
 - *Measuring the fluctuation-dissipation ratio in glassy systems with no perturbing field*,
F. Ricci-Tersenghi,
Phys. Rev. E **68**, 065104 (2003).
 - *Bicolouring random hypergraphs*,
T. Castellani, V. Napolano, F. Ricci-Tersenghi and R. Zecchina,
J. Phys. A. **36**, 11037–11053 (2003).
 - *On the nature of the low-temperature phase in discontinuous mean-field spin glasses*,
A. Montanari and F. Ricci-Tersenghi,
Eur. Phys. J. B **33**, 339–346 (2003).
 - *Two solutions to diluted p -spin models and XORSAT problems*,
M. Mezard, F. Ricci-Tersenghi and R. Zecchina,
J. Stat. Phys. **111**, 505–533 (2003).
 - *Microscopic description of aging dynamics: Fluctuation-dissipation relations, effective temperature, and heterogeneities*,
A. Montanari and F. Ricci-Tersenghi,
Phys. Rev. Lett. **90**, 017203 (2003).
 - *Learning to Compete and Coordinate in a Complex World*,
M. Marsili, R. Mulet and F. Ricci-Tersenghi,
Lecture Notes in Economics and Mathematical Systems **521**, 61–74 (2003).
 - *Dynamic phase transition for decoding algorithms*,
S. Franz, M. Leone, A. Montanari and F. Ricci-Tersenghi,
Phys. Rev. E **66**, 046120 (2002).
 - *Complexity transitions in global algorithms for sparse linear systems over finite fields*,
A. Braunstein, M. Leone, F. Ricci-Tersenghi and R. Zecchina,
J. Phys. A **35**, 7559–7574 (2002).
 - *Zero-temperature properties of RNA secondary structures*,
E. Marinari, A. Pagnani and F. Ricci-Tersenghi,
Phys. Rev. E **65**, 041919 (2002).
 - *Hiding solutions in random satisfiability problems: A statistical mechanics approach*,
W. Barthel, A.K. Hartmann, M. Leone, F. Ricci-Tersenghi, M. Weigt and R. Zecchina,
Phys. Rev. Lett. **88**, 188701 (2002).
 - *Direct sampling of complex landscapes at low temperatures: The three-dimensional $\pm J$ Ising spin glass*,
A.K. Hartmann and F. Ricci-Tersenghi,
Phys. Rev. B **66**, 224419 (2002).

- *Learning to coordinate in a complex and nonstationary world*,
M. Marsili, R. Mulet, F. Ricci-Tersenghi and R. Zecchina,
Phys. Rev. Lett. **87**, 208701 (2001).
- *Exact solutions for diluted spin glasses and optimization problems*,
S. Franz, M. Leone, F. Ricci-Tersenghi and R. Zecchina,
Phys. Rev. Lett. **87**, 127209 (2001).
- *A ferromagnet with a glass transition*,
S. Franz, M. Mézard, F. Ricci-Tersenghi, M. Weigt and R. Zecchina,
Europhys. Lett. **55**, 465–471 (2001).
- *Aging effects and dynamic scaling in the 3D Edwards-Anderson spin glasses: a comparison with experiments*,
M. Picco, F. Ricci-Tersenghi and F. Ritort,
Eur. Phys. J. B **21**, 211–217 (2001).
- *Phase coexistence and finite-size scaling in random combinatorial problems*,
M. Leone, F. Ricci-Tersenghi and R. Zecchina,
J. Phys. A **34**, 4615–4626 (2001).
- *Comment on “Two time scales and violation of the fluctuation-dissipation theorem in a finite dimensional model for structural glasses” – Reply*,
F. Ricci-Tersenghi, G. Parisi, D.A. Stariolo and J.J. Arenzon,
Phys. Rev. Lett. **86**, 4717 (2001).
- *Chaotic, memory, and cooling rate effects in spin glasses: Evaluation of the Edwards-Anderson model*,
M. Picco, F. Ricci-Tersenghi and F. Ritort,
Phys. Rev. B **63**, 174412 (2001).
- *Comment on “Glassy transition in a disordered model for the RNA secondary structure” – Reply*,
A. Pagnani, G. Parisi and F. Ricci-Tersenghi,
Phys. Rev. Lett. **86**, 1383 (2001).
- *The use of optimized Monte Carlo methods for studying spin glasses*,
E. Marinari, G. Parisi, F. Ricci-Tersenghi and F. Zuliani,
J. Phys. A **34**, 383–390 (2001).
- *Simplest random K-satisfiability problem*,
F. Ricci-Tersenghi, M. Weigt and R. Zecchina,
Phys. Rev. E **63**, 026702 (2001).
- *Glassy dynamics near zero temperature*,
F. Ricci-Tersenghi and R. Zecchina,
Phys. Rev. E **62**, R7567–R7570 (2000).
- *Dynamics of the frustrated Ising lattice gas*,
J.J. Arenzon, F. Ricci-Tersenghi and D.A. Stariolo,
Phys. Rev. E **62**, 5978–5985 (2000).
- *Coupled Ising models with disorder*,
P. Simon and F. Ricci-Tersenghi,
J. Phys. A **33**, 5985–5991 (2000).
- *Absence of ageing in the remanent magnetization in Migdal-Kadanoff spin glasses*,
F. Ricci-Tersenghi and F. Ritort,
J. Phys. A **33**, 3727–3734 (2000).

- *Two time scales and violation of the fluctuation-dissipation theorem in a finite dimensional model for structural glasses*,
F. Ricci-Tersenghi, D.A. Stariolo and J.J. Arenzon,
Phys. Rev. Lett. **84**, 4473–4476 (2000).
- *Off-equilibrium dynamics at very low temperatures in three-dimensional spin glasses*,
E. Marinari, G. Parisi, F. Ricci-Tersenghi and J.J. Ruiz-Lorenzo,
J. Phys. A **33**, 2373–2382 (2000).
- *Replica symmetry breaking in short-range spin glasses: Theoretical foundations and numerical evidences*,
E. Marinari, G. Parisi, F. Ricci-Tersenghi, J.J. Ruiz-Lorenzo and F. Zuliani,
J. Stat. Phys. **98**, 973–1047 (2000).
- *Glassy transition in a disordered model for the RNA secondary structure*,
A. Pagnani, G. Parisi and F. Ricci-Tersenghi,
Phys. Rev. Lett. **84**, 2026–2029 (2000).
- *Ultrametricity in three-dimensional Edwards-Anderson spin glasses*,
S. Franz and F. Ricci-Tersenghi,
Phys. Rev. E **61**, 1121–1124 (2000).
- *On the origin of ultrametricity*,
G. Parisi and F. Ricci-Tersenghi,
J. Phys. A **33**, 113–129 (2000).
- *Universality in the off-equilibrium critical dynamics of the three-dimensional diluted Ising model*,
G. Parisi, F. Ricci-Tersenghi and J.J. Ruiz-Lorenzo,
Phys. Rev. E **60**, 5198–5201 (1999).
- *Generalized off-equilibrium fluctuation-dissipation relations in random Ising systems*,
G. Parisi, F. Ricci-Tersenghi and J.J. Ruiz-Lorenzo,
Eur. Phys. J. B **11**, 317–325 (1999).
- *Small window overlaps are effective probes of replica symmetry breaking in three-dimensional spin glasses*,
E. Marinari, G. Parisi, F. Ricci-Tersenghi and J.J. Ruiz-Lorenzo,
J. Phys. A **31**, L481–L487 (1998).
- *Dynamics of the four-dimensional spin glass in a magnetic field*,
G. Parisi, F. Ricci-Tersenghi and J.J. Ruiz-Lorenzo,
Phys. Rev. B **57**, 13617–13623 (1998).
- *Violation of the fluctuation-dissipation theorem in finite-dimensional spin glasses*,
E. Marinari, G. Parisi, F. Ricci-Tersenghi and J.J. Ruiz-Lorenzo,
J. Phys. A **31**, 2611–2620 (1998).
- *Mean field dynamical exponents in finite-dimensional Ising spin glass*,
G. Parisi, P. Ranieri, F. Ricci-Tersenghi and J.J. Ruiz-Lorenzo,
J. Phys. A **30**, 7115–7131 (1997).
- *Equilibrium and off-equilibrium simulations of the 4d Gaussian spin glass*,
G. Parisi, F. Ricci-Tersenghi and J.J. Ruiz-Lorenzo,
J. Phys. A **29**, 7943–7957 (1996).