

Marco TARZIA

Curriculum vitæ

○ GENERAL INFORMATION

Date and place of birth: Naples (Italy), May 16, 1979
Citizenship: Italian
Family situation: Civil partnership, 1 son
Professional address: Laboratoire de Physique Théorique de la Matière Condensée
Université Pierre et Marie Curie
Campus de Jussieu, tour 12-13/13-23, Boîte 121
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○ EDUCATION AND PROFESSIONAL EXPERIENCE

◆ Current position

Maître de Conférences (assistant professor) at the Laboratoire de Physique Théorique de la Matière Condensée (LPTMC), Université Pierre et Marie Curie (UPMC), since Sept. 2008

Habilitation à diriger des recherches, defence of the thesis *First steps towards the study of finite-dimensional non-perturbative fluctuations beyond the mean-field theory of glasses*, Oct. 19 2017

◆ Undergraduate studies

Graduate studies in Physics at the University of Naples Federico II, Oct. 1997 – Oct. 2002

Degree in physics cum laude

Thesis: *Statistical mechanics of the glass transition*, Oct. 16, 2002, Supervisor: A. Coniglio

Erasmus project at the University Joseph Fourier, Grenoble, France, Sept. 2000 – Feb. 2001

◆ PhD

PhD in theoretical physics at the University of Naples Federico II, Nov. 2002 – Dec. 2005

Thesis: *Mean-field theories for the structural arrest in glassy systems, colloidal suspensions and granular materials*, Dec. 14, 2005, Supervisor: A. Coniglio

◆ Post-docs

· Nov. 2005 – Jan. 2006:

Post-doc at the University of Naples Federico II, Italy, with A. Coniglio

· Feb. 2006 – Sept. 2006:

Post-doc at the School of Physics and Astronomy of the University of Manchester, UK, with M. A. Moore

· Jan. 2007 – Dec. 2007:

Post-doc at the LPTMS, Université Paris Sud, Orsay, France, with M. Mézard

· Dec. 2007 – Aug. 2008:

Post-doc CNRS at the IPhT, CEA/Saclay, France, with G. Biroli

◆ Short-term visits

- Visit at the Universidade de Rio Grande do Sul, Porto Alegre, Brazil, Dec. 2010
- Internship at the IPhT, CEA/Saclay, France, Nov. 2006 – Dec. 2006

◆ Awards, grants and projects

- Demi délégation CNRS in 2012–2013 and 2013–2014
- Primes d'investissement en recherche (PIR) of the UPMC, 2013–2017 and 2017–2021
- Participation in the collaboration program ECOS NORD, Universidad de Buenos Aires, Universidad Nacional de La Plata, Argentina, 2015–2017
- Participation in the ERC project “NPRGGLASS” of G. Biroli, 2011–2017
- Participation in the european project “CRISIS” (<http://crisis.oxalto.co.uk>), 2012–2014
- Participation in the collaboration program CAPES-COFECUB “Statistical physics of complex fluids: soft condensed matter and out of equilibrium dynamics”, Universidade de Rio Grande do Sul, Porto Alegre, Brazil, 2009–2012
- Participation in the ANR project DynHet, “Quantitative characterisation of dynamic heterogeneities in glassy materials: models, simulations and new experiments”, 2008
- Participation in the European FP6 project Evergrow, 2007

◆ Administrative duties

- Member of the commission 29 of the UPMC, Sept. 2013 – Sept. 2015
- Member of the recruiting committee of a Maître de Conférences position at the LPTHE (UPMC), Apr. 2012

○ RESEARCH ACTIVITY

◆ Research interests

- Statistical physics of complex and disordered systems. Glass transition. Mean-field theory for glassy systems. Renormalization group approach for disordered systems.
- Quantum disordered systems. Anderson localization and random matrices. Many Body Localization. Quantum strongly correlated systems. Frustrated magnetism.
- Statistical physics approach to micro and macroeconomy. Agent based models for economic instabilities and crises.
- Active matter.
- Soft matter. Gelification transition in colloidal suspensions. Statistical mechanics approach to granular materials.
- Combinatorial optimization problems in statistical physics and information theory.

◆ Oral presentations: conferences, workshops and seminars

- *Jamming transition in granular media*, “STATPHYS22”, 22nd International conference on statistical physics of the IUPAP, Bangalore, India, Jul. 4–9, 2004
- Invited seminar: *Statistical mechanics approach to granular media: application to jamming transition and size segregation*, University of Naples Federico II, Italy, Dec. 12, 2004
- Invited speaker: *Pattern formation and glassy phase in the Yukawa frustrated ferromagnet*, “Unifying concepts in glasses, colloids and granular media”, Anacapri, Italy, May 19–20, 2005
- Invited seminar: *Mean-field approaches for the structural arrest in glassy systems, colloidal suspensions and granular materials*, University of Naples Federico II, Italy, Nov. 8, 2005
- Invited speaker: *Lattice glass models and cavity method*, “Loopy belief propagation algorithm and applications”, Evergrow SP3-4 workshop, HUJI, Jerusalem, Israel, Feb. 19–21, 2007
- Invited seminar: *Group testing with random pools: phase transitions and optimal strategy*, LPTMS, Université Paris Sud, Orsay, France, Oct. 24, 2007

- Invited seminar: *The valence bond glass phase*, University of Naples Federico II, Italy, Feb. 28, 2008
- Invited seminar: *The valence bond glass phase*, LPT, ENS Paris, France, Avr. 8, 2008
- Invited seminar: *Une nouvelle phase vitreuse quantique: le “valence bond glass”*, LPTMC, UPMC, Paris, France, May 5, 2008
- *Analytical calculation of the non-linear response in supercooled liquids*, École de physique de Beg Rohu, France, Jun. 16–28, 2008
- Invited speaker: *Group testing with random pools: Phase transitions and optimal strategy*, ECCS conference 2008 on complex systems, Jerusalem, Israel, Sept. 14–19, 2008
- Invited speaker: *Dynamical correlations in Arrhenius systems*, DynHet meeting, Montpellier, France, May 14–15, 2009
- *The quantum cavity method: Mott transition and supersolidity*, École de physique de Beg Rohu, France, Jun. 15–27, 2009
- *First steps towards a renormalization group approach for structural glasses*, “International workshop on dynamics in viscous liquids”, Rome, Italy, Mar. 30 – Avr. 2, 2011
- Invited speaker: *Non-linear responses of glassy liquids: theory and experiments*, “Multiscale modelling of amorphous materials: from structure to mechanical properties”, Dublin, Ireland, Jul. 4–6, 2011
- Invited speaker: *First steps towards a renormalization Group approach for structural glasses*, “French-Japanese meeting on jamming, glasses and phase transitions”, Paris, France, Dec. 7–10, 2011
- Invited speaker: *Chaos and ergodicity in disordered quantum systems*, “Frontiers in statistical physics and complex systems”, Catania, Italy, Jun. 2–5, 2012
- Invited speaker: *Difference between level statistics, ergodicity and localization transitions on the Bethe lattice*, “Complex quantum systems: non-ergodicity, glassiness and localization”, Trieste, Italy, Aug. 27–31, 2012
- Invited speaker: *Ising-like effective theory for the glass transition*, “Spin glasses: An old tool for new problems”, Cargèse, France, Aug. 25 – Sept. 6, 2014
- Invited speaker: *Level statistics, ergodicity and localization transition of Lévy matrices*, “Quantum Many-Body systems, random matrices, and disorder”, ESI, Vienna, Austria, Jun. 8–12, 2015
- Invited speaker: *Critical properties of Anderson localization in high dimensions*, “Renormalization group theory of disordered systems”, ENS, Paris, France, Jul. 25–27, 2016
- Invited speaker: *Anderson Localization on random regular graphs: ergodicity and glassy dynamics*, “New aspects of Localization”, Toulouse, France, Nov. 27–28, 2017
- Invited speaker: *First steps towards a non-perturbative RG approach for spin glasses in finite dimensions*, “Beyond Mean Field Theory: Renormalisation Group and Non Perturbative approaches in Disordered and Glassy Systems”, Rome, Italy, Jan. 3–5, 2018

◆ Participation in other schools and conferences

- “9th international workshop on disordered systems”, Andalo, Italy, Mar. 10–13, 2003
- “Unifying concepts in granular media and glasses”, Anacapri, Italy, Jun. 25–28, 2003
- “The physics of complex systems (New advances and perspectives)”, École internationale de physique “Enrico Fermi”, Course CLV, Varenna, Italy, Jul. 1–11, 2003
- “Unifying concepts in glass physics III”, STATPHYS22 satellite meeting, Bangalore, India, Jun. 28 – Jul. 1, 2004
- Trimestre “Materiaux granulaires”, Institut Henri Poincaré, Paris, France, Jan. 31 – Feb. 12, 2005
- “Relaxation dynamics of macroscopic systems”, Newton Institute, Cambridge, UK, Jan. 9–13, 2006
- “Statistical physics of glasses, spin glasses, information processing and combinatorial optimization”, École de Physique de Les Houches, France, Feb. 20–24, 2006
- “STATPHYS23”, 23rd International conference on statistical physics of the IUPAP, Genova, Italy, Jul. 9–13, 2007
- “Manifolds in random media, random matrices and extreme value statistics”, École de physique de Beg Rohu, France, Jun. 16–28, 2008
- “Dynamical heterogeneities in glasses, colloids and granular media”, Lorentz Center, Leiden, Netherlands, Aug. 25 – Sept. 5, 2008
- “Quantum physics out of equilibrium”, École de physique de Beg Rohu, France, Jun. 15–27, 2009
- “Unifying concepts in glass physics V”, Institut Henri Poincaré, Paris, France, Dec. 12–16, 2011

- “Complexity Models for Systemic Instabilities and Crises”, Lorentz Center, Leiden, Netherlands, Avr. 8–12, 2013
- “Many body localization and associated theory”, Princeton Center for Theoretical Science, Princeton, USA, Mar. 31 – Avr. 1, 2014
- “The meaning of it all, conference in honor of Gilles Tarjus”, Paris, France, Dec. 16–18, 2014
- “The Statistical Physics Cornucopia, conference in honor of Marc Mézard, Paris, France, 6–8 septembre 2017
- “La complexité des systèmes économiques”, Paris School of Economics, Paris, France, 21–22 septembre 2017

◆ Organization of schools and conferences

Co-organization of the summer school of physics of Beg Rohu, with G. Biroli and C. Godrèche (2010–2013), and with G. Biroli and C. Cammarota (2014–2017)

- *Concepts and methods of statistical mechanics*, Aug. 23 – Sept. 4, 2010
<http://ipht.cea.fr/Meetings/BegRohu2010/index.html>
- *Statistical physics and complex systems*, Jul. 19–31, 2011
<http://ipht.cea.fr/Meetings/BegRohu2011/index.html>
- *Glass and jamming transitions*, May 28 – Jun. 9, 2012
<http://ipht.cea.fr/Meetings/BegRohu2012/index.html>
- *Disordered systems*, Jun. 3–15, 2013
<http://ipht.cea.fr/Meetings/BegRohu2013/index.html>
- *Nonequilibrium statistical mechanics and active matter*, Sept. 8–20, 2014
<http://ipht.cea.fr/Meetings/BegRohu2014/index.html>
- *Statistical physics, biology, inference and networks*, Aug. 24 – Sept. 5, 2015
<http://ipht.cea.fr/Meetings/BegRohu2015/index.html>
- *Concepts and methods of statistical physics*, Aug. 22 – Sept. 3, 2016
<http://ipht.cea.fr/Meetings/BegRohu2016/index.html>
- *Out of equilibrium dynamics, evolution and genetics*, Jul. 24 – Aug. 5 2017
<http://ipht.cea.fr/Meetings/BegRohu2017/index.html>

◆ Referring activity

I have referred scientific articles for: European Journal of Physics B, Europhysics Letters, Journal of Statistical Mechanics: Theory and Experiment (JSTAT), Physica A, Physical Review Letters, Physical Review E.

○ TEACHING ACTIVITY

◆ Courses

[CM = “Cours Magistraux”; TD = “Travaux Dirigés”; TP = “Travaux Pratiques”; CC = “Contrôles Continus”]
[L = “Licence”; M = “Master”]

2004–2005 University of Naples Federico II, Italy, “Statistical physics” (TD) 16h

2007–2008 Université Paris Sud, “Thermodynamique” (TD), L2, 24h

2008–2009 UPMC, “Physique” for first year medical school students (TD), 120h
UPMC, “Physique du mouvement” (TD), L1, 30h

2009–2010 UPMC, “Introduction à la Physique” (TD & TP), L1, 120h
ENS-Cachan, “Introduction à la physique statistique” (TD), L3, 30h

2010–2011 UPMC, “Outils mathématiques pour les scientifiques” (CM & TD), L1, 75h
UPMC, “Méthodes de calcul et statistiques” (TD), L1, 100h

2011–2012 UPMC, “Outils mathématiques pour les scientifiques” (CM & TD), L1, 75h
UPMC, “Méthodes de calcul et statistiques” (TD), L1, 50h

2012–2013 UPMC, “Physique classique I : mouvement et énergie” (TD & TP), L1, 90h
ENS-Cachan, “Introduction à la physique statistique” (TD), L3, 30h

- 2013–2014 UPMC, “Concepts et méthodes de la physique” (TD & TP), L1, 64h
 UPMC, “Méthodes mathématiques pour physicien” (CM & TD), L3, 30h
- 2014–2015 UPMC, “Concepts et méthodes de la physique” (TD & CC), L1, 44h
 UPMC, “Physique du mouvement” (TD), L2, 40h
 UPMC, “Méthodes mathématiques pour physicien” (CM & TD), L3, 30h
 UPMC, “Electromagnétisme et électrocinétique” (TD), L2, 40h
- 2015–2016 UPMC, “Mécanique Statistique” (TD), M1, 55h
 UPMC, “Du microscopique au macroscopique” (TD), L3, 24h
 UPMC, “Physique du mouvement” (TD), L2, 40h
 UPMC, “Electromagnétisme et électrocinétique” (TD & CC), L2, 50h
- 2016–2017 UPMC, “Mécanique Statistique” (TD), M1, 55h
 UPMC, “Du microscopique au macroscopique” (TD), L3, 24h
 UPMC, “Electromagnétisme et électrocinétique” (TD), L2, 40h
- 2017–2018 UPMC, “Mécanique Statistique” (TD), M1, 55h
 UPMC, “Du microscopique au macroscopique” (TD), L3, 24h
 UPMC, “Physique quantique” (CM & TD), L3, 28h
 UPMC, “Electromagnétisme et électrocinétique” (TD & TP), L2, 56h
 UPMC, “Physique du mouvement” (TD), L2, 38h

◆ Undergraduate students

- B. Cauchois (Université Paris Sud), M2 internship on *Ergodicity breaking and localization in the Anderson model on the Bethe lattice*, Jan. – May 2013
- K. Primicerio (Université Paris Sud), M1 internship on *Complex dynamics and multiple equilibria in agent based models for the macroeconomy*, May – Aug. 2013
- F. Gianoli (Université Paris Sud), M2 internship on *Study of agent based models for economic instabilities and crises*, Jan. – May 2014
- C. Rulquin (UPMC), M2 internship on *Metastability and nucleation in the ϕ^4 theory in 1d. A renormalization group approach*, co-supervised with G. Biroli and G. Tarjus, Jan. – May 2014
- G. Cencetti (ENS Paris), M2 internship on *A stochastic model for economic instabilities and crises*, co-supervised with J.-P. Bouchaud and F. Zamponi, Feb. – Avr. 2014
- M. Cordi (KTH Stockholm), M2 internship on *A study of the distribution of firm sizes*, co-supervised with J.-P. Bouchaud and F. Zamponi, Mar. – Aug. 2014
- D. Sharma (École polytechnique), M2 internship on *Multiple equilibria: from the perceptron to the macro-economy*, co-supervised with J.-P. Bouchaud and F. Zamponi, Avr. – Jul. 2017

◆ PhD students

- E. Tarquini, *Level statistics and localization in Lévy matrices and in the Anderson model in high dimensions*, co-supervised with G. Biroli, Sept. 2013 – Dec. 2016
- C. Rulquin, *The role of finite-dimensional fluctuations in glasses and spin glasses*, co-supervised with G. Biroli and G. Tarjus, Sept. 2014 – Nov. 2017
- M. Casiulis, *Hamiltonian dynamics of active spins systems*, co-supervised with L. Cugliandolo and O. Dauchot, Sept. 2016 – Sept. 2019
- D. Sharma, *Multiple equilibria: from the perceptron to the macro-economy*, co-supervised with J.-P. Bouchaud and F. Zamponi, Sept. 2017 – Sept. 2020

◆ Post-docs

- A. C. Ribeiro Teixeira, co-supervised with G. Biroli, 2011 – 2012
- S. Gualdi, co-supervised with F. Zamponi and J.-P. Bouchaud, 2012 – 2014

◆ Participation in PhD thesis committees

- Member of the PhD thesis defence committee of T. Sarlat on *Un modèle de dimension finie pour la transition vitreuse*, Nov. 13, 2009
- Member of the PhD thesis defence committee of C. Rainone on *Following the evolution of metastable glassy states under external perturbations: compression and shear-strain*, Dec. 21, 2015
- Member of the PhD thesis defence committee of M. Sevelev on *Phase diagram, jamming and glass transitions in the non-convex perceptron*, Oct. 6, 2017

○ OTHER INFORMATION

◆ Spoken languages

Italian: Native
English: Fluent
French: Fluent
Spanish: Fluent

◆ Programming skills

Programming languages: C, C++
Operating systems: Linux, Unix, macOS, Windows
Scientific softwares: Mathematica, Latex, Gnuplot

○ LIST OF PUBLICATIONS

◆ Published articles in international refereed reviews

39. *Optimal Inflation Target: Insights from an Agent-Based Model*
J.-P. Bouchaud, S. Gualdi, M. Tarzia, F. Zamponi
arXiv:1709.05117, submitted to Economics E-Journal
38. *Delocalized Glassy Dynamics and Many Body Localization*
G. Biroli, M. Tarzia
Phys. Rev. B Rapid Comm. **96**, 201114(R) (2017)
37. *Critical properties of the Anderson localization transition and the high-dimensional limit*
E. Tarquini, G. Biroli, M. Tarzia
Phys. Rev. B **95**, 094204 (2017)
36. *Monetary policy and dark corners in a stylized agent-based model*
S. Gualdi, M. Tarzia, F. Zamponi, J.-P. Bouchaud
J. Econ. Interact. Coord. **12**, 507 (2017)
35. *Field-tuned order by disorder in Ising frustrated magnets with antiferromagnetic interactions*
P. C. Guruciaga, M. Tarzia, M. V. Ferreyra, L. F. Cugliandolo, S. A. Grigera, R. A. Borzi
Phys. Rev. Lett. **117**, 167203 (2016)
34. *Role of fluctuations in the phase transitions of coupled plaquette spin models of glasses*
G. Biroli, C. Rulquin, G. Tarjus, M. Tarzia
SciPost Phys. **1**, 7 (2016)
33. *Nonperturbative fluctuations and metastability in a simple model: from observables to microscopic theory and back*
C. Rulquin, P. Urbani, G. Tarjus, M. Tarzia
Journal of Statistical Mechanics: Theory and Experiment (JSTAT), 023209 (2016)

32. *Spontaneous instabilities and stick-slip motion in a generalized Hebraud-Lequeux model*
J.-P. Bouchaud, S. Gualdi, M. Tarzia, F. Zamponi
Soft matter **12**, 1230 (2016)
31. *Level statistics and localization transitions of Lévy matrices*
E. Tarquini, G. Biroli, M. Tarzia
Phys. Rev. Lett. **116**, 010601 (2016)
30. *Endogenous crisis waves: Stochastic model with synchronized collective behavior*
S. Gualdi, J.-P. Bouchaud, G. Cencetti, M. Tarzia, F. Zamponi
Phys. Rev. Lett. **114**, 088701 (2015)
29. *Tipping points in macroeconomic agent-based models*
S. Gualdi, M. Tarzia, F. Zamponi, J.-P. Bouchaud
Journal of Economic Dynamics & Control, **50**, 29 (2015)
28. *Random-field-like criticality in glass-forming liquids*
G. Biroli, C. Cammarota, G. Tarjus, M. Tarzia
Phys. Rev. Lett. **112**, 175701 (2014)
27. *Thermal phase transitions in artificial Spin-Ice*
D. Levis, L. Cugliandolo, L. Foini, M. Tarzia
Phys. Rev. Lett. **110**, 207206 (2013)
26. *Fragility of the mean-field scenario of structural glasses for finite-dimensional disordered spin models*
C. Cammarota, G. Biroli, M. Tarzia, G. Tarjus
Phys. Rev. B **87**, 064202 (2013)
25. *Static properties of 2D spin-ice as a sixteen-vertex model*
L. Foini, D. Levis, M. Tarzia, L. Cugliandolo
Journal of Statistical Mechanics: Theory and Experiment (JSTAT), P02026 (2013)
24. *Nonlinear dielectric susceptibilities: Accurate determination of the growing correlation volume in supercooled liquids*
C. Brun, F. Ladieu, D. L'Hôte, M. Tarzia, G. Biroli, J.-P. Bouchaud
Phys. Rev. B **84**, 104204 (2011)
23. *Renormalization group analysis of the Random First Order Transition*
C. Cammarota, G. Biroli, M. Tarzia, G. Tarjus
Phys. Rev. Lett **106**, 115705 (2011)
22. *On the solution of a 'solvable' model for an ideal glass of hard spheres displaying a jamming transition*
M. Mézard, G. Parisi, M. Tarzia, F. Zamponi
Journal of Statistical Mechanics: Theory and Experiment (JSTAT), P03002 (2011)
21. *Anomalous nonlinear response of glassy liquids: General argument and a mode-coupling approach*
M. Tarzia, G. Biroli, A. Lefèvre, J.-P. Bouchaud
J. Chem. Phys. **132**, 054501 (2010)
20. *Anderson model on Bethe lattice: density of states, localization properties and isolated eigenvalue*
G. Biroli, G. Semerjian, M. Tarzia
Prog. Theor. Phys. **184**, 187 (2010)
19. *Bose-Einstein condensation in quantum glasses*
G. Carleo, M. Tarzia, F. Zamponi
Phys. Rev. Lett. **103**, 215302 (2009)
18. *Exact solution of the Bose-Hubbard model on the Bethe lattice*
G. Semerjian, M. Tarzia, F. Zamponi
Phys. Rev. B **80**, 014524 (2009)
17. *Lattice models for colloidal gels and glasses*
F. Krzakala, M. Tarzia, L. Zdeborová
Phys. Rev. Lett. **101**, 165702 (2008)
16. *The valence bond glass phase*
M. Tarzia, B. Biroli
Europhys. Lett. **82**, 67008 (2008)

15. *Group testing with random pools: phase transitions and optimal strategy*
M. Mézard, M. Tarzia, C. Toninelli
J. Stat. Phys. **131**, 783 (2008)
14. *Statistical mechanics of the hitting set problem*
M. Mézard, M. Tarzia
Phys. Rev. E **76**, 041124 (2007)
13. *Glass phenomenology from the connection to spin glasses*
M. Tarzia, M. A. Moore
Phys. Rev. E **75**, 031502 (2007)
12. *On the absence of the glass transition in two dimensional hard disks*
M. Tarzia
Journal of Statistical Mechanics: Theory and Experiment (JSTAT), P01010 (2007)
11. *Lamellar order, microphase structures, and glassy phase in a field theoretic model for charged colloids*
M. Tarzia, A. Coniglio
Phys. Rev. E **75**, 011410 (2007)
10. *Columnar and lamellar phases in attractive colloidal systems*
A. de Candia, E. Del Gado, A. Fierro, N. Sator, M. Tarzia, A. Coniglio
Phys. Rev. E Rapid Comm. **74**, 010403 (2006)
9. *Pattern formation and glassy phase in the ϕ^4 theory with screened electrostatic repulsion*
M. Tarzia, A. Coniglio
Phys. Rev. Lett. **96**, 075702 (2006)
8. *Granular segregation under vertical tapping*
M. Pica Ciamarra, M. D. De Vizia, A. Fierro, M. Tarzia, M. Nicodemi, A. Coniglio
Phys. Rev. Lett. **96**, 058001 (2006)
7. *Size segregation in granular media induced by phase transition*
M. Tarzia, A. Fierro, M. Nicodemi, M. Pica Ciamarra, A. Coniglio
Phys. Rev. Lett. **95**, 078001 (2005)
6. *Statistical mechanics of dense granular media*
A. Coniglio, A. Fierro, M. Nicodemi, M. Pica Ciamarra, M. Tarzia
J. Phys.: Condens. Matter **17**, S2557 (2005)
5. *Jamming transition in granular media: A mean field approximation and numerical simulations*
A. Fierro, M. Nicodemi, M. Tarzia, A. de Candia, A. Coniglio
Phys. Rev. E **71**, 061305 (2005)
4. *Segregation in fluidized versus tapped packs*
M. Tarzia, A. Fierro, M. Nicodemi, A. Coniglio
Phys. Rev. Lett. **93**, 198002 (2004)
3. *Glass transition in granular media*
M. Tarzia, A. de Candia, A. Fierro, M. Nicodemi, A. Coniglio
Europhys. Lett. **66**, 531 (2004)
2. *A monodisperse model suitable to study the glass transition*
M. Pica Ciamarra, M. Tarzia, A. de Candia, A. Coniglio
Phys. Rev. E **68**, 066111 (2003)
1. *A lattice glass model with no tendency to crystallize*
M. Pica Ciamarra, M. Tarzia, A. de Candia, A. Coniglio
Phys. Rev. E, **67** 057105 (2003)

◆ Refereed conference Proceedings

6. *Statistical physics of group testing*
M. Mézard, M. Tarzia, C. Toninelli
International workshop on statistical-mechanical informatics
J. Phys.: Conf. Ser. **95** 012019 (2008)
5. *Statistical mechanics of dense granular media*
M. Pica Ciamarra, A. De Candia, M. Tarzia, A. Coniglio, M. Nicodemi
Advances in Complex Systems **8**, 217 (2007)
4. *Modulated phases and slow dynamics in attractive colloids*
A. Coniglio, M. Tarzia, A. de Candia, E. Del Gado, A. Fierro, N. Sator
International symposium on nonlinearity, nonequilibrium and complexity - Questions and perspectives in statistical physics
Physica A **372**, 298 (2006)
3. *Jamming in dense granular media*
A. Coniglio, A. Fierro, A. de Candia, M. Nicodemi, M. Tarzia, M. Pica Ciamarra
19th Sitges conference on jamming, yielding, and irreversible deformation in condensed matter
Lecture Notes in Physics **688**, 53 (2006)
2. *Statistical mechanics approach to the jamming transition in granular materials*
A. Coniglio, A. de Candia, A. Fierro, M. Nicodemi, M. Tarzia
International workshop on trends and perspectives in extensive and non-extensive statistical mechanics
Physica A **344**, 431 (2004)
1. *On Edwards' theory of powders*
A. Coniglio, A. de Candia, A. Fierro, M. Nicodemi, M. Pica Ciamarra, M. Tarzia
Conference on new materials and complexity
Physica A **339**, 1 (2004)

◆ Book chapters

7. *Nonlinear susceptibility experiments in a supercooled liquid: Evidence of growing spatial correlations close to T_g*
C. Brun, D. L'Hôte, F. Ladieu, C. Crauste-Thibierge, G. Biroli, J.-P. Bouchaud, M. Tarzia
Recent advances in broadband dielectric spectroscopy (2012)
6. *Statistical mechanics of dense granular media*
M. Nicodemi, A. Coniglio, A. de Candia, A. Fierro, M. Pica Ciamarra, M. Tarzia
Proceedings of the society of photo-optical instrumentation engineers, conference on complex systems (2005)
5. *Mean field theory of dense granular media*
A. Coniglio, A. Fierro, M. Nicodemi, M. Pica Ciamarra, M. Tarzia
Proceedings of the international conference on powders & grains (2005)
4. *Unifying approach to the jamming transition in granular media and the glass transition in thermal systems*
A. Coniglio, A. de Candia, A. Fierro, M. Nicodemi, M. Pica Ciamarra, M. Tarzia
Proceedings of complexity, metastability, and nonextensivity, 31st workshop of the international school of solid state physics (2004)
3. *Statistical mechanics of granular media and glassy systems*
A. Coniglio, A. de Candia, A. Fierro, M. Nicodemi, M. Pica Ciamarra, M. Tarzia
Proceedings of the international school of physics Enrico Fermi on the physics of complex systems - New advances and perspectives (2003)
2. *Numerical and mean-field study of a lattice glass model*
M. Tarzia, M. Pica Ciamarra, A. de Candia, A. Coniglio
Proceedings of the international school of physics Enrico Fermi on the physics of complex systems - New advances and perspectives (2003)
1. *Statistical mechanics of jamming and segregation in granular media*
M. Nicodemi, A. Coniglio, A. de Candia, A. Fierro, M. Pica Ciamarra, M. Tarzia
Proceedings of the workshop on unifying concepts in granular media and glasses (2003) [arXiv:0401602](https://arxiv.org/abs/0401602)

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