CURRICULUM VITAE

Prof. Pablo Hurtado

(April 23, 2019)

PERSONAL DETAILS

Family name: Hurtado Fernández
First name: Pablo Ignacio
Nationality: Spaniard
Sex: Male

CURRENT PROFESSIONAL ADDRESS

Professional status: Associate Professor
Starting date: 16/05/2012

Organism: University of Granada (UGR)
Department: Electromagnetism and Condensed Matter Physics
Postal address: Av. Fuentenueva, 18071 Granada (Spain)

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RESEARCH LINES

- Nonequilibrium statistical physics.
- Fluctuations and large deviations far from equilibrium.
- Dynamics in strongly correlated matter.
- Soft matter and complex liquids. Structural glasses. Glass transition.
- Transport and collective phenomena in low-dimensional systems.
- Kinetic theory. Granular media.
- Nonequilibrium phase transitions.
- Interfaces. Metastability. Avalanches. Self-organized criticality.
- Synchronization, robustness and structure of complex networks.
- Computational methods. Molecular dynamics and Monte Carlo simulations.

EDUCATION

09/1993–07/1998 Degree: M.Sc. in Physics (Theoretical Physics)
Centre: University of Granada

01/2001-12/2001 Degree: Master in Scientific Applications of Computers
Centre: University of Granada

01/1999-12/2002 Ph.D. program: Astrophysics, Geophysics y Particles
Centre: University of Granada

M.Sc. thesis: *Systems with Superabsorbing States*
Advisors: Dr. J. Marro and Dr. M.A. Muñoz
Publication: Phys. Rev. E **62**, 4633 (2000)

Ph.D. thesis: *Some Aspects on Dynamics of Nonequilibrium Systems: Metastability, Avalanches, Phase Separation, Absorbing States and Heat Conduction*, in english
Date: 07/02/2003
Advisor: Dr. J. Marro
Publication: cond-mat/0302349 ISBN: 978-84-694-0224-5

HONORS AND AWARDS

2018 Scientist in charge of MARIE-CURIE/MSCA-COFUND Athenea3i-2017 project *Hydrodynamics and fluctuations in open quantum systems* (European Union and Junta de Andalucía)

2015 Scientist in charge of TALENT HUB (MARIE CURIE cofund) project *Control of energy flows and stability in quantum devices* (Junta de Andalucía)

2011 Scientist in Charge of MARIE CURIE IEF project *Network-forming liquids*, NFLiquid (FP7)

2011 ANECA positive evaluation for Associate Professor.

2009 *Ramón y Cajal* fellow for leading scientists.

2007 UGR Award for Excellence Research Paper.

2006 Extraordinary Ph.D. Award, UGR (2006).

2005 MARIE CURIE Intraeuropean Research Fellowship (2005).

2003 FULBRIGHT/MEC postdoctoral fellowship.

2003 ANECA positive evaluation for *profesor ayudante doctor* (2003).

SCIENTIFIC EXPERIENCE

05/2012–today	Position: Associate Professor of Physics, UGR (Spain). Research field: Nonequilibrium statistical physics.
01/2009–05/2012	Position: *Ramón y Cajal* research associate, UGR (Spain). Research field: Nonequilibrium statistical physics.
10/2006–12/2008	Position: Research associate, University of Granada (Spain). Research field: Statistical physics in strongly-correlated matter.
09/2006–10/2006	Position: MARIE CURIE postdoc, Université Montpellier II (France). Research field: Physics of complex fluids.
09/2005–09/2006	Position: TMR postdoc (EU), Université Montpellier II (France). Research field: Physics of complex fluids and glasses.
09/2003–09/2005	Position: FULBRIGHT/MEC postdoc, Boston University (USA). Research field: Nonequilibrium statistical physics.
01/2003–06/2003	Position: postdoc, University of Granada (Spain). Research field: Nonequilibrium statistical physics.
01/1999–12/2002	Position: Ph.D. fellowship, University of Granada. Research field: Nonequilibrium statistical physics.
09/1998–11/1998	Position: Student fellowship, University of Kiev (Ukraine). Research field: Statistical physics.
10/1997–06/1998	Position: Student fellowship, University of Granada (Spain). Research field: Nuclear physics.

SUMMARY OF RESEARCH QUALITY INDICATORS

Number of positive national research periods (*sexenios*): 3 (1999-2004, 2005-2010, y 2011-2016)
Number of Ph.D. thesis mentored: 4 completed + 2 in process ($33\,\%$)
Total number of citations: 945 (ISI) / 1430 (Google Scholar)
Average citations/year for period 2013-2017: 97.4 (ISI) / 140.4 (Google Scholar)
Total number of papers in first quartile (Q1): 36 out of 48
H-index: 17 (ISI) / 20 (Google Scholar)

PUBLICATIONS

1. **Pablo I. Hurtado**, Miguel A. Muñoz, *"Systems with Superabsorbing States"*, Phys. Rev. E **62**, 4633 (2000). [cond-mat/0004138]

2. Pedro L. Garrido, **Pablo I. Hurtado**, Bjoern Nadrowski, *"Simple One-dimensional Model of Heat Conduction which Obeys Fourier's Law"*, Phys. Rev. Lett. **86**, 5486 (2001). [cond-mat/0104453]

3. Pedro L. Garrido, **Pablo I. Hurtado**, *"On the Objections on a Normal Heat Transport in One Dimension - Reply to Dhar"*, Phys. Rev. Lett. **88**, 249402 (2002). [cond-mat/0206266]

4. Pedro L. Garrido, **Pablo I. Hurtado**, *"Spurious Long-time Tail of the Total Energy Current Correlation Function - Reply to Li"*, Phys. Rev. Lett. **89**, 079402 (2002).

5. Joaquín Marro, Jesús Cortés, **Pablo I. Hurtado**, *"Modeling Nonequilibrium Phase Transitions and Critical Behavior in Complex Systems"*, Comp. Phys. Comm.**147**,115(2002). [cond-mat/0209324]

6. **Pablo I. Hurtado**, J. Marro, Ezequiel V. Albano, *"Growth and Scaling in Anisotropic Spinodal Decomposition"*, Europhys. Lett. **59**(1), 14 (2002). [cond-mat/0209314]

7. **Pablo I. Hurtado**, J. Marro, Pedro L. Garrido, Ezequiel V. Albano, *"Kinetics of Phase Separation in the Driven Lattice Gas: Self-Similar Pattern Growth under Anisotropic Nonequilibrium Conditions"*, Phys. Rev. B **67**, 014206 (2003). [cond-mat/0302243]

8. **Pablo I. Hurtado**, J. Marro, Pedro L. Garrido, Ezequiel V. Albano, *"Coarsening under Anisotropic Conditions in a Lattice Gas Model"*, AIP Conf. Proc. **661**, 85 (2003).

9. **Pablo I. Hurtado**, J. Marro, Pedro L. Garrido, *"Metastability and Avalanches in a Nonequilibrium Ferromagnetic System"*, AIP Conf. Proc. **661**, 147 (2003). [cond-mat/0302241]

10. **Pablo I. Hurtado**, *"Some Aspects on Dynamics of Nonequilibrium Systems: Metastability, Avalanches, Phase Separation, Absorbing States and Heat Conduction"*, [cond-mat/0302349]

11. **Pablo I. Hurtado**, J. Marro, Pedro L. Garrido, *"Reentrant Behavior of the Spinodal Curve in a Nonequilibrium Ferromagnet"*, Phys. Rev. E **70**, 021101 (2004). [cond-mat/0401316]

12. **Pablo I. Hurtado**, Pedro L. Garrido, J. Marro, *"Analysis of the Interface in a Nonequilibrium Two-Temperature Ising Model"*, Phys. Rev. B **70**, 245409 (2004). [cond-mat/0405534]

13. Luca Donetti, **Pablo I. Hurtado**, Miguel A. Muñoz, *"Entangled Networks, Synchronization, and Optimal Network Topology"*, Phys. Rev. Lett. **95**, 188701 (2005). [cond-mat/0502230].

14. **Pablo I. Hurtado**, *"Strong Shock Waves and Nonequilibrium Response in a One-Dimensional Gas: a Boltzmann Equation Approach"*, Phys. Rev. E **72**, 041101 (2005). [cond-mat/0505047]

15. **Pablo I. Hurtado**, J. Marro, Pedro L. Garrido, *"Understanding Scale Invariance in a Minimal Model of Complex Relaxation Phenomena"*, J. Stat. Mech. P02004 (2005). [cond-mat/0404477]

16. **Pablo I. Hurtado**, *"Breakdown of Hydrodynamics in a Simple One-Dimensional Fluid"*, Phys. Rev. Lett. **96**, 010601 (2006). [cond-mat/0507689]

17. **Pablo I. Hurtado**, J. Marro, Pedro L. Garrido, *"Stochastic Resonance and Scale Invariance in Nonequilibrium Metastable States"*, Eur. Phys. J. B **49**, 103 (2006).

18. **Pablo I. Hurtado**, S. Redner, *"The Simplest Piston Problem I: Elastic Collisions"*, Phys. Rev. E **73**, 016136 (2006). [cond-mat/0507485]

19. **Pablo I. Hurtado**, S. Redner, *"The Simplest Piston Problem II: Inelastic Collisions"*, Phys. Rev. E 016137 (2006). [cond-mat/0507651]

20. Luca Donetti, **Pablo I. Hurtado**, Miguel A. Muñoz, *"Synchronization in Network Structures: Entangled Topology as Optimal Architecture for Network Design"*, Lect. Notes in Comp. Sci. **3993**, 1075 (2006). [cond-mat/0602351]

21. **Pablo I. Hurtado**, J. Marro, P.L. Garrido, *"Metastability, Nucleation, and Noise-Enhanced Stability Out of Equilibrium"*, Phys. Rev. E **74**, 050101(R) (2006). [cond-mat/0604566].

22. **Pablo I. Hurtado**, L. Berthier, W. Kob, *"Heterogeneous Diffusion in a Reversible Gel"*, Phys. Rev. Lett. **98**, 135503 (2007). [cond-mat/0612513].

23. **Pablo I. Hurtado**, Joaquín Marro, Pedro L. Garrido, *"Demagnetization via Nucleation of the Metastable Phase in a Model of Disorder"*, J. Stat. Phys. **133**, 29 (2008). [cond-mat/0612675]

24. Luca Donetti, **Pablo I. Hurtado**, Miguel A. Muñoz, *"Network Synchronization: Optimal and Pessimal Scale-Free Topologies"*, J. Phys. A **41**, 224008 (2008). [arXiv/0710.4886]

25. Miguel A. Muñoz, Luca Donetti, **Pablo I. Hurtado**, *"Redes Óptimas: Grafos de Ramanujan, jaulas y redes entrelazadas*, Revista Española de Física **22 (4)**, 57 (2008).

26. **Pablo I. Hurtado**, Pedro L. Garrido, *"Test of the Additivity Principle for Current Fluctuations in a Model of Heat Conduction*, Phys. Rev. Lett. **102**, 250601 (2009). [arXiv/0809.3966]

27. **Pablo I. Hurtado**, P. Chaudhuri, L. Berthier, W. Kob, *"Static and Dynamic Properties a Reversible Gel*, AIP Conf. Proc. **1091**, 166 (2009). [arXiv/0811.1447]

28. **Pablo I. Hurtado**, Pedro L. Garrido, *"Current Fluctuations and Statistics During a Large Deviation Event in an Exactly-Solvable Transport Model*, J. Stat. Mech. P02032 (2009). [arXiv/0810.5543]

29. P. Chaudhuri, L. Berthier, **Pablo I. Hurtado**, W. Kob, *"When Glass and Gel Meet: A Mechanism for Multistep Relaxation*, Phys. Rev. E **81**, 040502(R) (2010). [arXiv/0911.5269]

30. **Pablo I. Hurtado**, P.L. Garrido, *"Large Fluctuations of the Macroscopic Current in Diffusive Systems: A Numerical Test of the Additivity Principle*, Phys. Rev. E **81**, 041102 (2010). [arXiv/1001.4056]

31. C. Pérez-Espigares, J.J. del Pozo, P.L. Garrido, **P.I. Hurtado**, *"Large Deviations of the Current in a Two-Dimensional Diffusive System"*, AIP Conf. Proc. **1332**, 204 (2011).

32. **Pablo I. Hurtado**, C. Pérez-Espigares, J.J. del Pozo, P.L. Garrido, *"Symmetries in Fluctuations Far from Equilibrium"*, Proc. Natl. Acad. Sci. USA **108**, 7704 (2011). [arXiv:1009.1243]

33. A. Prados, A. Lasanta, **Pablo I. Hurtado**, *"Large Fluctuations in Driven Dissipative Media"*, Phys. Rev. Lett. **107**, 140601 (2011). [arXiv:1105.3438]

34. **Pablo I. Hurtado**, Pedro L. Garrido, *"Spontaneous Symmetry Breaking at the Fluctuating Level"*, Phys. Rev. Lett. **107**, 180601 (2011). [arXiv:1106.0690]

35. **Pablo I. Hurtado**, Paul L. Krapivsky, *"Compact Waves in Microscopic Nonlinear Diffusion"*, Phys. Rev. E **85**, 060103(R) (2012). [arXiv:1112.5988]

36. A. Prados, A. Lasanta, **Pablo I. Hurtado**, *"Nonlinear driven diffusive systems with dissipation: Fluctuating hydrodynamics"*, Phys. Rev. E **86**, 031134 (2012). [arXiv:1207.5021]

37. C.P. Espigares, P.L. Garrido, **Pablo I. Hurtado**, *"Dynamical phase transition for current statistics in a simple driven diffusive system"*, Phys. Rev. E **87**, 032115 (2013). [arXiv:1212.4640]

38. **Pablo I. Hurtado**, A. Lasanta, A. Prados, *"Typical and Rare Fluctuations in Nonlinear Driven Dissipative Systems"*, Phys. Rev. E **88**, 022110 (2013). [arXiv:1302.6544]

39. **Pablo I. Hurtado**, C.P. Espigares, J.J. del Pozo, P.L. Garrido, *"Thermodynamics of currents in nonequilibrium diffusive systems: theory and simulation"*, J. Stat. Phys. **154**, 214 (2014). [arXiv:1312.1246]

40. Daniel Manzano, **Pablo I. Hurtado**, *"Symmetry and the thermodynamics of currents in open quantum systems"*, Phys. Rev. B **90**, 125138 (2014). [arXiv:1310.7370]

41. J.J. del Pozo, Pedro L. Garrido, **Pablo I. Hurtado**, *"Scaling laws and bulk-boundary decoupling in heat flow"*, Phys. Rev. E **91**, 032116 (2015). [arXiv:1401.5244]

42. P. Chaudhuri, **Pablo I. Hurtado**, L. Berthier and W. Kob, *"Relaxation dynamics in a transient network fluid with competing gel and glass phases"*, J. Chem. Phys. **142**, 174503 (2015). [arXiv:1502.00249]

43. J.J. del Pozo, Pedro L. Garrido, **Pablo I. Hurtado**, *"Probing local equilibrium in nonequilibrium fluids"*, Phys. Rev. E **92**, 022117 (2015). [arXiv:1407.3113]

44. A. Lasanta, **Pablo I. Hurtado**, A. Prados, *"Statistics of the dissipated energy in driven diffusive systems"*, Eur. Phys. J. E **39**, 35 (2016). [arXiv:1508.07635]

45. **Pablo I. Hurtado**, Carlos Pérez-Espigares, Pedro L. Garrido, *"Weak additivity principle for current statistics in d-dimensions"*, Phys. Rev. E **93**, 040103(R) (2016). [arXiv:1511.08373]

46. **Pablo I. Hurtado**, Pedro L. Garrido, *"A violation of universality in anomalous Fourier's law"*, Scientific Reports **6**, 38823 (2016). [arXiv:1506.03234]

47. Pedro L. Garrido, **Pablo I. Hurtado**, Nicolás Tizón-Escamilla, *"Structure of the optimal path to a fluctuation"*, Phys. Rev. E **95**, 032119 (2017) [arXiv:1611.02500]

48. N. Tizón-Escamilla, C. Pérez-Espigares, P.L. Garrido, **Pablo I. Hurtado**, *"Order and symmetry-breaking in the fluctuations of driven systems"*, Phys. Rev. Lett. **119**, 090602 (2017). [arXiv:1606.07507]

49. N. Tizón-Escamilla, **Pablo I. Hurtado**, P.L. Garrido, *"Structure of the optimal path to a fluctuation"*, Phys. Rev. E **95**, 032119 (2017). [arXiv:1611.02500]

50. Daniel Manzano, **Pablo I. Hurtado**, *"Harnessing symmetry to control quantum transport"*, Adv. in Phys. **67**, 1 (2018). [arXiv:1707.07895]

51. C. Pérez-Espigares, F. Carollo, J.P. Garrahan, **Pablo I. Hurtado**, *"Dynamical criticality in driven systems: non-perturbative results, microscopic origin and direct observation"*, Phys. Rev. E **98**, 060102(R) (2018). [arXiv:1807.10235]

52. P.L. Garrido, **Pablo I. Hurtado**, N. Tizón-Escamilla, *"Infinite family of universal profiles for heat current statistics in Fourier's law"*, Phys. Rev. E **99**, 022134 (2019). [arXiv:1810.10778]

SUBMITTED

53. C. Pérez-Espigares, **Pablo I. Hurtado**, *"Sampling rare events across dynamical phase transitions"*, in press (2019). [arXiv:1902.01276]

54. C. Gutiérrez-Ariza, **Pablo I. Hurtado**, *"The kinetic exclusion process: a tale of two fields"*, submitted (2019).

EDITED BOOKS AND VOLUMES

55. Pedro L. Garrido, **Pablo I. Hurtado**, J. Marro (eds.), *Modeling and Simulation of New Materials: X Granada Seminar on Computational and Statistical Physics*, American Institute of Physics (AIP) Conference Proceedings volume **1091** (2011)

56. P.L. Garrido, **Pablo I. Hurtado**, D. Manzano, and F. de los Santos (eds.), *Quantum Systems in and out of Equilibrium: Fundamentals, Dynamics and Applications*, European Physical Journal **227**, (2018)

RESEARCH VISITS

1. University of Kiev (Ukraine), 1998.
2. Centre Européen de Calcul Atomique et Moléculaire (CECAM), Lyon (France), 1999.
3. Abdus Salam International Centre for Theoretical Physics (ICTP), Trieste (Italy), 1999.
4. Departamento de Física, University of Coimbra (Portugal), 1999.
5. Instituto de Investigaciones Fisicoquímicas Teóricas y Aplicadas, La Plata (Argentina), 2000.
6. University of Amsterdam (Holland), 2002.
7. University of Rome I "La Sapienza", Rome (Italy), 2002 and 2003.
8. Department of Physics, Boston University (USA), 2003-2005 and 2008.
9. Department of Mathematics, Rutgers University, New Brunswick (USA), 2004, 2005 and 2008.
10. Department of Physics and DEAS, Harvard University, Cambridge (USA), 2004.
11. Center for Nonlinear Science, Los Alamos National Laboratory, Los Alamos (USA), 2005.
12. Lab. des Colloïdes, Verres et Nanomatériaux, Univ. Montpellier II (France), 2005-2006 and 2007.
13. Newton Institute for Mathematical Sciences, Cambridge University, Cambridge (UK), 2006.
14. Les Houches Centre de Physique, Université J. Fourier, Grenoble (France), 2006.
15. University of Reading (UK), 2006).
16. Service de Physique Théorique, CEA Saclay (France), 2006.
17. Instituto de Ciencia de Materiales de Madrid (ICMM), Madrid (Spain), 2007.
18. Orthodox Academy of Crete (OAC), Kolymbari, Crete (Greece), 2008.
19. Complexo Interdisciplinar da Universidade de Lisboa (CIIUL), Lisboa (Portugal), 2009.
20. Institut Henri Poincare (IHP), Paris (France), 2010.
21. Chemestry Department, University of Sydney, Sydney (Australia), 2010.
22. Université Cergy-Pontoise, Paris (France), 2011.

23. Boston University, Boston (USA), 2011.
24. Rutgers University, New Brunswick (USA), 2011.
25. School of Mathematics, Queen Mary University London, London (UK), 2014.
26. National Institute of Theoretical Physics, Stellenbosch (South Africa), 2014.
27. Rutgers University, New Brunswick (USA), 2015.
28. International Centre for Theoretical Sciences (ICTS), Bangalore (India), 2015.
29. Princeton University, Princeton (USA), 2015.
30. International Centre for Theoretical Sciences (ICTS), Bangalore (India), 2017.
31. Berkeley University, Berkeley (USA), 2018.

INVITED SEMINARS

04/10/2000 *Transiciones de Fase en Sistemas con Estados Superabsorbentes*, Instituto de Investigaciones Fisicoquímicas Teóricas y Aplicadas (INIFTA), Universidad Nacional de La Plata, La Plata, Argentina.

20/03/2003 *Metastability in a Nonequilibrium Ferromagnetic System*, Dipart. di Fisica, University of Rome I "La Sapienza", Rome, Italy.

30/05/2003 *Metastability and Avalanches in a Nonequilibrium Ferromagnet*, Workshop on Magnetoresistance and Magnetostriction in Small Systems, Granada, Spain.

08/12/2004 *Nonequilibrium Behavior of a Simple One-Dimensional Fluid*, Physics Department, Harvard University, Cambridge, USA.

20/10/2005 *Breakdown of Hydrodynamics in Low-Dimensional Liquids*, Laboratoire des Colloïdes, Verres et Nanomatériaux, Université Montpellier II, France.

23/02/2006 *Nonequilibrium Metastability and Resonant Stabilization*, Workshop on Statistical Physics of Glasses, Spin Glasses, Information Processing and Combinatorial Optimization, Les Houches Centre de Physique, France.

30/05/2006 *Synchronization in Network Structures: Entangled Topology as Optimal Architecture for Network Design*, Workshop on Networks: Structure and Dynamics, International Conference of Computer Science 2006, University of Reading, UK.

27/06/2006 *Metastability, Nucleation, and Noise-Enhanced Stabilization Far from Equilibrium*, Workshop on First-Passage and Extreme Value Problems in Random Processes, Isaac Newton Institute for Mathematical Sciences, (UK).

27/11/2006 *Heterogeneous Diffusion in a Reversible Gel*, Service de Physique Theorique, CEA Saclay, Gif-sur-Yvette, France.

26/04/2007 *Difusión Heterogénea en un Gel Reversible*, Instituto de Ciencia de Materiales de Madrid (ICMM), CSIC and Universidad Autónoma de Madrid, Cantoblanco, Spain.

19/06/2009 *When Glass and Gel Meet*, Workshop on Flow(ers) and Jam(mers), Complexo Interdisciplinar da Universidade de Lisboa (CIIUL), Lisboa, Portugal.

03/03/2011 *Symmetries in Fluctuations Far from Equilibrium*, Université Cergy-Pontoise, Paris, France.

03/07/2011 *Hidden Symmetries at the Fluctuating Level in Nonequilibrium Systems*, Department of Physics, Boston University, Boston, USA.

25/08/2011 *Nonlinear diffusive flow into vacuum: hydrodynamics and fluctuations*, Department of Physics, Boston University, Boston, USA.

22/09/2011 *Fluctuations out of equilibrium: symmetries and phase transitions*, Department of Mathematics, Rutgers University, New Brunswick (NJ), USA.

07/03/2012 *Spontaneous symmetry breaking at the fluctuating level*, Universidad de Sevilla, Spain.

11/09/2012 *Spontaneous symmetry breaking at the fluctuating level*, Workshop on "The statistical physics of inference and control theory", Granada, Spain.

10/04/2014 *Nonequilibrium fluctuations in classical and quantum systems*, First Joint Workshop of the Institute Carlos I for Theoretical and Computational Physics, Granada, Spain.

22/07/2014 *Universal scaling laws and local equilibrium in fluids out of equilibrium*, QMUL School of Mathematics, London, UK.

06/11/2014 *Symmetry and the thermodynamics of currents in open quantum systems*, Workshop on Large Deviations in Statistical Physics, National Institute of Theoretical Physics, Stellenbosch, South Africa.

11/05/2015 *Violation of universality in anomalous Fourier's law*, 113 Statistical Mechanics Conference, Rutgers University, USA.

26/10/2015 *Symmetry and the thermodynamics of currents in open quantum systems*, Workshop on Non-equilibrium Statistical Physics, ICTS, Bangalore, India.

16/11/2015 *Additivity of current fluctuations beyond* $1d$, Workshop on Large Deviation Functions in Principle and Practice, Princeton Center for Theoretical Science, USA.

11/09/2017 *Order and symmetry breaking in the fluctuations of driven systems*, Workshop on Large Deviations in Statistical Physics, ICTS, Bangalore, India.

14/01/2018 *Phase Transitions in the fluctuations of driven systems*, Berkeley Statistical Mechanics Meeting, University of California Berkeley, USA.

POSTDOCS

1. Dr. Carlos Pérez Espigares, MARIE CURIE/MSCA-COFUND Athenea3i-2017 program. 09/2018 – 09/2021

2. Dr. Daniel Manzano Diosdado, TALENT HUB program (MARIE CURIE co-fund). 09/2015 – 09/2017

3. Dr. María Leticia Rubio Puzzo, CONICET, La Plata (Argentina). 09/2010 – 09/2011, 10/2012 – 11/2012

4. Dr. Vanessa K. de Souza, MARIE CURIE program, FP7, UE. 10/2011 – 10/2013

PHD STUDENTS

1. Rubén Hurtado Gutiérrez, *Scaling laws, fluctuations and anomalous transport in nonequilibrium systems*. 09/2018 –

2. Miguel Ángel Martínez, *Harnessing symmetry and fluctuations to control transport in open quantum systems*. 10/2018 –

3. Nicolás Tizón Escamilla, *Symmetries in fluctuations far from equilibrium*. 01/2013 – 09/2018

4. Jesús J. del Pozo, *Nonequilibrium behavior of a hard-disks system*. 01/2010 – 05/2014

5. Antonio Lasanta Becerra, *Some properties of the nonequilibrium steady state of simple dissipative media*. 01/2010 – 03/2014

6. Carlos Pérez Espigares, *Nonequilibrium fluctuations in driven diffusive systems*. 09/2007 – 11/2012

GRADUATE STUDENTS

1. Carlos Zagoya, *Injected-power fluctuations in a granular system*. 01/2009 – 12/2009

2. Carlos Pérez Espigares, *Additivity of current fluctuations in two-dimensional diffusive systems*. 01/2008 – 12/2009

3. Antonio Lasanta, *Large deviations of the dissipated energy in granular materials: A macroscopic fluctuation theory approach*. 01/2010 – 12/2010

4. Antonio Tejero del Caz, *Heat Flow Across a Massive Piston*. 01/2011 – 12/2011

5. Carlos Gutiérrez Ariza, *Hydrodynamic Description of a Lattice Gas Model with two Conserved Fields*. 09/2014 – 06/2015

6. Rubén Hurtado Gutiérrez, *Anomalous transport in one dimension and scaling laws*. 09/2017 – 07/2018

ORGANIZATION OF INTERNATIONAL CONFERENCES

1. Quantum Systems In and Out of Equilibrium: Fundamentals, Dynamics and Applications. XIV Granada Seminar on Computational and Statistical Physics. Granada (Spain), June 20-23, 2017.

2. Physics Meets the Social Sciences: Emergent cooperative phenomena, from bacterial to human group behavior. 25 Years of Granada Seminar on Computational and Statistical Physics. La Herradura, Granada (Spain), June 15-19, 2015.

3. Physics, Computation, and the Mind: XII Granada Seminar on Computational and Statistical Physics. La Herradura, Granada (Spain), September 17-21, 2012.

4. Fundamental Problems in Nonequilibrium Statistical Physics: XI Granada Seminar on Computational and Statistical Physics. La Herradura, Granada (Spain), September 13-17, 2010.

5. Modeling and Simulation of New Materials: X Granada Seminar on Computational and Statistical Physics. Granada (Spain), September 15-19, 2008.

6. Computational and Mathematical Modeling of Cooperative Behavior in Neural Systems: IX Granada Seminar Computational and Statistical Physics. Granada (Spain), September 11-15, 2006.

7. Cooperative Behavior in the Social Sciences: VIII Granada Seminar Computational and Statistical Physics. Granada (Spain), February 7-11, 2005.

8. VII Granada Seminar Computational Physics. Granada (Spain), September 2-7, 2002.