

Ficha de grupo de investigación

FÍSICA ESTADÍSTICA Y DE LOS SISTEMAS COMPLEJOS

Código: FQM165

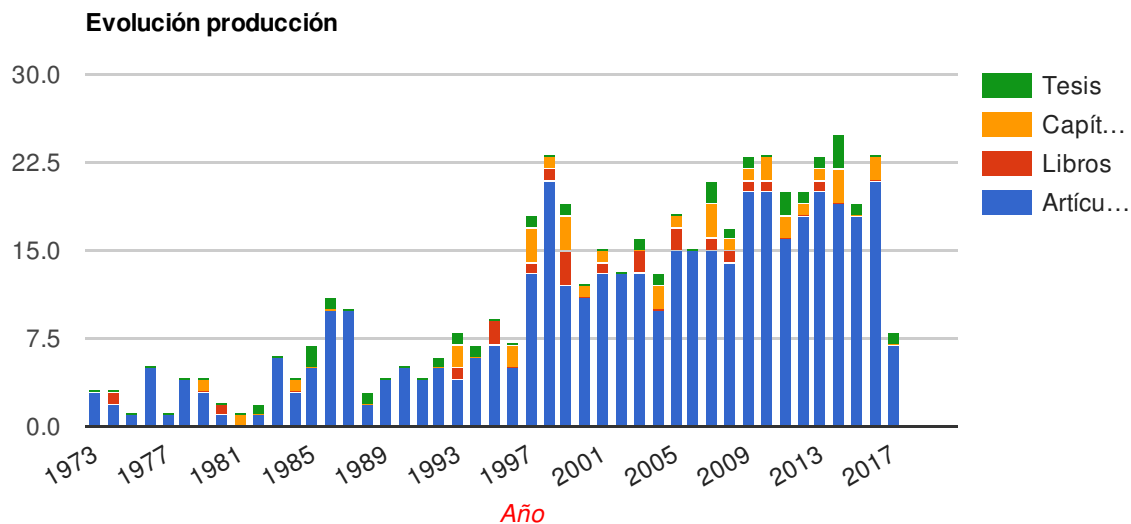
Responsable del grupo: PEDRO LUIS GARRIDO GALERA

Miembros

- JOAQUÍN MARRO BORAU Catedrático de universidad Tiempo completo
- PEDRO LUIS GARRIDO GALERA Catedrático de universidad Tiempo completo
- MIGUEL ANGEL MUÑOZ MARTINEZ Otros
- JOAQUIN JAVIER TORRES AGUDO Catedrático de universidad Tiempo completo
- FRANCISCO DE LOS SANTOS FERNÁNDEZ Profesor titular de universidad Tiempo completo
- PABLO IGNACIO HURTADO FERNANDEZ Profesor titular de universidad Tiempo completo
- JUAN ANTONIO BONACHELA FAJARDO Otros
- JOSÉ MANUEL MARTÍN MARTÍNEZ Administrador de sistemas y redes Tiempo completo
- SAMUEL JOHNSON Otros
- CARLOS PÉREZ ESPIGARES Investigador/a Tiempo completo
- DANIEL MANZANO DIOSDADO Investigador Científico Tiempo completo
- PAULA VILLA MARTÍN
- NICOLÁS TIZÓN ESCAMILLA Otros
- PABLO VILLEGAS GÓNGORA Contratado predoctoral de Investigación Tiempo completo
- ANA PAULA MILLÁN VIDAL Investigador/a

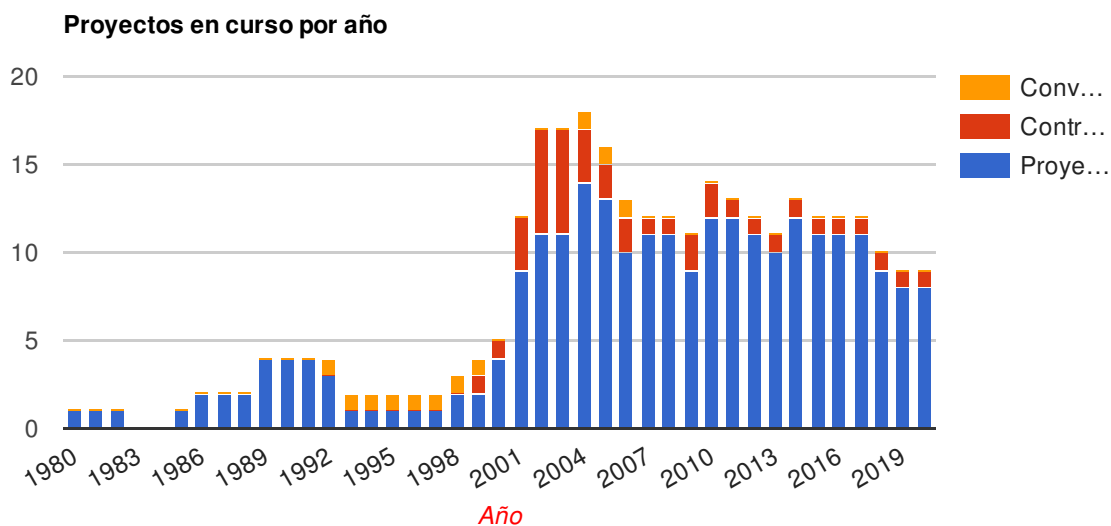
Producción 739

- Artículos (622)
- Libros (36)
- Capítulos de Libros (52)
- Tesis dirigidas (29)



Proyectos dirigidos 61

- Proyectos (49)
- Contratos (10)
- Convenios (2)



Actividades 32

Titulo publicación	Fuente	Tipo	Fecha
A theoretical foundation for multi-scale regular vegetation patterns	Nature	Articulo	2017
Double inverse stochastic resonance with dynamic synapses	Physical review e	Articulo	2017
Inverse stochastic resonance in networks of spiking neurons		Articulo	2017
Looplessness in networks is linked to trophic coherence	Proceedings of the national academy of sciences of the united states of america	Articulo	2017
Phase transitions and diversification in complex systems	Ciencias	Tesis doctoral	2017
Reply to comment on 'a note on heat reservoirs and the like'	European journal of physics	Articulo	2017
Simple unified view of branching process statistics: random walks in balanced logarithmic potentials	Physical review e	Articulo	2017
Structure of the optimal path to a fluctuation	Physical review. e, statistical, nonlinear, and soft matter physics	Articulo	2017
Complex synchronization patterns in the human connectome network	Springer proceedings in complexity	Articulo	2016
Cooperation, competition and the emergence of criticality in communities of adaptive systems	Journal of statistical mechanics: theory and experiment	Articulo	2016
Cooperation, competition and the emergence of criticality in communities of adaptive systems	Journal of statistical mechanics: theory and experiment	Articulo	2016
Dynamical signatures of molecular symmetries in nonequilibrium quantum transport		Articulo	2016
Eco-evolutionary model of rapid phenotypic diversification in species-rich communities	Plos computational biology	Articulo	2016
Emergence of low noise frustrated states in e/i balanced neural networks	Neural networks : the official journal of the international neural network society	Articulo	2016
Environmental unpredictability and inbreeding depression select for mixed dispersal syndromes	Bmc evolutionary biology	Articulo	2016
From neurons to epidemics: how trophic coherence affects spreading processes	Chaos (woodbury, n.y.)	Articulo	2016
Interactions between growth-dependent changes in cell size, nutrient supply and cellular elemental stoichiometry of marine synechococcus	Isme journal	Articulo	2016
Interplay between subthreshold oscillations and depressing synapses in single neurons	Plos one	Articulo	2016
Intervality and coherence in complex networks	Chaos (woodbury, n.y.)	Articulo	2016
Intrinsic noise and deviations from criticality in boolean gene-regulatory networks	Scientific reports	Articulo	2016
Introduction to focus issue: complex dynamics in networks, multilayered structures and systems	Chaos (woodbury, n.y.)	Articulo	2016
Langevin equations for reaction-diffusion processes	Physical review letters	Articulo	2016
Non-equilibrium statistical mechanics of turbulence	The foundations of chaos revisited: from poincaré to recent advancements	Capítulo de libro	2016
Quantum transport in d-dimensional lattices		Articulo	2016
Revivals of electron currents and topological-			

Reversal of electron currents and topological band insulator transitions in 2d gapped dirac materials	Europhysics letters	Articulo	2016
Self-organized bistability associated with first-order phase transitions	Physical review letters	Articulo	2016
Statistics of the dissipated energy in driven diffusive systems	European physical journal e. soft matter	Articulo	2016
Structure, function, and development of large-scale complex neural networks	Big data of complex networks	Capítulo de libro	2016
Violation of universality in anomalous fourier's law	Scientific reports	Articulo	2016
Weak additivity principle for current statistics in d dimensions	Physical review e: covering statistical, nonlinear, biological, and soft matter physics	Articulo	2016
Weak additivity principle for current statistics in d dimensions	Physical review. e, statistical, nonlinear, and soft matter physics	Articulo	2016
A novel brain partition highlights the modular skeleton shared by structure and function	Scientific reports	Articulo	2015
Brain performance versus phase transitions	Scientific reports	Articulo	2015
Coexistence in neutral theories: interplay of criticality and mild local preferences	Journal of statistical mechanics: theory and experiment	Articulo	2015
Effects of dynamic synapses on noise-delayed response latency of a single neuron	Physical review e	Articulo	2015
Efficient transmission of subthreshold signals in complex networks of spiking neurons	Plos one	Articulo	2015
Eluding catastrophic shifts	Proceedings of the national academy of sciences of the united states of america	Articulo	2015
Escaping the tragedy of the commons through targeted punishment	Royal society open science	Articulo	2015
Evolution of brain network structure under a critical condition as induced by local currents	International journal of complex systems in science	Articulo	2015
Insect swarms go critical	Physics	Articulo	2015
On the architectural features of biological and ecological networks		Tesis doctoral	2015
Probing local equilibrium in nonequilibrium fluids	Physical review e: covering statistical, nonlinear, biological, and soft matter physics	Articulo	2015
Ranking species in mutualistic networks	Scientific reports	Articulo	2015
Resource allocation by the marine cyanobacterium synechococcus wh8102 in response to different nutrient supply ratios	Limnology and oceanography	Articulo	2015
Rounding of abrupt phase transitions in brain networks	Journal of statistical mechanics: theory and experiment	Articulo	2015
Scaling laws and bulk-boundary decoupling in heat flow	Physical review e: covering statistical, nonlinear, biological, and soft matter physics	Articulo	2015
Spatial fluctuation theorem	Journal of physics a: mathematical and theoretical	Articulo	2015
Stochasticity enhances the gaining of bet-hedging strategies in contact-process-like dynamics	Physical review e	Articulo	2015
Termite mounds can increase the robustness of dryland ecosystems to climatic change	Science	Articulo	2015
Time scales at quantum phase transitions in the lipkin-meshkov-glick model	Physical review a - atomic, molecular, and optical physics	Articulo	2015
Algunas propiedades de los estados	Universidad de granada	Tesis	2014

estacionarios de sistemas disipativos sencillos.	Universidad de granada	doctoral	2014
Boltzmann machine	Encyclopedia of computational neuroscience, d. jaeger, r. jung (eds.)	Capítulo de libro	2014
Errors in reported degrees and respondent driven sampling: implications for bias	Drug and alcohol dependence	Articulo	2014
Evolutionary comparison between viral lytic rate and latent period	Journal of theoretical biology	Articulo	2014
Fenómenos de no-equilibrio en un sistema de discos rígidos		Tesis doctoral	2014
Fisher-shannon product and quantum revivals in wavepacket dynamics	Physica a. statistical mechanics and its applications	Articulo	2014
Frustrated hierarchical synchronization and emergent complexity in the human connectome network	Scientific reports	Articulo	2014
Hopfield network	Encyclopedia of computational neuroscience, d. jaeger, r. jung (eds.)	Capítulo de libro	2014
Impact of ocean phytoplankton diversity on phosphate uptake	Proceedings of the national academy of sciences of the united states of america	Articulo	2014
Information-based fitness and the emergence of criticality in living systems	Proceedings of the national academy of sciences of the united states of america	Articulo	2014
Inherent directionality explains the lack of feedback loops in empirical networks	Scientific reports	Articulo	2014
Inherent directionality explains the lack of feedback loops in empirical networks	Scientific reports	Articulo	2014
Insect swarms go critical	Physics	Articulo	2014
Interfacial depinning transitions in disordered media: revisiting an old puzzle	Journal of statistical mechanics: theory and experiment	Articulo	2014
Novel mechanisms for phase transitions and self-organization in living systems	Facultad de ciencias, universidad de granada	Tesis doctoral	2014
Perceptron learning	Encyclopedia of computational neuroscience, d. jaeger, r. jung (eds.)	Capítulo de libro	2014
Projective simulation for classical learning agents: a comprehensive investigation		Articulo	2014
Quantum walks on embedded hypercubes	Physical review a - atomic, molecular, and optical physics	Articulo	2014
Quasi-neutral theory of epidemic outbreaks	Plos one	Articulo	2014
Quenched disorder forbids discontinuous transitions in non-equilibrium low-dimensional systems	Physical review e: covering statistical, nonlinear, biological, and soft matter physics	Articulo	2014
Spontaneously broken neutral symmetry	Physical review letters	Articulo	2014
Symmetry and the thermodynamics of currents in open quantum systems	Physical review b: covering condensed matter and materials physics	Articulo	2014
The effect of quenched disorder in neutral theories	Journal of pharmacology and experimental therapeutics	Articulo	2014
Trophic coherence determines food-web stability	Proceedings of the national academy of sciences of the united states of america	Articulo	2014
Zitterbewegung in monolayer silicene in a magnetic field	Physics letters a	Articulo	2014
A model for variable phytoplankton stoichiometry based on cell protein regulation	Biogeosciences	Articulo	2013
A note on heat reservoirs and the like		Articulo	2013
Auto-organización, criticalidad y multiestabilidad		Tesis	2013

genérica: aplicaciones en neurociencia, biología y ecología		doctoral	2013
Does the phenomenon of stochastic amplification of fluctuations play a relevant role in cortical dynamics?	Physics, computation, and the mind - advances and challenges at interfaces: proceedings of the 12th granada seminar on computational and statistical physics	Capítulo de libro	2013
Dynamical phase transition for current statistics in a simple driven diffusive system	Physical review e	Articulo	2013
Factors determining nestedness in complex networks	Plos one	Articulo	2013
Fisher information, nonclassicality and quantum revivals		Articulo	2013
Griffiths phases and the stretching of criticality in brain networks	Nature communications	Articulo	2013
Heat transport through lattices of quantum harmonic oscillators in arbitrary dimensions		Articulo	2013
La danza del agua en los nanocanales	Investigacion y ciencia	Articulo	2013
Physics, computation, and the mind - advances and challenges at interfaces: proceedings of the 12th granada seminar on computational and statistical physics	Aip conference proceedings	Libros	2013
Quantum transport quantum networks photosynthetic complexes steady state	Plos one	Articulo	2013
Revival times at quantum phase transitions	Physical review a - atomic, molecular, and optical physics	Articulo	2013
Revivals times at quantum phase transitions	Physical review a - atomic, molecular, and optical physics	Articulo	2013
Rigid motions: action-angles, relative cohomology and polynomials with roots on the unit circle	Journal of mathematical physics	Articulo	2013
Robust short-term memory without synaptic learning	Plos one	Articulo	2013
Short-term synaptic plasticity and heterogeneity in neural systems	Aip conference proceedings	Articulo	2013
Short-term synaptic plasticity in the deterministic tsodyks μ markram model leads to unpredictable network dynamics	Proceedings of the national academy of sciences of the united states of america	Articulo	2013
Signal transmission competing with noise in model excitable brains	Aip conference proceedings	Articulo	2013
Stochastic multiresonances in complex nets of spiking neurons	International journal of complex systems in science .	Articulo	2013
Thermodynamics of currents in nonequilibrium diffusive systems: theory and simulation	Journal of statistical physics	Articulo	2013
Typical and rare in nonlinear driven diffusive systems with dissipation	Physical review e: covering statistical, nonlinear, biological, and soft matter physics	Articulo	2013
What ecological factors shape species-area curves in neutral models?		Articulo	2013
Characterization of quantum phase transitions in dirac systems by means of wave packet dynamics	Aip advances	Articulo	2012
Compact waves in microscopic nonlinear diffusion	Physical review e	Articulo	2012
Correction for bonachela et al., dynamic model of flexible phytonlankton nutrient uptake	Proceedings of the national academy of sciences of the united states of america	Articulo	2012

of flexible phytoplankton nutrient uptake		sciences of the united states of america	
Fluctuaciones fuera del equilibrio en sistemas difusivos		Tesis doctoral	2012
Infinite family of second-law-like inequalities	Physical review. e, statistical, nonlinear, and soft matter physics	Articulo	2012
Mathematical and computational challenges in the study of complex adaptive microbial systems	The social biology of microbial communities: workshop summary	Capítulo de libro	2012
Nonlinear driven dissipative systems with dissipation: fluctuating hydrodynamics	Physical review e: covering statistical, nonlinear, biological, and soft matter physics	Articulo	2012
Patchiness and demographic noise in three ecological examples	Journal of statistical physics	Articulo	2012
Quantum transport efficiency and fourier's law	Physical review e: covering statistical, nonlinear, biological, and soft matter physics	Articulo	2012
Relations between the diffusion anomaly and cooperative rearranging regions in a hydrophobically nanoconfined water monolayer	Physical review e: covering statistical, nonlinear, biological, and soft matter physics	Articulo	2012
Rare region effects in the contact process on networks		Articulo	2012
Rare region effects in the contact process on networks	Physical review e: covering statistical, nonlinear, biological, and soft matter physics	Articulo	2012
Short-term synaptic facilitation improves information retrieval in noisy neural networks	Europhysics letters	Articulo	2012
Spontaneously broken neutral symmetry		Articulo	2012
Statistical measures of complexity for quantum systems with continuous variables	Physica a. statistical mechanics and its applications	Articulo	2012
Stochastic amplification of fluctuations in cortical up-states	Plos one	Articulo	2012
Stochastic resonance crossovers in complex networks	Plos one	Articulo	2012
Temporal disorder in up-down symmetric systems	Physical review e	Articulo	2012
The effect of quenched disorder in neutral theories	Journal of statistical mechanics: theory and experiment	Articulo	2012
What ecological factors shape species-area curves in neutral models?	Plos one	Articulo	2012
Can intrinsic noise induce various resonant peaks?	New journal of physics	Articulo	2011
Direct spreading measures of laguerre polynomials	Journal of computational and applied mathematics	Articulo	2011
Dynamic model of flexible phytoplankton nutrient uptake	Proceedings of the national academy of sciences usa	Articulo	2011
Emergence of resonances in neural systems: the interplay between adaptive threshold and short-term synaptic plasticity	Plos one	Articulo	2011
Enhancing neural-network performance via assortativity	Physical review. e, statistical, nonlinear, and soft matter physics	Articulo	2011
Entropy and complexity analyses of d-dimensional quantum systems	Statistical complexity: applications in electronic structure	Capítulo de libro	2011
Evolution of a modular software network	Proceedings of the national academy of sciences usa	Articulo	2011
Fluctuations of the dissipated energy in a granular system	Non-equilibrium statistical physics. aip conference proceedings	Capítulo de libro	2011

Interplay between network topology and dynamics in neural systems	Universidad de granada. electromagnetismo y física de la materia	Tesis doctoral	2011
Large deviations of the current in a two-dimensional diffusive system	Aip conference proceedings	Articulo	2011
Large fluctuations in driven dissipative media	Physical review letters	Articulo	2011
Paradoxical reflection in quantum mechanics	American journal of physics	Articulo	2011
Quasi-neutral theory of epidemics	Plos one	Articulo	2011
Study of long-range correlations and criticality in neural media and other biological systems	Universidad de granada, facultad de ciencias	Tesis doctoral	2011
Symmetries in fluctuations far from equilibrium	Proceedings of the national academy of sciences of the united states of america	Articulo	2011
Spontaneous symmetry breaking at the fluctuating level	Physical review letters	Articulo	2011
Temporal griffiths phases	Physical review letters	Articulo	2011
Understanding diffusion and density anomaly in a coarse-grained model for water confined between hydrophobic plates	The journal of physical chemistry b	Articulo	2011
Universality in bacterial colonies	Journal of statistical physics	Articulo	2011
Why are so many networks disassortative?	Aip conference proceedings	Articulo	2011
Application of new rényi uncertainty relations to wave packet revivals	Physica. e, low-dimensional systems and nanostructures	Articulo	2010
Complexity analysis of klein-gordon single-particle systems	Europhysics letters	Articulo	2010
Dynamical phase coexistence: a simple solution of the savanna problem	Journal of theoretical biology	Articulo	2010
Entropic origin of disassortativity in complex networks	Physical review letters	Articulo	2010
Evolving networks and the development of neural systems	Journal of statistical mechanics: theory and experiment	Articulo	2010
Excitable networks: non-equilibrium criticality and optimum topology	International journal of bifurcation and chaos in applied sciences and engineering	Articulo	2010
Griffiths phases on complex networks	Physical review letters	Articulo	2010
History-dependent excitability as a single-cell substrate of transient memory for information discrimination	Plos one	Articulo	2010
Irregular dynamics in up and down cortical states	Plos one	Articulo	2010
Large fluctuations of the macroscopic current in diffusive systems: a numerical test of the additivity principle	Physical review. e, statistical, nonlinear, and soft matter physics	Articulo	2010
Modeling biological neural networks	Handbook of natural computing	Capítulo de libro	2010
Nonequilibrium behavior in neural networks: criticality and optimal performance	Advances in cognitive neurodynamics (ii)	Capítulo de libro	2010
Nonequilibrium statistical physics today. where shall we go from here?	American institute of physics	Libros	2010
Phase transition and dynamics of bulk and interfacial water	Journal of physics: condensed matter	Articulo	2010
Pendulum, elliptic functions and relative cohomology	Journal of mathematical physics	Articulo	2010
Quantum entanglement in two-electron atomic models	Journal of physics a: mathematical and general	Articulo	2010

Relativistic klein-gordon charge effects by information-theoretic measures	New journal of physics	Articulo	2010
Renormalisation group determination of the order of the dna denaturation transition	Europhysics letters	Articulo	2010
Self-organization without conservation: are neuronal avalanches generically critical?	Journal of statistical mechanics: theory and experiment	Articulo	2010
Spreading lengths of hermite polynomials	Journal of computational and applied mathematics	Articulo	2010
Unstable dynamics, nonequilibrium phases, and criticality in networked excitable media	Physical review. e, statistical, nonlinear, and soft matter physics	Articulo	2010
Wave packet revivals in a graphene quantum dot in a perpendicular magnetic field	Physical review b: covering condensed matter and materials physics	Articulo	2010
When glass and gel meet: a mechanism for multistep relaxation	Physical review. e, statistical, nonlinear, and soft matter physics	Articulo	2010
Chaos in heterogeneous networks with temporally inert nodes	International journal of bifurcation and chaos in applied sciences and engineering	Articulo	2009
Complexity of d-dimensional hydrogenic systems in position and momentum spaces	Physica a. statistical mechanics and its applications	Articulo	2009
Configuration complexities of hydrogenic atoms	European physical journal d. atomic, molecular, optical and plasma physics	Articulo	2009
Current fluctuations and statistics during a large deviation event in an exactly solvable transport model	Journal of statistical mechanics: theory and experiment	Articulo	2009
Cusps, self-organization, and absorbing states	Physical review. e, statistical, nonlinear, and soft matter physics	Articulo	2009
Development of neural network structure with biological mechanisms	Lecture notes in computer science	Articulo	2009
Dynamically slow processes in supercooled water confined between hydrophobic plates	Journal of physics: condensed matter	Articulo	2009
Influence of intramolecular couplings in a model for hydrogen-bonded liquids	Aip conference proceedings	Articulo	2009
Maximum memory capacity on neural networks with short-term synaptic depression and facilitation	Neural computation	Articulo	2009
Modeling and simulation of new materials: x granada seminar on computational and statistical physics	American institute of physics	Libros	2009
Multidimensional hydrogenic complexity	Mathematical physics and field theory. julio abad in memoriam	Capítulo de libro	2009
Nonlinear preferential rewiring in fixed-size networks as a diffusion process	Physical review. e, statistical, nonlinear, and soft matter physics	Articulo	2009
Nonlinear q-voter model	Physical review. e, statistical, nonlinear, and soft matter physics	Articulo	2009
Revivals, classical periodicity, and zitterbewegung of electron currents in monolayer graphene	Physical review. b, condensed matter	Articulo	2009
Self-organization without conservation: true or just apparent scale-invariance?	Journal of statistical mechanics: theory and experiment	Articulo	2009
Separability criteria and entanglement measures for pure states of n-identical fermions	Europhysics letters	Articulo	2009
Short-term synaptic plasticity: computational implications in the emergent behavior of neural systems	Universidad de granada. electromagnetismo y física de la materia	Tesis doctoral	2009

Simplest nonequilibrium phase transition into an absorbing state	Physical review. e, statistical, nonlinear, and soft matter physics	Articulo	2009
Static and dynamic properties a reversible gel	Aip conference proceedings	Articulo	2009
Switching dynamics of neural systems in the presence of multiplicative colored noise	Lecture notes in computer science	Articulo	2009
Test of the additivity principle for current fluctuations in a model of heat conduction	Physical review letters	Articulo	2009
The simplest nonequilibrium phase transition into an absorbing state	Physical review. e, statistical, nonlinear, and soft matter physics	Articulo	2009
The speed of quantum and classical learning for performing the k-th root of not	New journal of physics	Articulo	2009
A brief comment on the modeling of flow	Computer physics communications	Articulo	2008
Complex behavior in a network with time-dependent connections and silent nodes	Journal of statistical mechanics: theory and experiment	Articulo	2008
Confirming and extending the hypothesis of universality in sandpiles	Physical review. e, statistical, nonlinear, and soft matter physics	Articulo	2008
Critical wetting of a class of nonequilibrium interfaces: a computer simulation study	Physical review. e, statistical, nonlinear, and soft matter physics	Articulo	2008
Crystallization and melting of bacteria colonies and brownian bugs	Physical review. e, statistical, nonlinear, and soft matter physics	Articulo	2008
Demagnetization via nucleation of the nonequilibrium metastable phase in a model of disorder	Journal of statistical physics	Articulo	2008
Entropy estimates of small data sets	Journal of physics a: mathematical and theoretical	Articulo	2008
Excitable networks: non-equilibrium criticality and optimum topology	Modelling and computation on complex networks and related topics	Capítulo de libro	2008
Fractional revivals through re?nyi uncertainty relations	Physical review a - atomic, molecular, and optical physics	Articulo	2008
Functional optimization in complex excitable networks	Europhysics letters	Articulo	2008
Física y vida	Crítica (grupo planeta)	Libros	2008
Instabilities in attractor networks with fast synaptic fluctuations and partial updating of the neurons activity	Neural networks : the official journal of the international neural network society	Articulo	2008
Network synchronization: optimal and pessimal scale-free topologies	Journal of physics a: mathematical and theoretical	Articulo	2008
Redes optimas: grafos de ramanujan, jaulas y redes enmarañadas	Revista española de física	Articulo	2008
Simplified langevin approach to the peyrard-bishop-dauxois model of dna	Physical review. e, statistical, nonlinear, and soft matter physics	Articulo	2008
The role of synaptic facilitation in spike coincidence detection	Journal of computational neuroscience	Articulo	2008
Universalidad en criticalidad auto-organizada	Universidad de granada. electromagnetismo y física de la materia	Tesis doctoral	2008
Absorbing states and elastic interfaces in random media: two equivalent descriptions of self-organized criticality	Physical review letters	Articulo	2007
Attractor neural networks with activity-dependent synapses: the role of synaptic facilitation	Neurocomputing	Articulo	2007
Boundary dissipation in a driven hard disk system	Journal of statistical physics	Articulo	2007

Chaotic hopping between attractors in neural networks.	Neural networks : the official journal of the international neural network society	Articulo	2007
Competition between synaptic depression and facilitation in attractor neural networks	Neural computation	Articulo	2007
Complex networks with time-dependent connections and silent nodes	New trends and tools in complex networks	Capítulo de libro	2007
Cooperative behavior in neural systems	Aip	Libros	2007
Critical wetting of a class of nonequilibrium interfaces: a mean-field picture	Physical review. e, statistical, nonlinear, and soft matter physics	Articulo	2007
Heterogeneous diffusion in a reversible gel	Physical review letters	Articulo	2007
How to discriminate easily between directed-percolation and manna scaling	Physica a. statistical mechanics and its applications	Articulo	2007
Identifying wave-packet fractional revivals by means of information entropy	Physical review letters	Articulo	2007
Improvement of spike coincidence detection with facilitating synapses	Neurocomputing	Articulo	2007
Inestabilidades, nucleación y comportamiento crítico en fluidos con arrastre fuera del equilibrio: teoría y simulación	Universidad de granada. electromagnetismo y física de la materia	Tesis doctoral	2007
Information processing with unstable memories	Aip conference proceedings	Articulo	2007
Langevin equations for non-equilibrium phase transitions	Universidad de granada. electromagnetismo y física de la materia	Tesis doctoral	2007
Lattice versus lennard-jones models with a net particle flow	Traffic and granular flow	Capítulo de libro	2007
Modelling neural systems with short-term depression and facilitation	Aip conference proceedings	Articulo	2007
Networks with heterogeneously weighted connections and partial synchronization of nodes	Computer physics communications	Articulo	2007
On the similarities and differences between lattice and off-lattice models of driven fluids	The european physical journal special topics	Articulo	2007
Signal detection in networks of spiking neurons with dynamical synapses	Aip conference proceedings	Articulo	2007
Topology induced instabilities in neural nets with activity-dependent synapses	New trends and tools in complex networks	Capítulo de libro	2007
Absorbing state phase transitions with a non-accessible vacuum	Journal of statistical mechanics: theory and experiment	Articulo	2006
Breakdown of hydrodynamics in a simple one-dimensional fluid	Physical review letters	Articulo	2006
Diffusion-limited deposition with dipolar interactions: fractal dimension and multifractal structure	Journal of chemical physics	Articulo	2006
Effects of fast presynaptic noise in attractor neural networks	Neural computation	Articulo	2006
Kardar-parisi-zhang interfaces bounded by long-ranged potentials	Physical review. e, statistical, nonlinear, and soft matter physics	Articulo	2006
Metastability, nucleation and noise-enhanced stabilization out of equilibrium	Physical review. e, statistical, nonlinear, and soft matter physics	Articulo	2006
Nonequilibrium anisotropic phases, nucleation, and critical behavior in a driven lennard-jones fluid	Physical review b: covering condensed matter and materials physics	Articulo	2006
Optimal network topologies: expanders, cages,	Journal of statistical mechanics: theory and		2006

ramanujan graphs, entangled networks and all that	experiment	Articulo	2006
Simplest piston problem. i. elastic collisions	Physical review. e, statistical, nonlinear, and soft matter physics	Articulo	2006
Stochastic resonance and scale invariance in nonequilibrium metastable states	European physical journal b. condensed matter and complex systems	Articulo	2006
Synchronization in network structures: entangled topology as optimal architecture for network design	Lecture notes in computer science	Articulo	2006
Sticky grains do not change the universality class of isotropic sandpiles	Physical review. e, statistical, nonlinear, and soft matter physics	Articulo	2006
The simplest piston problem ii: inelastic collisions	Physical review. e, statistical, nonlinear, and soft matter physics	Articulo	2006
Transmission tomography reconstruction using compound gauss-markov random fields and ordered subsets	Lecture notes in computer science	Articulo	2006
Understanding scale invariance in a minimal model of complex relaxation phenomena	Journal of statistical mechanics: theory and experiment	Articulo	2006
A non-order parameter langevin equation for a bounded kardar-parisi-zhang universality class	Journal of statistical mechanics: theory and experiment	Articulo	2005
Algorithms for identification and categorization	Aip conference proceedings	Articulo	2005
Chemical etching of a disordered solid: from experiments to field theory	Physica a. statistical mechanics and its applications	Articulo	2005
Discriminacion, generalizacion y clasificacion mediante automatas neuronales con ruido que induce depression sinaptica	Cedi 2005	Capítulo de libro	2005
Effects of static and dynamic disorder on the performance of neural automata	Biophysical chemistry	Articulo	2005
Entangled networks, synchronization, and optimal network topology	Physical review letters	Articulo	2005
Generic two-phase coexistence in nonequilibrium systems	European physical journal b. condensed matter and complex systems	Articulo	2005
Improved spectral algorithm for the detection of network communities	Aip conference proceedings	Articulo	2005
Instability of attractors in auto-associative networks with bio-inspired fast synaptic noise	Lecture notes in computer science	Articulo	2005
Integration of langevin equations with multiplicative noise and the viability of field theories for absorbing phase transitions	Physical review letters	Articulo	2005
Interacting slow and fast dynamics in precise spiking-bursting neurons	Lecture notes in computer science	Articulo	2005
Langevin description of critical phenomena with two symmetric absorbing states	Physical review letters	Articulo	2005
Lennard-jones and lattice models of driven fluids	Physical review. e, statistical, nonlinear, and soft matter physics	Articulo	2005
Mean-field limit of systems with multiplicative noise	Physical review. e, statistical, nonlinear, and soft matter physics	Articulo	2005
Modeling cooperative behavior on the social sciences	American institute of physics	Libros	2005
Non-perturbative fixed point in a non-equilibrium phase transition	Physical review letters	Articulo	2005
Nonequilibrium phase transitions in lattice models (new paperback edition)	Cambridge university press	Libros	2005

Strong shock waves and nonequilibrium response in a one-dimensional gas: a boltzmann equation approach	Physical review. e, statistical, nonlinear, and soft matter physics	Articulo	2005
Analysis of the interface in a nonequilibrium two-temperature ising model	Physical review. b, condensed matter	Articulo	2004
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1	Física estadística de los sistemas complejos: de los principios básicos a las fronteras de la física de la materia, ecología y neurociencia	Proyecto	1/1/14	3/31/18
2	Física estadística de los sistemas complejos: de los principios básicos a las fronteras de la física de la materia, ecología y neurociencia	Proyecto	1/1/14	12/31/17
3	Nfliquid - dynamics and structure in a network-forming liquid	Proyecto	1/26/12	3/25/14
4	Física estadística, teoría y simulación de sistemas complejos, y sus aplicaciones multi-disciplinarias	Proyecto	1/1/10	12/31/13
5	Fenómenos colectivos en sistemas complejos: teoría y computación	Proyecto	1/1/08	1/31/12
6	Estudio y modelización de los procesos de excitación involucrados en la transmisión sináptica y su relación con enfermedades neurodegenerativas	Proyecto	1/22/11	12/31/11
7	Ayuda a grupos p+i de la junta de andalucía	Proyecto	1/1/07	1/1/11
8	Fenómenos colectivos en sistemas, complejos: teoría y computación	Proyecto	1/1/07	6/1/10
9	Ugr -ibm (new york)	Contrato	1/1/09	1/1/10
10	Modelos físico-matemáticos de procesos cooperativos en el cerebro y sus aplicaciones en biología, neurociencia y computación	Proyecto	1/1/07	12/31/09
11	Física estadística de sistemas complejos: teoría y aplicaciones interdisciplinarias	Proyecto	1/31/05	12/31/08
12	Modelos físico-matemáticos de procesos cooperativos en el cerebro y sus aplicaciones en biología, neurociencia y computación	Proyecto	1/1/05	1/1/08
13	Física estadística y no lineal	Proyecto	1/1/07	12/31/07
14	Acción integrada España Italia 2004	Convenio	1/1/04	12/31/06
15	Organización del fisic (congreso nacional de física estadística) 2006	Proyecto	1/1/06	12/31/06
16	Estudio teórico de procesos biofísicos en sistemas neuronales y otros medios celulares: aplicación al estudio del procesamiento de información y a la formación de patrones	Contrato	1/16/01	11/15/06
17	Estudio teórico de procesos biofísicos en sistemas neuronales y otros medios celulares (contrato Ramón y Cajal)	Proyecto	1/16/01	11/15/06
18	Acción hispano-portuguesa 2004-2006 "superficies fuera del equilibrio"	Proyecto	1/1/04	6/30/06
19	Proyecto sobre física estadística de la materia condensada con la universidad de tetuán - agencia española de cooperación	Proyecto	1/20/04	12/31/05
20	Análisis teórico y práctico de autómatas neuronales con ruido sináptico y de sus posibles aplicaciones entidad financiadora:	Proyecto	1/1/01	9/30/05
21	Cecam	Proyecto	1/8/04	7/7/05
22	Granada seminar (modeling cooperative behavior in the social sciences)	Proyecto	1/1/05	6/30/05
23	Acción integrada con Italia - 2004	Proyecto	1/1/04	12/31/04
24	Análisis teórico y práctico de autómatas neuronales con ruido sináptico y de sus posibles aplicaciones - 2004	Contrato	1/1/04	12/31/04
25	Fenómenos cooperativos: teoría y aplicaciones interdisciplinarias	Proyecto	1/28/01	11/30/04
26	Aportación española al centro europeo de cálculo atómico y molecular (cecam) - 2003	Proyecto	1/11/03	6/10/04
27	Análisis teórico y práctico de autómatas neuronales con ruido sináptico y de sus posibles aplicaciones - 2003	Contrato	1/1/03	12/31/03
28	Aplicaciones científico-técnicas del ordenador y modelado de sistemas complejos	Contrato	1/1/02	12/31/03
29	Mecánica estadística de sistemas complejos	Proyecto	1/1/02	12/31/03
30	Stability and universality in classical mechanics	Contrato	1/1/01	12/31/03
31	Acción integrada con Italia - 2003	Proyecto	1/1/03	12/31/03
32	7º seminario multidisciplinar de Granada	Proyecto	1/19/02	6/18/03

33	Granada seminars on computational physics 1998 - 2003	Contrato	1/31/99	2/1/03
34	Acción integrada con italia - 2002	Proyecto	1/1/02	12/31/02
35	Análisis teórico y práctico de autómatas neuronales con ruido sináptico y de sus posibles aplicaciones - 2002	Contrato	1/1/02	12/31/02
36	Tmr programme of the european union, dg xii science, research & development	Proyecto	1/1/01	12/31/02
37	Seminar on computational physics	Proyecto	1/1/98	10/31/02
38	Fenómenos cooperativos en materia condensada	Proyecto	1/1/00	12/31/01
39	Molecular dynamics and monte carlo simulations of quantum and classical systems	Convenio	1/1/92	12/31/99
40	Fenómenos cooperativos en materia condensada	Proyecto	1/1/92	7/31/97
41	Phase transitions in disordered magnetic systems	Proyecto	1/1/89	12/31/92
42	Física estadística	Proyecto	1/1/89	6/30/92
43	Dynamics of systems far from equilibrium", acción integrada con la universidad de oporto	Proyecto	1/1/90	12/31/91
44	Fomento de la cooperación científica con países de la cee, programa sectorial de promoción general del conocimiento, programa science	Proyecto	1/1/89	12/31/91
45	"estudio de propiedades cooperativas en sistemas físicos", en colaboración con miembros departamento de física fundamental de la universidad de barcelona	Proyecto	1/1/86	8/30/89
46	"kinetics of phase transitions", en colaboración con grupos de las universidades de barcelona, islas baleares, new york, rutgers y temple	Proyecto	1/1/85	12/31/88
47	Contrato con fundación fulbright - comité conjunto hispano norteamericano para la cooperación científica	Proyecto	1/1/80	12/31/82
48	Correlaciones y fluctuaciones en sistemas fuera de equilibrio	Proyecto	12/31/03	
49	Acción integrada con portugal - 2003	Proyecto	1/1/03	
50	Challenges in molecular simulations: bridging the length and time scales gap, with cecam, lyon.	Proyecto	1/1/00	
51	Colaboración en física estadística y computacional con la universidad de tetuán	Proyecto	1/1/04	
52	Superficies fuera de equilibrio: depósitos de partículas magnéticas y transiciones de "wetting";	Proyecto	12/31/03	
53	Redes complejas y auto-organizacion: aplicaciones interdisciplinarias	Proyecto	2/1/10	
54	Proyecto excelencia:, redes complejas y aplicaciones en ecología biodiversidad y neurociencia	Proyecto	1/1/10	
55	Ugr - universidad de tetuán (marruecos)	Contrato	1/1/04	
56	Accion integrada: redes complejas y sus aplicaciones en bioinformatica	Proyecto	1/1/10	

Actividades 32

Titulo actividad	Entidad	Tipo	Fecha
Participación en: instituto carlos i de física teórica y computacional (universidad de granada)	Universidad de granada	Comité científico en sociedad ci	Jan 1, 1999
Participación en: miembro de la academia de ciencias de nueva york (nyas)	Nyas	Comité científico en sociedad ci	Sep 18, 1999
Participación en: unión internacional para la física pura y aplicada (iupap) (iupap)	Iupap	Comité científico en sociedad ci	Apr 28, 1999
Participación en: sociedad europea de física (eps), consejos emsps y de física computacional (eps)	Eps	Comité científico en sociedad ci	Feb 10, 1995
Participación en: real sociedad española de física (gefes y gefenol) (rsef)	Rsef	Comité científico en sociedad ci	Jan 1, 1988

Participación en: american physical society (aps) (aip)	Aip	Comité científico en sociedad ci	Oct 1, 1980
Physical review e (american physical society)		Comités científicos de revista	Jan 1, 2009
Participación en comité de revista: journal of physics a: mathematical and theoretical		Comités científicos de revista	Mar 1, 2000
Participación en comité de revista: physica a		Comités científicos de revista	Jan 1, 2006
Participación en comité de revista: physical review letters		Comités científicos de revista	Dec 1, 1999
Participación en comité de revista: physical review b		Comités científicos de revista	Oct 1, 2000
Participación en comité de revista: european physical journal b		Comités científicos de revista	Jan 1, 2004
Participación en comité de revista: physics letters. section a: general, atomic and solid state physics		Comités científicos de revista	Jan 1, 2006
Participación en comité de revista: neurocomputing		Comités científicos de revista	May 1, 2007
Participación en comité de revista: europysics letters		Comités científicos de revista	Jan 1, 2001
Participación en comité de revista: computer physics communications		Comités científicos de revista	Jan 1, 1997
Comite español de fisica estadística (fises)	Fises	Foros y comités internacionales	Nov 1, 2006
Física estadística y sistemas complejos		Colaboración con centros i+d	Sep 1, 2012
Colaboración con universidad de padua		Colaboración con centros i+d	Sep 1, 2015
Participación en: american physical society ()		Comité científico en sociedad ci	Mar 1, 1996
Participación en: american physical society ()		Comité científico en sociedad ci	Mar 15, 2005
Participación en: american association for the advancement of science (aaas)	Aaas	Comité científico en sociedad ci	Oct 1, 1988
Evaluador en panel de seguimiento de proyectos mineco		Experiencia en evaluación	Jan 1, 2015
Mineco		Experiencia en evaluación	Jan 1, 2014
Xxi congreso de física estadística (fises17)		Foros y comités internacionales	Mar 30, 2017
li jornadas de investigadores en formación: fomentando la		Foros y comités	May 17,

interdisciplinariedad (jiffi)	internacionales	2017
Research foundation flanders ¿ fwo (http://www.fwo.be)	Experiencia en evaluación	Jan 3, 2011
Agencia nacional de promoción científica y tecnológica, ministerio de ciencia, tecnología e innovación productiva (argentina)	Experiencia en evaluación	Oct 24, 2014
Referee for the journal 'physica a'	Experiencia en evaluación	Mar 9, 2015
Referee for the journal 'journal of physics a: mathematical and theoretical'	Experiencia en evaluación	Jun 15, 2016
Referee for the journal 'europhysics letters'	Experiencia en evaluación	Dec 1, 2017

Colaboradores 37

- JOAQUÍN MARRO BORAU (157)
- PEDRO LUIS GARRIDO GALERA (146)
- JOAQUIN JAVIER TORRES AGUDO (86)
- MIGUEL ANGEL MUÑOZ MARTINEZ (80)
- PABLO IGNACIO HURTADO FERNANDEZ (51)
- SAMUEL JOHNSON (31)
- FRANCISCO DE LOS SANTOS FERNÁNDEZ (25)
- JUAN ANTONIO BONACHELA FAJARDO (18)
- ELVIRA ROMERA GUTIÉRREZ (16)
- LUCA DONETTI (13)
- JESÚS SÁNCHEZ-DEHESA MORENO-CID (11)
- CARLOS PÉREZ ESPIGARES (10)
- MANUEL DÍEZ MINGUITO (8)
- Paula Villa Martín (6)
- Pablo Villegas Góngora (4)
- Ana Paula Millán Vidal (3)
- RAFAEL RUBIO DE CASAS (3)
- ANGEL RICARDO PLASTINO (2)
- BLANCA BIEL RUIZ (2)
- JUAN B. ROLDAN ARANDA (2)
- LORENZO LUIS SALCEDO MORENO (2)
- Nicolás Tizón Escamilla (2)
- PABLO SANCHEZ MORENO (2)
- RAFAEL JOSÉ YÁÑEZ GARCÍA (2)
- ALBERTO PRIETO ESPINOSA (1)
- ALEJANDRO ZARZO ALTAREJOS (1)
- ANTONIO LOPEZ FERNANDEZ (1)
- ANTONIO MIGUEL MORA GARCÍA (1)
- Daniel Manzano Diosdado (1)
- JOSE LUIS BERNIER VILLAMOR (1)
- JUAN CARLOS ANGULO IBÁÑEZ (1)
- Juan Carlos Bolívar Fernández (1)
- MARIA ISABEL GARCÍA ARENAS (1)
- MARÍA CARMEN GARCÍA RECIO (1)
- Octavio Héctor Castaños Garza (1)

- PEDRO ANGEL CASTILLO VALDIVIESO (1)
- RAFAEL MOLINA SORIANO (1)