

YAMIR MORENO VEGA, PhD.
CURRICULUM VITAE

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EDUCATION

- PhD. in Physics (Summa Cum Laude), Department of Theoretical Physics, University of Zaragoza, Spain. From October 1997 to September 2000. Dissertation: “*Some Stochastic Models of Fracture in Heterogeneous Systems*”.
- Master in Physics (Summa Cum Laude), Faculty of Physics, University of Havana, Cuba. December 1996. Dissertation: “*Criticality in Fragmentation Processes*”.
- Graduation (Laurea) in Physics (Summa Cum Laude), Faculty of Physics, University of Havana, Cuba. From September 1988 to April 1993.

PROFESSIONAL EXPERIENCE

February 2014- Present	Elected Vice-President, Complex Systems Society.
June 2013- Present	Board of the NetSci Society.
October 2012- Present	Elected Member of the Executive Committee and Council of the Complex Systems Society.
February 2011- Present	Scientific Secretary, Institute for Biocomputation and Physics of Complex Systems (BIFI), University of Zaragoza, 50018, Spain.
February 2010- Present	Research Professor, Institute for Biocomputation and Physics of Complex Systems (BIFI) & Department of Theoretical Physics, Faculty of Sciences, University of Zaragoza, 50018, Spain.
February 2005- February 2010	Ramón y Cajal Senior Research Scientist, Institute for Biocomputation and Physics of Complex Systems & Department of Theoretical Physics, Faculty of Sciences, University of Zaragoza, 50018, Spain.

February 2003- February 2005	Research Scientist, Department of Theoretical Physics & Institute for Biocomputation and Physics of Complex Systems, University of Zaragoza, Spain.
September 2000- January 2003	Postdoctoral Fellow, The Abdus Salam International Centre for Theoretical Physics Condensed Matter Group, Trieste, Italy.
September 1997- Sept. 2000	Associate Professor, Department of Physics, Technological University of Havana, Cuba.
September 1994 – August 1997	Adjunct Assistant Professor & Associate Researcher, Centre of Renewable Energetic Technologies, Havana, Cuba.
September 1994 – August 1997	Assistant Professor, Department of Physics, Technological University of Havana, Cuba.

HONORS and AWARDS

- Elected Vice-President of the Complex Systems Society. Since February 2014.
- Member of the Future and Emerging Technologies (FET) Advisory Group to the European Commission H2020 Research Program. Since November 2013.
- Awarded the condition of ISI Fellows (Institute for Scientific Interchange, Turin, Italy). Since June 2013.
- Board of the NetSci Society. Since June 2013.
- Advisory Board Member of the WHO Collaborative Center “Complexity Sciences for Health Systems” (CS4HS), which is based on the Division of Mathematical Modeling at the University of British Columbia Centre for Disease Control, in Vancouver, British Columbia, Canada. Since March 2013.
- Editorial Board member of the Journal of Complex Networks, Oxford University Press. Since November 2012.
- Elected member of the Executive Committee of the Complex Systems Society. Since October 2012.
- Elected member of the Council of the Complex Systems Society. Since October 2012.
- Member of the Editorial Board of Scientific Reports (NPG). Since October 2011.
- Professor at the Summer School on Statistical Physics of Complex and Small Systems, organized by the Royal Spanish Physical Society, Palma de Mallorca, Spain, 2011.
- Scientific Secretary, Institute for Biocomputation and Physics of Complex Systems (BIFI), University of Zaragoza, Spain. Since February 2011.
- Academic Editor of PLoS ONE. Since January 2011.
- ISI WoK Highly Cited Scientist (i.e, within the top 1% of most cited scientists).
- Member of the Board and Steering Committees of the Institute for Biocomputation and Physics of Complex Systems (BIFI), University of Zaragoza. Since 2007.

- Head of the Research Area: “*Complex Systems and Networks*”, Institute for Biocomputation and Physics of Complex Systems (BIFI), University of Zaragoza. Since 2005.
- Outstanding American Physical Society Reviewer (2009).
- Article “Evolutionary Game Dynamics in a Growing Structured Population”, *New Journal of Physics*, **11**, 083031 (2009), selected “Best of 2009” by IoP.
- Plenary Speaker for the prestigious Conference Cycles of Cosmo-Caixa. Barcelona, October 2009. Subject: Natural Selection and Evolution.
- Outstanding Europhysics Letters Reviewer (2008).
- Member of the European Physical Society.
- Member of the European Complex Systems Society.
- Ramón y Cajal Fellow, 2005-2010.
- Guest Editor for the Special Issue of the New Journal of Physics “*Complex Networked Systems: Theory and Applications*”.
- Member of the Editorial Board of the Journal “*Nova Scientia*”.
- Editor of the Journal of Complex Systems in Science (2010-).
- PhD Fellowship from the Spanish Ministry of Foreign Affairs, 1997-2000.
- 1997 Outstanding Teaching Award of the Minister for Education, Havana, Cuba.

PROFESSIONAL SERVICES

- Member of the Future and Emerging Technologies (FET) Advisory Group to the European Commission H2020 Research Program. 2013-
- Member of the Computational Social Sciences’ Reviewer Panel for the Academy of Sciences of Finland. 2014.
- Satellite Chair of the NetSci 2014, Berkeley, California, June 2-6, 2014.
- Member of the Reviewer Panel for the selection of an IBS’ (Institute for Basic Sciences) Institute Director. Seoul, Korea.
- I act regularly as Referee for more than 25 International Journals, including: *Nature*, *Nature Physics*, *Proceedings of the National Academy of Sciences USA (PNAS)*, *Physical Review Letters*, *Physical Review E*, *Mathematical Biosciences*, *Proceedings of the Royal Society: Biological Sciences*, *Europhysics Letters*, *BMC Genomics*, *BMC Bioinformatics*, *New Journal of Physics*, *Journal of Theoretical Biology*, *PLoS One*, etc.
- Reviewer for the Spanish Ministry of Education and Science (Project proposals and under & postgraduate fellowships).
- Reviewer for the French National Research Agency (ANR).
- Reviewer for the European Commission FP7 Program.
- Reviewer for The Netherlands Organization for Scientific Research (NWO).
- Reviewer for the European Commission FP6 and FP7 Programs.
- Referee for the European Commission in the Program: NEST PATHFINDER (Tackling Complexity in Science, 2006).

- Referee and Member of the Hearing Panel for the European Commission Call FP7-ICT-2007-3 “Science of Complex Systems for Socially Intelligent ICT”.
- Co-Editor of the AIP Conference Proceedings, volume 851, (2006).
- Co-Editor of the “Handbook on Biological Networks”, World Scientific, (December, 2009).

CONFERENCE ORGANIZATION

- Satellites Chair of the NetSci 2014 Conference, Berkeley, California, June 2-6, 2014.
- Co-organizer of the 2013 ECCS Satellite Meeting "Modeling of Disease Contagion Processes" (together with V. Colizza, C. Poletto, and S. Meloni).
- Co-organizer of the 2013 NetSci Satellite Meeting "Dynamic Networks: Theory and Applications in Information and Communication Networks" (together with F. Schweitzer and Maarten van Steen).
- Member of the Program Committee of the ECCS '12 Satellite Meeting: Data-Driven Modeling of Contagion Processes - Brussels, September 5th, 2012.
- Member of the Program Committee of the WWW2012 Conference. Lyon, France. April 2012.
- Member of the Scientific Committee of the Conference NET-WORKS11, El Escorial, Madrid, Spain. 2011.
- Chairman of the International Conference: “BIFI 2010 – IV International Congress: Networks, A Framework for Cross-Disciplinary Applications”, Zaragoza, Spain, 2010.
- Member of the Scientific & Organizing Committees of the Conference NET-WORKS10, University of Zaragoza. Spain. 2010.
- Member of the Program Committee of the “IEEE International Workshop COMPENG 2010 - Complexity in Engineering”, Rome, Italy (Feb 22-24, 2010).
- Member of the Organizing Committee of the IV National BIFI Conference, University of Zaragoza. Spain. 2009.
- Member of the Scientific Committee of the BCNet Workshop 2008, Barcelona, Spain, December 2008.
- Member of the Scientific Committee of the Conference NET-WORKS08, University of Navarra, Spain. 2008.
- Member of the Technical Program Committee of the International Conference “BIONETICS 2007: 2nd International Conference on Bio-Inspired Models of Network, Information, and Computing Systems”, Budapest, Hungary (10-13 Dec 2007).
- Member of the Scientific Committee of the Conference NET-WORKS07, University of Rey Juan Carlos, Aranjuez, Spain. 2007.
- Member of the Organizing Committee of the III National BIFI Conference, University of Zaragoza. Spain. 2007.
- Chairman of the International Conference: “BIFI 2006 – II International Congress: From Physics to Biology: The Interface between Experiment and Computation”, Zaragoza, Spain.
- Member of the Organizing Committee of the Neuroscience Meeting Series (once a year, local meetings to promote the exchange of knowledge among researchers of different fields within the subject of Neuroscience, University of Zaragoza, Spain).

MAJOR INVITED AND CONTRIBUTED TALKS

- Contributed Talk, "Dynamic Systems: From Statistical Mechanics to Engineering Applications". Zurich, Switzerland, January 2014.
- Plenary Invited Speaker at the European Conference on Complex Systems (ECCS 2013), Barcelona, Spain. September 2013.
- Invited Speaker at ECCS 2013 Satellite "Collective Contagion", Barcelona, Spain. September 2013.
- Invited Speaker at ECCS 2013 Satellite "Global Computing for our Complex Hyper-connected World", Barcelona, Spain. September 2013.
- Invited Speaker at the Second Symposium of the Institute for Basic Science "Towards a Theoretical Description of Nonlinear Dynamics in Complex Systems", Seoul, Korea. August 2013.
- Contributed talk at the "Workshop on Time-dependent and Multiplex Networks", University of Oxford, Oxford, UK. July 2013.
- ISI Fellows award from the ISI Foundation, Turin, Italy. The ceremony took place on June 27th, 2013, followed by the conference "The Being of Science" in which all ISI Fellows shared their vision with the public and gave an invited talk.
- Invited Lecturer (course "Networks: Structure and Diffusion Dynamics") at the Summer School "Emergent Dynamics of Discrete & Stochastic Multiscale Systems: analysis & simulation", TU Eindhoven, The Netherlands. June 2013.
- Invited Speaker at the Workshop "Uncertainty in Interactions Networks", Bath University, UK. June 2013.
- Invited Speaker at the Final Conference of Cyberemotions, Warsaw, Poland. January 2013.
- Invited Lecturer at the School "Complex Networks in Action", University of Catania, Catania, Italy. September 2012.
- Invited participant to the Workshop "Complex Systems Analysis: Advancing Health Systems Policy Design and Planning". Bellagio, Italy, September 2012.
- Invited Speaker at the National Conference "Nolineal 2012". University of Zaragoza, Zaragoza, Spain. June 2012.
- Keynote Speaker at "XXXIII Annual Meeting of the Neurology Society of the Basque Country", Villabuena de Álava, Spain. March 2012.
- Invited Speaker at the "V BIFI International Conference: Protein Targets, Discovery of Bioactive Compounds", Zaragoza, Spain. February 2012.
- Keynote Speaker at "Third Course on Network Science", organized by the Orange Chair at UPM, Madrid, Spain. 2011.
- Invited Speaker at "An Evolutionary Journey II", Universidad Carlos III, Madrid. 2011.
- Keynote Speaker at Workshop "Sinergia", organized by Arts Santa Monica, Barcelona, Spain. 2011.
- Keynote Speaker at Workshop "Robustness of Complex Networks", Delft, The Netherlands. 2010.
- Invited Talk, STATPHYS 2010 Satellite Meeting: New Frontiers in Complex Networks. Seoul, Korea. 2010.
- Invited Talk, Complex Energy Landscapes: Computational and Statistical Methods for Soft Matter. ZCAM, Zaragoza, Spain. 2010.
- Contributed Talk, Statistical Physics and Game Theory. Aland, Finlandia. 2009.

- Invited Talk, Complejidad: Nuevos retos en la Ciencia y la Tecnología. Universidad Rey Juan Carlos, Spain. 2009.
- Invited Talk, International Workshop “Evolution and Co-evolution”. Universidad Carlos III, Madrid, Spain. 2009.
- Contributed Talk, NET-WORKS 08. Universidad de Navarra, Pamplona. 2008.
- Plenary Speaker, Non-Linear 2008. Universidad Politécnica de Cataluña, Barcelona. 2008.
- Contributed Talk, Statistical Physics FISES 08. Universidad de Salamanca, Spain. 2008.
- Invited Talk, Bio-inspired Complex Networks in Science and Technology: From Topology to Structure and Dynamics. Max Planck Institute, Dresden, Germany. 2008.
- 2 Invited Talks, CNET-07 Workshop on Complex Networks. University of Aveiro, Aveiro, Portugal. 2007.
- Plenary Speaker, NET-WORKS-07. Universidad Rey Juan Carlos, Aranjuez, Spain. 2007.
- Contributed Talk, Non-Linear 2007. Universidad de Castilla la Mancha, Ciudad Real. 2007.
- Invited Talk, BIOWIRE-07: Workshop on Bio-inspired design of Networks. Computer Lab, Cambridge University, UK. 2007.
- Invited Talk, Dynamics on Complex Networks and Applications. Max Planck Institute, Dresden, Germany. 2006.
- Invited Talk, Workshop on Networks and Dynamical Processes: Epidemics, Social Contacts and Percolation. University of Bath, U.K. 2005.
- Plenary Speaker, XIX Congress of Differential Equations y Applications & IX Congress of Spanish Society of Applied Mathematics. Universidad Carlos III, Madrid. 2005.
- Invited Talk, FISES-05. Madrid, Spain. 2005.
- Invited Talk, Workshop on the Structure and Function of Complex Networks. International Centre for Theoretical Physics (ICTP), Trieste, Italy. 2005.
- Contributed Talk, Workshop on Synchronization of Complex Networks. University of Barcelona, Barcelona, Spain. 2004.
- Invited Talk, DIMACS Working Group Meeting on Analogies between Computer Viruses and Immune Systems and Biological Viruses and Immune Systems. Rutgers University, NJ, USA. 2002.

MOST RELEVANT INVITED SEMINARS

- Diffusion processes on complex networked systems. Invited seminar given at the Department of Mathematics, Queen Mary University, London, UK. July 2013.
- Online Networks and the Diffusion of Protests. Invited seminar given at ETH Zurich, Switzerland (December 2012).
- Techno-social networks and the diffusion of collective social phenomena. Talk addressed at the “Scuola Lagrange Sistemi Complessi”, ISI Foundation, Turin, Italy (July 2012).
- Online Networks and the Diffusion of Protests. Dep. of Biomedical Engineering and Computational Science (BECS), Aalto University, Espoo, Finland (April 2012).
- The 15-M Movement and the Social Media. Talk addressed to a general public at Ibercaja Zentrum, Zaragoza, 2011.

- The Dynamics of Protest Recruitment through an Online Network. Talk addressed to a general public at Cosmo-Caixa Madrid, 2011.
- Transcriptional regulatory network and epidemiology of Tuberculosis. School of Informatics, Indiana University, Bloomington, USA (November 2010).
- Complex Networks: From the Biomolecular to the Social, Faculty of Medicine, University of Zaragoza, Spain (April 2010).
- The Evolution of Evolutionary Theory, Invited Conference on Natural Selection, CosmoCaixa, Barcelona, Spain (October 2009).
- Evolutionary Dynamics on Graphs. ETH Zurich, Switzerland. (November, 2008).
- Evolutionary Game Dynamics on Networks. ISI Foundation, Turin, Italy. (August, 2008).
- Complex Networks: The Case of Epidemic Spreading. Department of Mathematics, Universidad Rey Juan Carlos, Móstoles, Madrid, Spain. (October, 2007).
- Paths to Synchronization in Complex Networks. Department of Mathematics, Bath Institute for Complexity, University of Bath, U.K. (September, 2006).
- Paths to Synchronization in Complex Networks. Complexity Research Group, BT Exact, British Telecom Laboratories, Ipswich, U.K. (August, 2006).
- The Structure of P2P Networks. Universidad Rovira i Virgili, Tarragona, Spain. (March, 2006).
- Complex Networks in Biology. Institute for Biocomputation and Physics of Complex Systems (BIFI), (April, 2005).
- Traffic Handling and Covering Problems in Communication Networks. Complexity Research Group, BT Exact, British Telecom Central Laboratories, Martlesham, Suffolk, U.K. (March, 2005).
- Dynamics of Complex Gene Expression Networks. University of Rome “La Sapienza”, Rome, Italy. (February, 2004).
- Synchronization of Coupled Oscillators in Complex Networks. Donostia International Physics Center, Universidad del País Vasco, San Sebastián, Spain. (January, 2004).
- Complex Networks in Nature: Structure and Applications. Donostia International Physics Center, Universidad del País Vasco, San Sebastián, Spain. (January, 2004).
- The Use of Rumor Spreading Algorithms for Fast and Efficiency Communication in Complex Technological Networks. Complexity Research Group, BT Exact, British Telecom Central Laboratories, Martlesham, Suffolk, U.K. (August, 2003).
- Transport Process in Complex Networks. Department of Condensed Matter, Faculty of Sciences, University of Zaragoza, Spain (February, 2003).
- Resilience of Graphs with Arbitrary Degree Correlations. The Abdus Salam International Centre for Theoretical Physics, Trieste, Italy (December, 2002).

FUNDING

- “*Mathematical framework for multiplex networks (PLEXMATH)*”. European Union. Project 317614 under call FP7-ICT-2011-8. 2012-2015. PI. 350.000 €.
- “*Foundational Research on multilevel complex networks and systems (MULTIPLEX)*”. European Union. Project 317532 under call FP7-ICT-2011-8. 2012-2016. PI. 310.000 €.
- “*A Model for the Identification of Unique Clients and Influential Users of Mobile Phones*”. Project Granted by Applied Advanced Analytics. 2011. PI. 20.400 €.
- “*Urban Mobility at Zaragoza*”. Institute BIFI. PI. 6.400 €.

- “*Networks, Biophysics and Nonlinear Science*”. Ministry of Science and Innovation. (MICINN) Project Number: FIS2011-25167. 2012-2014. Co-PI. 259.000 €.
- “*Structure and Dynamics of Natural and Manmade Complex Systems*”. Government of Aragon, DGA. Project number FMI22/10. 2011. PI. 9.300 €.
- “*Thematic Network: Dynamics and Synchronization in Networks*”. Ministry of Science and Innovation. (MICINN) Project Number: FIS2010-09832-E. 2010-2011. PI of Zaragoza node. 12.000 €.
- “*Tackling Complexity in Physical and Biological Systems: A Computational Approach*”. Ministry of Science and Innovation. (MICINN) Project Number: FIS2009-13364-C02-01/FIS. 2010-2012. Co-PI. 86.000 €.
- “*Networks: A Framework for Cross-Disciplinary Applications*”. Ministry of Science and Innovation, DGA and University of Zaragoza. 2010. PI. 9.500 €.
- COST action “Physics of Conflict and Cooperation”. European Union. 2009-2011. Co-PI (representative of Zaragoza Group).
- “*Systems Biology of Mycobacterium tuberculosis PhoP: Signaling, Cellular Cycle and Epidemiological Interactions*”. DGA, Project Number: PI038/08. 2008-2010. PI. 40.000 €.
- “*Dynamics and Structure of Complex System*”s. Ministry of Science and Innovation. (MICINN) Project Number: FIS2008-01240/FIS. 2009-2011. Co-PI. 210.000 €.
- *Thematic Network: “Dynamics and Collective Phenomena in Socio-Economic Systems”*. Ministry of Science and Innovation. (MICINN) Project Number: FIS2008-01155-E/FIS. 2008-2009. Co-PI. 12.000 €.
- Grant to the Consolidated Group FENOL. Government of Aragon, (DGA). 2008-2009. Co-PI. 19.000 €.
- “*Complexity in Biological and Social Systems*”. DGICYT FIS2006-12781-C02-01. 2007-2009. Co-PI. 45000 €.
- “*Global Approach to Brain Activity (GABA)*”. European Union, NEST Pathfinder Call. 2007-2009. PI (subcontracted node). 20.000 €.
- “*Modeling Wireless Communication Networks*”. DGA (MI06/2005). 2006. PI. 9.200 €.
- *Thematic Network: “Applications of Statistical and Non-Linear Physics to Economy and Social Sciences”*. Ministry of Education and Science. (MEC). 2005-2007. Co-PI. 12.000 €.
- “*Theory and Simulation of Complex Systems 2*”. Ministry of Education and Science. MEC FIS2005-00337. 2006-2008. Co-PI. 83.000 €.
- Grant to the Consolidated Group FENOL. Government of Aragon, (DGA). 2005-2007. Co-PI. 18.000 €.
- “*Complex Networks and their Applications in Physics, Biology and Information Technologies*”. Ramón y Cajal Grant, Ministry of Education and Science. Project Number: RyC-2004-001210. PI. 8.000 €.
- “*Emergent and Cooperative Phenomena in Complex Systems between Physics and Biology*”. DGICYT FIS2004-05073-C04-01. 2005-2006. Co-PI. 40.000 €.
- “*Physical Models of Many Body Systems: Applications in Geophysics*”. DGICYT Grant (Project Number. BFM 2002-01798). 2003-2005. Co-PI. 36.000 €.

PUBLICATIONS

- My scientific production amounts to 135+ peer-reviewed publications with a total of **6380+** citations (**h-index=33**, as of February, 2014; 41 from Google Scholar). **ISI Highly Cited Scientist** (i.e., within the top 1% of scientists in Physics by number of citations). Relevant contributions include journals like Physics Reports, Proc. Nat. Acad. Sci. USA, Phys. Rev. Lett., Phys. Rev. X, Phys. Rev. E, Europhys. Lett., and PLoS One. My scientific production includes the most highly cited Physics Reports in the last 10 years (**2520+ citations**). Citation record can be found at <http://www.researcherid.com/rid/A-1076-2009>.

EDITED BOOKS and BOOK CHAPTERS:

1. S. González-Bailón, J. Borge-Holthoefer and Y. Moreno, “*Online Networks and the Diffusion of Protest*”, Chapter contribution to Analytical Sociology: Norms, Actions and Networks, in press, 2014.
2. J. Borge-Holthoefer, S. González-Bailón, A. Rivero, and Y. Moreno, “*The Spanish Indignados Movement: Time dynamics, geographical distribution, and recruitment mechanisms*”, Chapter contribution to Online Collective Action, in press, 2014.
3. E. Cozzo, J. Sanz, and Y. Moreno, “*Dynamics of Biomolecular Networks*”. Chapter contribution to the Encyclopedia of Molecular Cell Biology and Molecular Medicine. (Edited by Robert A. Meyers), ISBN: 978-3-527-32607-5 (Wiley-VCH, Weinheim, 2012).
4. J. Poncela, J. Gomez-Gardenes, L. M. Floría, and Y. Moreno, “*Growing Networks Driven by the Evolutionary Prisoner’s Dilemma Game*”. Chapter contribution to the Handbook of Optimization in Complex Networks. Springer Optimization and Its Applications, Vol. 57, Thai, My T.; Pardalos, Panos M. (Eds.) 2012.
5. S. Meloni, A. Arenas, S. Gómez, J. Borge-Holthoefer, and Y. Moreno, “*Modeling Epidemic Spreading in Complex Networks: Concurrency and Traffic*”. Chapter contribution to the Handbook of Optimization in Complex Networks Springer Optimization and Its Applications, Vol. 57, Thai, My T.; Pardalos, Panos M. (Eds.) 2012.
6. A. H. Rodríguez, and Y. Moreno, “*Dyadic and Social Influence on the Axelrod Model with Clever Mass Media*”, Chapter contribution to the collection “Mass Media: Coverage, Objectivity and Changes”, Nova Publisher, (2010).
7. “*Handbook on Biological Networks*” Editors: S. Boccaletti, V. Latora and Y. Moreno, World Scientific, Singapore. 450pp (approx.), December 2009. ISBN 978-981-283-879-7.
8. Y. Moreno, “*Complex Network Modeling: A New Approach to Neurosciences*”, Chapter contribution in: “Coordinated Activity in the Brain: Measurements and Relevance to Brain Function and Behavior”, Springer Verlag, (2009). Hardcover (ISBN: 978-0-387-93796-0).
9. R. Sinatra, J. Gomez-Gardenes, Y. Moreno, L.M. Floría, D. Condorelli and V. Latora, “*Structural and Dynamical Properties of Cellular Regulatory Networks*”, in “Statistical Mechanics of Cellular Systems and Processes”, Edited by M.H. Zaman, Cambridge University Press, (2009). Hardback (ISBN-13: 9780521886086).
10. L. M. Floría, Y. Moreno, and J. Gomez-Gardenes, “*The Modeling of Biological Networks*”, Physics of Complex Systems and Life Sciences, Book Chapter, Edited by M. A. F. Sanjuan, (Research Signpost, 2007).

JOURNAL ARTICLES:

11. E. Cozzo, M. Kivela, M. De Domenico, A. Sole-Ribalta, A. Arenas, S. Gómez, M. A. Porter, and Y. Moreno, “Clustering Coefficients in Multiplex Networks”, submitted for publication.
12. S. González-Bailón, N. Wang, A. Rivero, J. Borge-Holthoefer and Y. Moreno, “Assessing the Bias in Communication Networks Sampled from Twitter”, *Social Networks*, in press (2014).
13. R. A. Baños, J. Borge-Holthoefer, Y. Moreno, and S. González-Bailón, “Diffusion dynamics with changing network composition”, *Entropy* **15**, 4553-4568 (2013).

14. R. Gutiérrez, R. Sevilla-Escoboza, P. Piedrahita, C. Finke, U. Feudel, J. M. Buldú, G. Huerta-Cuellar, R. Jaimes-Reátegui, Y. Moreno, and S. Boccaletti, "Generalized synchronization in relay systems", *Physical Review E* **88**, 052908 (2013).
15. E. Cozzo, R. A. Baños, S. Meloni, and Y. Moreno, "Contact-based social contagion in multiplex networks", *Physical Review E (RC)* **88**, 050801 (2013).
16. J. Sanz, E. Cozzo, and Y. Moreno, "Data reliability in complex directed networks", *Journal of Statistical Mechanics: Theory and Experiment*, **P12008** (2013).
17. J. A. Molina, J. I. Giménez-Nadal, J. A. Cuesta, C. Garcia-Lazaro, Y. Moreno, and A. Sánchez, "Gender differences in cooperation: experimental evidence on high school students", *PLoS ONE* **8**(12): e83700 (2013).
18. P. Piedrahita, J. Borge-Holthoefer, Y. Moreno and A. Arenas, "Modeling self-sustained activity cascades in socio-technical networks", *EPL* **104**, 48004 (2013).
19. Z. Wang, C.-Y. Xia, S. Meloni, C.-S. Zhou and Y. Moreno, "Impact of social punishment on cooperative behavior in complex networks", *Scientific Reports* **3**, 3055 (2013).
20. M. De Domenico, A. Sole-Ribalta, E. Cozzo, M. Kivela, Y. Moreno, M. A. Porter, S. Gómez, and A. Arenas, "Mathematical formulation of multi-layer networks", *Physical Review X* **3**, 041022 (2013).
21. C. Gracia-Lázaro, L. M. Floría, J. Gómez-Gardeñes and Y. Moreno, "Cooperation in changing environments: Irreversibility in the transition to cooperation in complex networks", *Chaos, Solitons and Fractals* **56** 188 (2013).
22. C. Poletto, S. Meloni, V. Colizza, Y. Moreno and A. Vespignani, "Host mobility drives pathogen competition in spatially structured populations", *PLoS Computational Biology* **9**(8): e1003169 (2013).
23. R. A Baños, J. Borge-Holthoefer and Y. Moreno, "The role of hidden influentials in the diffusion of online information cascades", *EPJ Data Science* **2**:6 (2013).
24. J. Borge-Holthoefer, R. A. Baños, S. González-Bailón and Y. Moreno, "Cascading Behavior in Complex Socio-technical Networks", *Journal of Complex Networks* **1**, 3-24 (2013).
25. S. González-Bailón, J. Borge-Holthoefer, and Y. Moreno, "Broadcasters and Hidden Influentials in Online Protest Diffusion", *American Behavioral Scientist* **57**, 943-965 (2013).
26. M. Perc, J. Gómez-Gardeñes, A. Szolnoki, L. M. Floría and Y. Moreno, "Evolutionary dynamics of group interactions on structured populations – A review", *Journal of the Royal Society Interface* **10**, 20120997 (2013).
27. S. Gómez, A. Díaz-Guilera, J. Gómez-Gardeñes, C. J. Pérez-Vicente, Y. Moreno, and A. Arenas, "Diffusion dynamics on multiplex networks", *Physical Review Letters* **110**, 028701 (2013).
28. J. Borge-Holthoefer, S. Meloni, B. Gonçalves, and Y. Moreno, "Emergence of influential spreaders in modified rumor models", *Journal of Statistical Physics* **151**, 383 (2013).

29. C. Y. Xia, Z. Wang, J. Sanz, S. Meloni, and Y. Moreno, "Effects of delayed recovery and nonuniform transmission on the spreading of diseases in complex networks", *Physica A* **392**, 1577 (2013).
30. L. Prignano, Y. Moreno, and A. Díaz-Guilera, "Exploring complex networks by means of adaptive walkers", *Physical Review E* **86**, 066116 (2012).
31. J. Gómez-Gardeñes, C. Gracia-Lázaro, L. M. Floría and Y. Moreno, "Evolutionary Dynamics on Interdependent Networks", *Physical Review E* **86**, 056113 (2012).
32. J. Iranzo, L. M. Floría, Y. Moreno, and A. Sánchez "Empathy emerges spontaneously in the ultimatum game: Small groups and networks", *PLoS ONE* **7**, e43781 (2012).
33. E. Cozzo, A. Arenas, and Y. Moreno, "Stability of Boolean Multilevel Networks", *Physical Review E* **86**, 036115 (2012).
34. J. Sanz, L. M. Floría, and Y. Moreno, "Dynamics of Persistent Infections in Homogeneous Populations". *International Journal of Bifurcation and Chaos* **22**, 1250164 (2012).
35. C. Gracia-Lázaro , A. Ferrer , G. Ruíz , A. Tarancón , J. A. Cuesta , A. Sánchez, and Y. Moreno, "Heterogeneous networks do not promote cooperation when humans play a Prisoner's Dilemma", *Proceedings of the National Academy of Sciences USA* **109**, 12922-12926 (2012).
36. J. Borge-Holthoefer, Y. Moreno, and A. Arenas, "Topological vs. Dynamical Robustness in a Lexical Network". *International Journal of Bifurcation and Chaos* **22**, 1250157 (2012).
37. J. Sanz, E. Cozzo, J. Borge-Holthoefer, and Y. Moreno, "Topological effects of data incompleteness of gene regulatory networks", *BMC Systems Biology* **6**:110 (2012).
38. S. Meloni, J. Gomez-Gardenes, V. Latora, and Y. Moreno, "Effects of degree heterogeneity in flow fluctuations on complex networks", *International Journal of Bifurcation and Chaos* **22**, 1250170 (2012).
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PEER- REVIEWED PROCEEDINGS:

128. M. Nekovee and Y. Moreno, "*Rumor-like Information Dissemination in Complex Computer Networks*", Proceedings from the Fifth International Conference on Complex Systems), Springer Complexity Series, (2009).
129. Y. Moreno, "*The Emergence of Collective Behavior in Complex Topologies*", Proceedings of the Conference NET-WORKS'07, 97 (2007).
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131. O. Sotolongo, Y. Moreno, E. López-Pages, F. Barreras. "*Fractal Viewpoint in Transition to Scaling in Atomization*", Proceedings of the Joint Meeting of the Sections of The Combustion Institute, Madeira, Spain. 1996.
132. J. J. Llovera, Y. Moreno, A. Sotto. "Bubble Nucleation in Water/Gasoil Emulsions. *The Influence of Water Fraction and the Surfactant Fraction*", Proceedings of III Caribbean Congress on Fluid Dynamics and III Latin-American Symposium on Fluid Mechanics, Caracas, Venezuela, 1995.
133. Y. Moreno, J. J. Llovera, O. Sotolongo. "*Droplet Size Distribution Function in W/O Emulsions*", Proceedings of III Caribbean Congress on Fluid Dynamics and III Latin-American Symposium on Fluid Mechanics, Caracas, Venezuela, 1995.

TEACHING EXPERIENCE

- **University of Zaragoza, Spain:**

- "Computational Physics", Undergraduate Course. Spring-Summer of the Academic Years 2011-2012, 2012-2013, 2013-2014.
- "Chaos and Complex Systems", Undergraduate Course. Spring of the years 2005, 2006, 2007, 2008, 2009, 2010, 2011, 2012.

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- “Atomic Physics”, Undergraduate Course for Chemical Engineers. Yearlong course, 1996-1997.

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- Pablo Piedrahita, Started September 2012.
- Emanuele Cozzo, Dissertation expected: Spring 2015.
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- Julia Poncela Casasnovas, “Evolutionary Games in Complex Topologies: Interplay between Structure and Dynamics”. Date of Dissertation: October 20, 2010. Mark: Summa Cum Laude. Currently, she is a Postdoctoral fellow in the group of Prof. Luis N. Amaral, Northwestern University, USA.
- Pablo Echenique Robba, “A Bottom-Up Physical Approach from Small Peptides to Proteins. Methods and ab-Initio Potentials”. Date of Dissertation: December 15, 2006. Mark: Summa Cum Laude. Currently he is a tenure research scientist of the Spanish National Research Council.
- Jesus Gomez-Gardenes, “Complex Systems: Nonlinearity and Structural Complexity in Spatially Extended and Discrete Systems”. Date of Dissertation: December 14, 2006. Mark: Summa Cum Laude and award to the best PhD Thesis of the University of Zaragoza. Currently he is at the Institute for Biocomputation and Physics of

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- Dr. Javier Borge-Holthoefer, PhD at the University of Tarragona. Sept 2010- Nov 2013.
- Dr. Sandro Meloni, PhD at the University of Rome III. Feb. 2011-
- Sergio Arregui. Sept 2013- Sept 2014.
- Alfredo Ferrer. Jan. – March 2013.
- Pablo Piedrahita. Sept – Dec 2012.
- Alessio Cardillo Feb 2013- Feb 2014.

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- Dr. Chengyi Xia, Tianjin University, China. Sept 2011-Aug 2012.
- Dr. Arezky Hernández, Universidad Autónoma de la Ciudad de Mexico, Mexico. May-Sept 2012.
- M.Sc. Zhen Wang, Hong Kong Baptist University. June-Sept 2012.
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 - Carlos Gracia Lazaro
 - Pablo Piedrahita
 - Luis Hueso
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 - Luis Fernandez Lafuerza
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 - Elio Profumo (Italy)