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Recent Professional Appointments:

UNIVERSITY OF INDIANA, SCHOOL OF INFORMATICS & COMPUTING AND COGNITIVE SCIENCE PROGRAM, *Full Professor since April 2013, Associate Professor, 2004-2013. Director of Complex Systems PhD Track.*
INSTITUTO GULBENKIAN DA CIENCIA, Portugal. Director of the *FLAD Computational Biology Collaboratorium*, and in the Direction of the PhD Program in Computational Biology 04/00-present.
LOS ALAMOS NATIONAL LABORATORY, MODELING, ALGORITHMS, AND INFORMATICS GROUP, Technical Staff: 1999-2004, Postdoctoral Associate: 1997-1999. Leader of the *Complex Systems Modeling Research Focus Area.*
STATE UNIVERSITY OF NEW YORK AT BINGHAMTON, DEPARTMENT OF SYSTEMS SCIENCE AND INDUSTRIAL ENGINEERING, Adjunct Professor, 1995-1997 and Information Systems Manager, 1995-1997

Research Interests:

Complex adaptive systems: Agent-based modeling, artificial life, automata, bio-inspired computing, discrete dynamical systems, embodied cognition, collective behavior and dynamics, evolutionary and adaptive systems, network dynamics, origin of information, theoretical biology.
Computational and Systems biology: Automatic functional annotation, bioinformatics, literature and text mining, microarray analysis, models of biochemical regulation, RNA editing.
Computational intelligence and complex networks: Collective and adaptive behavior, connectionism, evolutionary computation, fuzzy set theory, generalized information theory, information retrieval, literature and text mining, machine learning, network science, recommender systems, uncertainty modeling.

Academic Education:

PhD in Systems Science, 1997, State University of New York, Binghamton, New York.
Licentiate (5 year) Degree in Mechanical Engineering with specialization in Systems Engineering (1985-1990), Instituto Superior Técnico, Lisbon, Portugal.

Professional Service:

Editorial Boards (selected): *Frontiers in Comp. Intelligence, Int. J. of Natural Comp. Research, PLoS ONE.*
Ad Hoc Editor: *Artificial Life, Biosystems, Communication and Cognition - Artificial Intelligence*
Ad Hoc Reviewer (Selected): *Adaptive Behavior, Advances in Complex Systems, Artificial Intelligence, Artificial Life, Behavioral and Brain Sciences, Biosystems, BMC Bioinformatics, BMC systems Biology, Cognitive Science, Complex Systems, Data Mining & Knowledge Discovery, European Physics Journal, IEEE Trans. Evolutionary Computation, IEEE Trans. on Systems Man and Cybernetics, Int. J. of Human-Computer Studies, Int. J. of General Systems, Journal of Artificial Societies and Social Simulation, Journal of Theoretical Biology, Molecular Biosystems, Network Science, Nucleic Acids Research, PNAS, Physical Review E, Scientific Reports.*

Selected Recent Conference Organizing and Program Committees

AIS 2015: *1st International Workshop on Artificial Immune Systems.* Taormina, Italy, July 17-18, 2015.
The Gulbenkian Alan Turing Centenary Symposium, December 11th, 2013 Lisbon, Portugal (**Program Chair**)
IEEE Symposium Series on Computational Intelligence 2013. April 15 – 19, 2013, Singapore.
GECCO 2012: *Genetic and Evolutionary Computation Conference,* July 7-11, 2012, Philadelphia, USA.
ICCS2011: *Eighth International Conference on Complex Systems.* June 26 - July 1, 2011, Boston, MA.
RECOMB 2010: *14th Int. Conf. on Res. in Comp. Molec. Bio.* April 25-28, Lisbon, Portugal. (**Org. Com.**)
ISMB 2009: *17th Int. Conf. on Intelligent Systems for Molecular Biology,* June 27 - July 2, Stockholm, Sweden.
EPIA 2009: *14th Portuguese Conf. on Artificial Intelligence,* Aveiro, Portugal (**Program Chair**)
AAAI-08: *The 23rd National Conference on Artificial Intelligence,* Chicago, Illinois, July 13-17, 2008.
ECAL 2007: *European Conference on Artificial Life,* September 2007, Lisbon, Portugal (**Organizing Com.**)
Artificial Life X: Bloomington, IN, June 3-7, 2006 (**Chair of Organizing Committee**)

Selected Review Panels

National Science Foundation, Various panels in Computing and Life Sciences, 2006-2012
Killam Research Fellowships, Canada Council for the Arts, 2012.
Chair of Robotics, Intelligent and Information Systems Review Panel of the Fundacao Ciencia e Tecnologia, Portugal, 2000, 2003, 2004, 2007
Computer Science and Software Engineering internal proposal (LDRD) review committee at the Los Alamos National Laboratory 1998-2000.

Selected Recent Invited Lectures

FUNDAÇÃO CHAMPALIMAUD, DELIBERATION CONFERENCE , October 25th 2014, Lisboa, Portugal
Plenary Speaker: "Collective decision in the global brain: science and policy"
INSTITUT DES SYSTÈMES COMPLEXES PARIS (ISC-PIF), April 8-9, 2013, Paris, France
Invited Speaker: "Turing's Tape and Immunocomplexity."
AALTO COMPLEX NETWORKS FACTORY, AALTO UNIVERSITY, June 4–8, 2012, Finland.,
Invited Speaker and session chair: "Semi-metric topology and collective computation in complex networks."
COLUMBIA UNIVERSITY, THE BARNARD INTERDISCIPLINARY WORKSHOP ON EMBODIMENT, July 22-24, 2010,
Invited Speaker: "Semiotic Closure: material symbols in evolution"
SYSTEMS BIOLOGY IN MEDICINE WORKSHOP, UNIVERSITY OF BARCELONA, HOSPITAL CLINIC, MAY 8-10, 2008.
Invited Speaker: "Complex Networks and Bibliome Informatics: Applications to Computational Biology"
UNIVERSITY OF CALIFORNIA AT LOS ANGELES, NOVEMBER 5-9, 2007, INST. FOR PURE & APPLIED MATHEMATICS,
Invited Speaker: "Social Data Mining and Knowledge Building Workshop"
INFORMATION SCIENCE AND TECHNOLOGY COLLOQUIUM, NASA GODDARD SPACE FLIGHT CENTER, Jan. 29, 2003
Featured speaker
CENTER FOR THE STUDY OF COMPLEX SYSTEMS, UNIVERSITY OF MICHIGAN, ANN ARBOR, December 5, 2002
Invited Speaker
CRITICAL STUDIES WORKSHOP, STANFORD UNIVERSITY, MAY 8, 2002.
Invited speaker.
GORDON RESEARCH CONFERENCE ON RNA EDITING JANUARY 21-26, 2001, VENTURA, CA.
Invited keynote session speaker: "Simulations of RNA Editing and the Origin of Codes".

Selected List of Recent Publications:

T. Simas and L.M. Rocha [2015]. "Distance Closures on Complex Networks". *Network Science*. In Press.
arXiv:1312.2459
A. Kolchinsky, M.P. van den Heuvel, A. Griffa, P. Hagmann, L.M. Rocha, O. Sporns and J. Goñi [2014].
"Multi-scale Integration and Predictability in Resting State Brain Activity". *Frontiers in Neuroinformatics*. **8**:66.
M. Marques-Pita and L.M. Rocha [2013]. "Canalization and control in automata networks: body segmentation in *Drosophila melanogaster*." *PLOS One*, **8**(3): e55946. doi:10.1371/journal.pone.0055946.
A. Lourenço, M. Conover, A. Nematzadeh, F. Pan, A. Wong, H. Shatkay, and L.M. Rocha [2011]. "A Linear Classifier Based on Entity Recognition Tools and a Statistical Approach to Method Extraction in the Protein-Protein Interaction Literature". *BMC Bioinformatics*, **12**(Suppl 8):S12.
A. Abi-Haidar and L.M. Rocha [2011]. "Collective Classification of Textual Documents Using Self-Organized Cross-Regulation in the Adaptive Immune System". *Evolutionary Intelligence*, **4**(2):69-80.
Z. Wang, S. Kim, S.K. Quinney, Y. Guo, S.D. Hall, L.M. Rocha, and L. Li [2009]. "Literature mining on pharmacokinetics numerical data: A feasibility study". *Journal of Biomedical Informatics*. **42** (4): 726-735.
A. Abi-Haidar, J. Kaur, A. Maguitman, P. Radivojac, A. Retchsteiner, K. Verspoor, Z. Wang, and L.M. Rocha [2008]. "Uncovering protein-protein interactions in abstracts and text using linear models and word proximity networks ". *Genome Biology*. **9**(Suppl 2):S1.
Rocha, L.M., C. Huang, A. Maguitman, J. Kaur. [2007]. "Agent-based Model of Genotype Editing". *Evolutionary Computation*. **15** (3): 253-89.
Rocha, L.M., M. Bedau, D. Floreano, R. Goldstone, A. Vespignani, and L. Yaeger (Eds.) [2006]. *Artificial Life 10: Proceedings of the 10th Int. Conference on the Simulation and Synthesis of Living Systems*. MIT Press.
Rocha, Luis M. And W. Hordijk [2005]. "Material Representations: From the Genetic Code to the Evolution of Cellular Automata". *Artificial Life*. **11** (1-2), pp. 189 - 214.
Wall, Michael E., Andreas Rechtsteiner, and Luis M. Rocha [2003]. "Singular Value Decomposition and Principal Component Analysis ". In: *Understanding And Using Microarray Analysis Techniques*. Kluwer, pp. 91-109.