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Rashid V. Williams-García

Curriculum Vitae

Research Interests

- nonequilibrium statistical physics
- critical phenomena
- neural networks
- complex systems

Affiliations

The American Physical Society. 2014–present

Education

Doctor of Philosophy, Physics, *Indiana University Bloomington*. 2008–2016
Bachelor of Science, Physics, *University of California Los Angeles*. 2003–2006

Doctoral thesis

title: *Phase Transitions in Living Neural Networks*
advisors: Prof. Gerardo Ortiz and Prof. John M. Beggs

Publications

- [1] R. V. Williams-García, J. M. Beggs, and G. Ortiz, “Unveiling causal activity of complex networks,” *arXiv preprint:1603.05659*, 2016.
- [2] R. V. Williams-García, M. Moore, J. M. Beggs, and G. Ortiz, “Quasicritical brain dynamics on a nonequilibrium Widom line,” *Physical Review E*, vol. 90, p. 062714, 2014.

Research

Postdoctoral

Postdoctoral Scholar, *University of Pittsburgh*, 2016–present
Prof. Nathan N. Urban, Department of Neurobiology,
Prof. G. Bard Ermentrout, Department of Mathematics.
Noise and variability in the causal structure of neural network dynamics in animal models of autism (theoretical)

Graduate

Research Assistant, *University of Indiana Bloomington*, 2012–2016
Prof. Gerardo Ortiz, Department of Physics.
Phase transitions in living neural networks (theoretical)

Research Assistant, *University of Indiana Bloomington*, 2009–2016
Prof. John M. Beggs, Department of Physics.
Epileptic neural networks and criticality (experimental)

<i>Post-Baccalaureate</i>	Research Assistant, <i>University of California Los Angeles</i> , Prof. Dolores Bozovic, Department of Physics & Astronomy. Response of oscillating hair cell stereocilia to mechanical stimuli (experimental)	2005–2008
<i>Undergraduate</i>	Research Assistant, <i>University of California Los Angeles</i> , Prof. George Grüner, Department of Physics & Astronomy. Scale-free charge percolation in carbon nanotube-coated substrates (experimental)	2005–2006
	Research Assistant, <i>University of California Los Angeles</i> , Prof. James Rosenzweig, Department of Physics & Astronomy. Design of free electron laser wavefront propagation simulations (numerical)	2004–2005
Awards and Honors	Ruth L. Kirschstein National Research Service Award, <i>University of Pittsburgh</i> , National Institutes of Health.	2016
	Grand-in-Aid of Doctoral Research, <i>Indiana University Bloomington</i> , The University Graduate School.	2015
	McCormick Science Grant, <i>Indiana University Bloomington</i> , College of Arts & Sciences.	2015
	Earl Studevart Graduate Fellowship, <i>Indiana University Bloomington</i> , Department of Physics.	2014
	Lilly Biocomplexity Fellowship, <i>Indiana University Bloomington</i> , Biocomplexity Institute.	2009–2010
	Graduate Scholars Fellowship, <i>Indiana University Bloomington</i> , The University Graduate School.	2008
	Post-Baccalaureate Research & Education Program, <i>University of California Los Angeles</i> , National Institutes of Health.	2006–2008
	Dean's Honors List, <i>University of California Los Angeles</i> , College of Letters & Science.	2006
Fellows Award, <i>University of California Los Angeles</i> , Center for Academic & Research Experience.	2006	
Programming	○ Python	○ MATLAB
	○ Mathematica	○ C/C++
	○ Bash	○ TORQUE

Languages	English: C2	<i>Fluent</i>
	Spanish: C1	<i>Native speaker, fluent</i>
	German: A2	<i>Beginner</i>
Posters	Criticality in Biology, <i>Quasicriticality and Optimal Brain Dynamics</i> , Dresden, Germany.	Apr. 2015
	Dynamics Days XXXIV, <i>Quasicriticality and Optimal Brain Dynamics</i> , Houston, Texas.	Jan. 2015
	Annual Biomedical Research Conference for Minority Students, <i>Overstimulation Recovery in Bullfrog Hair Cells</i> , Austin, Texas.	Nov. 2007
Teaching	Grader: Computational Physics, <i>University of Indiana Bloomington.</i>	2014
	Associate Instructor: General Physics I/II, <i>University of Indiana Bloomington.</i>	2010–2014
	Associate Instructor: Physics for Elementary Teachers, <i>University of Indiana Bloomington.</i>	2009–2010
Outreach	Mentor: Groups Program STEM Initiative, <i>Indiana University Bloomington.</i>	2012–2014
	Volunteer: Physics Department Open House, <i>Indiana University Bloomington.</i>	2008–2013
	Mentor: URC-CARE Research Mentorship Program, <i>University of California Los Angeles.</i>	2007–2008
	Vice President: Society of Physics Students, <i>University of California Los Angeles.</i>	2005