Ulises Pereira Obilinovic

CONTACT INFORMATION	4 Washington Place, room X New York, NY 10003	312-885-8749 upo201@nyu.edu

EDUCATION

The University of Chicago, Chicago, IL

Ph.D. in Statistics (advisor: Nicolas Brunel)	2018
M.S. in Statistics	2015

Universidad de Chile, Santiago, Chile

M.S. in Physics, (advisor: Enrique Tirapegui)	2013
Molecular Biotechnology Engineer Certificate (ranked 1/8)	2013
B.S. in Physics (ranked 1/6)	2012

EMPLOYMENT

New York University, New York City, NY

Postdoctoral Associate, Center for Neural Science (supervisor: Xiao-Jing Wang), 1/19-.

HONORS AND AWARDS

Young Leader Prize. Diario Financiero (Chilean newspaper).	10/17
Doctoral Fulbright Fellowship. Fulbright commission.	07/12
Best Physics Student of Class 2011. Universidad de Chile.	12/11
CONICYT Master Fellowship. Chilean Government. Ranked 5/1584.	03/11
Scholarship for Undergraduate Studies. Chilean Ministry of Education.	03/04

PUBLICATIONS

4. **Pereira U** and Brunel N. Attractor dynamics in networks with learning rules inferred from in vivo data. *Neuron*, 99(1), 227-238, 2018.

3. **Pereira U**, Coullet P and Tirapegui E. The Bogdanov-Takens Normal Form: A Minimal Model for Single Neuron Dynamics. *Entropy*, 17(12):7859–7874, 2015.

2. Vera J, Pezzoli M, **Pereira U**, Bacigalupo J and Sanhueza M. Electrical Resonance in the θ Frequency Range in Olfactory Amygdala Neurons. *Plos One*, 9(1):e85826, 2014.

1. Contreras D, **Pereira U**, Hernández V, Reynaert B and Letelier JC. A loop conjecture for metabolic closure. In *ECAL*, pages 176–183, 2011. MIT press. pages 176–183, 2011.

SUBMITTED MANUSCRIPTS

2. **Pereira U** and Brunel N. Unsupervised Learning of Persistent and Sequential Activity. *bioRxiv*, October, 2018.

1. Vera J, **Pereira U**, Reynaert B, Bacigalupo J and Sanhueza M. Neuronal resonance in the theta (4-10 Hz) frequency range is modulated by dynamic changes in the input resistance. *bioRxiv*, November, 2017.

MANUSCRIPTS IN PREPARATION

2. **Pereira U**, Aljadeff J and Brunel N. Memory and Chaos in Neuronal Networks.

1. Gillett M, **Pereira U** and Brunel N. Unsupervised learning of sequential activity with temporally asymmetric Hebbian learning rules.

INVITED TALKS

11/18 Psychology Department. Pontificia Universidad Católica de Chile, Santiago
10/18 Institute of Neuroscience. University of Oregon, Eugene
09/18 Bernstein Conference, Satellite Workshops. TUB, Berlin
07/18 Neuroscience Program. University of Illinois at Urbana-Champaign, Champaign
03/18 Center for Neural Science. NYU, New York
03/18 Center for Theoretical Neuroscience. Columbia University, New York
03/18 Center for Brain Science. Harvard University, Cambridge
10/17 Workshop on Theoretical Neuroscience. Janelia Research Campus, Ashburn
09/17 Physics Department. Universidad de Chile, Santiago
06/17 International Conference on Mathematical Neuroscience, Boulder

CONFERENCE POSTERS

13. Gillett M, **Pereira U** and Brunel N. Unsupervised learning of sequential activity with temporally asymmetric Hebbian learning rules. COSYNE Poster Presentation. Denver, EEUU. February 2018.

12. **Pereira U** and Brunel N. Optimal Unsupervised Hebbian Learning Rules For Attractor Neural Networks. COSYNE Poster Presentation. Salt Lake City, EEUU. February 2017.

11. **Pereira U** and Brunel N. Unsupervised Learning of Persistent and Sequential Activity. COSYNE Poster Presentation. Salt Lake City, EEUU. February 2016.

10. **Pereira U** and Brunel N. Unsupervised Learning of Sequential Activity. XV International Workshop on Instabilities and Nonequilibrium Structures. Valparaíso, Chile. December 2015.

9. Vera J, **Pereira U**, Reynaert B, Bacigalupo J and Sanhueza M. Modulation of frequency preference by changes in input resistance. 44th Annual Meeting Society for Neuroscience. Washington D.C., USA. November 2014.

8. Vera J., **Pereira U.**, Reynaert B., Deichler A., Astudillo D., Bacigalupo J., and Sanhueza M. A biological context for theta-frequency neuronal resonance: a comparative study between cortical amygdala and hippocampal neurons. X Annual meeting of the Chilean Society for Neuroscience. October, 2014. Valdivia, Chile.

7. **Pereira U**, Tirapegui E. Una Ecuación Universal Para la Dinámica Neuronal. In Proceedings of the XVII Conference on Nonequilibrium Statistical Mechanics and Nonlinear Physics. Santiago, Chile. December 2012.

6. **Pereira U.**, Tirapegui E. Una Ecuación Universal Para la Dinámica Neuronal. In Proceedings of the XVIII Simposio Chileno de Física. La Serena, Chile. November, 2012.

5. **Pereira U.**, Vera J., Pezzoli M., Bacigalupo J. and Sanhueza M. A computational conductance-based model that reproduce theta resonance dynamics in olfactory amygdala neurons.*41st Annual meeting of the Society for Neuroscience*. Washington DC, EEUU. November, 2011.

4. Vera J, **Pereira U.**, Pezzoli M., Bacigalupo J. and Sanhueza M. Sub and supra-threshold dynamics of resonant neurons in the olfactory amygdala.*41st Annual meeting of the Society for Neuroscience*. Washington DC, EEUU. November, 2011.

3. Contreras D, **Pereira U**, Hernández V, Reynaert B and Letelier JC. A loop conjecture for metabolic closure. *Eleventh European Conference on the Synthesis and Simulation of Living Systems*. Paris, France. August 2011.

2. **Pereira U**, Pezzoli M, Bacigalupo J, Sanhueza M. A computational conductance-based model of electrical resonance in the theta frequency range in olfactory amygdala neurons. VI meeting of the Chilean Society of Neuroscience. Valdivia, Chile. September 2010.

1. Jaramillo S., Honorato-Zimmer R., **Pereira U.**, Contreras D., Reynaert B., Hernández V., Soto-Andrade J., Cárdenas M.L., Cornish-Bowden A. and Letelier J.C. (M,R) Systems and RAF Sets: Common Ideas, Tools and Projections. *XII Artificial life Conference.* Odense, Denmark. August, 2010.

TEACHING
EXPERIENCE

The University of Chicago

Theoretical Neuroscience (TA)	Winter 17
Statistical Methods and Applications (TA)	Fall 16
Statistical Models and Methods (TA)	Spring 15
Statistical Models and Methods (Lecturer)	Winter 15
Statistical Methods and Applications (TA)	Fall 15
Statistical Methods and Applications (TA)	Spring 14
Elementary Statistic (TA)	Fall 14
Theoretical Neuroscience (TA)	Winter 13

Universidad de Chile

General Physiology (TA)	Fall 10
Biological Instrumentation (TA)	Spring 08

COURSES

Methods in Computational Neuroscience. Marine Biology Lab. Woods Hole, MA, USA.   July 29-August 24, 2018

Latin American Summer School in Computational Neuroscience. Institute of Complex Systems. Valparaíso, Chile.   January 11-29, 2010

VI Summer School of Complex Systems. Institute of Complex Systems. Valparaíso, Chile.   January 7-11, 2008