

Curriculum Vitae

Name Chung-Chuan Lo (羅中泉) **Address** Institute of Systems
Neuroscience
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Education

1998-2004 **Boston University**, Boston, Massachusetts
Ph. D. in Physics
Thesis title: Statistical Physics Approaches for Understanding
Sleep-Wake Transitions
Thesis advisor: H. Eugene Stanley, Professor of Physics

1995-1997 **National Taiwan University**, Taipei, Taiwan
M. S. in Physics
Thesis title: Study of the Effect of Site Mutation on the Structural
Stability of Cobra Cardiotoxin by Time-Resolved Fluorescence
Thesis advisor: Wunshain Fann, Joint Assistant Professor of Physics.

1991-1995 **National Taiwan University**, Taipei, Taiwan
B. S. in Physics
Project title: The Effect of Noises on a Cascaded Lorenz System
Project advisor: Yih-Yuh Chen, Associate Professor of Physics.

Employment

2009-present **National Tsing Hua University**, Hsinchu, Taiwan
Assistant professor, Institute of Systems Neuroscience

2008-2009 **National Tsing Hua University**, Hsinchu, Taiwan
Assistant professor, Institute of Bioinformatics and Structural
Biology

2006-2008 **Yale University**, New Haven, CT.
Postdoc assistant (Supervisor, Dr. Xiao-Jing Wang).
Neural network modeling

2004-2006 **Brandeis University**, Waltham, MA.
Postdoc fellow (Supervisor, Dr. Xiao-Jing Wang).
Neural network modeling

1997-1998 **Institute of Atomic and Molecular Sciences, Academia Sinica**,
Taipei, Taiwan
Research Assistant (Supervisor, Dr. W.-S. Fann)
Experiments on time-resolved fluorescence of conformational
changes in protein.

Honors and Awards

- 2004-2007** Postdoctoral fellowship in computational neuroscience (Sloan-Swartz foundation)
- 2003** American Physical Society travel awards for Annual Meeting.
- 2001** Sigma Xi award, achievement in graduate research at Boston University.
- 2001** Travel scholarship for Sleep Medicine Conference, Marburg, Germany
- 1998-2003** Boston University Ph.D. research fellowship (2000-2003); teaching fellowship (1998-2000).
- 1991-1995** Ministry of Education (Taiwan) bachelor degree scholarship for outstanding students.

Professional Services

- 2011-present** Editorial board of Frontiers in Neuroinformatics
- 2011-2012** Technical program committee for Symposium on Engineering, Medicine and Biology Applications & International workshop on Bio-inspired Systems and Prosthetic Devices (Feb 11-13, 2012, Taichung, Taiwan)
- 2009-present** Member of the task force for the multi-scale modeling, International Neuroinformatics Coordinating Facility (INCF)

Publications

1. **C.-C. Lo**, L. Boucher, M. Pare, J. D. Schall and X.-J. Wang. Proactive inhibitory control and attractor dynamics in countermanding action: a spiking neural circuit model. *J. Neurosci.* 29, 9059-9071 (2009).
2. **C.-C. Lo** and X.-J. Wang. Cortico-basal ganglia circuit mechanism for a decision threshold in reaction time tasks. *Nat. Neurosci.* 9, 957-963 (2006).
3. **C.-C. Lo**, Chou T, Penzel T, Scammell TE, Strecker RE, Stanley HE and Ivanov PCh, Common scale-invariant pattern of sleep-wake transitions across mammalian species. *Proc. Natl. Acad. Sci. USA.* 50, 17545-17548 (2004)
4. T. Penzel, J. W. Kantelhardt, **C.-C. Lo**, K. Voigt and C. F. Vogelmeier. Dynamics of Heart Rate and Sleep Stages in Normals and Patients with Sleep Apnea. *Neuropsychopharmacology* **28**, S48-S53 (2003)
5. **C.-C. Lo**, L. A. N. Amaral, S. Havlin, P. Ch. Ivanov, T. Penzel, J.-H. Peter and H. E. Stanley. Dynamics of sleep-wake transitions during sleep. *Europhysics Letters* 57 (5), 625-631 (2002).
6. P. Ch. Ivanov and **C.-C. Lo**. Stochastic Approaches to Modeling of Physiological Rhythms, in *Modeling Biomedical signals*, edit. G. Nardulli & S. Stramaglia. World Scientific (2002).
7. **C.-C. Lo**, J.-H. Hsu, Y.-C. Sheu, C.-M. Chiang, W.-G. Wu, W.-S. Fann and P.-H. Tsao. Effect of D57N mutation on membrane activity and molecular unfolding of cobra cardiotoxin. *Biophysical Journal* 75 (5), 2382-2388 (1998).

Conference Talks

- 2011** International Organization of Chinese Physics and Astronomers Annual meeting, Kaohsiung, Taiwan (Invited)
- 2010** International Workshop on Bio-inspired Systems and Prosthetic Devices, Hsinchu, Taiwan (Invited)
- 2010** Neuroinformatics 2010 (INCF Congress), Kobe, Japan (Invited)
- 2009** Annual Meeting of Society for Neuroscience, Chicago, Illinois, USA.
- 2007** Annual Meeting of Sloan-Swartz Centers for Theoretical Neurobiology, University of California, San Diego, California, USA.
- 2004** Annual Meeting of Sloan-Swartz Centers for Theoretical Neurobiology, Cold Spring Harbor Laboratory, New York, USA.
- 2003** American Physical Society Annual March Meeting, Austin, Texas, USA.
- 2002** The 2nd APCTP and 6th Taiwan International Symposium on Statistical Physics Lattice Models and Complex Systems, Taipei, Taiwan.
American Physical Society Annual March Meeting, Indianapolis, Indiana, USA.
- 2001** 84th Statistical Mechanics Conference, Rutgers University, Piscataway, New Jersey, USA.

Popular Articles and Journal Reviews About My Research

1. Benedicte Ballanger, Top-down control of saccades as part of a generalized model of proactive inhibitory control *Journal of Neurophysiology* published 26 August 2009, 10.1152/jn.00717.2009
2. Roozbeh Kiani, Timothy D Hanks & Michael N Shadlen. When is enough enough? *Nature Neuroscience* 9, 681-683 (2006).
3. Taylor McNeil, Bring on the Sandman. *Bostonia*. Summer 2002. (<http://www.bu.edu/alumni/bostonia/2002/summer/explorations/sleep/index.html>)
4. Michael Brooks, Feature: Snooze Control. *New Scientist* p. 173, 38-40, Feb. 23, 2002.
5. "Tired? Well, you woke up 35 times last night", *The Daily Mail*, p. 35, Feb. 21, 2002.
6. "Sleep well last night? You woke up 37 times", *The Mirror*, Feb. 21, 2002.
7. *Complex Digest* issue 51, Dec. 19 2001. (<http://www.comdig.de/ComDig01-51/#12>)