Sam Lewallen

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Princeton Neuroscience Institute
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Education and employment

Postdoctoral Research Associate, Princeton Neuroscience Institute

July 2014 - Present

Advisor: David Tank

Methods in Computational Neuroscience (summer course), MBL, Woods Hole, MA

August 2013

Ph.D., Mathematics, Princeton University

September 2008 - May 2014

Advisor: Zoltán Szabó

Thesis title: "Floergåsbord." (General subject matter: Low-dimensional topology, topological quantum field theory)

B.A. Mathematics, Harvard University

September 2004 - June 2008

Graduated with Highest Honors

Publications

Yoon, Kijung[1], **Sam Lewallen**[1], David Tank, and Ila Fiete. "Grid Cell Responses in 1D Environments Assessed as Slices through a 2D Lattice." *Neuron* no. 89.5 (2016): 1086-1099

Joshua Evan Greene, **Sam Lewallen**, and Faramarz Vafaee[2]. "(1,1) L-space knots." *Compositio Mathematica*, to appear (2013, submitted 2016)

Levine, Adam Simon, and **Sam Lewallen**[2]. "Strong L-spaces and left-orderability." *Mathematical Research Letters* 19, no. 6 (2012).

Burak, Yoram, **Sam Lewallen**, and Haim Sompolinsky. "Stimulus-dependent correlations in threshold-crossing spiking neurons." *Neural computation* 21, no. 8 (2009): 2269-2308.

[1] Joint first authors.
[2] Authors in alphabetical order.

Awards and fellowships

NSF Nordic Fellowship, 2011

NSF Graduate Research Fellowship, 2008-2011

Centennial Fellowship, 2008-2011 (awarded to top few incoming Phd students by Princeton math department)

Other research experiences in neuroscience

Independent undergraduate research project advised by Haim Sompolinsky, Harvard University
Summer, 2007

Undergraduate research assistant with Maria Geffen and Marcello Magnasco, Rockefeller University
Summer, 2006

Invited/external talks

Swartz Meeting, University of Washington, Summer 2014

Harvard University, Spring 2013, Neurolunch seminar

UC Davis, Spring 2013, computational neuroscience seminar

Brandeis University, Fall 2012, Topology seminar

UCLA, Spring 2011, Topology seminar

Caltech, Spring 2011, Topology seminar

Michigan State Unversity, Fall 2010, Topology seminar

Indiana University, Bloomington, Fall 2010, Topology seminar

MSRI, Berkeley, Spring 2009, Knot homologies program seminar

Computer competencies

MATLAB, Python, Mathematica, C++