DANIEL (DJ) STROUSE
5634 Frist Center
Princeton University
Princeton, NJ 08544
danieljstrouse@gmail.com
www.djstrouse.com

Born: Nov 24, 1987
in Elgin, IL
Citizenship: USA
Hometown: Newark, DE
Last updated: Jan 14, 2014

Education

9/2017 PhD in Physics
Princeton University, Princeton, NJ
Advisor: William Bialek

9/2012 Master's of Philosophy (MPhil) in Engineering
University of Cambridge, Cambridge, UK
Advisor: Máté Lengyel

5/2011 B.A. Physics (*magna cum laude*), B.S. Mathematics (*magna cum laude*)
University of Southern California (USC), Los Angeles, CA

Research Interests

- Design principles of biological systems
- Inference and prediction in biological systems
- Quantitative approaches to cultural phenomena

Grants, Honors, & Awards

2013-2017 Hertz Foundation Fellowship

2012-2016 DoE Computational Sciences Graduate Fellowship (*awarded in 2011)*

2011-2012 Churchill Scholarship

2011 Hertz Foundation Fellowship Finalist

2011 NSF Graduate Research Fellowship *(declined for DoE CSGF)*

2011 USC Order of the Laurel and the Palm *(highest honor bestowed upon graduating seniors)*

Journal Publications

X. Wu, **DJ Strouse**, & B. Mel. *Optimizing online learning capacity in a biologically-inspired neural network.* (in preparation)

AM Childs & **DJ Strouse**. *Levinson's theorem for graphs.* Journal of Mathematical Physics. Aug 2011. [arxiv] [journal]

Posters

DJ Strouse, Balazs Ujfalussy, & Mate Lengyel. *Dendritic subunits: the crucial role of input statistics and a lack of two-layer behavior.* Computational and Systems Neuroscience (Cosyne). Salt Lake City, UT. February 2013.

DJ Strouse, Jakob Macke, Roman Shusterman, Dima Rinberg, & Elad Schneidman. *Behaviorally-locked structure in a sensory neural code.* Sensory Coding & Natural Environment (SCNE). Vienna, Austria. September 2012.

DJ Strouse & Mate Lengyel. *Hierarchical generalized linear models of dendritic integration and somatic membrane potential.* Computational and Systems Neuroscience (Cosyne). Salt Lake City, UT. February 2012.

Bartlett Mel, Xundong Wu, & **DJ Strouse**. *Optimizing online learning capacity in a biologically-inspired memory structure.* Computational and Systems Neuroscience (Cosyne). Salt Lake City, UT. February 2012.

Xundong Wu, **DJ Strouse**, & Bartlett Mel. *Optimizing online learning capacity in a biologically-inspired neural network.* Society for Neuroscience (SfN). Washington, DC. November 2011. [link]

Xundong Wu, **DJ Strouse**, & Bartlett Mel. *Optimizing online learning capacity in a biologically-inspired neural network.* Annual Joint Symposium On Neural Computation. San Diego, CA. June 2011.

DJ Strouse. *Reliable brains from unreliable neurons – the search for synfire chains in the brain.* Stanford Amgen Scholars Symposium. Palo Alto, CA. August 2010.

Talks

8/2012 Advanced Course in Computational Neuroscience Symposium (Będlewo, Poland)
Title: Optimal dynamics for fast network responses

4/2012 Microsoft Research Cambridge, Machine Learning Group (Cambridge, UK)
Title: The Information Bottleneck Method

8/2011 Methods in Computational Neuroscience Symposium (MBL, Woods Hole, MA)
Title: Sniff-modulations of the olfactory bulb vocabulary

8/2010 Stanford Amgen Scholars Symposium (Palo Alto, CA) [link]
Title: Reliable brains from unreliable neurons – the search for synfire chains in the brain

7/2010 Open Science Summit (University of California, Berkeley, CA) [link]
Title: Open science is more than open publishing – meet CoLab

6/2010 Institute for Quantum Computing Colloquium (Waterloo, Ontario, Canada) [link]
Title: A Levinson's theorem for scattering on graphs

Professional

10/2014-present Co-Founder, *Lilibri*, a mobile application to help users annotate physical books, alone and collaboratively

3/2013 Organizer, Computational and Systems Neuroscience (Cosyne) workshop on *Dendritic computation in neural circuits*

12/2009-4/2012 Co-Founder, *CoLab*, an online set of tools designed to promote open and massively collaborative science

Summer Schools

8/2013 Computational and Cognitive Neuroscience Summer School (CCNSS)
Cold Spring Harbor Asia, Beijing, China

8/2012 Advanced Course in Computational Neuroscience (ACCN)
FENS-IBRO European Neuroscience School Programme, Będlewo, Poland

8/2011 Methods in Computational Neuroscience (MCN) summer course
Marine Biological Laboratory (MBL), Woods Hole, MA

Other Skills & Information

COMP. LANGUAGES Python, Matlab, Mathematica

HUMAN LANGUAGES English (fluent), Mandarin (conversational), Spanish (conversational)

HOBBIES hiking, running, traveling, using the web to improve how science is done and shared