

DANIEL (DJ) STROUSE
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Education

- 9/2017 PhD in Physics
 Princeton University, Princeton, NJ
Awards/Funding: Hertz Fellowship, Dept of Energy Computational Sciences Graduate Fellowship
Advisor: William Bialek
- 9/2012 Master's of Philosophy (MPhil) in Information Engineering
 University of Cambridge, Cambridge, UK
Awards/Funding: Churchill Scholarship
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
Awards/Funding: USC Order of the Laurel and the Palm, USC Presidential Scholarship

Journal Publications & Conference Proceedings

- DJ Strouse** & D. Schwab. (2016). *The deterministic information bottleneck*. arXiv:1604.00268 [q-bio.NC] [[link](#)]
- X. Wu, **DJ Strouse**, & B. Mel. *Optimizing online learning capacity in a biologically-inspired neural network*. (in preparation)
- AM Childs & **DJ Strouse**. (2011). *Levinson's theorem for graphs*. Journal of Mathematical Physics. [[link](#)]

Talks

- 3/2016 APS March Meeting (Baltimore, MD)
Title: Compression and regularization with the information bottleneck [[link](#)]
- 1/2016 Physics-Informed Machine Learning (Santa Fe, NM)
Title: The deterministic information bottleneck
- 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)
Title: Reliable brains from unreliable neurons – the search for synfire chains in the brain
- 7/2010 Open Science Summit (University of California, Berkeley, CA)
Title: Open science is more than open publishing – meet CoLab [[link](#)]
- 6/2010 Institute for Quantum Computing Colloquium (Waterloo, Ontario, Canada)
Title: A Levinson's theorem for scattering on graphs

Posters

- DJ Strouse** & David Schwab. *The Deterministic Information Bottleneck*. APS March Meeting. San Antonio, TX. March 2015.
- DJ Strouse** & David Schwab. *The Deterministic Information Bottleneck: Optimizing Memory for Prediction*. Society for Neuroscience (SfN). Washington, DC. November 2014. [[link](#)]
- 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.

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.

Professional

10/2015	Organizer, Hertz Foundation East Coast Fellows Retreat
3/2013	Organizer, Computational and Systems Neuroscience (Cosyne) workshop on <i>Dendritic computation in neural circuits</i>
12/2009-4/2012	Co-Founder, <i>CoLab</i> , an online set of tools designed to promote open and massively collaborative science

Additional Education

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	Matlab, R, Python, Mathematica
HUMAN LANGUAGES	English (fluent), Mandarin (conversational), Spanish (conversational)
HOBBIES	running, traveling, hiking, web/mobile app development