

# Noga Zaslavsky

*PhD Candidate, The Hebrew University*

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**Research interests:** Machine Learning • Computational Cognitive Science • Computational Linguistics

## Education

- 2014–current **Ph.D. student**, *Computational Neuroscience*, Center for Brain Sciences (ELSC), The Hebrew University.  
Advisor: Prof. Naftali Tishby
- 2012–2014 **M.Sc.** (direct Ph.D. track), *Computational Neuroscience*, ELSC, The Hebrew University.  
Advisor: Prof. Naftali Tishby    GPA: 96.5/100
- 2009–2012 **B.Sc.** (magna cum laude), *Computer Science and Cognitive Science, with a minor in Mathematics*, The Hebrew University.

## Research Experience

- 2018–current **Graduate Student Researcher**, International Computer Science Institute, UC Berkeley.
- 2017–current **Visiting Student Researcher**, Department of Linguistics, UC Berkeley.  
Host: Prof. Terry Regier
- Spring 2018 **Visiting Graduate Student**, Simons Institute for the Theory of Computing, UC Berkeley.  
The Brain and Computation program
- Summer 2016 **Research Intern**, IBM Research.  
Debating Technologies research group (Project Debater)
- Sept. 2014 **Summer School**, Max Planck Institute for Mathematics in the Sciences.  
Summer school on Autonomous Learning

## Honors and Awards

- 2018 Computational Modeling Prize in Language, Cognitive Science Society
- 2016 IBM Ph.D. Fellowship Award
- 2015 Doctoral scholarship, Gatsby Charitable Foundation
- 2015 Women in Machine Learning Travel Grant
- 2014 ELSC Prize for outstanding academic performance
- 2012–2018 Merit-based scholarship, ELSC, The Hebrew University
- 2011 Dean's List, Faculty of Science, The Hebrew University

## Publications

### Journal Articles

- [1] **N. Zaslavsky**, C. Kemp, T. Regier, and N. Tishby. Efficient compression in color naming and its evolution. *Proceedings of the National Academy of Sciences (PNAS)*, 2018. [↗](#)

- [2] **N. Zaslavsky**, C. Kemp, N. Tishby and T. Regier. Color naming reflects both perceptual structure and communicative need. *Topics in Cognitive Science (topiCS)*, 2018. [↗](#)
- [3] S. Wang, A. Borst, **N. Zaslavsky**, N. Tishby and I. Segev. Efficient representation of motion is mediated by gap junctions in the fly visual system. *PLOS Computational Biology*, 2017. [↗](#)

### Conferences and Workshops

- [4] **N. Zaslavsky**,\* K. Garvin,\* C. Kemp, N. Tishby and T. Regier. Color-naming evolution and efficiency: The case of Nafaanra [Abstract]. To appear in the *93rd Annual Meeting of the Linguistic Society of America*, 2019.
- [5] **N. Zaslavsky**, C. Kemp, N. Tishby and T. Regier. Color naming reflects both perceptual structure and communicative need. *Proceedings of the 40th Annual Conference of the Cognitive Science Society (CogSci)*, 2018. **Computational Modeling Prize in Language**. [↗](#)
- [6] **N. Zaslavsky**, C. Kemp, T. Regier and N. Tishby. Information-theoretic efficiency and semantic variation: The case of color naming [Abstract]. *Proceedings of the 40th Annual Conference of the Cognitive Science Society (CogSci)*, 2018. [↗](#)
- [7] **N. Zaslavsky**, C. Kemp, T. Regier, and N. Tishby. Efficient human-like semantic representations via the Information Bottleneck principle. *Cognitively Informed AI Workshop at the 31st Conference on Neural Information Processing Systems (NIPS)*, 2017. [↗](#)
- [8] S. Wang, **N. Zaslavsky**, A. Borst, N. Tishby and I. Segev. Early Motion Processing Circuit Uses Gap Junctions to Achieve Efficient Stimuli Encoding. *COSYNE Abstracts*, 2017.
- [9] N. Tishby and **N. Zaslavsky**. Deep Learning and the Information Bottleneck Principle. *IEEE Information Theory Workshop (ITW)*, 2015. [↗](#)
- [10] **N. Zaslavsky** and N. Tishby. Learning minimal sufficient representations in deep networks [Abstract]. *Women in Machine Learning Workshop (co-located with NIPS)*, 2015.

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## Talks and Presentations

- 2018 Syntax and Semantics Circle, UC Berkeley, December 7 (talk)
- 2018 Language Learning & Processing Lab, The Hebrew University, Jerusalem, November 13 (talk)
- 2018 40th Annual Conference of the Cognitive Science Society, Madison, WI, July 27 (talk)  
*Information-theoretic efficiency and semantic variation: The case of color naming*
- 2018 40th Annual Conference of the Cognitive Science Society, Madison, WI, July 26 (talk)  
*Color naming reflects both perceptual structure and communicative need*
- 2018 Gatsby tri-center annual meeting, Columbia University, New York, June 19 (talk)
- 2018 Brain and Computation Program, Simons Institute, UC Berkeley, April 24 (talk)
- 2018 Computational Cognitive Science Lab, UC Berkeley, February 28 (talk)
- 2017 Cognitively Informed AI workshop at NIPS, Long Beach, CA, December 9 (poster & spotlight)
- 2016 ELSC Annual Retreat, Ein-Gedi, January 24 (poster)
- 2015 Women in Machine Learning Workshop, Montreal, December 7 (poster)
- 2015 NeuroBridges Workshop, Paris, September 7 (talk)

## Teaching Experience

- October 2018 **NeuroBridges Summer School** (Cluny, France), *Teaching Assistant*.  
Ten-day course in computational neuroscience for graduate students and postdocs. Served as mentor for three research projects and a journal club.
- Spring 2016 **Introduction to Machine Learning**, *Teaching Assistant*, School of Computer Science and Engineering, The Hebrew University.  
Undergraduate-level course (270 students). Taught 5 weekly hours, co-organized and mentored in a machine learning hackathon.
- 2013–2016 **Introduction to Information Processing and Learning**, *Teaching Assistant*, Center for Brain Sciences (ELSC), The Hebrew University.  
Graduate-level course covering topics in machine learning, information theory, and statistics. Taught 2 weekly hours in Fall 2014 and 2016. Served as exercise grader in Fall 2013.

## Industry Experience

- 2011–2013 **Software Developer**, IBM.  
Developed text analytics tools at the Enterprise Content Management (ECM) software group. Published an open-source developerWorks project for content classification. [↗](#)
- 2008–2009 **Technical Support Engineer**, SunGard.  
Provided advanced technical support for IT teams of international banks and financial institutes.