OLGA LOSITSKY

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Website: http://www.princeton.edu/~lositsky

EDUCATION

Princeton University, New Jersey — 2011 – 2017
PhD in Neuroscience

McGill University, Montreal, Canada — 2007 – 2010
Bachelor of Science in Neuroscience

University of Freiburg, Germany — 2008 – 2009
Academic Exchange

Collège Stanislas, Montreal, Canada — 2005 – 2007
General Baccalaureate Diploma

SCIENTIFIC RESEARCH SKILLS

- Literature review and synthesis
- Experimental design and data collection: human behavior and neuroimaging
- Project management with teams of students, postdocs and professors
- Data visualization and presentation at international conferences
- Scientific writing

TECHNICAL SKILLS

- Data analysis using inferential statistics: Parametric and non-parametric methods, including multilevel linear regression, generalized linear models, bootstrapping and permutation
- Computational modeling: Bayesian inference, Kalman filters, reinforcement learning and drift diffusion models
- Machine learning: Applying unsupervised clustering and supervised learning algorithms, including neural networks, Support Vector Machines, Logistic Regression and Gaussian Naïve Bayes classifiers, to large multi-dimensional datasets
- Programming: MATLAB, Python, R, JavaScript, HTML/CSS, Bash, Git
- Cluster computing (Slurm)

LANGUAGE SKILLS

Russian, English and French (fluent), German (proficient), Hebrew and Spanish (beginner)

PROFESSIONAL EXPERIENCE

Postdoctoral Research Associate | Adviser: Jonathan Cohen — 2021 – Present
Princeton Neuroscience Institute, Princeton University

Postdoctoral Research Associate | Adviser: David Badre — 2017 – 2020
Department of Cognitive, Linguistic and Psychological Sciences, Brown University

PhD Student | Advisers: Kenneth Norman and Jonathan Cohen — 2011 – 2017
Princeton Neuroscience Institute, Princeton University

Research Assistant | Adviser: Kenneth Norman — 2010 – 2011
Computational Memory Lab, Princeton University

Research Assistant (DAAD Undergraduate Scholarship) — Spring 2009
Department of Diagnostic Radiology, University Hospital Freiburg, Germany

Research Assistant (DAAD Undergraduate Scholarship) — Fall 2008
Neuropsychology Department, University of Freiburg, Germany

DAAD RISE Scholar (Research Internships in Science and Engineering) Summer 2008
Institute of Developmental Genetics, Helmholtz Research Center, Munich, Germany

"GCRC Summer Research Training Program" Scholar Summer 2007
Department of Biochemistry, McGill Cancer Centre, Montreal, Canada

PUBLICATIONS AND CONFERENCE PAPERS

Kassel, M.T., **Lositsky, O.**, Vaidya, A.R., Badre, D., Malloy, P.F., Greenberg, B.D., Marsland, R., Noren, G., Sherman, A., Rasmussen, S.A., McLaughlin, N.C.R. (*in revision at Neuropsychologia*). Differential assessment of frontally-mediated behaviors between self- and informant-report in patients with Obsessive-Compulsive Disorder following gamma ventral capsulotomy.

Nastase, S. A., Liu, Y.-F., Hillman, H., Zadbood, A., Hasenfratz, L., Keshavarzian, N., Chen, J., Honey, C. J., Yeshurun, Y., Regev, M., Nguyen, M., Chang, C. H. C., Baldassano, C., **Lositsky, O.**, Simony, E., Chow, M. A., Leong, Y. C., Brooks, P. P., Micciche, E., Choe, G., Goldstein, A., Vanderwal, T., Halchenko, Y. O., Norman, K. A., & Hasson, U. (2021). The "Narratives" fMRI dataset for evaluating models of naturalistic language comprehension. Scientific Data, 8, 250. https://doi.org/10.1038/s41597-021-01033-3

Lositsky, O., Shvartsman, M., Wilson, R.C., Cohen, J.D. (2017, September). Weak Fusion of Cue Predictions in Context-Based Decisions. *Conference on Cognitive Computational Neuroscience 2017*, New York, NY. https://www2.securecms.com/CCNeuro/docs-0/592c782a68ed3f1b4d1a9ba9.pdf

Lositsky, O., Chen, J., Toker, D., Honey, C. J., Shvartsman, M., Poppenk, J. L., Hasson, U., & Norman, K. A. (2016). Neural Pattern Change During Encoding of a Narrative Predicts Retrospective Duration Estimates. *eLife*. https://elifesciences.org/articles/16070

Simony, E., Honey, C. J., Chen, J., **Lositsky, O.**, Yeshurun, Y., Wiesel, A., & Hasson, U. (2016). Dynamical reconfiguration of the default mode network during narrative comprehension. *Nature Communications*. https://www.nature.com/articles/ncomms12141

Lositsky, O., Wilson, R.C., Shvartsman, M., Cohen, J.D. (2015, June). A drift diffusion model of proactive and reactive control in a context-dependent two-alternative forced choice task. In Proceedings of the *Reinforcement Learning and Decision Making Conference*, Edmonton, Alberta. https://rldm.org/wp-content/uploads/2015/05/RLDM2015ExtendedAbstracts.pdf

SELECTED CONFERENCE PRESENTATIONS

Lositsky, O., Badre, D. (2020, June). Effects of gradual and abrupt changes on segmentation of task-set memories. *Brown Unconference: Computational Intelligence and Applications*, Providence, RI. [***Talk***]

Lositsky, O., Badre, D. (2019, October). Overlap in stimulus-response rules is insufficient for retrieval of task set memories. *Society for Neuroscience Annual Meeting*, Chicago, IL. [***Poster***]

Lositsky, O., Nassar, M.R., Badre, D. (2019, July). Gradual changes promote the generalization of behavioral rules across temporal contexts. *Reinforcement Learning and Decision Making Conference*, Montreal, Canada. [***Poster***]

Lositsky, O., Badre, D. (2019, May). The role of awareness in task set encoding and retrieval. *Control Processes Conference*, Providence, RI. [***Talk***]

Lositsky, O., Shvartsman, M., Wilson, R.C., Cohen, J.D. (2017, July). Adaptive response priors in context-dependent decision-making. *39th Annual Meeting of the Cognitive Science Society*, London, UK. [***Poster***]

Lositsky, O., Wilson, R.C., Shvartsman, M., Cohen, J.D. (2015, December). Adaptive task representations in context-based decision making. "Bounded Optimality and Rational Metareasoning" workshop, *Neural Information Processing Systems Conference*, Montreal, Canada. [***Poster***]

Lositsky, O., Wilson, R.C., White, J.M., Cohen, J.D. (2013, October). Bayesian model of proactive and reactive control in the AX-CPT. *Computational Psychiatry Conference*, Miami, FL. [***Poster***]

TEACHING AND MENTORSHIP

Undergraduate Research Mentor, Princeton and Brown Universities — 2013 – 2021
Trainees: Lucy Lin, James Verch, Amanda Ng, Ijeoma Uche, Isabel Reyes

Lecturer for "Workshop on Computational Cognitive Modeling of Behavioral and Neural Data" at Brown University — 2017 – 2020

Assistant instructor at Princeton University — 2011 – 2013

COMMUNITY SERVICE AND SCIENCE OUTREACH

- Science outreach volunteer at STEMCivics Charter School, Ewing, NJ — October 2021
- Co-founder and organizer of the Structure Learning Group at Brown University — 2019 – 2021
- Member of Scholars at Brown for Climate Action — 2019 – 2020
- High School Teacher for Rhode Island Brain Awareness Week — March 2018
- High School Teacher at STEMCivics Charter School, Ewing, NJ — April 2017
- Guest in episode of Princeton University science radio show. Blog post and recording: https://tvr2c.com/2016/09/01/olga-neuroscience/ — August 2016
- Science Fair Judge, Hopewell Elementary School, Hopewell, NJ — April 2016
- Forest Land Stewart Volunteer at Skinny Trees Farm, Hopewell, NJ — April 2016
- Parallel Distributed Processing (PDP) Meeting Organizer, Princeton University — 2013 – 2015
- Social Hour Organizer for Princeton Neuroscience Institute — 2013 – 2014
- Assembly Member, Graduate Student Government, Princeton University — 2012 – 2013
- Communications Officer, Medical Students Society, McGill University — 2009 – 2010
- Canadian Student Representative at "Bologna from Outside" Conference in Siegburg, Germany. — April 2009
  - Worked with officials from World Education Services USA and German Federal Ministry of Education to analyze impact of Bologna Process on education systems worldwide.
- Franco-German interpreter for AiD ("Fight Against Poverty in Dialogue") Conference in Paris, France. — January 2009

AWARDS

2012 Honorable Mention, National Science Foundation (NSF) Graduate Research Fellowship Program

2008 DAAD (German Academic Exchange Service) Undergraduate Scholarship

2008 PBCSE Government of Quebec Travel Award

2008 DAAD Research Internships in Science and Engineering Scholarship

2007 Canadian Millennium Excellence Award
2007 James McGill Scholarship
2007 Toyota Earth Day Scholarship
2007 Prize of the Lieutenant-Governor of Quebec
2007 Laureate in Innovation : « Concours Intercollégial Pédagogie environnement »
2007 Certificate of Distinction, Canadian Mathematics Contest