

Geoffrey Roeder

EDUCATION

- University of Toronto**, Machine Learning Group 2016–present
Ph.D.-track M.Sc., Computer Science
Advisor: Prof. David Duvenaud
Research areas: Deep learning, Bayesian statistics, variational inference
- University of British Columbia**, UBC Machine Learning Lab 2013–2016
B.Sc., Computer Science, Statistics
A+ GPA overall, graduated with first-class honours
- Kwantlen Polytechnic University** 2012–2013
Certificate in Engineering
A+ GPA overall, awarded merit scholarship
- University of British Columbia** 2009 – 2011
M.A., Applied Linguistics
Thesis: Climate Change in Modal Adverbials

PROFESSIONAL EXPERIENCE

- University of Toronto**
Graduate Teaching Assistant, Dept of Computer Science Sept 2016–present
Gave tutorials and assessed students in mixed 4th-year/graduate classes on machine learning, probabilistic graphical models
- University of British Columbia**
Research Intern, UBC Machine Learning Lab Summer 2016
Developed dimensionality reduction and unsupervised learning algorithms with Prof. Mark Schmidt for Matlab toolbox
- Undergraduate Teaching Assistant*, Dept of Computer Science Sept–Dec 2015,
Gave tutorials on 3rd year computer hardware and operating Summer 2014
systems, 1st year introduction to program design
- Research Coordinator*, Dept of Education 2012 – 2013
Led 3-person team under Prof. Teresa Dobson that designed and conducted UX studies of academic research support software
- Arista Networks**
Software Engineering Intern, Vancouver R&D Office Summer 2015
On product team, developed routing feature for Arista network switch that was integrated into first-quarter 2016 release

HONORS AND AWARDS

- American Statistical Association's Undergrad Project Competition: *Honorable Mention* 2016
NSERC Undergrad Student Research Award: \$4500 2016
Dr. John Pearson Memorial Merit Scholarship: \$2000 2014
Joseph-Armand Bombardier Canada Graduate Scholarship (Master's): \$17,500 2010

PUBLICATIONS

Roeder, G., Yuhuai Wu, and David Duvenaud. (2016). **Sticking the Landing: A Simple Reduced-Variance Gradient Estimator for Automatic Differentiation Variational Inference**. *Advances in Approximate Bayesian Inference Workshop*. NIPS, 2016.
<http://approximateinference.org/accepted/RoederEtAl2016.pdf>.

Roeder, G., X. She, M. Schmidt et al. (2016). **MatLearn: Fundamental Machine Learning Algorithms in Matlab**. Software package.
<https://www.cs.ubc.ca/~schmidtm/Software/matLearn.html>.

Dobson, T.M., Brown, M., Grue, D., Peña, E., & Roeder, G. (2015). **The Interface Implications of Understanding Readers**. *Interdisciplinary Science Reviews*, 40(1), 3-16.

Ruecker, S., Adelaar, N., Brown, S., Dobson, T.M., Knechtel, R., Liepert, S., MacDonald, A., Peña, E., Radzikowska, M., Roeder, G., Sinclair, S., and Windsor, J. (2014). **Academic prototyping as a method of knowledge production: The case of the Dynamic Table of Contexts**. *Scholarly and Research Communication*, 5(2).

Frizzera, L., Radzikowska, M., Roeder, G., Peña, E., Dobson, T.M., Ruecker, S., Rockwell, G. & Brown, S. (2013). **Visual workflow interfaces for editorial processes**. *Literary and Linguistic Computing*, 28(4), 615-628.

Roeder, G. (2012). **Climate models in modal adverbials: representational practice and deep uncertainty in the IPCC summary documents**. Master's thesis. University of British Columbia. <https://open.library.ubc.ca/cIRcle/collections/ubctheses/24/items/1.0072479>.

TALKS

Roeder, G. (2016). **Tensor Decompositions for Machine Learning**. *Machine Learning Reading Group*. University of British Columbia, Vancouver BC.
http://www.cs.ubc.ca/labs/lci/mlrg/slides/MLRG_Tensor_Talk.pdf.

Roeder, G. (2016). **Hierarchical Models and Bayesian Model Selection**. *Machine Learning Reading Group*. University of British Columbia, Vancouver BC.
http://www.cs.ubc.ca/labs/lci/mlrg/slides/MLRG_2016.pdf.

Roeder, G. (2012). **The Dynamic Table of Contexts: user experience and future directions**. *Digital Humanities 2012*, University of Hamburg, Hamburg, Germany.

Roeder, G. (2010). **Modality in climate change discourse**. *International Systemic Functional Linguistics Conference*, University of British Columbia, Vancouver B.C., Canada

CONFERENCE PROCEEDINGS

Roeder, G., Dobson, T., Peña, E., Brown, S., Dergacheva, E., Knechtel, R., and the INKE Research Group (2013). **Collaboration by Design: Institutional Innovation through Interface Aesthetics**. *Proceedings of the 3rd Conference of Japanese Association for Digital Humanities*. Sept 19-21, 2013, Ritsumeikan University, Kyoto, Japan.

Dobson, T., Roeder, G., Peña, E., Dergacheva, E., Brown, S., Heller, B., and the INKE Research Group (2013). **Managing the Editorial Process: A Study of Workflow**. *Proceedings of Digital Humanities (DH2013)*. July 16-19, 2013.

REVIEWING

International Conference on Learning Representations (ICLR)	2017
Neural Information Processing Systems (NIPS)	2016