Sean Robertson

Bahen Centre of Computer Science,
40 St George St, Rm 4242,
Toronto, ON, M5S 2E4

+1 (647) 701 6206
sdrobert@cs.toronto.edu
www.cs.toronto.edu/~sdrobert

EDUCATION

2016-pres	PhD Computer Science, University of Toronto, Canada
2013-2015	MSc Computer Science, University of Toronto, Cananda
2008-2013	Bachelor of Computer Science, Minor in Psychology, Hons., Co-op, University of Waterloo, Canada

HONOURS

2018,2019	Vector Institute Postgraduate Affiliation, Vector Institute
2017-2020	Canadian Graduate Scholarship - Doctoral (CGS-D), Natural Sciences and Engineering Research Council of Canada (NSERC)
2016	Ontario Graduate Scholarship, Government of Ontario and the University of Toronto
2014-2015	Canadian Graduate Scholarship - Master's (CGS-M), Natural Sciences and Engineering Research Council of Canada (NSERC)
2013-2015	Wolfond Scholarship Program for Wireless Information Technology, University of Toronto
2011-2012	Undergraduate Student Research Award, NSERC

RESEARCH INTERESTS AND EXPERIENCE

Current	Topics: Speech recognition; deep learning; multi-scale speech processing; digital signal processing; reinforcement learning (policy gradients).
	Courses taken: Learning Discrete Latent Structure (A+); Numerical Methods for Optimization Problems (A+).
Master's	Topics: Computer-assisted pronunciation training; phonology; pedagogy; machine learning; experimental design; experimental statistics; and mobile human-computer interaction.
	Courses taken: Fundamentals of Cryptography (A+); Natural Language Computing (A+); Human-Computer Interaction (A+); and Computational Linguistics (A+).
Undergraduate	Research assistantships topics: probabilistic modeling; basic ("maker") circuit board design; digital signal processing; and concurrent database scaling.

Refereed Full Papers and Conference Proceedings

- **Robertson, S.,** Munteanu, C., Penn, G. (2018). *Designing pronunciation learning tools: the case for interactivity against over-engineering.* Conference on Human Factors in Computing Systems (CHI). 356:1-356:13.

- **Robertson, S.,** Munteanu, C., Penn, G. (2016). *Pronunciation error detection for new language learners.* Interspeech. 2691-2695.

- Rudzicz, F., Frydenlund, A., **Robertson, S.,** Thaine, P. (2016). *Acoustic-articulatory relationships and inversion in sum-product and deep-belief networks.* Speech Communication, 79, 61 - 73.

Workshop Proceedings and Non-Refereed Papers

- **Robertson, S.,** Penn, G., Wang, Y. (2019) Exploring spectro-temporal features in end-to-end convolutional neural networks. arXiv preprint arXiv:1901.00072.

- **Robertson, S.,** Munteanu, C., Penn, G. (2016). *Language learning dialogue systems: lessons in proving yourself.* Designing Speech and multimodal interactions for mobile, wearable, and pervasive applications, CHI 2016.

- Minhas, U. F., Liu, R., Aboulnaga, A., Salem, K., Ng, J., **Robertson, S.** (2012). *Elastic scale-out for partition-based database systems.* IEEE 28th International Conference on Data Engineering Workshops (ICDEW). 281-288.

Teaching Experience

2014,2016-2018	Computational Linguistics - Teaching Assistant
	Pre- and post-assignment tutorials; assignment revisions; and marking.
2014,2017	Introduction to Computer Science - Teaching Assistant
	Overseeing first-year labs.

Professional Experience

2014-pres	Contracted work for Speax Inc.
	Speech recognition software; development; consultation.

References

- Prof. Gerald Penn (current and past supervisor), Department of Computer Science, University of Toronto. gpenn@cs.toronto.edu

- Prof. Cosmin Munteanu (past supervisor), Department of Computer Science, University of Toronto. cosmin@taglab.ca