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ALEXANDER M. RUSH

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|---------------------|---|--|
| Appointment | <p><i>Harvard University School of Engineering and Applied Sciences</i> 2015-. Assistant Professor of Computer Science</p> <p><i>Facebook Artificial Intelligence Research Lab</i> 2015. Post-Doctoral Fellowship Advisor: Yann LeCunn</p> | |
| Education | <p><i>Massachusetts Institute of Technology</i> 2009-2014. Ph.D, Computer Science. Advisor: Michael Collins Dissertation: <i>Relaxation Methods for Natural Language Decoding.</i></p> <p><i>Columbia University</i> 2011-2014. Visiting Scholar, Department of Computer Science.</p> <p><i>Harvard University</i> 2007. B.A., Computer Science. (Magna Cum Laude With Highest Honors.)</p> | |
| Grants and Awards | 2012 | Best Paper Award, North American Association of Computational Linguistics. |
| | 2010 | Best Paper Award, Empirical Methods in Natural Language Processing. |
| | 2009 | Graduate Research Fellow, National Science Foundation. |
| | 2006 | Outstanding Undergraduate Award Finalist, Computing Research Association. |
| Recent Publications | <p>Yoon Kim, Sam Wiseman, Alexander M. Rush. <i>Deep Latent-Variable Models for Natural Language. EMNLP 2018 (Tutorial)</i></p> <p>Yuntian Deng*, Yoon Kim*, Justin Chiu, Demi Guo, Alexander M. Rush. <i>Latent Alignment and Variational Attention. NIPS 2018</i></p> <p>Sam Wiseman, Alexander Rush. <i>Learning Neural Templates for Text Generation. EMNLP 2018</i></p> | |

- Sebastian Gehrmann, Yuntian Deng, Alexander Rush. *Bottom-Up Abstractive Summarization*. *EMNLP 2018*
- Luke Melas-Kyriazi, George Han, Alexander Rush. *Training for Diversity in Image Paragraph Captioning*. *EMNLP 2018 (Short)*
- Luong Hoang, Sam Wiseman, Alexander Rush. *Entity Tracking Improves Cloze-style Reading Comprehension*. *EMNLP 2018 (Short)*
- Hendrik Strobelt, Sebastian Gehrmann, Michael Behrisch, Adam Perer, Hanspeter Pfister, Alexander M. Rush. *Seq2Seq-Vis: A Visual Debugging Tool for Sequence-to-Sequence Models*. *VAST 2018, EMNLP-BlackBox 2018 (Best Paper - Honorable Mention)*
- Alexander M. Rush. *The Annotated Transformer*. *ACL NLP-OSS 2018*
- Jean Senellart, Dakun Zhang, Bo Wang, Guillaume Klein, J.P. Ramatchandirin, Josep Crego, Alexander M. Rush. *OpenNMT System Description for WNMt 2018: 800 words/sec on a single-core CPU*. *WNMT 2018 (First-Place CPU Speed/Memory)*
- Yoon Kim, Sam Wiseman, Andrew C. Miller, David Sontag, Alexander M. Rush. *Semi-Amortized Variational Autoencoders*. *ICML 2018*
- Alexander M. Rush and Slav Petrov, *Vine Pruning for Efficient Multi-Pass Dependency Parsing*. Proceedings of NAACL 2012. [Best Paper Award]
- Terry Koo, Alexander M. Rush, Michael Collins, Tommi Jaakkola, and David Sontag. *Dual Decomposition for Parsing with Non-Projective Head Automata*. Proceedings of EMNLP 2010. [Best Paper Award]
- Patents*
- Techniques for discriminative dependency parsing (Google). Slav Petrov, Alexander M. Rush, 2015.
- Efficient parsing with structured prediction cascades (Google). Slav Petrov, Alexander M. Rush, 2013
- Determining user affinity towards applications on a social networking website (Facebook., Thomas S. Whitnah, Alexander M. Rush, Ding Zhou, Ruchi Sangvhi, 2010.

Industry

Lead Engineer (Platform Team), *Facebook*, June 2007 – August 2009, Palo Alto, CA.

Open-Source

[Deep Latent-Variable Models for Natural Language](#) - Inference in deep latent variable models.

[Variational Attention](#) - fast training for latent var. attention (e.g. hard attention) with accuracy like soft attention

[Seq2Seq Vis](#) - Interaction with seq2seq translation dynamics.

[OpenNMT](#) - Open-source neural machine translation system.