

Adam Lopez

Research Scientist
Johns Hopkins University
Human Language Technology Center of Excellence
Stieff Building, 810 Wyman Park Drive
Baltimore, MD 21211 USA
Email: alopez@cs.jhu.edu
Web: www.cs.jhu.edu/~alopez

Research areas

Natural language processing, machine learning, language and automata theory, algorithms.

Papers & talks

Journal Articles

- 2010 A. Arun, B. Haddow, P. Koehn, A. Lopez, P. Blunsom, and C. Dyer. Monte Carlo techniques for phrase-based translation. In *Machine Translation*, 24(2).
- 2008 A. Lopez. Statistical machine translation. In *ACM Computing Surveys* 40(3), Article 8: 1–49.

Refereed Conference Papers

- 2011 M. Auli and A. Lopez. A comparison of loopy belief propagation and dual decomposition for integrated CCG supertagging and parsing. In *Proceedings of the Association for Computational Linguistics (ACL)*.
- M. Auli and A. Lopez. Efficient CCG parsing: A* versus adaptive supertagging. In *Proceedings of the Association for Computational Linguistics (ACL)*.
- 2009 A. Lopez. Translation as weighted deduction. In *Proceedings of the European Association for Computational Linguistics (EACL)*.
- A. Arun, C. Dyer, B. Haddow, P. Blunsom, A. Lopez, and P. Koehn. Monte Carlo inference and maximization for phrase-based translation. In *Proceedings of the Conference on Natural Language Learning (CoNLL)*.
- 2008 A. Lopez. Tera-scale translation models via pattern matching. In *Proceedings of the International Conference on Computational Linguistics (COLING)*.
- 2007 A. Lopez. Hierarchical phrase-based translation with suffix arrays. In *Proceedings of the Conference on Empirical Methods in Natural Language Processing (EMNLP)*.
- 2006 A. Lopez and P. Resnik. Word-based alignment, phrase-based translation: What's the link? In *Proceedings of the Association for Machine Translation in the Americas (AMTA)*.
- 2005 D. Chiang, A. Lopez, N. Madnani, C. Monz, P. Resnik, and M. Subotin. The Hiero machine translation system: extensions, evaluation, and analysis. In *Proceedings of the Conference on Empirical Methods in Natural Language Processing (EMNLP)*.

Refereed Workshop & Demonstration Papers

- 2010 C. Dyer, A. Lopez, J. Ganitkevitch, J. Weese, F. Ture, P. Blunsom, H. Setiawan, V. Eidelman, and P. Resnik. cdec: A Decoder, Alignment, and Learning Framework for Finite-State and

- Context-Free Translation Models. In *Proceedings of the Association for Computational Linguistics (ACL) Demonstration Track*.
- 2009 M. Auli, A. Lopez, H. Hoang, and P. Koehn. A systematic analysis of translation model search spaces. In *Proceedings of the Workshop on Machine Translation (WMT)*.
- H. Hoang, P. Koehn, and A. Lopez. A unified framework for phrase-based, hierarchical, and syntax-based statistical machine translation. In *Proceedings of the International Workshop on Spoken Language Translation (IWSLT)*.
- 2005 A. Lopez and P. Resnik. Improved HMM alignment models for languages with scarce resources. In *Proceedings of the Workshop on Building and Using Parallel Texts*.
- A. Lopez and P. Resnik. Pattern visualization for machine translation output. In *Proceedings of the Conference on Empirical Methods in Natural Language Processing (EMNLP) Demonstration Session*.
- 2002 A. Lopez, M. Nossal, R. Hwa, and P. Resnik. Word-level alignment for multilingual resource acquisition. In *Proceedings of the Workshop on Linguistic Knowledge Acquisition and Representation-Bootstrapping Annotated Language Data*.

Invited talks

- 2010 Johns Hopkins Human Language Technology Center of Excellence, hosted by Mark Dredze.
- 2009 Oxford University Computing Lab, hosted by Phil Blunsom.
- Cambridge University Computing Lab, hosted by Stephen Clark.
- Saarland University Department of Computational Linguistics, hosted by Andreas Eisele.
- Dublin City University Center for Next Generation Language Technology, hosted by Andy Way.
- 2008 Second Machine Translation Marathon, workshop organized by Philipp Koehn.
- 2007 University of Amsterdam Institute for Logic Language and Computation, hosted by Khalil Sima'an.
- University of Edinburgh Department of Informatics, hosted by Philipp Koehn.
- University of Pittsburgh Natural Language Processing Lab, hosted by Wendy Chapman.
- Carnegie Mellon University Language Technologies Institute, hosted by Alon Lavie.
- Microsoft Research, hosted by Robert C. Moore.
- MITRE Corporation, hosted by Christy Doran.
- 2006 Colgate University Department of Computer Science, hosted by Jaime Spacco.
- 2005 Union College Department of Computer Science, hosted by Brian Postow.

Tutorials & courses

- 2010 Statistical Machine Translation. One-week course at the European Summer School in Logic, Language and Information (ESSLLI).
- Introduction to Machine Translation. Tutorial lecture at the Fifth Machine Translation Marathon.
- Machine Translation. Tutorial lecture at the 2010 Johns Hopkins Summer School on Human Language Technology, with John DeNero.
- Introduction to Machine Translation. Tutorial lecture at the Fourth Machine Translation Marathon.
- 2009 Machine Translation. Tutorial lecture at the 2009 Johns Hopkins Summer School on Human Language Technology, with John DeNero.
- Introduction to Machine Translation. Tutorial lecture at the Third Machine Translation Marathon.
- 2008 Syntax-based Machine Translation. Tutorial lecture at the Second Machine Translation Marathon.

Education

- 2008 PhD in Computer Science, University of Maryland. Supervised by Philip Resnik.
- 2002 MS in Computer Science, University of Maryland.
- 1997 BS in Computer Science, Duke University.

Experience

Research & Teaching Positions

- 2011- Assistant research scientist (courtesy appointment), Johns Hopkins University Computer Science Department.
- 2010- Research scientist (primary appointment), Johns Hopkins University Human Language Technology Center of Excellence.
- 2010 Senior scientist, Johns Hopkins Center for Language and Speech Processing summer workshop.
- 2008-2010 Research fellow, University of Edinburgh. Supervised by Philipp Koehn.
- 2000-7 Graduate research assistant, University of Maryland. Supervised by Philip Resnik.
- 2000 Research intern, Sun Microsystems Laboratories. Supervised by William A. Woods.
- 2000 Visiting lecturer, Prince George's Community College Computer Science Department.
- 1999 Graduate teaching assistant, University of Maryland Computer Science Department.
- 1994-96 Undergraduate teaching assistant, Duke University Computer Science Department.

Engineering Positions

- 1997-99 Software engineer, IBM Corporation.

Professional activities & service

Advising

Michael Auli, University of Edinburgh, PhD expected 2011. Co-supervisor with Philipp Koehn.
Loïc Dugast, University of Edinburgh, PhD expected 2011. Dissertation committee.
Hieu Hoang, University of Edinburgh, PhD expected 2011. Dissertation committee.

Conference & workshop organization

- 2010 Fourth International Workshop On Crosslingual Information Access, co-chair with Sudeshna Sarkar, Rhagavendra Udupa, and Min Zhang.
- 2009 Conference on Empirical Methods in Natural Language Processing (EMNLP), area chair in machine translation.

Reviewing

ACL 2006,8-11. COLING 2008,10. CoNLL 2010-11. EACL 2009. EMNLP 2007,9-11. ESSLLI 2010. IJCAI 2007,11. IJCNLP 2008. MT Summit 2009. NAACL 2007,9-10. Natural Language Engineering 2009. various workshops 2008-11.

Professional Society Memberships

Association for Computing Machinery.
Association for Computational Linguistics.

Personal

United States citizen.