

Dr. James B. Henderson

Curriculum Vitae

School of Informatics, University of Edinburgh
2 Buccleuch Place, Edinburgh EH8 9LW, United Kingdom

Qualifications

- Ph.D. 1991–1994
Univ. Pennsylvania, Department Computer and Information Science, Philadelphia, PA, USA
- M.S.E. with major in Computational Linguistics 1987–1991
Univ. Pennsylvania, Department Computer and Information Science, Philadelphia, PA, USA
- B.Sc. in Computer Science 1983–1987
Massachusetts Institute of Technology, Department Electrical Engineering and Computer Science, Cambridge, MA, USA

Positions

- Research Fellow Apr'04–present
Univ. Edinburgh, School of Informatics, Edinburgh, UK
- Maître-assistant Oct'00–Mar'04
Univ. Geneva, Department of Computer Science, Geneva, Switzerland
A senior research position.
- Visiting Professor Feb'01–Oct'01
Swiss Federal Institute of Technology in Lausanne (EPFL), Department of Computer Science, Lausanne, Switzerland
- Lecturer in Computer Science Nov'94–Oct'01
Univ. Exeter, Department of Computer Science, Exeter, United Kingdom
- Visiting Researcher Aug'99–Jan'00
Swiss Federal Institute of Technology in Lausanne (EPFL), Artificial Intelligence Lab, Department of Computer Science, Lausanne, Switzerland

Grants

- British EPSRC grant Jan'07–present
End-to-end Integrated Statistical Processing for Context-Aware Dialogue Systems. GBP 266,907 (\$522,000)
- Swiss NSF Grant Oct'05–present
Kernel-Based Structure Processing for Natural Language Parsing. CHF 97,300 (\$76,800)
- Swiss NSF Grant Apr'03–Oct'05
Neural Network Statistical Estimation for Very Broad Coverage Parsing. CHF 83,920 (\$65,400)
- Swiss NSF Grant Oct'02–present
Combining Machine Learning and Natural Language Processing for Knowledge Discovery in Text. CHF 247,934 (\$180,000)

Professional Recognition

- Conference chairs 2004 – 2006
- Area Chair for Parsing, 2006 Conference on Empirical Methods in Natural Language Processing (EMNLP 2006), Sydney, Australia
 - Area Chair for Parsing and Grammatical Formalism, 2nd International Joint Conference on Natural Language Processing (IJCNLP-05), Jeju Island, Korea
 - Co-Chair for Tutorials, 20th Int. Conf. on Computational Linguistics (COLING 2004), Geneva, Switzerland
- Journal and Conference reviewer 1996–present
- Reviewed over 10 times for international journals and over 20 times for international conferences.

Selected Journal Articles

- Henderson, J. (2004). Estimating Probabilities for Unbounded Categorization Problems. *Neurocomputing*, 57:77–86.
- Lane, P. and Henderson, J. (2001). Incremental Syntactic Parsing of Natural Language Corpora with Simple Synchrony Networks. *IEEE Transactions on Knowledge and Data Engineering*, 13(2):219–231.

Selected Conference Papers

- Titov, I. and Henderson, J. (2007). Incremental Bayesian Networks for Structure Prediction. In *Proc. 24th Int. Conf. on Machine Learning (ICML-07)*. Corvallis, OR, USA. (29% acceptance rate)
- Titov, I. and Henderson, J. (2007). Constituent Parsing with Incremental Sigmoid Belief Networks. In *Proc. 45th Meeting of Assoc. for Computational Linguistics (ACL-07)*. Prague, Czech Republic. (22% acceptance rate)
- Titov, I. and Henderson, J. (2007). Fast and Robust Multilingual Dependency Parsing with a Generative Latent Variable Model. In *Proc. CoNLL 2007 Shared Task. Joint Conf. on Empirical Methods in Natural Language Processing and Computational Natural Language Learning (EMNLP-CoNLL-07)*. Prague, Czech Republic. (3rd result out of 23)
- Titov, I. and Henderson, J. (2007). A Latent Variable Model for Generative Dependency Parsing. In *Proc. International Conference on Parsing Technologies (IWPT-07)*. Prague, Czech Republic.
- Titov, I. and Henderson, J. (2006). Loss minimization in parse reranking. In *Proc. 2006 Conf. on Empirical Methods in Natural Language Processing (EMNLP 2006)*, Sydney, Australia. (18% acceptance rate)
- Titov, I. and Henderson, J. (2006). Porting statistical parsers with data-defined kernels. In *Proc Tenth Conf. on Computational Natural Language Learning (CoNLL 2006)*, New York, NY, USA.
- Lemon, O., Georgila, K., and Henderson, J. (2006). Evaluating Effectiveness and Portability of Reinforcement Learned Dialogue Strategies with real users: the TALK TownInfo Evaluation, In *Proc. IEEE/ACL Spoken Language Technology*.

- Georgila, K., Henderson, J., and Lemon, O. (2006). User Simulation for Spoken Dialogue Systems: Learning and Evaluation. In *Proc. Interspeech 2006*.
- Henderson, J. and Titov, I. (2005). Data-defined kernels for parse reranking derived from probabilistic models. In *Proc. 43rd Meeting of Association for Computational Linguistics (ACL 2005)*, Ann Arbor, MI, USA. (18% acceptance rate)
- Titov, I. and Henderson, J. (2005). Deriving kernels from MLP probability estimators for large categorization problems. In *Proc. 2005 International Joint Conf. on Neural Networks (IJCNN 2005)*, Montreal, Quebec, Canada.
- Henderson, J., Lemon, O., and Georgila, K. (2005). Hybrid reinforcement/supervised learning for dialogue policies from COMMUNICATOR data. In *Proc. IJCAI workshop on Knowledge and Reasoning in Practical Dialogue Systems*.
- Henderson, J. (2004). Discriminative training of a neural network statistical parser. In *Proc. 42nd Meeting of Association for Computational Linguistics (ACL 2004)*, Barcelona, Spain. (25% acceptance rate)
- Henderson, J. (2003). Structural Bias in Inducing Representations for Probabilistic Natural Language Parsing. In *Proc. of 13th Int. Conf. on Artificial Neural Networks (ICANN/ICONIP 2003)*, Istanbul, Turkey.
- Henderson, J. (2003). Inducing History Representations for Broad Coverage Statistical Parsing. In *Proc. of the Joint Meeting of the North American Chapter of the Association for Computational Linguistics and the Human Language Technology Conf. (HLT-NAACL 2003)*, pages 103–110, Edmonton, Canada. (22% acceptance rate)
- Henderson, J., Merlo, P., Petroff, I., and Schneider, G. (2002). Using Syntactic Analysis to Increase Efficiency in Visualizing Text Collections. In *Proc. of 19th Int. Conf. on Computational Linguistics (COLING 2002)*, pages 335–341, Taipei, Taiwan.
- Henderson, J. and Lane, P. (1998). A Connectionist Architecture for Learning to Parse. In *Proc. of 36th Annual Meeting of the Association for Computational Linguistics and 17th Int. Conf. on Computational Linguistics (COLING-ACL 1998)*, pages 531–537, Montreal, Canada.