

Gabriele Antonio Musillo

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Objective

Academic Research Position in Natural Language Processing or Challenging and Rewarding Position in Scientific Software Engineering with Significant Growth Potential.

Education

Ph.D. student. Department of Computer Science. University of Geneva.
October 2004 – September 2009 (expected).
Proposal: *Unlexicalised Latent Variable Models of Split Dependency Grammars*
Supervisors: Prof. Paola Merlo and Prof. Christian Pelligrini.

Ph.D. Oral Examination. Department of Computer Science. University of Geneva.
December 2008.
Subject: *Aspects of Statistical Machine Translation* (grade: 6/6).
Committee: Prof. James Henderson, Prof. Paola Merlo, Prof. Christian Pellegrini and Prof. Eric Wehrli.

Visiting Ph.D. student. Computer Science and Artificial Laboratory. Massachusetts Institute of Technology.
August 2007 – June 2008.
Proposal: *Unlexicalised Hidden Variable Models of Split Dependency Grammars*
Supervisor: Prof. Michael Collins.

LPI Linux Systems Administrator. Linux Professional Institute Certification Level One. July 2005.

Ph.D. student. Graduate Program in Logic. Computational and Applied Logic Group. Institute for Logic, Language and Computation. Department of Computer Science. University of Amsterdam.
November 2001–January 2003.
Supervisors: Maarten de Rijke and Khalil Simaan.

14th European Summer School in Logic, Language and Information. ITC, Trento, Italy, August 2002.

Licence in Philosophy (equivalent to a Master degree; grade: 5.64/6). Department of Philosophy. University of Geneva. 2001.
Thesis title: *Validité* (grade: 12/12).
The thesis investigates russellian and tarskian definitions of the concept of logical consequence from a modal logic perspective.
Advisor: Prof. Kevin Mulligan.

Language and Speech Engineering postgraduate course. EPFL, Lausanne, Switzerland, April–June 2000.

3/4 *licence* in Computational Linguistics (equivalent to a Bachelor degree; grade: 5.7/6). Department of Linguistics and Computer Science. University of Geneva. 2000. Project title: *Réseaux syntaxiques* (grade: 6/6).

The project defines and implements (in Oberon-2) constrained transition networks for natural language grammars.

Advisor: Prof. Eric Wehrli.

3/4 *licence* in Linguistics (equivalent to a Bachelor degree; grade: 5.85/6). Department of Linguistics. University of Geneva. 1999.

Employment

Assistant DIP (Teacher) October 2005–present
Teaching of the Perl programming language for empirical methods in natural language processing including dynamic programming techniques.
Setup, Linux System Administration and Optimization of HP Blade Workstations for machine learning computing.
LATL. Department of Computer Science and Department of Linguistics. University of Geneva.

Candoc (PhD student) October 2006–present
Research on semantic and dependency parsing with hidden variables (Swiss National Science Foundation grant number 100011-114044) and development of hidden variable models (in Perl and C). Co-supervision of a Master student project on combining syntactic structures computed by distinct parsing models.
LATL. Department of Computer Science and Department of Linguistics. University of Geneva.

Candoc (PhD student) October 2004–October 2006
Research on functional and semantic parsing (Swiss National Science Foundation grant number 101411-105286/1) and development of a state-of-the-art functional parser (in C). Teaching of the Perl programming language for empirical methods in natural language processing. Supervision of an undergraduate student project on visualizing large syntactic structures on hyperbolic planes.
LATL. Department of Computer Science and Department of Linguistics. University of Geneva.

Assistant de Recherche (research assistant) January 2003–October 2004
Development of a computational grammar for Italian, design and implementation (in Component Pascal) of FIPSITALIAN (a wide-coverage principle-based parser for Italian).
LATL. Department of Linguistics. University of Geneva.

Assistent in Opleiding (research assistant) November 2001–January 2003
Research on computational logic architectures that can handle linguistic information structures.
ILLC. Department of Computer Science. University of Amsterdam.

Scientific programmer September 2000–November 2001
Design and implementation (in Component Pascal) of FIPSINFLEXION (a morphological generator and analyzer) and FIPSPHONETIZER (a phonetic form generator) for speech synthesis systems.
LATL. Department of Linguistics. University of Geneva.

Moniteur (teaching assistant) October 1999–June 2000
Teaching of proof methods for Gentzen sequent calculi to undergraduate students in Logic and Philosophy of Language .
Department of Philosophy. University of Geneva.

Awards Swiss National Science Foundation Doctoral Fellowship for Prospective Researchers, January 2007.

Professional Recognition Program committee member for the *Conference on Empirical Methods in Natural Language Processing (EMNLP '09)*, Singapore, August 2009.

Program committee member for the *the Thirteenth Conference on Computational Natural Language Learning (CoNLL '09)*, Boulder, Colorado, USA, June 2009.

Program committee member for the *Student Research Workshop at the 11th Annual Meeting of the European Chapter of the Association for Computational Linguistics (EACL'06)*, Trento, Italy, April 2006.

References Prof. Paola Merlo
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Prof. James Henderson
Department of Computer Science
University of Geneva
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Prof. Michael Collins
MIT Computer Science and Artificial Intelligence Laboratory
Massachusetts Institute of Technology
Tel. +1 617 253 0705. Email: mcollins@csail.mit.edu

Publications Titov Ivan, Henderson James, Merlo Paola and Musillo Gabriele (2009). “Online Graph Planarisation for Synchronous Parsing of Semantic and Syntactic Dependencies”, *to appear in the Proceedings of the Twenty-First International Joint Conference on Artificial Intelligence (IJCAI-09)*, Pasadena, California, USA, July 2009.

Musillo Gabriele and Paola Merlo (2008). “Unlexicalised Hidden Variable Models of Split Dependency Grammars”, *Proceedings of the 46th Annual Meeting of the Association for Computational Linguistics (ACL'08-HLT)*, Columbus, Ohio, USA, June 2008.

Paola Merlo and Musillo Gabriele (2008). “Semantic Parsing for High-Precision Semantic Role Labelling”, *Proceedings of the 12th Conference on Computational Natural Language Learning (CoNLL-2008)*, Manchester, UK, June 2008.

James Henderson, Paola Merlo, Musillo Gabriele and Ivan Titov (2008). “A Latent Variable Model of Synchronous Parsing for Syntactic and Semantic Dependencies”, *Proceedings of the 12th Conference on Computational Natural Language Learning (CoNLL-2008)*, Manchester, UK, June 2008.

Musillo Gabriele and Paola Merlo (2006). “Accurate Parsing of the Proposition Bank”, *Proceedings of Human Language Technology Conference and North American chapter of the Association for Computational Linguistics (HLT-NAACL’06)*, New York City, USA, June 2006.

Musillo Gabriele and Paola Merlo (2006). “Robust Parsing of the Proposition Bank”, *Proceedings of the Fourth International EACL-2006 Workshop: Robust Methods in Analysis of Natural Language Data (ROMAND’06)*, Trento, Italy, April 2006.

Musillo Gabriele and Paola Merlo (2005). “Lexical and Structural Biases for Function Parsing”, *Proceedings of the Ninth International Conference on Parsing Technology (IWPT’05)*, pages 83-92, Vancouver, British Columbia, Canada, October 2005.

Merlo Paola and Gabriele Musillo (2005). “Accurate Function Parsing”, *Proceedings of Human Language Technology Conference and Conference on Empirical Methods in Natural Language Processing (HLT-EMNLP’05)*, pages 620-627, Vancouver, British Columbia, Canada, October 2005.

Musillo Gabriele and Paola Merlo (2005). “Assigning Function Labels to Unparsed Text”, *Proceedings of the International Conference on Recent Advances in Natural Language Processing (RANLP’05)*, pages 340-346, Borovetz, Bulgaria, September 2005.

Musillo Gabriele and Khalil Sima’an (2002). “Towards comparing parsers from different linguistics frameworks: an information-theoretic approach”, *Proceedings of the LREC-02 Workshop: Beyond PARSEVAL*, pages 44-51, Las Palmas, Gran Canaria, June 2002.

Talks

Unlexicalised Hidden Variable Models of Split Dependency Grammars, Artificial Intelligence and Information Systems Seminar, University of Illinois at Urbana-Champaign, May 2008.

Structural Biases for Function Parsing, GAIL-LATL meeting, University of Geneva, June 2005.

Formal Aspects of the FIPS parser, Ecole doctorale en Sciences du Langage, University of Geneva, April 2004.

FipsItalian: a wide-coverage parsing system for Italian, Ecole doctorale en Sciences du Langage, University of Geneva, May 2003.