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# Sebastian Riedel

## Curriculum Vitae

### Education

- 2004–2008 **Ph.D. in Informatics**, *University of Edinburgh*, Edinburgh, UK.  
Natural Language Processing and Machine Learning.
- 2003–2004 **M.Sc. in Informatics**, *University of Edinburgh*, Edinburgh, UK.  
Learning From Data, awarded with distinction.
- 1997–2003 **Dipl. Ing. Computer Science and Engineering**, *Technical University Hamburg-Harburg*, Hamburg, Germany.  
Information Systems, Grade: 1.5 (equivalent to first class honors).
- 1987–1996 **Abitur**, *Albert-Schweitzer-Gymnasium*, Hamburg, Germany.  
Grade: 1.7.

### Doctoral Thesis

- Title *Efficient Prediction of Relational Structure in Natural Language Processing*
- Supervisors Ewan Klein, Miles Osborne.
- Committee Pedro Domingos, Mirella Lapata, Ewan Klein.
- Description Used Cutting Plane methods and first-order query processing to improve memory and CPU efficiency of MAP Inference for Markov Logic by several orders of magnitude.

### Experience

- June 2011–  
current **Research Scientist**, *University of Massachusetts Amherst*, Amherst, USA.  
Continuation of my work on information extraction and inference; co-lecturing a class with Andrew McCallum.
- 2009–2011 **Postdoctoral Research Associate**, *University of Massachusetts Amherst*, Amherst, USA.  
Supervised students in Andrew McCallum's absence; work on weakly-supervised information extraction and efficient inference; lead team to rank first in BioNLP Shared Task 2011. Lead UMass Machine Reading team in DARPA project.
- 2008–2009 **Researcher**, *University of Tokyo*, Tokyo, Japan.  
Event Extraction from biomedical literature; lead a team to create an event extraction system based on Markov Logic. This system achieved the best results in the BioNLP Shared Task 2009 (Track 2).

- 2006 **Visiting Scholar**, *Stanford University*, Palo Alto, USA.  
Studied Natural Language Processing in Chris Manning's NLP group.
- 2001–2002 **Research Intern**, *Siemens Corporate Research*, Princeton, USA.  
"Towards marker-less tracking", developed camera pose estimation algorithms in an Augmented Reality scenario.
- 2000–2001 **Software Engineer**, *infoAsset AG*, Hamburg, Germany.  
Design and implementation of a Java web-based assessment software providing support for online design and evaluation of recruitment tests.
- 1999–2000 **Project Leader**, *Technical University Hamburg-Harburg*, Hamburg, Germany.  
Design and implementation of the university's online lecture evaluation system.
- 1999 **Research Intern**, *Germanischer Lloyd*, Hamburg, Germany.  
Developed an object-oriented "pipes and filter" framework and basic components for processing GPS data using Java.
- 1998 **Research Assistant**, *STS / Technical University Hamburg-Harburg*, Hamburg, Germany.  
Developed the graphical user interface of a multimedia information system for Political Iconography in an interdisciplinary project with the Art History department.

## Achievements

### Fellowships

- 2008 Conference on Uncertainty in Artificial Intelligence 2008 Student Grant.
- 2004–2007 Edinburgh-Stanford-Link Studentship.
- 2004–2007 ESRC PhD. +3 Competition Studentship.
- 2003–2004 EPSRC MSc. Studentship.

### Competitions and Awards

- 2011 1st place in three BioNLP 2011 shared tasks: "Genia Event Extraction Task 1", "Genia Event Extraction Task 2" and "Infectious Diseases Task."
- 2010 EMNLP 2010 Best Reviewer Award.
- 2009 1st place in the BioNLP shared task 2009 (Track 2), and 4th place (Track 1).
- 2008 2nd place in CoNLL Semantic Role Labeling and Dependency Parsing task 2008, Open Track (Selected for Oral Presentation).
- 2006 4th place in CoNLL Multilingual Parsing shared task 2006.
- 2005 1st place in the Learning Language in Logic Competition at ICML 2005, Relation Extraction.
- 2004 IGK Summer School Best Student Project.

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## Service

### Area Chair

2011 EACL 2012.

### Senior Program Committee

2011 IJCAI 2011, AAAI 2011.

### Program Committee

2011 ACL, CoNLL, ICML, EMNLP, RELMS, NIPS.

2010 ICML, ACL, CoNLL, Coling, AAAI, EMNLP.

2009 EACL, ICML, EMNLP, CoNLL.

2008 EACL.

2007 EMNLP.

2006 NAACL.

### Guest Editor

2011 Special Issue on Statistical Learning of Natural Language Structured Input and Output at Natural Language Engineering journal (2010-2011).

2011 ACM Transactions on Speech and Language Processing.

### Workshop Organizer

2011 Co-organizer of the 2012 Automated Knowledgebase Construction (AKBC) workshop.

2011 Co-organizer of the Shonan Computational Thinking workshop.

2009 Co-organizer of the NAACL/HLT 2009 ILP for NLP workshop.

2007 Co-organizer of the CoNLL Shared Task 2007.

### Other

2011 Panelist for the Relational Models of Semantics Workshop 2011 at ACL.

2008 Google Summer of Code mentor for the Natural Language Toolkit (NLTK) project.

2006–2008 Organizer for Machine Learning reading group at ICCS, University of Edinburgh.

2006 Student Representative in the Computing Committee of the School of Informatics.

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## Talks

- 2011 **Entity and Relation Discovery**, *Google*, New York, USA.  
Invited talk at the Knowledge Discovery Workshop.
- 2011 **Fast and Robust Biomedical Event Extraction**, *University of Illinois Urbana-Champaign*, Urbana-Champaign, USA.  
Invited talk at the Computer Science department.
- 2011 **Fast and Robust Biomedical Event Extraction**, *Wake Forrest University*, Winston-Salem, USA.  
Invited talk at the Computer Science department.
- 2010 **Modeling Relations and their Mentions without annotated Text**, *University of Tokyo*, Tokyo, Japan.  
Invited talk at the Tsujii-Lab.
- 2010 **Ignorant Inference**, *NTT Communication Science Laboratories*, Kyoto, Japan.  
Invited talk at the Linguistic Intelligence Research Group.
- 2010 **Ignorant Inference**, *Nara Institute of Science and Technology*, Nara, Japan.  
Invited talk at the annual Japanese NLP joint meeting.
- 2010 **Ignorant Inference**, *University of Washington*, Seattle, USA.  
Invited talk at the Machine Learning Lunch.
- 2010 **Factorie**, *SRI International*, Menlo Park, USA.  
Invited talk at DARPA ISAT workshop.
- 2009 **Cutting Plane Inference and Factorie**, *University of Wisconsin, Madison*, Madison, USA.  
Invited talks at the Machine Learning group.
- 2009 **Markov Logic for Natural Language Processing**, *Gakushuin University*, Tokyo, Japan.  
Invited talk at the Machine Learning and Natural Language Processing workshop of the SIG Fundamental Problems in AI.
- 2007 **The Cutting Plane Method for Inference in NLP**, *University of Edinburgh*, Edinburgh, United Kingdom.  
Invited talk at the Edinburgh Research Group for Optimization (ERGO) at the School of Mathematics.
- 2006 **Scaling Up Inference in NLP: Just Relax**, *Stanford University*, Palo Alto, USA.  
Invited talk at the NLPLunch at Computer Science department.

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## Teaching

- 2011 **Co-lecturer**, *University of Massachusetts Amherst*, Amherst, USA.  
Automated Knowledge Base Construction.

- 2011 **Guest-lecturer**, *University of Massachusetts Amherst*, Amherst, USA.  
Graphical Models.
- 2006 **Teaching Assistant**, *University of Edinburgh*, Edinburgh, UK.  
Data Intensive Linguistics.
- 2005 **Teaching Assistant**, *University of Edinburgh*, Edinburgh, UK.  
Introduction to Computational Linguistics.
- 2003 **Teaching Assistant**, *Technical University Hamburg-Harburg*, Hamburg, Germany.  
Foundations and technologies of ECommerce.
- 2000 **Teaching Assistant**, *Technical University Hamburg-Harburg*, Hamburg, Germany.  
Computer Science for Engineers; voted best TA in the department.

## Languages

German	<b>Native</b>
English	<b>Fluent</b>
Japanese	<b>Intermediate</b>

## Open Source Software

markov thebeast	a Markov Logic interpreter tailored to NLP applications. The software has over 1400 downloads on googlecode, and several exciting research projects rely on it (such as work on temporal reasoning at the University of Rochester, or work on ontology alignment at the University of Mannheim).
What's Wrong with My NLP?	an extensive visualizer for various NLP problems. Used in several university courses on NLP (such as "Current Approaches to Dependency Parsing" at the University of Tuebingen, and "Language Technology" at Lund University).

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## References

### **Professor Ewan Klein**

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### **Professor Andrew McCallum**

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### **Professor Michael Collins**

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