

## Slav Petrov

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### Education

University of California at Berkeley Berkeley, CA, USA  
Ph.D. in Computer Science August 2004 – August 2009  
Management of Technology Certificate, Haas School of Business  
Thesis: Coarse-to-Fine Natural Language Processing, Advisor: Dan Klein

Free University of Berlin Berlin, Germany  
Master of Science ('Diplom') in Computer Science October 2000 – June 2004

Duke University Durham, NC, USA  
Visiting exchange student August 2002 – May 2003

### Work Experience

Google Inc., Research Scientist New York, NY, USA  
Work on natural language processing for web search. August 2009 - currently

Google Inc., Research Intern New York, NY, USA  
Work on topic models for ranking news stories. June – August 2008

McKinsey & Company, Associate Intern Berlin, Germany  
IT strategy consulting for a retail client. August – September 2007

Microsoft Inc., Research Intern Redmond, WA, USA  
Work on a topic sensitive machine translation system. May – July 2007

### Research Experience

University of California at Berkeley, Advisor: Dan Klein Berkeley, CA, USA  
Work on inducing latent structure in natural language models. August 2005 – May 2009

University of California at Berkeley, Advisor: Jitendra Malik Berkeley, CA, USA  
Work on video classification and activity recognition. August 2004 – May 2006

Free University of Berlin, Advisor: Raul Rojas Berlin, Germany  
Computer vision and behavior control for soccer playing robots. August 2003 – June 2004

Duke University, Advisor: Carlo Tomasi Durham, NC, USA  
Design of features and similarity metrics for gesture recognition. October 2002 – June 2003

### Teaching Experience

Teaching Assistant for Artificial Intelligence. University of California at Berkeley Fall 2008

Teaching Assistant for Machine Structures. University of California at Berkeley Fall 2004

Teaching Assistant for Computer Organization. Free University of Berlin Summer 2002

Teaching Assistant for Computer Structures. Free University of Berlin Winter 2001

## Conference Publications

1. “*Coarse-to-Fine Syntactic Machine Translation using Language Projections*,” Slav Petrov, Aria Haghighi and Dan Klein, in Proceedings of the Conference on Empirical Methods in Natural Language Processing (**EMNLP ’08**), Honolulu, HI, USA, October 21-23, 2008.
2. “*Sparse Multi-Scale Grammars for Discriminative Latent Variable Parsing*,” Slav Petrov and Dan Klein, in Proceedings of the Conference on Empirical Methods in Natural Language Processing (**EMNLP ’08**), Honolulu, HI, USA, October 21-23, 2008.
3. “*Discriminative Log-Linear Grammars with Latent Variables*,” Slav Petrov and Dan Klein, in Advances in Neural Information Processing Systems 20 (**NIPS ’08**), Vancouver, December 3-8, 2007.
4. “*Learning Structured Models for Phone Recognition*,” Slav Petrov, Adam Pauls and Dan Klein, in Proceedings of the Conference on Empirical Methods in Natural Language Processing and the Conference on Computational Natural Language Learning (**EMNLP-CoNLL ’07**), Prague, 2007.
5. “*The Infinite PCFG using Hierarchical Dirichlet Processes*,” Percy Liang, Slav Petrov, Dan Klein and Michael Jordan, in Proceedings of the Conference on Empirical Methods in Natural Language Processing and the Conference on Computational Natural Language Learning (**EMNLP-CoNLL ’07**), Prague, 2007.
6. “*Learning and Inference for Hierarchically Split PCFGs*,” Slav Petrov and Dan Klein, in Proceedings of the 22nd Conference on Artificial Intelligence, Nectar Track, (**AAAI ’07**), Vancouver, 2007.
7. “*Improved Inference for Unlexicalized Parsing*,” Slav Petrov and Dan Klein, in Proceedings of Human Language Technologies: The Conference of the North American Chapter of the Association of Computational Linguistics (**HLT-NAACL ’07**), Rochester, NY, USA, April 22-27, 2007.
8. “*Learning Accurate, Compact, and Interpretable Tree Annotation*,” Slav Petrov, Leon Barrett, Romain Thibaux and Dan Klein, in Proceedings of the 21st International Conference on Computational Linguistics and 44th Annual Meeting of the Association for Computational Linguistics (**COLING-AACL ’06**), Sydney, Australia, July 17-21, 2006.
9. “*Non-Local Modeling with a Mixture of PCFGs*,” Slav Petrov, Leon Barrett and Dan Klein, in Proceedings of the 10th Conference on Computational Natural Language Learning (**CoNLL ’06**) New York, USA, June 9-10, 2006.
10. “*3D Tracking = Classification + Interpolation*,” Carlo Tomasi, Slav Petrov and Arvind Sastry, in Proceedings of the Ninth IEEE International Conference on Computer Vision (**ICCV ’03**), Nice, France, October 13-16, 2003.

## Other Publications

1. “*Coarse-to-Fine Natural Language Processing*,” Slav Petrov, PhD Thesis at the University of California at Berkeley, 2009.
2. “*Parsing German with Latent Variable Grammars*,” Slav Petrov and Dan Klein, in Proceedings of the Parsing German Workshop at ACL-HLT 2008, Columbus, OH, USA, June 16-20, 2008.
3. “*Detecting Categories in News Video using Acoustic, Speech and Image Features*,” Slav Petrov, Arlo Faria, Alex Berg, Andreas Stolcke, Dan Klein and Jitendra Malik, in Proceedings of VIDEO TREC (**TrecVid ’06**), Gaithersburg, MD, USA, November 13-14, 2006.
4. “*Computer Vision, Sensor Fusion and Behaviour Control for Soccer Robots*,” Slav Petrov, Master’s Thesis (‘Diplomarbeit’) at the Free University of Berlin, 2004.

## Honors and Awards

Berkeley Graduate Fellowship ’06.

World Champion in robotic soccer at RoboCup ’05 with the Free University of Berlin.

One-year full scholarship for the Duke University - Free University of Berlin Program.

Three time intramural soccer champion at UC Berkeley and once at Duke University.

**Professional Activities**

Workshop organizer at NIPS 2008: “Speech and Language: Unsupervised Latent-Variable Models”

Program committee member for ACL (2008, 2009), COLING (2008), CoNLL (2008, 2009), ICML (2008, 2009), EACL (2009), EMNLP (2007, 2008, 2009), NAACL (2007, 2009), RANLP (2009)

**Languages**

Native speaker of German and Bulgarian, Fluent in English, Some Italian, Latin.