

# Sameer Singh

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## Research Interests

- Interpretable Machine Learning
- Natural Language Processing
- Large-Scale Machine Learning
- Information Extraction

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## Education

- 2008–2014 **PhD (Computer Science)**, *University of Massachusetts*, Amherst, MA.  
title Scaling MCMC Inference and Belief Propagation to Large, Dense Graphical Models  
committee Andrew McCallum (chair), Carlos Guestrin, Ben Marlin, David Jensen, Michael Zink
- 2004–2007 **MS (Computer Science)**, *Vanderbilt University*, Nashville, TN.
- 2000–2004 **BE (Electronics & Comm Engg)**, *NSIT (Delhi University)*, New Delhi, India.

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## Employment

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### Academic

- July 2016–present **Assistant Professor**, *Computer Science*, University of California, Irvine.
- Oct 2016–present **Assistant Professor**, *Linguistics (courtesy appointment)*, University of California, Irvine.
- Apr 2017–present **Assistant Professor**, *Elec Engg & CS (courtesy appointment)*, University of California, Irvine.
- Sept '13–June '16 **Postdoc (Research Associate)**, *Computer Science*, University of Washington, Seattle.
- 2008–2013 **Research Assistant**, *Information Extraction and Synthesis Lab (IESL)*, UMass, Amherst.
- May 05–May 07 **Research Assistant**, *Inst. for Software & Integrated Systems (ISIS)*, Vanderbilt University.
- Summer 2006 **Research Assistant**, *Department of Biomedical Informatics*, Vanderbilt University.
- 2003–2004 **Student Collaborator**, *Defense Research & Development Organisation (DRDO)*, India.
- 2002–2004 **Student Collaborator**, *School of Physical Sciences*, Jawaharlal Nehru Univ. (JNU), India.

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### Industry

- June–Sept 2012 **Research Intern**, *Microsoft Research*, Cambridge, UK.
- June–Sept 2010 **Research Intern**, *Google Research*, Mountain View, CA.
- July–Sept 2009 **Applied Research Intern**, *Yahoo! Labs*, Santa Clara, CA.
- May–Dec 2007 **Software Engineer Intern**, *Google Inc*, Pittsburgh, PA.

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## Teaching

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### Course Instruction

- Fall 2017 **Instructor**, *CS 178: Machine Learning*, Undergraduate Course, UC Irvine.
- Fall 2017 **Instructor**, *CS 273A: Machine Learning*, Graduate Course, UC Irvine.
- Spring 2017 **Instructor**, *CS 175: Projects in AI (in Minecraft)*, Undergraduate Course, UC Irvine.
- Winter 2017 **Instructor**, *CS 295: Statistical Natural Language Processing*, Graduate Course, UC Irvine.
- Spring 2011 **Teaching Assistant**, *CS691: Probabilistic Graphical Models*, instr: Andrew McCallum, UMass.
- Spring 2008 **Teaching Assistant**, *CS121: Introduction to Programming*, instr: Erik Learned-Miller, UMass.
- Fall 04, Spring 05 **Teaching Assistant**, *CS201: Data Structures*, instr: Doug Fisher, Vanderbilt University.

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## Project Mentoring and Guest Lectures

- Spring 2017 **Mentor**, *EECS 159A/CS 181A: Senior Design Project*, Undergraduate Course, UC Irvine.
- Spring 2017 **Guest Lecturer**, *Econ 229: Big Data*, instr: Matthew Harding, UC Irvine.
- Fall 2017 **Mentor**, *EECS 159A/CS 181A: Senior Design Project*, Undergraduate Course, UC Irvine.
- Fall 2015 **Guest Lecturer**, *CSEP 517: Natural Language Processing*, instr: Yejin Choi, UW.
- Fall 2015 **Guest Lecturer**, *CSE 546: Machine Learning*, instr: Sham Kakade, UW.
- Fall 2014 **Guest Lecturer**, *CSE 546: Machine Learning*, instr: Carlos Guestrin, UW.
- Spring 2012 **Guest Lecturer**, *CS691: Probabilistic Graphical Models*, instr: Ben Marlin, UMass.

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## Professional Recognition and Activity

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### Honors and Awards

- 2016 **Audience Appreciation Award**, International Conference of SIGKDD, San Francisco, CA.
- 2016 **Best Paper Award**, ICML Workshop on Human Interpretability in Machine Learning, New York, NY.
- 2015 **DARPA Riser**, DARPA Wait, What? Event, St. Louis, MO.
- 2015 **Grand Prize Winner**, Yelp Dataset Challenge, Round 4.
- 2014 **Exceptional Submission Award**, ACL Workshop on Semantic Parsing, Baltimore, MD.
- 2011 **Best Talk Award**, Machine Reading Project Phase 3 Kickoff, Seattle, WA.
- 2010-2011 **Yahoo! Key Scientific Challenges (KSC) Award**, in Machine Learning & Statistics.
- 2010-2011 **Accomplishments in Search & Mining Award**, UMass CS Dept and Yahoo!.
- 2004 **Best Undergraduate Project**, Department of Instrumentation & Control (NSIT).

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### Tutorials

- Feb 2017 **Knowledge Graph Construction From Text**, *AAAI Conf on Advances in Artificial Intel*, San Francisco, CA.

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### Invited Talks

- Jul 2017 **Explaining Black-Box Machine Learning Predictions**, *Orange County ACM Meeting*, Irvine, CA.
- Jun 2017 **Explaining Black-Box Machine Learning Predictions**, *PyData SoCal Meetup*, Los Angeles, CA.
- Jun 2017 **Interpreting machine learning predictions**, *Nutanix .NEXT Conference*, Washington, DC.
- Mar 2017 **Intuitive Interactions with Black-box Machine Learning**, *USC ISI NLP Seminar*, Los Angeles, CA.
- Mar 2017 **Explaining the Predictions of any Classifier**, *Global Data Science Conference*, Santa Clara, CA.
- Dec 2016 **Explaining the Predictions of Any Classifier**, *OC Advanced Analytics Meetup*, Newport Beach, CA.
- Nov 2016 **“Why Should I Trust You?” Explaining the Predictions of Any Classifier**, *Workshop on Fairness, Accountability, and Transparency in ML (FATML)*, New York, NY.
- Nov 2016 **Intuitive Explanations and Interactions with Black-box Machine Learning**, *UCSD Artificial Intelligence Seminar*, San Diego, CA.
- Oct 2016 **Towards Intuitive Explanations and Interactions with Black-box ML**, *UCI CS Seminar*, Irvine, CA.
- Oct 2016 **Interpreting machine learning predictions**, *UCI Symp on Recent Advances in Data Science*, Irvine, CA.
- Jun 2016 **Interactive Training for Relation Extraction**, *University of Washington AI Seminar*, Seattle, WA.
- Jan 2016 **Interactive Training of Relation Embeddings**, *University of Maryland*, College Park, MD.
- Jan 2016 **Interactive Training of Relation Embeddings**, *Johns Hopkins University*, Baltimore, MD.
- Aug 2015 **Wolfe: A Declarative Machine Learning Stack**, *Big Data Scala By the Bay*, San Francisco, CA.
- April 2015 **Declarative ML With Wolfe**, *Dagstuhl Seminar on Probabilistic Programming*, Dagstuhl, Germany.
- Jan 2015 **Interactive Matrix Factorization**, *UW CSE Department Summit*, Seattle, WA.
- Dec 2014 **Wolfe: Declarative Machine Learning**, *Montreal Scala Meetup*, Montreal, Canada.
- Aug 2014 **Large-Scale Entity Resolution**, *COLING AHA! Workshop*, Dublin, Ireland.
- Nov 2013 **Universal Schema for TACKBP**, *NIST*, Gaithersburg, MD.

- Feb 2013 **Large-Scale Entity Resolution**, *Univ of Pennsylvania*, Philadelphia, PA.  
Nov 2012 **Machines That Read**, *Computer Science Dept Colloquium*, Williams College, MA.  
Apr 2011 **Large-scale Cross-doc Coreference**, *Machine Reading Project Ph 3 Kickoff*, Seattle, WA.  
Nov 2008 **Deep Belief Nets**, *Machine Learning and Friends Lunch (MLFL)*, UMass, Amherst.

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### Media Appearances, Articles, and Quotes

- Jul 2017 **Canada TV's Your Morning**, *Interviewed for live television*.  
Jul 2017 **The Wrap**, *Quoted in an article on Artificial Intelligence*.  
Jun 2017 **Fast Company**, *Quoted in an article on Machine Learning*.  
Aug 2016 **O'Reilly Blog**, *Wrote an article on Interpretable ML*.

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## Professional Service

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### Conference and Workshop Organization

- area chair Neural Information Processing Systems (NIPS), 2017  
area chair Empirical Methods in Natural Language Processing (EMNLP), 2017  
publication chair Annual Conference of the Association for Computational Linguistics (ACL), 2017  
organizer NAACL Workshop on "Automated Knowledge Base Construction", 2016  
organizer AAAI Workshop on "Declarative Learning Based Programming", 2016  
organizer NIPS Workshop on "Machine Learning Systems (LearningSys)", 2015  
organizer NIPS Workshop on "Automated Knowledge Base Construction", 2014  
organizer CIKM Workshop on "Automated Knowledge Base Construction", 2013  
organizer NIPS Workshop on "Big Learning", 2011, 2012, 2013  
organizer ICML Workshop on "Inferning": Interactions between Inference and Learning, 2012, 2013  
co-chair North-East Student Colloquium on Artificial Intelligence (NESCAI), 2010

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### Reviewing/PC Member

- journal Journal for AI Research (2016-), Transactions of the ACL (2015-), Big Data (2016-), Computational Linguistics (2016-), ACM Transactions on Intelligent Systems and Technology (2016-)  
conferences EMNLP (2010, 2011, 2012, 2014, 2015), KDD (2011, 2015), IJCAI (2011, 2015, 2016), NIPS (2011, 2012, 2013, 2014, 2015, 2016), EACL (2012, 2014, 2017), ICML (2013, 2014, 2015), NAACL (2013, 2015, 2016), UAI 2013, ACL (2014, 2015, 2016, 2017), COLING 2014, CIKM 2014, CONLL 2013, AAAI (2015, 2017), WSDM (2015, 2016), AISTATS 2017, ECML-PKDD (2016, 2017), WWW 2017, IJCNLP 2017  
workshops AKBC 2010, NESCAI 2010, OPTMAS 2012, AKBC 2012, OPTMAS 2013, LML 2013, AKBC 2013, StarAI 2014, LTPM 2014, NAMPI 2016, StarAI 2017, DeepStruct 2017

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### External Committee Member

- 2017 **PhD Proposal Committee**, *Marco Tulio Ribeiro*, Advised by Carlos Guestrin, UW.  
2015 **PhD Committee**, *Xiao Ling*, Advised by Daniel S. Weld, UW.

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## University Service

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### Student Committees

- 2017 **PhD Committee**, *William Lam*, Advised by Rina Dechter, UC Irvine.  
2016 **PhD Committee**, *Wei Ping*, Advised by Alex Ihler, UC Irvine.  
2017 **Advancement Committee**, *Jihyun Park*, Advised by Padhraic Smyth, UC Irvine.  
2017 **Advancement Committee**, *Junhyu Lee*, Advised by Rina Dechter, UC Irvine.  
2017 **Advancement Committee**, *Lars Hertel*, Advised by Pierre Baldi, UC Irvine.  
2017 **Advancement Committee**, *Dimitris Kotzias*, Advised by Padhraic Smyth, UC Irvine.

2016 **Advancement Committee**, *Filjor Broka*, Advised by Rina Dechter, UC Irvine.

2016 **Advancement Committee**, *Qi Lou*, Advised by Alex Ihler, UC Irvine.

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### Department Service

- organizer UCI Prospective PhD Students' Day, 2017
- member UCI Graduate Admissions Committee, 2017
- member UW CSE Postdoc Best Practices Committee, 2015
- member UW Graduate Admissions Committee, 2013
- member UMass Faculty Hiring Committee (CS + Computational Biology), 2012
- steward Computer Science, Graduate Employee Organization (GEO), UMass, 2010, 2011
- member New Students Committee, UMass Computer Science Department, 2009, 2010, 2012

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### School Service

- member ICS Website Task Force, 2017
- attendee ICS Bay Area Alumni Event, 2017

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### Campus-wide Service

- speaker INSIDE UCI Summer Session for Freshmen, 2017
- organizer UCI Symposium on Machine Learning and Human Behavior, 2017
- member UCI Endowed Graduate Fellowships Committee, 2016
- general secretary Vanderbilt India Association (VIA), 2005-2006

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### Outreach Activities

- organizer North American Computational Linguistics Olympiad (NACLO), UC Irvine, 2017
- mentor High School and Middle School teams, Paul Allen Computing Challenge, 2014
- judge Science Fair, Hampden Charter School of Science, 2012
- session chair Massachusetts Statewide Undergraduate Research Conference, 2012

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## Funding

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### Grants, Gifts, and Sponsored Research

- 2017 **Fair Isaac Corporation**, *Research Support*, Explaining Machine Learning Predictions.
- 2017 **Adobe Research**, *Data Science Faculty Award*, Explanations for Machine Learning Predictions.

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### Other Support

- 2015 **Support Grant for Junior Researchers**, Schloss Dagstuhl-NSF, Dagstuhl, Germany.
- 2014, 2015 **UW CSE Postdoc Research Award**, University of Washington, Seattle, WA.
- 2014 **Amazon Machine Learning Data Grant**, Amazon, Seattle, WA.
- 2012 **Finalist**, Facebook PhD Fellowship, Menlo Park, CA.
- 2009-2010 **Graduate School Fellowship Award**, *for continuing students*, Univ of Massachusetts.

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## Publications

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### Theses

- PhD Thesis · **Sameer Singh**. *Scaling MCMC Inference and Belief Propagation for Large, Dense Graphical Models*. PhD thesis, University of Massachusetts, 2014

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### Book Chapters

- BC1 Jeremy Kubica, **Sameer Singh**, and Daria Sorokina. Parallel large-scale feature selection, 2011

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## Journal Publications

- J3 Xiao Ling, **Sameer Singh**, and Dan Weld. Design challenges for entity linking. *Transactions of the Association for Computational Linguistics (TACL)*, 3, 2015
- J2 D.G. Feitelson, T.O.S. Adeshiyan, D. Balasubramanian, Y. Etsion, G. Madl, E.P. Osses, **Sameer Singh**, K. Suwanmongkol, M. Xie, and S.R. Schach. Fine-grain analysis of common coupling and its application to a linux case study. *Journal of Systems and Software (JSS)*, 80, 2007
- J1 S.R. Schach, T.O.S. Adeshiyan, D. Balasubramanian, G. Madl, E.P. Osses, **Sameer Singh**, K. Suwanmongkol, M. Xie, and D.G. Feitelson. Common coupling and pointer variables, with application to a linux case study. *Software Quality Journal (SQJ)*, 15, 2007

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## Peer-Reviewed Conference Papers

- C22 Nitish Gupta, **Sameer Singh**, and Dan Roth. Entity linking via joint encoding of types, descriptions, and context. In *Empirical Methods in Natural Language Processing (EMNLP)*, 2017
- C21 Parisa Kordjamshidi, Daniel Khashabi, Christos Christodoulopoulos, Bhargav Mangipudi, **Sameer Singh**, and Dan Roth. Better call saul: Flexible programming for learning and inference in nlp. In *International Conference on Computational Linguistics (COLING)*, 2016
- C20 Marco Tulio Ribeiro, **Sameer Singh**, and Carlos Guestrin. "why should i trust you?": Explaining the predictions of any classifier. In *Knowledge Discovery and Data Mining (KDD)*, 2016c
- C19 Hannah Rashkin, **Sameer Singh**, and Yejin Choi. Connotation frames: A data-driven investigation. In *Association for Computational Linguistics (ACL)*, 2016
- C18 Tim Rocktaschel, **Sameer Singh**, and Sebastian Riedel. Injecting logical background knowledge into embeddings for relation extraction. In *Annual Conference of the North American Chapter of the Association for Computational Linguistics (NAACL)*, 2015
- C17 Tianqi Chen, **Sameer Singh**, Ben Taskar, and Carlos Guestrin. Efficient second-order gradient boosting for conditional random fields. In *International Conference on Artificial Intelligence and Statistics (AISTATS)*, 2015
- C16 Ignacio Cano, **Sameer Singh**, and Carlos Guestrin. Distributed non-parametric representations for vital filtering: UW at TREC KBA 2014. In *Text REtrieval Conference (TREC): Knowledge-Base Acceleration (KBA) Track*, 2014
- C15 Fabian M. Suchanek, **Sameer Singh**, Sebastian Riedel, and Partha P. Talukdar. Akbc 2013: Third workshop on automated knowledge base construction. In *ACM Conference of Information and Knowledge Management (CIKM)*, 2013
- C14 **Sameer Singh** and Thore Graepel. Automated probabilistic modeling for relational data. In *ACM Conference of Information and Knowledge Management (CIKM)*, 2013
- C13 Jiaping Zheng, Luke Vilnis, **Sameer Singh**, Jinho D. Choi, and Andrew McCallum. Dynamic knowledge-base alignment for coreference resolution. In *Conference on Computational Natural Language Learning (CoNLL)*, 2013
- C12 **Sameer Singh**, Limin Yao, David Belanger, Ari Kobren, Sam Anzaroot, Michael Wick, Alexandre Passos, Harshal Pandya, Jinho D. Choi, Brian Martin, and Andrew McCallum. Universal schema for slot filling and cold start: Umass iesl at tackbp 2013. In *Text Analysis Conference on Knowledge Base Population (TAC KBP)*, 2013c
- C11 Michael Wick, **Sameer Singh**, and Andrew McCallum. A discriminative hierarchical model for fast coreference at large scale. In *Association for Computational Linguistics (ACL)*, 2012
- C10 **Sameer Singh**, Michael Wick, and Andrew McCallum. Monte carlo mcmc: Efficient inference by approximate sampling. In *Empirical Methods in Natural Language Processing (EMNLP)*, 2012d
- C9 **Sameer Singh**, Amarnag Subramanya, Fernando Pereira, and Andrew McCallum. Large-scale cross-document coreference using distributed inference and hierarchical models. In *Association for Computational Linguistics (ACL)*, 2011b



- C8 **Sameer Singh**, Dustin Hillard, and Chris Leggetter. Minimally-supervised extraction of entities from text advertisements. In *Annual Conference of the North American Chapter of the Association for Computational Linguistics (NAACL)*, 2010a
- C7 **Sameer Singh**, Limin Yao, Sebastian Riedel, and Andrew McCallum. Constraint-driven rank-based learning for information extraction. In *Annual Conference of the North American Chapter of the Association for Computational Linguistics (NAACL)*, 2010d
- C6 **Sameer Singh**, Karl Schultz, and Andrew McCallum. Bi-directional joint inference for entity resolution and segmentation using imperatively-defined factor graphs. In *Machine Learning and Knowledge Discovery in Databases (Lecture Notes in Computer Science) and European Conference on Machine Learning and Principles and Practice of Knowledge Discovery in Databases (ECML PKDD)*, 2009b
- C5 **Sameer Singh**, Jeremy Kubica, Scott E. Larsen, and Daria Sorokina. Parallel large scale feature selection for logistic regression. In *SIAM International Conference on Data Mining (SDM)*, 2009a
- C4 Andrew McCallum, Karl Schultz, and **Sameer Singh**. Factorie: Probabilistic programming via imperatively defined factor graphs. In *Neural Information Processing Systems (NIPS)*, 2009
- C3 Michael Wick, Khashyar Rohanimanesh, **Sameer Singh**, and Andrew McCallum. Training factor graphs with reinforcement learning for efficient map inference. In *Neural Information Processing Systems (NIPS)*, 2009
- C2 **Sameer Singh** and Julie A. Adams. Transfer of learning for complex domains: A demonstration using multiple robots. In *International Conference on Robotics and Automation (ICRA)*, 2006
- C1 **Sameer Singh**. Finding the shortest path for a mobile robot in an unmapped maze from minimum runs. In *Int Conf on CAD, CAM, Robotics and Autonomous Factories (INCARF)*, 2003

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#### Peer-reviewed Workshops, Demonstrations, and Symposia

- W29 Ananya Ananya and **Sameer Singh**. How biased are we? automated detection of gendered language. In *ACL Workshop on Women and Underrepresented Minorities in NLP (WiNLP)*, 2017
- W28 Parisa Kordjamshidi, **Sameer Singh**, Daniel Khashabi, Christos Christodoulopoulos, Mark Summons, Saurabh Sinha, and Dan Roth. Relational learning and feature extraction by querying over heterogeneous information networks. In *International Workshop on Statistical Relational AI (StarAI)*, 2017
- W27 **Sameer Singh**, Marco Tulio Ribeiro, and Carlos Guestrin. Programs as black-box explanations. In *NIPS Workshop on Interpretable Machine Learning in Complex Systems*, 2016
- W26 Marco Tulio Ribeiro, **Sameer Singh**, and Carlos Guestrin. Nothing else matters: Model-agnostic explanations by identifying prediction invariance. In *NIPS Workshop on Interpretable Machine Learning in Complex Systems*, 2016a
- W25 Marco Tulio Ribeiro, **Sameer Singh**, and Carlos Guestrin. "why should i trust you?": Explaining the predictions of any classifier. In *Demo at the Annual Conference of the North American Chapter of the Association for Computational Linguistics (NAACL)*, 2016d
- W24 Marco Tulio Ribeiro, **Sameer Singh**, and Carlos Guestrin. Model-agnostic interpretability of machine learning. In *ICML Workshop on Human Interpretability in Machine Learning (WHI)*, 2016e
- W23 Marco Tulio Ribeiro, **Sameer Singh**, and Carlos Guestrin. "why should i trust you?": Explaining the predictions of any classifier. In *CHI Workshop on Human-Centred Machine Learning (HCML)*, 2016b
- W22 **Sameer Singh** and Sebastian Riedel. Creating interactive and visual educational resources for AI. In *AAAI Symposium on Educational Advances in Artificial Intelligence (EAAI)*, 2016
- W21 **Sameer Singh**, Tim Rocktaschel, Luke Hewitt, Jason Naradowsky, and Sebastian Riedel. WOLFE: An NLP-friendly declarative machine learning stack. In *Demo at the Annual Conference of the North American Chapter of the Association for Computational Linguistics (NAACL)*, 2015a
- W20 **Sameer Singh**, Tim Rocktaschel, and Sebastian Riedel. Towards combined matrix and tensor factorization for universal schema relation extraction. In *NAACL Workshop on Vector Space Modeling for NLP*, 2015b

- W19 Ivan Sanchez, Tim Rocktaschel, Sebastian Riedel, and **Sameer Singh**. Towards extracting faithful and descriptive representations of latent variable models. In *AAAI Spring Symposium on Knowledge Representation and Reasoning (KRR): Integrating Symbolic and Neural Approaches*, 2015
- W18 Guillaume Bouchard, **Sameer Singh**, and Theo Trouillon. On approximate reasoning capabilities of low-rank vector spaces. In *AAAI Spring Symposium on Knowledge Representation and Reasoning (KRR): Integrating Symbolic and Neural Approaches*, 2015
- W17 Tim Rocktaschel, **Sameer Singh**, Matko Bosnjak, and Sebastian Riedel. Low-dimensional embeddings of logic. In *ACL 2014 Workshop on Semantic Parsing (SP14)*, 2014
- W16 Sebastian Riedel, **Sameer Singh**, Vivek Srikumar, Tim Rocktaschel, Larysa Visengeriyeva, and Jan Noessner. Wolfe: Strength reduction and approximate programming for probabilistic programming. In *International Workshop on Statistical Relational AI (StarAI)*, 2014
- W15 Xiao Ling, **Sameer Singh**, and Dan Weld. Context representation for named entity linking. In *Pacific Northwest Regional NLP Workshop (NW-NLP)*, 2014
- W14 Mathias Niepert and **Sameer Singh**. Out of many, one: Unifying web-extracted knowledge bases. In *Workshop on Automated Knowledge Base Construction (AKBC)*, 2014
- W13 **Sameer Singh**, Sebastian Riedel, Luke Hewitt, and Tim Rocktaschel. Designing an IDE for probabilistic programming: Challenges and a prototype. In *NIPS Workshop on Probabilistic Programming*, 2014b
- W12 Victoria (Xi) Lin, **Sameer Singh**, Luheng He, Ben Taskar, and Luke Zettlemoyer. Multi-label learning with posterior regularization. In *NIPS Workshop on Modern Machine Learning and Natural Language Processing*, 2014
- W11 **Sameer Singh**, Sebastian Riedel, Brian Martin, Jiaping Zheng, and Andrew McCallum. Joint inference of entities, relations, and coreference. In *CIKM Workshop on Automated Knowledge Base Construction (AKBC)*, 2013a
- W10 Michael Wick, **Sameer Singh**, Ari Kobren, and Andrew McCallum. Assessing confidence of knowledge base content with an experimental study in entity resolution. In *CIKM Workshop on Automated Knowledge Base Construction (AKBC)*, 2013a
- W9 Michael Wick, **Sameer Singh**, Harshal Pandya, and Andrew McCallum. A joint model for discovering and linking entities. In *CIKM Workshop on Automated Knowledge Base Construction (AKBC)*, 2013b
- W8 **Sameer Singh**, Sebastian Riedel, and Andrew McCallum. Anytime belief propagation using sparse domains. In *Neural Information Processing Systems (NIPS) Workshop on Resource Efficient Machine Learning*, 2013b
- W7 **Sameer Singh**, Michael Wick, and Andrew McCallum. Monte carlo mcmc: Efficient inference by sampling factors. In *NAACL/HLT Workshop on Automated Knowledge Base Construction (AKBC-WEKEX)*, 2012c
- W6 **Sameer Singh** and Thore Graepel. Compiling relational database schemata into probabilistic graphical models. In *NIPS Workshop on Probabilistic Programming*, 2012
- W5 **Sameer Singh** and Andrew McCallum. Towards asynchronous distributed mcmc inference for large graphical models. In *Neural Information Processing Systems (NIPS) Workshop on Big Learning*, 2011
- W4 **Sameer Singh**, Brian Martin, and Andrew McCallum. Inducing value sparsity for parallel inference in tree-shaped models. In *Neural Information Processing Systems (NIPS) Workshop on Computational Trade-offs in Statistical Learning (COST)*, 2011a
- W3 **Sameer Singh**, Amarnag Subramanya, Fernando Pereira, and Andrew McCallum. Distributed map inference for undirected graphical models. In *Neural Information Processing Systems (NIPS) Workshop on Learning on Cores, Clusters, and Clouds (LCCC)*, 2010b
- W2 Andrew McCallum, Khashyar Rohanimanesh, Michael Wick, Karl Schultz, and **Sameer Singh**. Factorie: Efficient probabilistic programming via imperative declarations of structure, inference and learning. In *NIPS Workshop on Probabilistic Programming*, 2008
- W1 T. Kichkaylo, C. van Buskirk, **Sameer Singh**, H. Neema, M. Orosz, and R. Neches. Mixed-initiative planning for space exploration missions. In *International Conference on Automated Planning and Scheduling Workshop (ICAPS)*, 2007

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## Unrefereed Publications

- U7 Igor Burago, Marco Levorato, and **Sameer Singh**. Semantic compression for edge-assisted systems. Technical report, Information Theory and Applications Workshop, 2017
- U6 Nitish Gupta and **Sameer Singh**. Collective factorization for relational data: An evaluation on the yelp datasets. Technical report, Yelp Dataset Challenge, Round 4, 2015
- U5 **Sameer Singh**, Amarnag Subramanya, Fernando Pereira, and Andrew McCallum. Wikilinks: A large-scale cross-document coreference corpus labeled via links to wikipedia. Technical report, University of Massachusetts Amherst, CMPSCI UM-CS-2012-015, 2012b
- U4 **Sameer Singh**, Gregory Druck, and Andrew McCallum. Constraint-driven training of complex models using mcmc. Technical report, University of Massachusetts Amherst, CMPSCI UM-CS-2012-032, 2012a
- U3 **Sameer Singh**, Michael Wick, and Andrew McCallum. Distantly labeling data for large scale cross-document coreference. Technical report, Computing Research Repository (CoRR) eprint arXiv:1005.4298, 2010c
- U2 **Sameer Singh**. Option discovery in hierarchical reinforcement learning for training large factor graphs for information extraction, 2009
- U1 Khashyar Rohanimanesh, Michael Wick, **Sameer Singh**, and Andrew McCallum. Reinforcement learning for map inference in large factor graphs. Technical report, University of Massachusetts Amherst, CMPSCI UM-CS-2008-040, 2008

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## Patents

- P2 **Sameer Singh**, Thore Graepel, Lucas J. Bordeaux, and Andrew D. Gordon. Relational database management. Technical report, US Patent Number 0188928, 2014a
- P1 **Sameer Singh**, E. S. Larsen, Jeremy Kubica, and Andrew W. Moore. Feature selection for large scale models. Technical report, US Patent Number 8190537, 2008

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## References

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Available upon request