Curriculum Vitae

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Education

B.S. in Computer Engineering, University of Illinois at Urbana-Champaign, High Honors, Bronze Tablet Award, 1983.

M.S. in Computer Science, University of Illinois at Urbana-Champaign, 1985.

Ph.D. in Computer Science, University of Illinois at Urbana-Champaign, 1988.

Professional Experience

September, 2000 – Present: Professor, Department of Computer Science, University of Texas at Austin.

September 1994 – August 2000: Associate Professor, Department of Computer Science, University of Texas at Austin.

January 1988 – August 1994: Assistant Professor, Department of Computer Science, University of Texas at Austin.

September 1983 – December 1987: Graduate Research Assistant and Teaching Assistant, Department of Electrical and Computer Engineering and Coordinated Science Laboratory, University of Illinois at Urbana-Champaign.

Thesis Title:

A General Explanation-Based Learning Mechanism and its Application to Narrative Understanding

Thesis Advisor:

Professor Gerald F. DeJong, Department of Computer Science, University of Illinois

Current Research Interests:

Artificial Intelligence; Machine Learning; Natural Language Understanding; Data Mining; Cognitive Science

Professional Societies:

American Association for Artificial Intelligence (AAAI)
Association for Computing Machinery (ACM)
ACM Special Interest Group on Knowledge Discovery and Data-Mining (SIGKDD)
Association for Computational Linguistics (ACL)
ACL Special Interest Group on Natural Language Learning (SIGNLL)
International Machine Learning Society (IMLS)
Cognitive Science Society

Publications

Journal Articles

1. Cohen, V., Nangue Tasse, G., Gopalan, N., James, S., Gombolay, M., Mooney, R., and Rosman, B.,"Compositional Instruction Following with Language Models and Reinforcement Learning," *Transactions on Machine Learning Research* (TLMR), December 2024.

2. Batra, D., Ferguson, E., Mooney, R., Parikh, D., Torralba, A., Bau, D., Diller, D., Fasching, J., Fiotto-Kaufman, J., Goyal, Y., Miller, J., Moffitt, K. Montes De Oca, A., Selvaraju, R., Shrivastava, A., and Wu, J., "Reframing Explanation as an Interactive Medium: The EQUAS (Explainable QUestion Answering System) Project," *Applied AI Letters*, Volume 2, Issue 4, Special Issue: DARPA's Explainable Artificial Intelligence (XAI) Program, December 2021.

3. Marge, M., Espy-Wilson, C., Ward, N., Alwand, A., Artzie, Y., Bansal, M., Blankenship, G., Chai, J., Daume, H., Dey, D., Harper, M., Howard, T., Kennington, K., Kruijff-Korbayová, I., Manocha, D., Matuszek, C., Mead, R., Mooney, R., Moore, R., Ostendorf, M., Pon-Barry, H., Rudnicky, A., Scheutz, M., St.Amant, R., Sun, T., Tellex, S., Traum, D., and Yu, Z., "Spoken language interaction with robots: Recommendations for future research," *Computer Speech & Language*, (2021).

4. Thomason, J., Padmakumar, A., Sinapov, J., Walker, N., Jiang, Y., Yedidsion, H., Hart, J., Stone, P., and Mooney, R., "Jointly Improving Parsing and Perception for Natural Language Commands through Human-Robot Dialog," *Journal of Artificial Intelligence Research* (JAIR), 67 (2020).

5. Khandelwal, P., Zhang, S., Sinapov, J., Leonetti, M., Thomason, J., Yang, F., Gori, I., Svetlik, M., Khante, P., Lifschitz, V., Aggarwal, J.K., Mooney, R., Stone, P., "BWIBots: A platform for bridging the gap between AI and human–robot interaction research," *International Journal of Robotics Research*, (2017).

6. Beltagy, I., Roller, S., Cheng, P., Erk, K., and Mooney, R.J., "Representing Meaning with a Combination of Logical and Distributional Models," *Computational Linguistics*, 42:4 (2016).

7. Chen, D., Kim, J.H., and Mooney, R.J., "Training a Multilingual Sportscaster: Using Perceptual Context to Learn Language," *Journal of Artificial Intelligence Research*, 37 (2010), pp. 397–435.

8. Kulis, B., Basu, S., Dhillon, I., and Mooney, R.J., "Semi-supervised Graph Clustering: A Kernel Approach," *Machine Learning*, 74, 1 (2009), pp. 1–22.

9. Ramani, A.K., Bunescu, R.C., Mooney, R.J. and Marcotte, E.M., "Consolidating the Set of Known Human Protein-Protein Interactions in Preparation for Large-Scale Mapping of the Human Interactome," *Genome Biology*, 6, 5, r40 (2005).

10. Bunescu, R. C., Ge, R., Kate, R.J., Marcotte, E.M., Mooney, R.J., Ramani, A.K., and Wong, Y.W., "Comparative Experiments on Learning Information Extractors for Proteins and their Interactions," *Artificial Intelligence in Medicine* (Special Issue on Summarization and Information Extraction from Medical Documents), 33, 2 (2005), pp. 139–155.

11. Melville, P. and Mooney, R.J., "Creating Diversity in Ensembles Using Artificial Data," *Information Fusion* (Special Issue on Diversity in Multiple Classifier Systems), 6, 1 (2004), pp. 99–111.

12. Califf, M.E. and Mooney, R.J., "Bottom-Up Relational Learning of Pattern Matching Rules for Information Extraction," *Journal of Machine Learning Research*, 4 (2003) pp. 177–210.

13. Thompson, C. A. and Mooney, R. J., "Acquiring Word-Meaning Mappings for Natural Language Interfaces," *Journal of Artificial Intelligence Research*, 18 (2003), pp.1–44.

14. Califf, M.E. and Mooney, R.J., "Advantages of Decision Lists and Implicit Negatives in Inductive Logic Programming," *New Generation Computing*, 16, 3 (1998), pp. 263–281.

15. Baffes, P.T. and Mooney, R.J., "Refinement-based Student Modeling and Automated Bug Library Construction," *Journal of Artificial Intelligence in Education*, 7, 1 (1996), pp. 75–116.

16. Mooney, R.J. and Califf, M. E. "Induction of First-Order Decision Lists: Results on Learning the Past Tense of English Verbs," *Journal of Artificial Intelligence Research,* 3 (1995), pp. 1–24.

17. Richards, B.L and Mooney, R.J. "Automated Refinement of First-Order Horn-Clause Domain Theories," *Machine Learning* 19, 2 (1995), pp. 95–131.

18. Mooney, R.J., "Encouraging Experimental Results on Learning CNF," *Machine Learning* 19, 1 (1995), pp. 79–92.

19. Ourston, D. and Mooney, R.J., "Theory Refinement Combining Analytical and Empirical Methods," *Artificial Intelligence*, 66 (1994), pp. 311–344.

20. Baffes, P.T. and Mooney, R.J., "Extending Theory Refinement to M-of-N Rules," *Informatica*, 17 (1993), pp. 387–397.

21. Mahoney, J.J. and Mooney, R.J., "Combining Connectionist and Symbolic Learning to Refine Certainty Factor Rule Bases," *Connection Science*, 5 (1993), pp. 339–364.

22. Mooney, R.J., "Induction Over the Unexplained: Using Overly General Domain Theories to Aid Concept Learning," *Machine Learning*, 10, 1 (1993), pp. 79–110.

23. Ahn, W.K., Brewer, W.F., and Mooney, R.J., "Schema Acquisition from a Single Example," *Journal of Experimental Psychology: Learning, Memory, and Cognition*, 18, 2 (1992), pp. 391–412.

24. Shavlik, J.W, Mooney, R.J. and Towell, G. "Symbolic and Neural Learning Algorithms: An Experimental Comparison," *Machine Learning*, 6, 2 (1991), pp. 111–143. (reprinted in *Readings in Knowledge Acquisition and Learning*, B. G. Buchanan and D. C. Wilkins (eds.), Morgan Kaufman, San Mateo, CA, 1993).

25. Mooney, R.J., "Learning Plan Schemata From Observation: Explanation-Based Learning for Plan Recognition," *Cognitive Science*, 14, 4 (1990), pp. 483–509.

26. DeJong, G.F. and Mooney, R.J., "Explanation-Based Learning: An Alternative View," *Machine Learning* 1, 2 (1986), pp. 145–176. (reprinted in in *Readings in Machine Learning*, J. W. Shavlik and T. G. Dietterich (eds.), Morgan Kaufman, San Mateo, CA, 1990).

Articles in Conference Proceedings

1. Fang, S., Yang, H., Mooney, R., and Huang, Q., "Text-Guided Interactive Scene Synthesis with Scene Prior Guidance," *Proceedings of 46th Annual Conference of the European Association for Computer Graphics* (EUROGRAPHICS), May 2025.

2. Tseng, W.C., Shih, Y.J., Harwath, D. and, Mooney, R.J., "Measuring Sound Symbolism in Audio-Visual Models," *Proceedings of IEEE Speech and Language Technologies* (SLT), Macao, China, Dec. 2024.

3. Lal, Y, Cohen, V., Chambers, N., Balasubramanian, N., and Mooney, R.J., "CAT-BENCH: Benchmarking Language Model Understanding of Causal and Temporal Dependencies in Plans," *Proceedings of the Conference on Empirical Methods in Natural Language Processing* (EMNLP), Miami, FL, Nov. 2024.

4. Voas, J., Harwath, D., and Mooney R.J., "Multimodal Contextualized Semantic Parsing from Speech," *Proceedings of 62nd Annual Meeting of the Association for Computational Linguistics* (ACL), Bangkok, Thailand, Aug. 2024.

5. Chen, Z., White, M., Mooney, R., Payani, A., Su, Y., and Sun, H., "When is Tree Search Useful for LLM Planning? It Depends on the Discriminator," *Proceedings of 62nd Annual Meeting of the Association for Computational Linguistics* (ACL), Bangkok, Thailand, Aug. 2024.

6. Cohen, V., Liu , J.X., Mooney, R., Tellex, S., and Watkins, D., "A Survey of Robotic Language Grounding: Tradeoffs Between Symbols and Embeddings," *Proceedings of the 33rd International Joint Conference on Artificial Intelligence* (IJCAI), Jeju Korea, Aug. 2024.

7. Yu, A., Foote, A., Mooney, R.J., and Martin-Martin, R., "Natural Language Can Help Bridge the Sim2Real Gap," *Proceedings of the Conference on Robotics: Science and Systems* (RSS), Delft, Netherlands, July 2024.

8. Raman, S.S., Cohen, V., Idrees, I., Rosen, E., Mooney, R., Tellex, S., and Paulius, D., "CAPE: Correcting Actions from Precondition Errors using Large Language Models," *Proceedings of the IEEE International Conference on Robotics and Automation* (ICRA), Yokohama Japan, May 2024.

9. Devare, S., Koupaee, M., Gunapati, G., Ghosh, S., Vallurupalli, S., Lal, Y., Ferraro, F., Chambers, N., Durrett, G., Mooney, R., Erk, K., Balasubramanian, N., "SAGEViz: SchemA GEneration and Visualization," *Proceedings of the Demonstration Track of the Conference on Empirical Methods in Natural Language Processing* (EMNLP), Singapore, Dec. 2023.

10. Voas, J. Wang, Y., Huang, Q., and Mooney, R.J., "What is the Best Automated Metric for Text to Motion Generation?," *Proceedings of the 16th ACM SIGGRAPH Conference and Exhibition on Computer Graphics and Interactive Techniques in Asia* (SIGGRAPH Asia), Sydney Australia, Dec. 2023.

11. Chen, Z., Chen, S., White, M., Mooney, R., Payani, A., Srinivasa, J., Su, Y., and Sun, H., "Text-to-SQL Error Correction with Language Models of Code," *Proceedings of 61st Annual Meeting of the Association for Computational Linguistics* (ACL), Toronto, Canada, July 2023.

12. Yu, A. and Mooney, R.J., "Using Both Demonstrations and Language Instructions to Efficiently Learn Robotic Tasks," *Proceedings of the International Conference on Learning Representations* (ICLR), Kigali, Rwanda, May 2023.

13. Nie, P., Banerjee, R., Li, J.J., Mooney, R.J., and Gligoric, M., "Learning Deep Semantics for Test Completion," *Proceedings of the 45th IEEE/ACM International Conference on Software Engineering* (ICSE 2023), Melbourne, Australia, May 2023.

14. Panthaplackel, S., Gligoric, M., Li, J., and Mooney, R.J., "Using Developer Discussions to Guide Fixing Bugs in Software," *Proceedings of the 'Findings Track' of the Conference on Empirical Methods in Natural Language Processing* (EMNLP), Abu Dhabi, UAE, Dec. 2022.

15. Lal, Y., Tandon, N., Aggarwal, T., Liu, H., Chambers, N., Mooney, R. and Balasubramanian , N., "Using Commonsense Knowledge to Answer Why-Questions," *Proceedings of the Conference on Empirical Methods in Natural Language Processing* (EMNLP) (Oral Presentation), Abu Dhabi, UAE, Dec. 2022.

16. Wu, J. and Mooney, R.J., "Entity-Focused Dense Passage Retrieval for Outside-Knowledge Visual Question Answering," *Proceedings of the Conference on Empirical Methods in Natural Language Processing* (EMNLP), Abu Dhabi, UAE, Dec. 2022.

17. Gao, T., Singh, S., and Mooney, R.J., "Towards Automated Error Analysis: Learning to Characterize Errors," *Proceedings of the 19th International Florida Artificial Intelligence Research Society Conference* (FLAIRS) (short paper), May 2022.

18. Panthaplackel, S., Li, J., Gligoric, M., and Mooney, R.J., "Learning to Describe Solutions for Bug Reports Based on Developer Discussions," *Proceedings of the 'Findings Track' of 60th Annual Meeting of the Association for Computational Linguistics* (ACL), May 2022.

19. Nie, P., Zhang, J., Li, J.J., Mooney, R.J., and Gligoric, M., "Impact of Evaluation Methodologies on Code Summarization," *Proceedings of the 60th Annual Meeting of the Association for Computational Linguistics* (ACL), May 2022.

20. Lal, Y., Chambers, N., Mooney, R. and Balasubramanian , N., "TellMeWhy: A Dataset for Answering Why-Questions in Narratives," *Proceedings of the 'Findings Track' of The Joint Conference of the 59th Annual Meeting of the Association for Computational Linguistics and the 11th International Joint Conference on Natural Language Processing* (ACL-IJCNLP), Aug. 2021.

21. Panthaplackel, S., Li, J., Gligoric, M., and Mooney, R.J., "Deep Just-In-Time Inconsistency Detection Between Comments and Source Code," *Proceedings of the 35th AAAI Conference on Artificial Intelligence* (AAAI), Feb. 2021.

22. Padmakumar, A. and Mooney, R.J., "Dialog Policy Learning for Joint Clarification and Active Learning Queries," *Proceedings of the 35th AAAI Conference on Artificial Intelligence* (AAAI), Feb. 2021.

23. Gao, T., Huang, Q., and Mooney, R.J., "Systematic Generalization on gSCAN with Language Conditioned Embedding," *Proceedings of the 1st Conference of the Asia-Pacific Chapter of the Association for Computational Linguistics and the 10th International Joint Conference on Natural Language Processing* (AACL-IJCNLP), Dec. 2020.

24. Goyal, P., Niekum, S., and Mooney, R.J., "PixL2R: Guiding Reinforcement Learning using Natural Language by Mapping Pixels to Rewards," *Proceedings of the Conference on Robot Learning* (CoRL), Nov. 2020.

25. Padmakumar, A. and Mooney, R.J.,"Dialog as a Vehicle for Lifelong Learning," *Proceedings of SIG-DIAL (special session on "Situated Dialogue with Virtual Agents and Robots")* (RoboDIAL), Jul. 2020.

26. Panthaplackel, S., Nie, P., Gligoric, M., Li, J., and Mooney, R.J., "Learning to Update Natural Language Comments Based on Code Changes," *Proceedings of the 58th Annual Meeting of the Association for Computational Linguistics* (ACL), Jul. 2020.

27. Panthaplackel, S., Gligoric, M., Mooney, R.J., and Li, J., "Associating Natural Language Comment and Source Code Entities," *Proceedings of the 34th AAAI Conference on Artificial Intelligence* (AAAI), Feb. 2020.

28. Wu, J. and Mooney, R.J., "Self-Critical Reasoning for Robust Visual Question Answering," in *Proceedings of the Thirty-third Conference on Advances in Neural Information Processing Systems* (NeurIPS) (Spotlight presentation), Vancouver, BC, Dec. 2019.

29. Yedidsion, H., Deans, J., Sheehan, C., Chillara, M., Hart, J., Stone, P., and Mooney, R.J., "Optimal Use Of Verbal Instructions For Multi-Robot Human Navigation Guidance," *Proceedings of the Eleventh International Conference on Social Robotics* (ICSR), pp. 133–143. Springer, Nov. 2019.

30. Nie, P., Rai, R., Li, J., Khurshid, S., Mooney, R.J., and Gligoric, M., "A Framework for Writing Trigger-Action Todo Comments in Executable Format," *Proceedings of the ACM Joint European Software Engineering Conference and Symposium on the Foundations of Software Engineering* (ESEC/FSE), Tallinn, Estonia, Aug. 2019. (**Distinguished Paper Award**)

31. Wu, J. and Mooney, R.J., "Generating Question Relevant Captions to Aid Visual Question Answering," *Proceedings of the 57th Annual Meeting of the Association for Computational Linguistics* (ACL), Florence, Italy, Jul. 2019.

32. Goyal, P., Niekum, S., and Mooney, R.J., "Using Natural Language for Reward Shaping in Reinforcement Learning," *Proceedings of the Twenty-Eighth International Joint Conference on Artificial Intelligence* (IJCAI), Aug. 2019.

33. Thomason, J., Padmakumar, A., Sinapov, J., Walker, N., Jiang, Y., Yedidsion, H., Hart, J., Stone, P., and Mooney, R., "Improving Grounded Natural Language Understanding through Human-Robot Dialog," *Proceedings of the IEEE International Conference on Robotics and Automation* (ICRA), May 2019.

34. Padmakumar, A., Stone, P. and Mooney, R.J., "Learning a Policy for Opportunistic Active Learning," *Proceedings of the Conference on Empirical Methods in Natural Language Processing* (EMNLP), Brussels, Belgium, Nov. 2018.

35. Rajani, N.F. and Mooney, R.J., "Stacking With Auxiliary Features for Visual Question Answering," *Proceedings of the Conference of the North American Chapter of the Association for Computational Linguistics* (NAACL), pp. 2217–2226, Jun. 2018.

36. Thomason, J., Sinapov, J., Mooney, R.J., and Stone, P., "Guiding Exploratory Behaviors for Multi-Modal Grounding of Linguistic Descriptions," *Proceedings of the 32nd AAAI Conference on Artificial Intelligence* (AAAI), Feb. 2018.

37. Chaurasia, S., and Mooney, R.J., "Dialog for Language to Code," *Proceedings of the 8th International Joint Conference on Natural Language Processing* (IJCNLP), Taipei, Taiwan, Nov. 2017.

38. Corona, R., Thomason, J., and Mooney, R.J., " Improving Black-box Speech Recognition using Semantic Parsing," *Proceedings of the 8th International Joint Conference on Natural Language Processing* (IJCNLP), Taipei, Taiwan, Nov. 2017.

39. Ferracane, E., Wang, S., and Mooney, R.J., "Leveraging Discourse Information Effectively for Authorship Attribution," *Proceedings of the 8th International Joint Conference on Natural Language Processing* (IJCNLP), Taipei, Taiwan, Nov. 2017.

40. Thomason, J., Padmakumar, A., Sinapov, J., Hart, J., Stone, P., and Mooney, R.J., "Opportunistic Active Learning for Grounding Natural Language Descriptions," *Proceedings of the 1st Annual Conference on Robot Learning* (CoRL), Mountain View, CA, pp. 67–76, Nov. 2017.

41. Rajani, N.F. and Mooney, R.J., "Stacking With Auxiliary Features," *Proceedings of the Twenty-Sixth International Joint Conference on Artificial Intelligence* (IJCAI), Melbourne, Australia, pp. 2634–2640, Aug. 2017.

42. Thomason, J., and Mooney, R.J., "Multi-Modal Word Synset Induction," *Proceedings of the Twenty-Sixth International Joint Conference on Artificial Intelligence* (IJCAI), Melbourne, Australia, pp. 4116–4122, Aug. 2017.

43. Venugopalan, S., Hendricks, L.A., Rohrbach, M., Mooney, R.J., Darrell, T., and Saenko, S., "Captioning Images with Diverse Objects," *Proceedings of the Conference on Computer Vision and Pattern Recognition* (CVPR), Honolulu, HI, July 2017.

44. Padmakumar, A., Thomason, J., and Mooney, R.J., "Integrated Learning of Dialog Strategies and Semantic Parsing," *Proceedings of the 15th Conference of the European Chapter of the Association for Computational Linguistics* (EACL), Valencia, Spain, pp. 547–557, Apr. 2017.

45. Rajani, N.F. and Mooney, R.J., "Combining Supervised and Unsupervised Ensembles for Knowledge Base Population," *Proceedings of the Conference on Empirical Methods in Natural Language Processing* (EMNLP), Austin, TX, Nov. 2016.

46. Venugopalan, S., Hendricks, L.A., Mooney, R.J., and Saenko, S. "Improving LSTM-based Video Description with Linguistic Knowledge Mined from Text," *Proceedings of the Conference on Empirical Methods in Natural Language Processing* (EMNLP), Austin, TX, Nov. 2016.

47. Pichotta, K. and Mooney, R.J., "Using Sentence-Level LSTM Language Models for Script Inference," *Proceedings of the 54th Annual Meeting of the Association for Computational Linguistics* (ACL), Berlin, Germany, August 2016.

48. Thomason, J., Sinapov, J., Svetlik, M., Stone, P., and Mooney, R.J. "Learning Multi-Modal Grounded Linguistic Semantics by Playing 'I Spy'" *Proceedings of the Twenty-Fifth International Joint Conference on Artificial Intelligence* (IJCAI), New York, NY, pp. 3477–3483, July 2016.

49. Hendricks, L.A., Venugopalan, S., Rohrbach, M., Mooney, R.J., Saenko, S., and Darrell, T., "Deep Compositional Captioning: Describing Novel Object Categories without Paired Training Data," *Proceedings of the Conference on Computer Vision and Pattern Recognition* (CVPR), Las Vegas, NV, June 2016.

50. Pichotta, K. and Mooney, R.J., "Learning Statistical Scripts With LSTM Recurrent Neural Networks," *Proceedings of the Thirtieth AAAI Conference on Artificial Intelligence* (AAAI), Phoenix, AZ, February 2016.

51. Venugopalan, S., Rohrbach, M., Donahue, J., Mooney, R.J., Darrell, T. and Saenko, K., "Sequence to Sequence – Video to Text," *Proceedings of the International Conference on Computer Vision* (ICCV), Santiago, Chile, December, 2015.

52. Quirk, C., Mooney, R.J., and Galley, M., "Language to Code: Learning Semantic Parsers for If-This-Then-That Recipes," *Proceedings of the 53rd Annual Meeting of the Association for Computational Linguistics* (ACL), Beijing, China, pp. 878–888, July 2015.

53. Viswanathan, V., Rajani N.F., Bentor, Y., and Mooney, R.J., "Stacked Ensembles of Information Extractors for Knowledge-Base Population," *Proceedings of the 53rd Annual Meeting of the Association for Computational Linguistics* (ACL), Beijing, China, pp. 177–187, July 2015.

54. Thomason, J., Zhang, S., Mooney, R.J., and Stone, P., "Learning to Interpret Natural Language Commands through Human-Robot Dialog," *Proceedings of the Twenty-Fourth International Joint Conference on Artificial Intelligence* (IJCAI), Buenos Aires, Argentina, July 2015.

55. Venugopalan S., Xu, H., Donahue, J., Rohrbach, M., Mooney, R.J., and Saenko, K., "Translating Videos to Natural Language using Deep Recurrent Neural Networks," *Proceedings of the Conference of the North American Chapter of the Association for Computational Linguistics – Human Language Technology* (NAACL-HLT), Denver, CO, pp. 1494–1504, June 2015.

56. Thomason, J., Venugopalan, S., Guadarrama, S., Saenko, K., and Mooney, R.J., "Integrating Language and Vision to Generate Natural Language Descriptions of Videos in the Wild," *Proceedings of the 25th International Conference on Computational Linguistics, Posters* (COLING), Dublin, Ireland, pp. 1218–1227, August 2014.

57. Beltagy, I., Erk, K., and Mooney, R.J., "Probabilistic Soft Logic for Semantic Textual Similarity," *Proceedings of the 52nd Annual Meeting of the Association for Computational Linguistics* (ACL), Baltimore, MD, pp. 1210–1219, June 2014.

58. Acharya, A., Mooney, R.J., and Ghosh, J., "Active Multitask Learning Using Both Latent and Supervised Shared Topics," *Proceedings of the SIAM International Conference on Data Mining* (SDM), Philadelphia, PA, Apr. 2014.

59. Pichotta, K. and Mooney, R.J., "Statistical Script Learning with Multi-Argument Events," *Proceedings of the 14th Conference of the European Chapter of the Association for Computational Linguistics* (EACL), Gothenburg, Sweden, pp. 220-229, Apr. 2014.

60. Guadarrama, S., Krishnamoorthy, N., Malkarnenkar, G., Venugopalan, S., Darrell, T., Mooney, R.J., and Saenko, K., "YouTube2Text: Recognizing and Describing Arbitrary Activities Using Semantic Hierarchies and Zero-Shot Recognition," *Proceedings of the International Conference on Computer Vision* (ICCV), Sydney, Australia, pp. 2712–2719, Dec. 2013.

61. Bhosale, S., Vinicombe, H., and Mooney, R.J., "Detecting Promotional Content in Wikipedia," *Proceedings of the Conference on Empirical Methods in Natural Language Processing* (EMNLP), Seattle, WA, pp. 1851–1857, Oct. 2013.

62. Acharya, A., Rawal, A., Mooney, R.J., and Hruschka, E.R., "Using Both Latent and Supervised Shared Topics for Multitask Learning," *Proceedings of the European Conference on Machine Learning and Principles and Practice of Knowledge Discovery in Databases, Part II* (ECML/PKDD), Prague, Czech Republic, pp. 369–384, Sept. 2013.

63. Kim, J.H. and Mooney, R.J., "Adapting Discriminative Reranking to Grounded Language Learning," *Proceedings of the 51st Annual Meeting of the Association for Computational Linguistics* (ACL), Sofia, Bulgaria, pp. 218–227, Aug. 2013.

64. Krishnamoorthy, N., Malkarnenkar, G., Mooney, R.J., Saenko, K., and Guadarrama, S., "Generating Natural-Language Video Descriptions Using Text-Mined Knowledge," *Proceedings of the Twenty-Seventh AAAI Conference on Artificial Intelligence* (AAAI), Bellevue, WA, pp. 541–547, July 2013.

65. Beltagy, I., Chau, C., Boleda, G., Garrette, D., Erk, K., and Mooney, R., "Montague Meets Markov: Deep Semantics with Probabilistic Logical Form," *Proceedings of the Second Joint Conference on Lexical and Computational Semantics* (*SEM), Atlanta, GA, pp. 11–21, June 2013.

66. Motwani, T. and Mooney, R.J., "Improving Video Activity Recognition using Object Recognition and Text Mining," *Proceedings of the 20th European Conference on Artificial Intelligence* (ECAI), Montpellier, France, pp. 600–605, Aug. 2012.

67. Kim, J.H. and Mooney, R.J., "Unsupervised PCFG Induction for Grounded Language Learning with Highly Ambiguous Supervision," *Proceedings of the Joint Conference on Empirical Methods in Natural Language Processing and Computational Natural Language Learning* (EMNLP-CoNLL), Jeju, Korea, pp. 433–444, July 2012.

68. Raghavan, S.V., Mooney, R.J. and Ku, H., "Learning to 'Read Between the Lines' using Bayesian Logic Programs," *Proceedings of the 50th Annual Meeting of the Association for Computational Linguistics* (ACL), Jeju, Korea, pp. 349–358, July 2012.

69. Huynh, T.N. and Mooney, R.J., "Online Structure Learning for Markov Logic Networks," *Proceedings of the European Conference on Machine Learning and Principles and Practice of Knowledge Discovery in Databases* (ECML/PKDD), Athens, Greece, pp. 81–96, Sept. 2011.

70. Raghavan, S.V. and Mooney, R.J., "Abductive Plan Recognition by Extending Bayesian Logic Programs," *Proceedings of the European Conference on Machine Learning and Principles and Practice of Knowledge Discovery in Databases* (ECML/PKDD), Athens, Greece, pp. 629–644, Sept. 2011.

71. Reisinger, J. and Mooney, R.J., "Cross-Cutting Models of Lexical Semantics," *Proceedings of the Conference on Empirical Methods in Natural Language Processing* (EMNLP), Edinburgh Scotland, pp. 1405–1415, July 2011.

72. Singla, P. and Mooney, R.J., "Abductive Markov Logic for Plan Recognition," *Proceedings of the Twenty-Fifth AAAI Conference on Artificial Intelligence* (AAAI), San Francisco, CA, pp. 1069–1075, Aug. 2011.

73. Chen, D.L. and Mooney, R.J., "Learning to Interpret Natural Language Navigation Instructions from Observations," *Proceedings of the Twenty-Fifth AAAI Conference on Artificial Intelligence* (AAAI), San Francisco, CA, pp. 859–865, Aug. 2011.

74. Huynh, T.N. and Mooney, R.J., "Online Max-Margin Weight Learning for Markov Logic Networks," *Proceedings of the SIAM International Conference on Data Mining* (SDM), Mesa, AZ, pp. 642–651, Apr. 2011.

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103. Richards, B.L. and Mooney R.J., "First-Order Theory Revision," *Proceedings of the Eighth International Machine Learning Workshop*, pp. 447-451, Evanston, IL, June 1991.

104. Ng, H.T and Mooney, R.J., "The Role of Coherence in Constructing and Evaluating Abductive Explanations," *Proceedings of the AAAI Spring Symposium on Automated Abduction*, Stanford, CA, March 1990.

105. Ng, H.T and Mooney, R.J, "Occam's Razor Isn't Sharp Enough: The Importance of Coherence in Abductive Explanation," *Proceedings of the IJCAI-89 Workshop on Plan Recognition*, Detroit, MI, August 1989.

106. Mooney, R.J. and Ourston, D., "Induction Over the Unexplained: Integrated Learning of Concepts with Both Explainable and Conventional Aspects," *Proceedings of the Sixth International Workshop on Machine Learning*, pp. 5-7, Ithaca, N.Y., June 1989.

107. Fisher, D., McKusick, K., Mooney, R., Shavlik, J., Towell, G., "Processing Issues in Comparisons of Symbolic and Connectionist Learning Systems," *Proceedings of the Sixth International Workshop on Machine Learning*, pp. 169-173, Ithaca, N.Y., June 1989.

108. Mooney, R.J., "Explanation-Based Learning of Plans for Plan Recognition," *Proceedings of the AAAI-88 Workshop on Plan Recognition*, St. Paul, MN, August 1988.

109. Mooney, R.J., "Generalizing the Order of Operators and its Relation to Generalizing Structure," *Proceedings of the AAAI Spring Symposium on Explanation-Based Learning*, Stanford, CA, March 1988.

110. Mooney, R.J., "Explanation-Based Learning: A General Learning Mechanism and its Application to Several Complex Domains," *Complex Learning Workshop*, Grange-over-Sands, England, April 1987.

111. Mooney, R.J., "Generalizing Explanations of Narratives into Schemata," *Proceedings of the Third International Machine Learning Workshop*, Skytop, PA, June 1985.

Technical Reports

1. Tang, L.R., Califf, M.E., and Mooney, R.J., "An Experimental Comparison of Genetic Programming and Inductive Logic Programming on Learning Recursive List Functions," Technical Report AI98-271, Artificial Intelligence Laboratory, University of Texas at Austin, May 1998.

2. Mahoney, J.J. and Mooney, R.J., "Initializing ID5 with a Domain Theory: Some Negative Results," Technical Report AI91-154, Artificial Intelligence Laboratory, University of Texas at Austin, March 1991.

3. Mooney, R.J. and Ourston, D., "Theory Refinement with Noisy Data," Technical Report AI91-153, Artificial Intelligence Laboratory, University of Texas at Austin, March 1991.

4. Ng, H.T., and Mooney, R.J., "Abductive Explanation in Text Understanding: Some Problems and Solutions," Technical Report AI89-116, Artificial Intelligence Laboratory, University of Texas at Austin, October 1989.

5. Mooney, R.J., Ourston, D. and Wu, S.Y., "Induction Over the Unexplained: A New Approach to Combining Empirical and Explanation-Based Learning," Technical Report AI89-110, Artificial Intelligence Laboratory, University of Texas at Austin, August 1989.

6. Mooney, R.J. and Subramanian, S. "Limiting the Use of Learned Rules to Insure the Utility of Explanation-Based Learning," Technical Report AI89-109, Artificial Intelligence Laboratory, University of Texas at Austin, August 1989.

7. Mooney, R.J., "A General Explanation-Based Learning Mechanism and its Application to Narrative Understanding," Ph.D. Thesis, Department of Computer Science, University of Illinois, Urbana, IL, January 1988. (Also appears as Technical Report UILU-ENG-87-2269, AI Research Group, Coordinated Science Laboratory, University of Illinois at Urbana-Champaign.)

8. Mooney, R.J., "Learning Indices for Conceptual Information Retrieval," Technical Report UILU-ENG-87-2230, May 1987, AI Research Group, Coordinated Science Laboratory, University of Illinois at Urbana-Champaign.

9. Mooney, R.J., "Generalizing Explanations of Narratives into Schemata," M.S. Thesis, Department of Computer Science, University of Illinois, Urbana, IL, May 1985. (Also appears as Technical Report T-159, AI Research Group, Coordinated Science Laboratory, University of Illinois at Urbana-Champaign.)

10. DeJong, G.F., Segre, A.M., Ram, A., Mooney, R.J., and Edel, M., "A Natural Language Processor that Supports Learning," Working Paper 55, March 1984, AI Research Group, Coordinated Science Laboratory, University of Illinois at Urbana-Champaign.

Awards and Honors

- Fellow of the Association for Computational Linguistics (ACL), Elected in 2014 "For significant contributions to machine learning for semantic parsing, language generation, and multimodal integration."

- Fellow of the Association for Computing Machinery (ACM), Elected in 2010 "For contributions to machine learning and natural-language processing."

- Fellow of the American Association for Artificial Intelligence (AAAI), Elected in 2005 "For significant contributions to machine learning, particularly explanation-based learning, theory refinement, and learning for natural-language processing."

- 2019 Distinguished Academic Achievement Alumni Award from the Department of Computer Science at the University of Illinois at Urbana-Champaign.

- Distinguished Paper Award, ACM Joint European Software Engineering Conference and Symposium on the Foundations of Software Engineering, for "A Framework for Writing Trigger-Action Todo Comments in Executable Format," by Nie, P., Rai, R., Li, J., Khurshid, S., Mooney, R.J., and Gligoric, M.

- Classic Paper Award, 33rd AAAI Conference on Artificial Intelligence (AAAI-19) for paper in the 18th National Conference on Artificial Intelligence (AAAI-02), "Content-Boosted Collaborative Filtering for Improved Recommendations," by P. Melville, R.J. Mooney, and R. Nagarajan.

- Best Paper Award, 45th Annual Meeting of the Association for Computational Linguistics (ACL-07) for "Learning Synchronous Grammars for Semantic Parsing with Lambda Calculus," by Y.W. Wong and R.J. Mooney.

- Distinguished Student Paper Award, 22nd International Conference on Machine Learning (ICML-05) for "Semi-Supervised Graph Clustering: A Kernel Approach," by B. Kulis, S. Basu, I. Dhillon, and R.J. Mooney.

- Best Research Paper Award, Tenth ACM SIGKDD International Conference on Knowledge Discovery and Data Mining (KDD-04) for "A Probabilistic Framework for Semi-Supervised Clustering," by S. Basu, M. Bilenko, and R.J. Mooney.

- One of 8 nominated for Best Paper Award, Sixteenth International Machine Learning Conference (ICML-99) for "Active Learning for Natural Language Parsing and Information Extraction" by C.A. Thompson, M.E. Califf, and R.J. Mooney.

- Best Paper Award, Thirteenth National Conference on Artificial Intelligence (AAAI-96) for "A Novel Application of Theory Refinement to Student Modeling" by P.T. Baffes and R.J. Mooney.

Grants

- Open Philanthropy, "Seeking Edits and Explanations from Users to Generate Long, Knowledge-Rich Texts," $432,953, May 2022 – Aug. 2025 (co-PI, PI Greg Durrett, co-PI Eunsol Choi).

- Defense Advanced Research Projects Agency (thru subcontract from Kitware Inc.), Perceptual Task Guidance (PTG) Program, "ANGEL: Assistant Navigating a Graphical Event Library," $588,245, November 2021 – December 2024.

- Google Faculty Research Award, "Co-evolution of Code and Comments," $55,314, March 2020 – February 2021 (co-PIs Milos Gligoric, Junyi Jessy Li).

- Defense Advanced Research Projects Agency (thru subcontract from Stonybrook Univ.), Knowledge-directed Artificial Intelligence Reasoning Over Schemas (KAIROS) Program, "TA1:Structured Generative Models for Multi-modal Schema Learning," $1,747,236, September 2019 – February 2024 (co-PI, PI Greg Durret, co-PI Katrin Erk).

- National Science Foundation, "NRI 2.0: Improving Robot Learning from Feedback and Demonstration using Natural Language," (IIS-1925082), $749,411, September 2019 – August 2022, (co-PIs Scott Niekum, Peter Stone).

- Google Faculty Research Award, "Improving Grounded Human/Robot Dialog," $52,909, March 2019 – February 2020.

- Amazon Research Award, "Language-Aided Learning from Demonstration," $55,000, March 2019 – February 2020 (co-PI Scott Niekum).

- Defense Advanced Research Projects Agency (thru subcontract from Raytheon BBN Technologies), Explainable Artificial Intelligence (XAI) Program, "EQUAS -- Explainable QUestion Answering System," $700,000, October 2017 – May 2021.

- National Science Foundation, "NRI: Robots that Learn to Communicate through Natural Human Dialog," (IIS-1637736), $936,906, September 2016 – August 2019, (co-PI Peter Stone).

- Microsoft Research Gift, "Interactive Dialog for Language to Code," $50,000, August 2016 – July 2017.

- Google Grant Program, "Natural Language Video Description using Deep Recurrent Neural Networks," $47,000, September 2015 –August 2016 (co-PI Kate Saenko, University of Massachusetts Lowell)

- National Science Foundation, "Robots that Learn to Communicate with Humans Through Natural Dialog," (IIS-1548567) $150,000, September 2015 – August 2016 (co-PI Peter Stone).

- Defense Advanced Research Projects Agency, Deep Exploration and Filtering of Text (DEFT) Program, "Statistical Relational Learning and Script Induction for Textual Inference," $1,302,318, November 2012 – April 2017 (co-PI Katrin Erk).

- Office of Naval Research, "Active Transfer Learning for Object and Activity Recognition Using Diverse Forms of Supervision," $787,861, January 2011 – December 2015, (co-PI, PI: Kristen Grauman).

- National Science Foundation, "Perceptually Grounded Learning of Instructional Language," (IIS-1016312), $450,000, September 2010 – August 2014.

- Defense Advanced Research Projects Agency, Machine Reading Program (through subcontract from IBM), "RACR: Reader and Contextual Reasoner," (FA8750-09-C-0172), $812,157, July 2009 – December 2012.

- Google Grant Program, "Unsupervised Induction of Semantic Lexicons Handling Both Synonymy and Polysemy," $50,000, May 2009 – April 2010.

- Army Research Office, Multi-disciplinary University Research Initiative (through subcontract from the University of Washington), "A Unified Approach to Abductive Inference," (W911NF-08-1-0242), $752,598, May 2008 – April 2014.

- Microsoft Research, "Using Markov Logic Networks to Infer User Intent for Search Queries," $40,000, January 2008 – December 2008.

- National Science Foundation, "Learning Language Semantics from Perceptual Context," (IIS-0712097), $443,535, September 2007 – August 2010.

- Google Grant Program, "Global Extraction of Semantic Relations from Text Corpora by Learning from Weak Supervision," $60,000, January 2007 – December 2007.

- Cisco Systems, gift to support research on "Automated Malware Fingerprinting," $50,000, January 2007 – December 2007, (co-PI, PI: Yin Zhang).

- National Science Foundation, "Autonomic Systems: Integrating Machine Learning with Computer Systems," (CNS-0615104), $880,000, August 2006 – July 2009, (co-PI, PI: Emmett Witchel, other co-PI's: Peter Stone, Yin Zhang, Vitaly Shmatikov)

- Defense Advanced Research Projects Agency (through subcontract from Institute for Study of Learning and Expertise), "Transfer Learning in Integrated Cognitive Systems," (FA8750-05-2-0283) $953,254 October 2005 – April 2009, (co-PI Peter Stone).

- Google Grant Program, "Accurate Record Linkage Using Joint Models for Learnable String Distance and Information Extraction," $90,000, September 2005 – August 2006.

- Defense Advanced Research Projects Agency (through subcontract from Lockheed Inc.), "Architecture for Cognitive Information Processing," $700,000, September 2004 – August 2006. (co-PI, PI: Emmett Witchel, other co-PI's: Peter Stone, Michael Dahlin, Risto Miikkulainen, Doug Burger, Steve Keckler).

- Google Grant Program, "Using Weblog Constraints for Semi-Supervised Clustering of Query Results," $44,407, June 2004 – May 2005.

- Defense Advanced Research Projects Agency (through subcontract from Univ. of Wisconsin), "Interactive Learning from Advice and Reinforcements: Broadening the Communication Channel between Machine Learners and their Human Teachers," (HR0011-04-1-0007), $643,300, December 2003 – January 2006.

- National Science Foundation, Information Technology Research Award, "Feedback from Multi-Source Data Mining to Experimentation for Gene Network Discovery," (IIS-0325116), October 2003 – September 2007, $1,700,000. (PI, Co-PI's are: D. Miranker, I. Dhillon, E. Marcotte, V. Iyer, J. Ghosh).

- International Business Machines, IBM Faculty Award, "Semi-supervised Clustering for Intelligent User Management," January 2003 – December 2003, $40,000.

- National Science Foundation, "Text Data Mining and Information Extraction" (IIS-0117308), October 2001 – September 2005, $240,000.

- Defense Advanced Research Projects Agency (through subcontract from Univ. of Wisconsin), "Pattern Learning for Link Discovery Using Inductive Logic Programming," (F30602-01-2-0571), October 2001 – December 2003, $284,992.

- National Science Foundation, "Symbolic Learning for Natural-Language Processing: Integrating Information Extraction and Querying" (IRI-9704943), August 1997 – July 2001, $339,563.

- Daimler-Benz Research and Technology North America Inc., "Learning Adaptive Natural-Language Parsers for Database Queries," January 1997 - December 1998, $55,000.

- National Science Foundation, "Learning Search-Control Heuristics for Logic Programs: Applications to Speedup Learning and Language Acquisition," (IRI-9310819), March 1994 – February 1997, $189,998.

- Texas Advanced Research Program, "Automated Refinement of Knowledge Bases for Rule-Based Systems," (ARP-003658-114), January 1992 – December 1993, $91,800.

- National Science Foundation, "Refining Concepts and Domain Theories by Combining Explanation-Based and Empirical Learning" (IRI-9102926), September 1991 – August 1993, $106,284.

- NASA Ames Research Center, "Utility and Incomplete Theories: Addressing Two Important Problems in Explanation-Based Learning" (NCC 2-629), June 1989 – July 1992, $224,886.

University Courses Taught

Undergraduate

Information Retrieval and Web Search
Artificial Intelligence
LISP and Symbolic Computation

Graduate

Grounded Natural Language Processing
Machine Learning
Natural Language Processing
Artificial Intelligence II
Introduction to Cognitive Science

Tutorials and Short Courses Taught

- Lecture on "Applications of AI: Natural Language Processing," for AI/ML 101 for High School Educators, UT Machine Learning Lab, June 28, 2021.

- Tutorial on Text Mining at *19th Brazilian Symposium on Artificial Intelligence* (SBIA-08), Salvador, Brazil, Oct. 29, 2008.

- Short course on "Empirical Approaches to Word Sense Disambiguation, Information Extraction, Semantic Role Labeling, and Semantic Parsing," at the International Ph.D School on Language and Speech Technologies, Rovira i Virgili University, Tarragona, Spain, July 6–10, 2006.

- Short course on "Machine Learning for Natural Language Processing," Universitat Internacional Menéndez Pelayo – Centre Ernest Lluch, Barcelona, Spain, July 5, 2006.

- Tutorial on Machine Learning, Johns Hopkins Summer School on Human Language Technology, Baltimore, MD, July 8, 2003.

- Tutorial on "Inductive Logic Programming for Natural Language Processing," at the *Fourth Computational Natural Language Learning Workshop*, Lisbon, Portugal, September 15, 2000.

- Tutorial on "Symbolic Machine Learning for Natural Language Processing," at the Belgian-Dutch Association for Artificial Intelligence (BNVKI) Tutorials on Artificial Intelligence and Language Processing, Tilburg, The Netherlands, Jan. 10, 2000.

- (with Claire Cardie) Tutorial on "Symbolic Machine Learning for Natural Language Processing," at the *37th Annual Meeting of the Association for Computational Linguistics*, College Park, MD, June 20, 1999.

- Lectures on "Logical and Probabilistic Theory Refinement," at the *I Brazilian School on Machine Learning and Knowledge Discovery in Databases*, Rio de Janiero, Brazil, Sept. 28 – Oct. 2, 1998.

- Tutorial on "Applications of ILP to Natural Language in the U.S.,"at the *Eighth International Conference on Inductive Logic Programming*, Madison, WI, July 21, 1998.

- (with Patrick Langley) Tutorial on "Machine Learning for Planning, Problem Solving, and Natural Language," *Tenth National Conference on Artificial Intelligence*, San Jose, CA, July 12, 1992.

- (with Bruce Porter) "Overview of Machine Learning" University of Houston at Clear Lake for employees of NASA Johnson Space Center, May 10 – 12, 1989.

Student Supervision

Ph.D. Theses Supervised

- Sheena Panthaplackel (co-supervised with Jessy Li),"Facilitating Software Evolution through Natural Language Comments and Dialogue," August 2022. Sheena now works at Google AI.

- Jialin Wu, "Incorporating External Information for Visual Question Answering," August 2022. Jialin now works for Google LA.

- Prasoon Goyal (co-supervised with Scott Niekum), "Using Natural Language for Task Specification in Sequential Decision Making Problems," August 2022, Prasoon now works for Amazon Alexa Group.

- Aishwarya Padmakumar, "Dialog as a Vehicle for Lifelong Learning of Grounded Language Understanding Systems," August 2020. Aishwarya now works in Amazon Alexa group.

- Nazneen Rajani, "Explainable Improved Ensembling for Natural Language and Vision," August, 2018. Nazneen recently founded a new AI startup..

- Jesse Thomason, "Continually Improving Grounded Natural Language Understanding through Human-Robot Dialog," May, 2018. Jesse is an Assistant Professor at the University of Southern California.

- Karl Pichotta, "Advances in Statistical Script Learning," August, 2017. Karl now works at Memorial Sloan Kettering Cancer Center, New York.

- Subhashini Venugopalan, "Natural-Language Video Description with Deep Recurrent Neural Networks," August, 2017. Subha is now a Researcher at Google, Mountain View.

- Islam Beltagy (co-supervised with Katrin Erk), "Natural Language Semantics using Probabilistic Logic," December, 2016. Islam worked at the Allen Institute for Artificial Intelligence (AI2) and recently co-founded an AI startup.

- Ayan Acharya (co-supervised with Joydeep Ghosh), "Knowledge Transfer Using Latent Variable Models," August, 2015. Ayan is now a Senior Software Engineer at LinkedIn.

- Daniel Garrette (co-supervised with Jason Baldridge), "Inducing Grammars from Linguistic Universals and Realistic Amounts of Supervision," May 2015. Dan now works at Google, New York.

- Joohyun Kim, "Grounded Language Learning Models for Ambiguous Supervision," August 2013. Joohyun now works at My Fitness Pal.

- Sindhu Raghavan, "Bayesian Logic Programs for Plan Recognition and Machine Reading," December 2012. Sindhu now works at Google Mountain View.

- Joseph Reisinger, "Latent Variable Models of Distributional Lexical Semantics," May 2012. Joe founded a start-up called Premise.

- David Chen, "Learning Language from Ambiguous Perceptual Context," May 2012. David is now a software engineer in the Search team at Google, Mountain View.

- Tuyen Huynh, "Improving the Accuracy and Scalability Of Discriminative Learning Methods for Markov Logic Networks," May 2011. Tuyen is now works for TrustingSocial in Vietnam.

- Ruifang Ge, "Learning for Semantic Parsing Using Statistical Syntactic Parsing Techniques," May 2010.

- Lilyana Mihalkova, "Learning with Markov Logic Networks: Transfer Learning, Structure Learning, and an Application to Web Query Disambiguation," August 2009. Lily now works for Google LA.

- Rohit Kate, "Learning For Semantic Parsing With Kernels Under Various Forms Of Supervision," August 2007. Rohit is now an Associate Professor at the University of Wisconsin at Milwaukee.

- Yuk Wah (John) Wong, "Learning For Semantic Parsing And Natural Language Generation Using Statistical Machine Translation Techniques," August 2007. John is now a software engineer at Google Pittsburgh.

- Razvan Bunescu, "Learning for Information Extraction: From Named Entity Recognition and Disambiguation To Relation Extraction," August 2007. Razvan is now an Associate Professor at University of North Carolina at Charlotte.

- Mikhail Bilenko, "Learnable Similarity Functions and their Application to Record Linkage and Clustering," August 2006. Misha is now a VP at Google.

- Prem Melville, "Creating Diverse Ensemble Classifiers to Reduce Supervision," December 2005. Prem is now at a start-up he founded, Social Alpha.

- Sugato Basu, "Semi-supervised Clustering: Probabilistic Models, Algorithms, and Experiments," May 2005. Sugato is now a research scientist at Google Research.

- Un Yong Nahm, "Text Mining with Information Extraction," August 2004. Un Yong went on to become a research scientist at Yahoo Applied Research.

- Lap Poon Rupert Tang, "Integrating Top-down and Bottom-up Approaches in Inductive Logic Programming: Applications in Natural Language Processing and Relational Data Mining," August 2003. Rupert went on to become an Assistant Professor of Computer Science at the University of Texas at Brownsville.

- Cynthia A. Thompson, "Semantic Lexicon Acquisition for Learning Natural Language Interfaces," December 1998.

- Mary Elaine Califf, "Relational Learning Techniques for Natural Language Information Extraction," August 1998. Mary-Elaine is a Professor of Applied Computer Science at Illinois State University, Normal, IL.

- Tara A. Estlin, "Using Multi-Strategy Learning to Improve Planning Efficiency and Quality," May 1998. Tara now leads the Machine Learning group at NASA's Jet Propulsion Laboratory, Pasadena, CA.

- Sowmya Ramachandran, "Theory Refinement of Bayesian Networks with Hidden Variables," May 1998. Sowmya is a Research Scientist at Stottler Henke Associates Inc., San Mateo, CA.

- Ulf Hermjakob, "Learning Parse and Translation Decisions From Examples With Rich Context," May 1997. Ulf is a Research Scientist at the University of Southern California's Information Sciences Institute, Marina Del Rey, CA.

- J. Jeffrey Mahoney, "Combining Symbolic and Connectionist Learning to Revise Certainty-Factor Rule Bases", May 1996.

- John M. Zelle; "Using Inductive Logic Programming to Automate the Construction of Natural Language Parsers", August 1995. John is currently a Professor of Computer Science at Wartburg College, Waverly, Iowa.

- Siddarth Subramanian, "Qualitative Multiple-Fault Diagnosis of Continuous Dynamic Systems Using Behavioral Modes," August 1995.

- Paul T. Baffes, "Automatic Student Modeling and Bug Library Construction using Theory Refinement," August 1994. Paul is Program Director for Innovation Programs, IBM Austin.

- Bradley L. Richards, "An Operator-Based Approach To First-Order Theory Revision," August 1992.

- Hwee Tou Ng, "A General Abductive System with Applications to Plan Recognition and Diagnosis," May 1992. Hwee Tou is a Professor in the Department of Computer Science at the National University of Singapore.

- Dirk Ourston, "Using Explanation-Based and Empirical Methods in Theory Revision," August 1991.

Postdoctoral Fellows Supervised

- Harel Yedidsion, Dec. 2017–Aug. 2019 (co-supervised with Peter Stone).

- Justin Hart, Dec. 2016–Aug. 2017 (co-supervised with Peter Stone).

- Parag Singla, Jan. 2010–Aug. 2011, Parag is now an Assistant Professor at the Indian Institute of Technology (IIT) Dehli.

- Rohit Kate, Sept. 2008– Aug. 2010, Rohit is now an Associate Professor at the University of Wisconsin at Milwaukee.

Masters Theses Supervised

- Yili Wang, "Directly Optimizing Evaluation Metrics to Improve Text to Motion," May 2023.

- Jordan Voas, "What is the Best Automated Metric for Text to Motion Generation?," May 2023.

- Clara Cannon, "Supervised Attention from Natural Language Feedback for Reinforcement Learning," May 2021.

- Shobhit Chaurasia, "Dialog for Language to Code," May 2017.

- Vidhoon Viswanathan, "Knowledge Base Population using Stacked Ensembles of Information Extractors," May 2015.

- Srivatsan Ramanujam, "Factorial Hidden Markov Models for Full and Weakly Supervised Supertagging," (co-supervisor: Prof. Jason Baldridge, Dept. of Linguistics), August 2009.

- Sonal Gupta, "Activity Retrieval in Closed Captioned Videos," August 2009, Sonal continued as a Ph.D. student at Stanford University.

- Noppadon Kamolvilassatian, "Property Based Feature Extraction and Selection," August 2002.

- Cynthia A. Thompson, "Inductive Learning for Abductive Diagnosis," August 1993. Cindi continued as a Ph.D. student (see above).

Undergraduate Honors Theses Supervised

- Antony Yun, "Evaluating the Robustness of Natural Language Reward Shaping Models to Spatial Relations," May 2020.

- David Gros, "AInix: Open platform for natural language interfaces to shell commands," May 2019. David went on to be a Ph.D. student at the Univ. of California at Davis.

- Rodolfo Corona, "An Analysis of Using Semantic Parsing for Speech Recognition," December, 2016. Rodolfo went on to be a PhD student at the Univ. of California at Berkeley.

- Calvin MacKenzie, "Integrating Visual and Linguistic Information to Describe Properties of Objects," May 2014.

- Trevor Fountain, "FDL: A Feature Description Language for Semantic Role Labeling," May 2008. (de facto supervisor, Katrin Erk, Linguistics)

- Jeff Rego, "Graphical Viewing of Relationships Extracted from Online Articles," May 2008. (de facto supervisor, Jason Baldridge, Linguistics)

- Jiayun Chen, "Markov Logic Networks for Information Extraction," May 2008.

- Mustafa Bilgic, "Explanation for Recommender Systems: Satisfaction vs. Promotion," May 2004. Mustafa went on to be a Ph.D. student at the Univ. of Maryland and then a faculty member at the Illinois Institute of Technology.

- Edward Wild, "ELIXIR: A Library for Writing Wrappers in Java," Dec. 2001, Ted went on to be a Ph.D. student at the Univ. of Wisconsin.

- Michael B. Cline, "Using HTML Structure and Linked Pages to Improve Learning cdfor Text Categorization," May 1999. Mike went on to be a graduate student at the University of British Columbia.

- Paul N. Bennett, "Text Categorization Through Probabilistic Learning: Applications to Recommender Systems," May 1998. Paul went on to be a Ph.D. student at Carnegie Mellon University and is now a Research Scientist at Microsoft Research.

- Glenn Pfeffer, "Applying Theory Refinement to Thyroid Diagnosis," December, 1990. Glenn went on to obtain a M.S. in our department.

Invited Lectures

Conference Invited Speaker Presentations

- Invited Speaker, "The Deep Learning Revolution: Progress, Promise, and Profligate Promotion," *Elevate: Integrating AI with the DoD Conference*, Scott Air Force Base, IL, Oct. 13, 2022.

- Keynote Invited Speaker, "Answering Why Questions about Narrative Text," *11th CCF International Conference on Natural Language Processing and Chinese Computing* (NLPCC-2022), Sept. 24, 2022.

- Invited Speaker, "Deep Learning for Automating Software Documentation Maintenance," *Indian Symposium on Machine Learning* (IndoML), Dec. 16, 2021.

- Keynote Invited Speaker, "Dialog with Robots: Perceptually Grounded Communication with Lifelong Learning," *The 22nd Annual Meeting of the Special Interest Group on Discourse and Dialogue* SIGDIAL, July 29, 2021.

- Keynote Invited Speaker, "Explainable AI: Making Machine Learning Systems More Transparent," *Amazon Machine Learning Conference* (AMLC), virtual presentation, Oct. 5, 2020.

- Keynote Invited Speaker, "Explainable AI: Making Visual Question Answering Systems More Transparent," *The ACM India Joint International Conference on Data Science & Management of Data* (CoDS-COMAD), Kolkata, India, Jan. 5, 2019.

- Invited Speaker, "Robots that Learn Grounded Language Through Interactive Dialog," *The 31st International FLAIRS Conference* (FLorida AI Research Society), Melbourne, FL, May 21, 2018.

- Invited Speaker, "The Deep Learning Revolution: Progress, Promise, and Profligate Promotion," *Computing in the 21st Century*, Harbin, China, Oct. 19, 2017.

- Keynote Invited Speaker, "Grounded Language Learning," *Twenty-Seventh AAAI Conference on Artificial Intelligence* (AAAI), Bellevue, WA, Jul. 16, 2013.

- Invited Speaker, "Getting Computers to Learn Human Language," *Southwestern Psychological Association Convention* (SWPA), Fort Worth, TX, April 6, 2013.

- Invited Speaker, "Learning Language from Perceptual Context," *13th Conference of the European Chapter of the Association for Computational Linguistics* (EACL), Avignon, France, April 27, 2012.

- Invited Speaker, "Bottom-up Search and Transfer Learning in SRL," *Joint Meeting of the 19th International Conference on Inductive Logic Programming, International Workshop on Statistical Relational Learning, and the 7th International Workshop on Mining and Learning with Graphs* (ILP/SRL/MLG), Leuven, Belgium, July 2, 2009.

- Invited Speaker, "Transfer Learning by Mapping and Revising Relational Knowledge," *19th Brazilian Symposium on Artificial Intelligence* (SBIA-08), Salvador, Brazil, Oct. 27, 2008.

- Invited Speaker, "Learning Language from its Perceptual Context," *European Conference on Machine Learning and Principles and Practice of Knowledge Discovery in Databases* (ECML/PKDD-08), Antwerp, Belgium, Sept. 16, 2008.

- Invited Speaker, "Learning for Semantic Parsing," *8th International Conference on Computational Linguistics and Intelligent Text Processing* (CICLing 2007), Mexico City, Mexico, Feb. 22, 2007.

- Invited Speaker, "Machine Learning for Recommender Systems," *International Conference on Tools for Artificial Intelligence*, Dallas, TX, Nov. 9, 2001.

- Invited Speaker, "Learning to Improve Efficiency and Quality of Planning," *Eleventh International Florida Artificial Intelligence Research Society Conference* (FLAIRS-98), Sanibel Island, FL, May 1998.

- Keynote Speaker, "Relational Learning for Natural Language Parsing and Information Extraction," *Fourteenth International Conference on Machine Learning*, Nashville, TN, July 9, 1997.

- Invited Speaker, "Inductive Logic Programming for Natural Language Processing" *Sixth International Inductive Logic Programming Workshop,* Stockholm, Sweden, August 30, 1996.

Colloquia and Invited Workshop Talks

- "Understanding Plans in Text: Why QA and Temporal Dependencies," Department of Computer Science, University of Texas at Dallas, Richardson, TX, Nov. 22, 2024.

- "Understanding Plans in Text: Why QA and Temporal Dependencies," Department of Computer Science, Arizona State University, Tempe, AZ, Oct. 25, 2024.

- "Answering Why Questions about Narrative and Instructional Text," Department of Computer Science, EPFL, Lausanne, Switzerland, May 27, 2024.

- "Answering Why Questions about Narrative and Instructional Text," Department of Computer Science, ETH Zurich, Switzerland, May 22, 2024.

- Interview about AI hosted by Prof. James Pennebaker, Four Seasons Residences Speakers' Forum, Austin, TX, May 8, 2024.

- "Answering Why Questions about Narrative Text," Compliance Engineering Group, Goldman Sachs, New York, NY, Mar. 11, 2024.

- "Using Natural Language to Help Train Robots," Dept. of Computer Science, Cornell Tech, New York, NY, Mar. 8, 2024.

- "The Deep Learning Revolution: Progress, Promise, and Profligate Promotion," Invited dinner speaker at event for visitors from Hiroshima University, Texas Global program, UT Austin, Feb. 12, 2024.

- "The Vision Thing: Finding and Pursuing your Research Passion" *EMNLP Workshop on The Big Picture: Crafting a Research Narrative*, Singapore, Dec. 7, 2023.

- Invited Panel Member (virtual), Protecting Our Values: Generative AI, Regulation, and the Future of Work, *CATT 2023 Global Analytics Conference*, Nov. 16, 2023.

- "Answering Why Questions about Narrative Text," Department of Computer Sciences, University of Michigan, Ann Arbor, MI, Sept. 29, 2023.

- "Answering Why Questions about Narrative Text," Distinguished Lecture, Manning College of Information and Computer Sciences, University of Massachusetts at Amherst, MA, Sept. 15, 2023.

- Invited Panel Member, "Exploring the Potential of AI in K-12 Education: Opportunities and Challenges," WeTeach CS Summit, June 17, 2023, Houston, TX.

- "Answering Why Questions about Narrative Text," Apple Machine Learning Research Invited Talk, June 13, 2023, Cupertino, CA.

- "Answering Why Questions about Narrative Text," Amazon Alexa Group, June 12, 2023, Sunnyvale, CA.

- "The Deep Learning Revolution: Progress, Promise, and Profligate Promotion," Tuesday Club, Austin, TX. April 18, 2023.

- "Answering Why Questions about Narrative Text," Department of Computer Science, University of Arizona, Tucson, AZ, April 14,2023.

- Participant on panel on Artificial Intelligence after 10th Anniversary Screening of Film "Computer Chess," Austin Film Society, Mar. 28, 2023, Austin, TX.

- "Answering Why Questions about Narrative Text," Jon Postel Distinguished Lecture, Department of Computer Science, University of California, Los Angeles, CA, Mar. 16, 2023.

- "Answering Why Questions about Narrative Text," Information Sciences Institute, Marina Del Rey, CA, Mar. 15, 2023.

- "Dialog with Robots: Perceptually Grounded Communication with Lifelong Learning," Department of Computer Science, Tufts University, Boston, MA, Nov. 7, 2022.

- "Answering Why Questions about Narrative Text," Department of Interactive Computing, Georgia Institute of Technology, Atlanta, GA, Oct. 21, 2022.

- "Dialog with Robots: Perceptually Grounded Communication with Lifelong Learning," Department of Computer Science, Rice University, Houston, TX, Sept. 19, 2022.

- "Deep Learning for Automating Software Documentation Maintenance," Department of Computer Science, Columbia University, New York, NY, May 9, 2022.

- "Dialog with Robots: Perceptually Grounded Communication with Lifelong Learning," Department of Computer Science, Princeton University, Princeton, NJ, May 6, 2022.

- "Deep Learning for Automating Software Documentation Maintenance," Department of Computer Science, University of Illinois at Chicago, Mar. 15, 2022.

- "Dialog with Robots: Perceptually Grounded Communication with Lifelong Learning," Toyota Technological Institute at Chicago, Mar. 14, 2022.

- "Dialog with Robots: Perceptually Grounded Communication with Lifelong Learning," Invited virtual speaker, Dongguk University, South Korea, Sep. 23, 2021.

- "Deep Learning for Automating Software Documentation Maintenance," Natural Language Processing Group, Stanford University, (virtual talk), July 1, 2021.

- Invited Speaker, "Generating Animated Videos of Human Activities from Natural Language Descriptions," CVPR-2021 Workshop on Language for 3D Scenes, virtual talk, June 25, 2021.

- Invited Speaker, "Explanations for Visual Question Answering," NAACL-2021 Workshop on Advances in Language and Vision Research (ALVR), virtual talk, June 11, 2021.

- "The Relationships Between Fairness, Interpretability, and Explainability of AI Systems," Panel for Fair & Transparent AI: Lessons from UT Austin's "Good Systems" Grand Challenge, Austin Forum on Technology and Society, (virtual talk), Apr. 20, 2021.

- "Explainable AI: Making Visual Question Answering Systems More Transparent," ByteDance AI Research (virtual talk), Mar. 22, 2021.

- "Deep Learning for Automating Software Documentation Maintenance," Distinguished Lecture, Dept. of Computer Science, Pennsylvania State University, State College, PA. (virtual talk), Feb. 25, 2021.

- "Explainable AI: Making Visual Question Answering Systems More Transparent," Microsoft Research Multimodal Group (virtual talk), Aug. 18, 2020.

- "Robots that Learn Grounded Language Through Interactive Dialog," Department of Computer Science, University of California Santa Barbara, CA, Jan. 16, 2020.

- "Explainable AI: Making Visual Question Answering Systems More Transparent," Department of Computer Science, University of California Los Angeles, CA, Jan. 14, 2020.

- "Explainable AI: Making Visual Question Answering Systems More Transparent," Department of Computer Science, California Institute of Technology, Pasadena, CA, Jan. 13, 2020.

- "Connecting Natural Language and Code using Deep Learning," *NSF Workshop on Deep Learning and Software Engineering* at the *Conference on Automated Software Engineering* (ASE), San Diego, CA, Nov. 10, 2019.

- "Explainable AI: Making Visual Question Answering Systems More Transparent," Department of Computer Science, University of Illinois at Urbana-Champaign, Oct. 18, 2019.

- Invited Speaker, "A Review of Work on Natural Language Navigation Instructions" ACL-2019 Combined Workshop on Spatial Language Understanding (SpLU) & Grounded Communication for Robotics (RoboNLP), Minneapolis, MN, June 2019.

- Member of Panel on "The Future of AI, Machine Learning, and Data Analytics," *Engineering Dean's Institute (EDI)* organized by the American Society of Engineering Education (ASEE), San Antonio, TX, Apr. 8, 2019.

- "Explainable AI: Making Visual Question Answering Systems More Transparent," Language Technologies Institute, Carnegie Mellon University, Mar. 8, 2019.

- Invited Speaker, "Jointly Generating Image Captions to Aid Visual Question Answering," *Workshop on Image Description for Consumer and Overhead Imagery*, Institute for Computational and Experimental Research in Mathematics (ICERM), Brown University, Providence Rhose Island, Feb. 25, 2019.

- "Explainable AI: Making Visual Question Answering Systems More Transparent," Dept. of Computer Science, Indian Institute of Technology (IIT), New Dehli, India, Jan. 11, 2019.

- Invited Speaker, "Learning to Understand Natural Language Instructions through Human-Robot Dialog," *NeurIPS-2018 Workshop on Learning by Instruction* (LBI), Montreal, Canada, Dec. 8, 2018.

- "Explainable AI: Making Visual Question Answering Systems More Transparent," AMD Research, Austin, TX, Nov. 16, 2018.

- "Explainable AI: Making Visual Question Answering Systems More Transparent," ICES Seminar-Babuska Forum Series, University of Texas, Austin, TX, Oct. 12, 2018.

- "Explainable AI: Making Visual Question Answering Systems More Transparent," Distinguished Invited Speaker, Department of Computer Science, Purdue University, West Lafeyette, IN, Sept. 28, 2018.

- "Robots that Learn Grounded Language Through Interactive Dialog," Department of Computer Science, Yale University, New Haven, CT, Apr. 20, 2018.

- "Ensembling and Explanation for Visual Question Answering," Center for Data Science, New York University, New York, NY, Apr. 19, 2018.

- "Robots that Learn Grounded Language Through Interactive Dialog," Google Research, Mountain View, CA, Mar. 16, 2018.

- "Robots that Learn Grounded Language Through Interactive Dialog," Facebook AI Research, Palo Alto, CA, Mar. 15, 2018.

- "Ensembling and Explanation for Visual Question Answering," SRI International, Menlo Park, CA, Mar. 13, 2018.

- "Robots that Learn Grounded Language Through Interactive Dialog," Department of Computer Science, University of California, Davis, CA, Mar. 12, 2018.

- Invited Speaker, "Visually Grounded Language: Past, Present, and Future," *NIPS-2017 Workshop on Visually-Grounded Interaction and Language* (ViGIL), Long Beach, CA, Dec. 8, 2017.

- Invited Speaker, "Learning Scripts for Text Understanding with Recurrent Neural Networks," *K-CAP-2017 Workshop on Machine Reading*, Austin, TX, Dec. 4, 2017.

- Invited Speaker, "Robots that Learn Grounded Language Through Interactive Dialog," *AAAI Fall Symposium on Natural Communication for Human-Robot Collaboration*, Washington D.C., Nov. 11, 2017.

- Learning Machines Seminar Series, "Robots that Learn Grounded Language Through Interactive Dialog," Cornell Tech, New York, NY, Oct. 6, 2017.

- Invited Speaker, "Robots that Learn Grounded Language Through Interactive Dialog," *ACL-2017 Workshop on Language Grounding for Robotics,* (RoboNLP), Vancouver, BC, Aug. 3, 2017.

- "Generating Natural-Language Video Descriptions using LSTM Recurrent Neural Networks," Distinguished Invited Speaker, Dept. of Computer Science, Ohio State University, Columbus, OH, Mar. 3, 2017.

- "Learning Scripts for Text Understanding with Recurrent Neural Networks," Dept. of Computer Science, North Carolina State University, Raleigh, NC, Oct. 18, 2016.

- "Generating Natural-Language Video Descriptions using LSTM Recurrent Neural Networks," Invited "Triangle Speaker," Dept. of Computer Science, University of North Carolina, Chapel Hill, NC, Oct. 17, 2016.

- "Ensembling Diverse Approaches to Question Answering," *NAACL 2016 Workshop on Human-Computer Question Answering*, San Diego, CA, June 16, 2016.

- "Generating Natural-Language Video Descriptions using LSTM Recurrent Neural Networks," Department of Computer Science, Cambridge University, England, May 18, 2016.

- "Generating Natural-Language Video Descriptions using LSTM Recurrent Neural Networks," and discussant at "AI Salon," Department of Computer Science, Stanford University, Palo Alto, CA, Apr. 1, 2016.

- "Generating Natural-Language Video Descriptions using LSTM Recurrent Neural Networks," Invited Talk, *NIPS 2015 Workshop on Multimodal Machine Learning* (MMML), Montreal, Quebec, Dec. 11, 2015.

- "Natural Language Semantics by Combining Logical and Distributional Methods using Probabilistic Logic," Department of Computer Science, Texas A&M University, College Station, TX, Nov. 9, 2015.

- "Generating Natural-Language Descriptions of Videos in the Wild," Department of Computer Science, University of Houston, Houston, TX, Nov. 6, 2015.

- "Semantic Parsing and Natural Language Programming," *NSF Interdisciplinary Workshop on Statistical Natural Language Processing and Software Engineering*, Redmond, WA, Oct. 27, 2015.

- "Combining Logical and Distributional Semantics using Probabilistic Logic," Invited Talk, *ACL 2015 Workshop on Continuous Vector Space Models and their Compositionality*, Beijing, China, Jul. 31, 2015.

- "Stacked Ensembles of Information Extractors for Knowledge-Base Population," Invited Talk, *Microsoft Faculty Summit*, Redmond, WA, Jul. 8, 2015.

- "Learning Probabilistic Scripts for Text Understanding," Department of Computer Science, University of North Texas, Denton, TX, Jun. 26, 2015.

- "Learning Probabilistic Scripts for Text Understanding," Department of Computer Science, University of Texas at Dallas, Richardson, TX, Jun. 25, 2015.

- "Generating Natural-Language Descriptions of Videos in the Wild," Department of Computer Science, Illinois Institute of Technology, Chicago, IL, Apr. 16, 2015.

- "Natural Language Semantics by Combining Logical and Distributional Methods using Probabilistic Logic," Information Sciences Institute and Google LA, Los Angeles, CA, Dec. 18, 2014.

- "Natural Language Semantics by Combining Logical and Distributional Methods using Probabilistic Logic," Department of Computer Science, University of California, Santa Cruz, CA, Dec. 16, 2014.

- "Generating Natural-Language Descriptions of Videos in the Wild," Department of Computer Science, University of California, Berkeley, CA, Dec. 15, 2014.

- "Natural Language Semantics by Combining Logical and Distributional Methods using Probabilistic Logic," Joint University of Washington and Microsoft Research Symposium on Computational Linguistics, Seattle, WA, Nov. 14, 2014.

- "Deep Natural Language Semantics by Combining Logical and Distributional Methods using Probabilistic Logic," Allen Institute for Artificial Intelligence, Seattle, WA, Nov. 4, 2014.

- "Generating Natural-Language Video Descriptions Using Text-Mined Knowledge," Department of Computer Science, University of Washington, Seattle, WA, Oct. 6, 2014.

- "Generating Natural-Language Video Descriptions Using Text-Mined Knowledge," Information Retrieval Group, Microsoft Research, Redmond, WA, Sept. 11, 2014.

- "Deep Natural Language Semantics by Combining Logical and Distributional Methods using Probabilistic Logic," Natural Language Processing Group, Microsoft Research, Redmond, WA, Sept. 4, 2014.

- "Deep Natural Language Semantics by Combining Logical and Distributional Methods using Probabilistic Logic," Department of Computer Science, University of Colorado, Boulder, CO, Aug. 13, 2014.

- "Semantic Parsing: Past, Present, and Future," Invited talk, *ACL-2014 Workshop on Semantic Parsing*, Baltimore, MD, Jun. 26, 2014.

- "Generating Natural-Language Video Descriptions Using Text-Mined Knowledge," Department of Computer Science, University of Utah, Salt Lake City, UT, Jun. 19, 2014.

- "Generating Natural-Language Video Descriptions Using Text-Mined Knowledge," School of Informatics, University of Edinburgh, Scotland, U.K., Apr. 11, 2014.

- "Grounded Language Learning," Dept. of Computer Science, University of Pennsylvania, Philadelphia, PA, Sept. 17, 2013.

- "Using Natural Language Processing to Aid Computer Vision," Invited Talk, *University of Washington and Microsoft Research Workshop on Understanding Situated Language in Everyday Life*, Union, WA, July 22-25, 2013.

- "Statistical Relational Learning for Textual Inference," Dept. of Computer Science, University of Washington at Seattle, July 19, 2013.

- "Generating Natural-Language Video Descriptions Using Text-Mined Knowledge," Keynote Invited Talk, *CVPR-2013 V&L Net Workshop on Language for Vision*, Portland, OR, June 23, 2013.

- "Statistical Relational Learning for Textual Inference," Dept. of Machine Learning, Carnegie Mellon University, May 20, 2013.

- "Generating Natural-Language Video Descriptions Using Text-Mined Knowledge," Dept. of Computer Science, State University of New York at Stonybrook, April 19, 2013.

- "Statistical Relational Learning for Textual Inference," Dept. of Computer Science, University of Texas at Dallas, Richardson, TX, April 5, 2013.

- "Grounded Language Learning," Dept. of Computer Science, University of North Texas, Denton, TX, April 4, 2013.

- "Curbing Crime with Data Extraction & Ontologies," (joint with Greg Ebert), South by Southwest Interactive (SXSW), Austin, TX, Mar. 9, 2013.

- "Grounded Language Learning," Center for the Study of Language and Information, Stanford Univ., Palo Alto, CA, Feb. 7, 2013.

- "Learning Language from Perceptual Context," Department of Electrical Engineering and Computer Science, University of Michigan, Ann Arbor, MI, Oct. 30, 2012.

- "Learning Language from Perceptual Context," Department of Computer Science, Michigan State University, East Lansing, MI, Oct. 29, 2012.

- "Automatically Extracting Structured Information from Biomedical Text," Rochester Big Data Forum, University of Rochester, Rochester, NY, Oct. 6, 2012.

- "Learning Language from Perceptual Context," Computer Science and Artificial Intelligence Laboratory, Massachusetts Institute of Technology, Cambridge, MA, Sept. 21, 2012.

- "Learning Language from Perceptual Context," Department of Computer Science, University of Illinois at Urbana/Champaign, Sept. 14, 2012.

- Invited Speaker, "Learning to Interpret Natural Language Navigation Instructions from Observation," *AAAI 2012 Workshop on Grounding Language for Physical Systems*, Toronto, Canada, July 23, 2012.

- Invited Speaker, "Learning to Interpret Natural Language Navigation Instructions from Observation," *NAACL 2012 Workshop on From Words to Actions: Semantic Interpretation in an Actionable Context*, Montreal, Canada, June 8, 2012.

- Invited Presenter, "PAM: in Inside Computer Understanding," *NAACL 2012 Event: NLP Idol: Plucked from Obscurity*, Winner of both judge and audience vote, Montreal, Canada, June 5, 2012.

- Panelist, "Beautiful Data?" South by Southwest Interactive (SXSW), Austin, TX, Mar. 11, 2012.

- Invited Speaker, "Learning Natural Language from its Perceptual Context," *NIPS 2011 Workshop on Learning Semantics*, Seirra Nevada, Spain, Dec. 17, 2011.

- Invited Speaker, "Learning Natural Language from its Perceptual Context," *Visions of Computing Lecture Series*, Dept. of Computer Science, University of Texas, Austin, TX, Nov. 26, 2011.

- "Learning Language from its Perceptual Context," Google Research, Mountain View, CA, Aug. 12, 2011.

- Invited Speaker, "Learning Language from its Perceptual Context," *AAAI Workshop on Language-Action Tools for Cognitive Artificial Agents: Integrating Vision, Action and Language*, San Francisco, CA, August 7, 2011.

- "Learning Language from its Perceptual Context," Microsoft Research, Redmond, WA, June 28, 2011.

- "Learning Language from its Perceptual Context," Dept. of Computer Science, University of Washington, Seattle, June 17, 2011.

- "Learning Language from its Perceptual Context," *NSF Workshop on Language and Vision*, Arlington, VA, May 17, 2011.

- "Learning Language from its Perceptual Context," Dept. of Computer Science, University of Maryland, College Park, Oct. 13, 2010.

- "Learning Language from its Perceptual Context," Dept. of Computer Science, University of Regina, Saskatchewan, Sept. 17, 2010.

- "Learning Language from its Perceptual Context," Dept. of Computer and Information Sciences, University of Alabama at Birmingham, Apr. 23, 2010.

- "Bottom-up Search and Transfer Learning in Statistical Relational Learning," Dept. of Computer Science, Temple University, Apr. 2, 2010.

- Invited Speaker, "Using Perception to Supervise Language Learning and Language to Supervise Perception," *IJCAI-09 Workshop on Cross-Media Information Access and Mining*, Pasadena, CA, July 13, 2009.

- "Search Query Disambiguation from Short Sessions using Markov Logic," *Microsoft Research Workshop: Beyond Search – Semantic Computing and Internet Economics*, Redmond, WA, Jun 10–11, 2009

- "Transfer Learning by Mapping and Revising Relational Knowledge," Dept. of Computer Science and Engineering, University of Notre Dame, South Bend, IN, Apr. 17, 2009.

- "Learning Language from its Perceptual Context," Dept. of Computer Science, University of Memphis, Memphis, TN, Feb. 6, 2009.

- "Learning Language from its Perceptual Context," Dept. of Computer Science, Texas A&M University, College Station, TX, Jan. 28, 2009.

- ""Acquiring Language from Perceptual Context: Learning to Sportscast," DARPA Workshop on Computer Learning of Linguistic Representations of the Physical World, Arlington, VA, Dec. 2, 2008.

- "Learning Language from its Perceptual Context," School of Computer Science, Carnegie Mellon University, Pittsburgh, PA, Nov. 21, 2008.

- "Learning to Extract Proteins and their Interactions from Biomedical Text," Department of Computer Science, Universidade Federal do Rio de Janiero, Rio de Janiero, Brazil, Oct. 24, 2008.

- "Transfer Learning by Mapping and Revising Relational Knowledge," Dept. of Computer Science and Engineering, University of Minnesota, Minneapolis, MN, August 7, 2008.

- "Learning Language from its Perceptual Context," Dept. of Computer Science, University of Illinois, Urbana, IL, July 11, 2008.

- Invited Speaker, "Transfer Learning by Mapping and Revising Relational Knowledge," *ICML-08 Workshop on Planning to Learn* (PlanLearn), Helsinki, Finland, July 9, 2008.

- "Code Switching and Transfer Learning," NSF Sponsored Workshop on Code-Switching, Tampa, FL, April 11, 2008.

- "Learning Language from its Perceptual Context," Dept. of Computer Science, University of North Texas, Denton, TX, March 7, 2008.

- "Learning Language from its Perceptual Context," Dept. of Computer Science, University of Texas at Dallas, Richardson, TX, March 6, 2008.

- "Learning for Semantic Parsing of Natural Language," Center for Computational Learning Systems, Columbia University, New York, NY, Nov. 2, 2007.

- "Learning to Extract Proteins and their Interactions from Biomedical Text," Department of Computer Science, University of Pittsburgh, Pittsburgh, PA, Dec. 8, 2006.

- "Learning for Semantic Parsing of Natural Language," School of Computing, University of Utah, Salt Lake City, UT, Nov. 17, 2006.

- "Learning to Extract Proteins and their Interactions from Biomedical Text," Department of Computer Science, Brigham Young University, Provo, UT, Nov. 16, 2006.

- Keynote Speaker, "Maximizing the Utility of Small Training Sets in Machine Learning," *Texas Linguistics Society X: Computational Linguistics for Less-Studied Languages*, Austin, TX, Nov. 4, 2006.

- "Learning to Extract Proteins and their Interactions from Medline Abstracts," Artificial Intelligence Center, SRI International, Menlo Park, CA, July 28, 2006.

- "Learning for Semantic Parsing of Natural Language," Department of Computer Science, University of Illinois at Urbana-Champaign, April 28, 2006.

- "Learning for Semantic Parsing of Natural Language," School of Computer Science, Carnegie Mellon University, Pittsburgh, Dec. 12, 2005.

- Invited Speaker, "Learning for Semantic Parsing of Natural Language," *International Joint Conference on Artificial Intelligence (IJCAI) 2005 Workshop on Grammatical Inference Applications: Successes and Future Challenges*, Edinburgh, Scotland, Jul. 31, 2005.

- "Learning to Extract Proteins and their Interactions from Medline Abstracts," Department of Computer Science, University of Washington, Seattle, WA, June 22, 2005.

- "Parsing Text into Logical Form," *DARPA Workshop on Learning by Reading*, Seattle, WA, June 21, 2005.

- "Statistical Relational Learning for Natural-Language Information Extraction and Semantic Parsing," *Dagstuhl Seminar on Probabilistic, Logical and Relational Learning – Towards a Synthesis*, Wadern, Germany, Jan. 31 – Feb. 4, 2005.

- "Learning to Extract Proteins and their Interactions from Medline Abstracts," and "All You Really Need to Know About Computer Science Was Learned Pursuing Artificial Intelligence," Department of Computer Science, Cornell University, Ithaca, NY, Oct. 21, 2004.

- "All You Really Need to Know About Computer Science Was Learned Pursuing Artificial Intelligence," Dept. of Computer Sciences, Univ. of Texas at Austin, Sept. 1, 2004.

- "Semi-Supervised Clustering and its Application to Document Clustering and Record Linkage," Google Inc., Mountain View, CA, March 25, 2004.

- "Learning to Extract Proteins and their Interactions from Medline Abstracts," Department of Computer and Information Science, University of Pennsylvania, Philadelphia, PA, March 2, 2004.

- "Semi-Supervised Clustering and its Application to Document Clustering and Record Linkage," Navy Center for Applied Research in Artificial Intelligence, Naval Research Laboratory, Washington D.C., Dec. 15, 2003.

- "Semi-Supervised Clustering and its Application to Document Clustering and Record Linkage," Department of Computer Science, University of Maryland, College Park, MD, July 9, 2003.

- "Text Mining Using Information Extraction," Department of Computer Science, University of Washington, and Microsoft Research, Seattle, WA, Dec. 10 & 11, 2002.

- "Text Mining Using Information Extraction," Information Sciences Institute, University of Southern California, Marina Del Rey, CA, Sept. 15, 2002.

- "Artificial Intelligence," Te Wananga-o-Raukawa (Maori College), Otaki, New Zealand, July 5, 2002,

- "Text Mining Using Information Extraction," Department of Computer Science, Victoria University, Wellington, New Zealand, July 4, 2002.

- "Text Mining Using Information Extraction," Department of Computer Science, and "Machine Learning for Recommender Systems," Department of Library and Information Science, University of Waikato, Hamilton, New Zealand, June 28, 2002.

- "Text Mining Using Information Extraction," Department of Computer Science, University of Wisconsin, Madison, WI, March 20, 2002.

- "Computing as an Experimental Science, or Exaggerated Formalist Rhetoric Considered Harmful," Dept. of Computer Sciences, Univ. of Texas at Austin, Jan. 17, 2002.

- "AI & Atheism: AI - Mind without Mysticism: Atheism - Life, the Universe, and Everything without Mysticism," debate with B. Kuipers on "AI and Religion," Forum for Artificial Intelligence, University of Texas at Austin, Nov. 30, 2001.

- "Text Mining Using Information Extraction," Department of Computer Science, Southern Methodist University, Dallas, TX, May 1, 2001.

- "Text Mining Using Information Extraction," Language Technology Institute, Carnegie Mellon University, Pittsburgh, PA, April 24, 2001.

- "Content-based Book Recommending using Learning for Text Categorization," and "Text Mining Using Information Extraction," Department of Computer Science and Beckman Institute for Advanced Science and Technology, University of Illinois at Urbana-Champaign, April 5–6, 2001.

- "Text Mining Using Information Extraction," Department of Computer Science, University College Dublin, Dublin, Ireland, March 16, 2001.

- "Text Mining Using Information Extraction," Information Technology Department, National University of Ireland, Galway, March 13, 2001.

- "Text Mining Using Information Extraction," Data Mining Seminar Series, University of Texas, Austin, TX, Oct. 27, 2000.

- "Content-based Book Recommending using Learning for Text Categorization," Department of Library and Information Science, University of Pittsburgh, Pittsburgh, PA, July 20, 2000.

- "Learning for Natural Language Information Extraction," University of New Mexico, Department of Computer Science, Albuquerque, NM, Feb. 10, 2000.

- "Learning for Natural Language Information Extraction," University of Antwerp, Antwerp, Belgium, Jan. 7, 2000.

- "Learning for Natural Language Information Extraction,"

  - IBM TJ Watson Research Center, Hawthorne, NY, Nov. 11, 1999
  - AT&T Research Labs, Florham Park, NJ, Nov. 12, 1999.

- "Content-based Book Recommending using Learning for Text Categorization," Technical University of Graz, Graz, Austria, July 2, 1999. 19, 1999.

- Invited Speaker, "Learning for Semantic Interpretation: Scaling Up Without Dumbing Down," *Learning Language in Logic Workshop*, Bled Slovenia, June 30th, 1999.

- "Content-based Book Recommending using Learning for Text Categorization," Department of Computer Science, University of Wisconsin, Madison, WI, March 19, 1999.

- "Teaching Machines Human Language" Smithsonian Institute lecture series on "Understanding Artificial Intelligence," Washington D.C., June 8, 1998.

- "Relational Learning for Natural Language Parsing and Information Extraction," Center for Language and Speech Processing, Johns Hopkins University, Baltimore MD, April 14, 1998.

- "Relational Learning for Natural Language Parsing and Information Extraction,"Department of Computer Science, Carnegie-Mellon University, Pittsburgh, PA, November 11, 1997.

- "Theory Refinement for Student Modeling: An Application of Machine Learning to Intelligent Tutoring," Learning Research and Development Center, University of Pittsburgh, Pittsburgh, PA, November 10, 1997.

- "Relational Learning for Natural Language Parsing and Information Extraction," Department of Computer Science, Stanford University, March 27, 1997.

- "Inductive Logic Programming for Natural Language Learning," Navy Center for Applied Research in Artificial Intelligence, Naval Research Lab, Washington, D.C., April 8, 1996.

- "Theory Refinement for Probabilistic Knowledge Bases," Department of Computer Science, Stanford University, March 1, 1996.

- "Inductive Logic Programming for Natural Language Learning"

    - Information Sciences Institute, Marina Del Rey, CA, Jan. 16, 1996.
    - Department of Computer Science, University of California at San Diego, Jan, 19, 1996.

- "Theory Refinement for Probabilistic Knowledge Bases," NASA Jet Propulsion Laboratory, Pasadena, CA, Jan. 17, 1996.

- "Inductive Logic Programming for Natural Language Learning" and "Theory Refinement for Probabilistic Knowledge Bases," Department of Computer Science, University of California at Irvine, July 6-7, 1995.

- "Theory Refinement for Probabilistic Knowledge Bases," Siemens Corporate Research, Princeton, NJ, June 9, 1995.

- "Inductive Logic Programming for Natural Language Learning"

    - AT&T Bell Laboratories, Murray Hill, NJ, June 12, 1995.
    - Department of Computer Science, Rutgers University, New Brunswick, NJ, June 13, 1995.

- "Machine Learning and Natural Language Acquisition" Department of Psychology, University of Louisville, Louisville, KY, January 11,1995.

- "Constructing Natural Language Parsers from Corpora using Inductive Logic Programming," Department of Computer Science, North Carolina State University, Raleigh, NC, January 10, 1995.

- "A Machine Learning Approach to Constructing Natural Language Parsers from Corpora,"

    - Basser Department of Computer Science, University of Sydney, Sydney, Australia, June 9, 1994.
    - Department of Computer Science, Australian National University, Canberra, Australia, July 12, 1994.
    - Department of Computer Science, Monash University, Melbourne, Australia, July 20, 1994.

- "A Machine Learning Approach to Constructing Natural Language Parsers from Corpora," Department of Computer Science, University of Wisconsin, Madison, WI, January 10, 1994.

- "Automated Knowledge-Base Refinement," *Space Operations, Applications, and Research Symposium* (SOAR 93), NASA Johnson Space Center, Houston, TX, August 5, 1993.

- "A Machine Learning Approach to Language Acquisition," Cognitive Science Center, University of Texas, Austin, TX, April 12, 1993.

- "Revising Knowledge Bases to Improve Accuracy and Speed," Department of Electrical and Computer Engineering, University of Hawaii at Monoa, Honolulu, HI, March 15, 1993.

- "Automatically Revising Knowledge Bases to Improve Accuracy and Speed," Computer Science Industrial Forum, Department of Computer Sciences, University of Texas, Austin, TX, February 15, 1993.

- "Refining Domain Theories to Improve Accuracy and Speed,"

- – Department of Computer Science, Carnegie-Mellon University, Pittsburgh, PA, December 8, 1992.
- – Department of Computer Science, George Mason University, Fairfax, VA, December 10, 1992.

- "Combining Symbolic and Neural Learning to Revise Probabilistic Domain Theories," *Office of Naval Research Workshop on Hybrid Models of Complex Learning*, Woods Hole, MA, September 2-4, 1992.

- "Automated Refinement and Speedup of First-Order Horn-Clause Theories," Department of Computer Science, University of Wisconsin, Madison, August 31, 1992.

- "Recent Progress in Abduction and Theory Revision,"
  - – Artificial Intelligence Lab, NASA Ames Research Center, Moffet Field CA, March 23, 1992.
  - – Artificial Intelligence Group, XEROX Palo Alto Research Center, CA, March 24, 1992.

- "An Overview of Machine Learning," *Workshop on Automation and Robotics*, March 12, 1992, NASA Johnson Space Center, Houston, TX.

- "Integrating Theory and Data in Category Learning," *Interfaces Conference on Categorization and Category Learning by Humans and Machines*, Texas Tech University, Lubbock, TX. October 11-12, 1991.

- "Automatic Refinement of Arbitrarily Imperfect Domain Theories," Department of Computer Science, University of California at Irvine, July 24, 1991.

- "Comprehensive Theory Refinement using Abduction and Induction,"
  - – Beckman Institute for Advanced Science and Technology, University of Illinois at Urbana, March 11,1991.
  - – Institute for the Learning Sciences, Northwestern University, Evanston, IL, March 14, 1991.
  - – Department of Computer Science, University of Wisconsin at Madison, March 15, 1991.

- "Using Abduction and Empirical Learning to Refine Approximate Domain Theories," NASA Ames Research Center, August, 1990.

- "Explanation-Based Learning," Artificial Intelligence Lab, Texas Instruments Inc., Dallas, TX, May 6, 1988.

- "Explanation-Based Learning: A General Learning Mechanism and its Application to Several Complex Domains," *Complex Learning Workshop*, Grange Over Sands, England, April 22, 1987.

Professional Services

University Administrative Positions

- Director, Artificial Intelligence Laboratory (a UT Organized Research Unit), June 2008–present.

Positions in Professional Societies

- President, International Machine Learning Society (IMLS), May 2008–June 2011.

Journal Editing and Editorial Boards

- Editorial Board member for the *Journal of Computational Linguistics* (2007–2010)

- Editorial Board member for the *Journal of Machine Learning Research* (2000–2010)

- Editorial Board member for the journal *Cognitive Science* (2004–2010)

- Editorial Board member for the journal *New Generation Computing* (1997–2000).

- Editorial Board member for the journal *Machine Learning* (1993–2001)

- Action Editor for the journal *Machine Learning* (1993-1999).

- Editorial Board member for the journal *Applied Intelligence* (1995-2000).

- Editorial Board member for the *Journal of Artificial Intelligence Research* (1994–1997).

- Co-editor (with Eric Brill) of special issue of the *AI Magazine* on Empirical Natural Language Processing, 18:4, 1997.

- Co-editor (with Claire Cardie) of special issue of the journal *Machine Learning* on Natural Language Learning, 34, 1999.

Conference Chair Positions

- Program Co-Chair (with Yolanda Gil) for the *Twenty-First National Conference on Artificial Intelligence*, Boston, MA, July 16–20, 2006.

- General Chair for the *Human Language Technology Conference and Conference on Empirical Methods in Natural Language Processing*, Vancouver, BC, October 6–8, 2005.

- Co-chair (with B. Porter) for the *Seventh International Machine Learning Conference* held at the University of Texas at Austin, June 21-23, 1990.

- Workshop Co-chair (with D. Leake), *Fifteenth National Conference on Artificial Intelligence*, Madison, WI, July 26-30, 1998.

- Workshop Chair, *Fourteenth National Conference on Artificial Intelligence*, Providence, RI, August 4-8, 1997.

Major Conference Program Committees and Reviewing

- Reviewer for the *Conference on Empirical Methods in Natural Language Processing* (EMNLP), Nov. 2024.

- Reviewer for the *Annual Meeting of the North American Association for Computational Linguistics* (NAACL), June 2024.

- Reviewer for the *Annual Meeting of the Association for Computational Linguistics* (ACL), August 2024.

- Reviewer for the *Annual Meeting of the Association for Computational Linguistics* (ACL), July 2023.

- Best Paper Award Committee and Reviewer for the *Conference on Empirical Methods in Natural Language Processing* (EMNLP), Dec. 2022.

- Program Committee member for the 23rd Annual Meeting of the Special Interest Group on Discourse and Dialogue (SIGDIAL 2022), Sept. 2022.

- Reviewer for the *Annual Meeting of the North American Association for Computational Linguistics* (NAACL), July 2022.

- Reviewer for the *Annual Meeting of the Association for Computational Linguistics* (ACL), May 2022.

- Reviewer for the *Conference on Empirical Methods in Natural Language Processing* (EMNLP), Nov. 2021.

- Senior Area Chair for Sentence Semantics for the *Annual Meeting of the Association for Computational Linguistics* (ACL), June 2021.

- Program Commitee Member for the *Conference on Empirical Methods in Natural Language Processing* (EMNLP), Nov. 2020.

- Reviewer for the *Conference on Neural Information Processing Systems* (NeurIPS), Vancouver, BC, Canada, Dec. 2020.

- Program Committee Member for SIGDIAL (Special Interest Group on Dialog), Special Session on Situated Dialogue with Virtual Agents and Robots (RoboDIAL), July 1–3, 2020.

- Area Chair for Special Theme track for the *Annual Meeting of the Association for Computational Linguistics*, Seattle, WA, July 6–8, 2020.

- Best Paper Award Committee for the *SIGNLL Conference on Natural Language Learning* (CoNLL), Nov. 3-4, 2019

- Reviewer for the *Conference on Neural Information Processing Systems* (NeurIPS), Vancouver, BC, Canada, Dec. 9–14, 2019.

- Area Chair for Machine Learning for the *16th Annual Conference of the North American Chapter of the Association for Computational Linguistics*, New Orleans, LA, June 2018.

- Program Commitee Member for the *Conference on Empirical Methods in Natural Language Processing*, Copenhagen, Denmark, Sept. 7—11, 2017.

- Area Chair for Semantics for the *Conference on Empirical Methods in Natural Language Processing* (EMNLP), Austin, TX, November 2–6 2016.

- Paper Awards Committee member for the *54th Annual Meeting of the Association for Computational Linguistics*, Berlin, Germany, Aug. 7–11, 2016.

- Program Committee member for the *15th Annual Conference of the North American Chapter of the Association for Computational Linguistics: Human Language Technologies*, San Diego, CA, June 12–17, 2016.

- Program Committee member for the *Conference on Empirical Methods in Natural Language Processing*, Lisbon, Portugal, Sept. 17-21, 2015.

- Program Committee member for the *14th Conference of the European Chapter of the Association for Computational Linguistics*, April 26-30, 2014.

- Senior Program Committee member for the *AAAI Twenty Sixth Conference on Artificial Intelligence*, Toronto, Ontario, July 22–26, 2012.

- Program Committee member for the *Conference on Empirical Methods in Natural Language Processing*, Edinburgh, UK, July 27–31, 2011.

- Program Committee member for the *49th Annual Meeting of the Association for Computational Linguistics*, Portland, OR, June 19–24, 2011.

- Program Committee member for the *20th International World Wide Web Conference* (WWW), Hyderabad, India, March 28–April 1, 2011.

- Program Committee member for the *Conference on Empirical Methods in Natural Language Processing*, Cambridge, MA, October 9–11, 2010.

- Program Committee for the *23rd International Conference on Computational Linguistics* (COLING), Beijing, China, August 23–27, 2010.

- Area chair for the *AAAI Twenty Fourth Conference on Artificial Intelligence*, Atlanta, GA, July 11–15, 2010.

- Program Committee member for the *Conference on Empirical Methods in Natural Language Processing*, Singapore, August 6–7, 2009.

- Program Committee member for the *26th International Machine Learning Conference*, Montreal, Canada, June 16–19, 2009.

- Reviewer for the *22nd Conference on Neural Information Processing*, Vancouver, BC, December 8–10, 2008.

- Program Committee member for the *22nd International Conference on Computational Linguistics* (COLING), Manchester, England, August 18–22, 2008.

- Area Chair for the *46th Annual Meeting of the Association for Computational Linguistics*, Columbus, OH, June 15–20, 2008.

- Program Committee member for the *45th Annual Meeting of the Association for Computational Linguistics*, Prague, June 24–29, 2007.

- Program Committee member for the *Twentieth National Conference on Artificial Intelligence*, Pittsburgh, PA, July 9–13, 2005.

- Program Committee member for the *42nd Annual Meeting of the Association for Computational Linguistics*, Barcelona, Spain, July 21–26, 2004.

- Program Committee member for the *Tenth ACM SIGKDD International Conference on Knowledge Discovery and Data Mining*, Seattle, WA, August 22–25, 2004.

- Area Chair for Machine Learning for Natural Language, *41st Annual Meeting of the Association for Computational Linguistics*, Sapporo, Japan, July 7–12, 2003.

- Program Committee member for the *Ninth ACM SIGKDD International Conference on Knowledge Discovery and Data Mining*, Washington D.C., August 24 – 27, 2003.

- Program Committee member for the *Eighteenth National Conference on Artificial Intelligence*, Edmonton, Alberta, July 28–Aug. 1, 2002.

- Program Committee member for the *First International Conference on Knowledge Capture*, Victoria, B.C., Oct. 21–23, 2001.

- Area Chair, *Eighteenth International Conference on Machine Learning*, Williams College, MA, June 28 – July 1, 2001.

- Program Committee, *Second Meeting of the North American Chapter of the Association for Computational Linguistics*, Pittsburgh, PA, June 2–7, 2001.

- Senior Program Committee member for the *Seventeenth National Conference on Artificial Intelligence*, Austin, TX, July 30 – August 3, 2000.

- Program Committee member for the *Sixteenth International Machine Learning Conference*, Bled, Slovenia, June 27–30, 1999.

- Program Committee member for the *International Conference on Computational Linguistics / 36th Annual Meeting of the Association for Computational Linguistics*, Montreal, Quebec, August 10–14, 1998.

- Program Committee member for the *Fourteenth National Conference on Artificial Intelligence*, Providence, RI, August 4–8, 1997.

- Senior Program Committee member for the *Thirteenth National Conference on Artificial Intelligence*, Portland, OR, August 4–8, 1996.

- Program Committee member for the *Thirteenth International Machine Learning Conference*, Bari, Italy, July 3–6, 1996.

- Program Committee member for the *Twelfth International Machine Learning Conference*, Tahoe City, CA, July 9–12, 1995.

- Program Committee member for the *Eleventh International Machine Learning Conference*, New Brunswick, NJ, July 10–13, 1994.

- Program Committee member for the *Eleventh National Conference on Artificial Intelligence*, Washington, D.C., July 11–16, 1993.

- Program Committee member for the *Tenth International Machine Learning Conference*, Amherst, MA, June 27–29, 1993.

- Program Committee member for the *Ninth International Machine Learning Conference*, Aberdeen, Scotland, July 1–3, 1992.

- Organizing Committee member for the *Eighth International Machine Learning Workshop*, Evanston, IL, June 1991.

Workshop and Specialized Conference Program Committees

- Advisory Committee, *Fourth International Combined Workshop on Spatial Language Understanding and Grounded Communication for Robotics* (SpLU-RoboNLP), ACL 2024, Bangkok, Thailand, Aug. 2024.

- Co-Organizer, *First Workshop on Natural Language Processing for Programming* (NLP4Prog) at ACL-IJCNLP-21 (virtual), Aug. 2021.

- Selection Committee for AAAI-2021's "New Faculty Highlights," Feb. 2021.

- Program Commitee for the *ICML Workshop on Language in Reinforcement Learning* (LaReL), July, 2020.

- Program Committee for the *ACL Workshop on Advances in Language and Vision Research* (ALVR), July 9, 2020.

- Participant, *NSF Workshop on Deep Learning and Software Engineering* at the *Conference on Automated Software Engineering* (ASE), San Diego, CA, Nov. 2019.

- Co-Organizer and Participant, *NSF Workshop on Speech in Robotics*, College Park, MD, Oct. 2019.

- Program Committee for the *ACL Workshop on Analyzing and Interpreting Neural Networks for NLP* (BlackboxNLP), Florence, Italy, July 2019.

- Program Committee for the *Third Workshop on Computational Approaches to Linguistic Code-switching* at ACL 2018, Melbourne Australia, July 2018.

- Program Committee for the *AAAI-2018 Workshop on NLP for Software Engineering* (NL4SE), New Orleans, LA, Feb. 2018.

- Program Committee for the *AAAI Fall Symposium Series: Natural Communication for Human-Robot Collaboration*, Washington, D.C., November 2017.

- Steering Committee and Program Committee for the *ACL-2017 Workshop on Language Grounding for Robotics* (RoboNLP), Vancouver, BC, August 2017.

- Participant, *NSF Workshop on Multimedia Research Challenges for the Next Ten Years*, Arlington, VA, March 30–31, 2017.

- Steering Committee and Participant, *NSF Interdisciplinary Workshop on Statistical Natural Language Processing Methods for Software Engineering*, Microsoft Research, Redmond WA, Oct 25–27, 2015.

- Program Committee for the *COLING-2014 Workshop on Language and Vision*, Dublin, Ireland, August 2014.

- Program Committee for the *EACL-2014 Workshop on Dialog in Motion*, Gothenberg, Sweden, April 2014.

- Program Comittee for the *CVPR-2013 V&L Net Workshop on Language for Vision*, Portland, OR, June 23, 2013.

- Program Comittee for the *NAACL-2013 Workshop on Vision and Language* (WVL), Atlanta, GA, June 14, 2013.

- Program Committee member for the *2nd Joint Conference on Lexical and Computational Semantics* (*SEM), Atlanta, GA, June 13-14, 2013.

- Program Committee member for the *10th International Conference on Computational Semantics* (IWCS), Potsdam, Germany, March 19, 2013.

- Program Committee member for the *ICML-2012 Workshop on Statistical Relational Learning* (SRL), Edinburgh, Scotland, June 30 2012.

- Program Committee member for the *NAACL-2012 Workshop on Semantic Interpretation in an Actionable Context*, Montreal, Canada, June 8, 2012.

- Co-organizer (with Trevor Darrell and Kate Saenko) for the *NIPS 2011 Workshop on Integrating Language and Vision*, Seirra Nevada, Spain, Dec. 16, 2011.

- Program Committee member for the *Fourteenth Conference on Computational Natural Language Learning*, Upsala, Sweden, July 15–16, 2010.

- Program Committee for the *ACL 2010 Workshop on Domain Adaptation for Natural Language*, Uppsala, Sweden, July, 2010.

- Program Committee for the *AAAI 2010 Workshop on Statistical Relational Artificial Intelligence*, Atlanta, GA, July, 2010.

- Program Committee for the *NAACL-HLT Workshop on Active Learning for Natural Language*, Los Angeles, CA, June 2010.

- Program Committee for the *NAACL-HLT Young Investigators Workshop*, Los Angeles, CA, June 2010.

- Program Committee member for the *NIPS-09 Workshop on Transfer Learning for Structured Data*, Vancouver, BC, Canada, Dec 11–12, 2009.

- Program Committee member for the *19th International Inductive Logic Programming Conference*, Leuven, Belgium, July 2–4, 2009.

- Program Committee for the *NAACL-HLT Workshop on Active Learning for Natural Language Processing*, Boulder, CO, June 4–5, 2009.

- Program Committee for the *NAACL-HLT Workshop on Semi-Supervised Learning for Natural Language Processing*, Boulder, CO, June 4–5, 2009.

- Program Committee for the *AAAI-08 Workshop on Wikipedia and Artificial Intelligence: An Evolving Synergy*, Chicago, IL, July 13–14, 2008.

- Program Committee for *8th International Conference on Intelligent Text Processing and Computational Linguistics*, Mexico City, Feb. 18–24, 2007.

- Program Committee for *TLSX Texas Linguistics Society 10: Computational Linguistics for Less-Studied Languages*, Austin, TX, Nov. 3–5, 2006.

- Program Committee for the *HLT/NAACL Workshop on Computationally Hard Problems and Joint Inference in Speech and Language Processing*, New York, NY, June 9, 2006.

- Organizing Committee for the *AAAI-04 Workshop on Adaptive Text Extraction and Mining*, San Jose, CA, July 25, 2004.

- Program Committee member for the *Eighth Conference on Natural Language Learning*, Boston, MA, May 6–7, 2004.

- Program Committee member for the *KDD-03 Workshop on Data Cleaning, Record Linkage, and Object Consolidation*, Washington, D.C., August 27, 2003.

- Program Committee member for the *ICML-03 Workshop on the Continuum from Labeled to Unlabeled Data in Machine Learning and Data Mining*, Washington, D.C., August 21, 2003.

- Program Committee member for the *ACL-03 Workshop on Multilingual Summarization and Question Answering–Machine Learning and Beyond*, Sapporo Japan, July 11, 2003.

- Program Committee member for the *Seventh Conference on Natural Language Learning*, Edmonton, Canada, May 31 – June 1, 2003.

- Program Committee member for the *Sixth Conference on Natural Language Learning*, Taipei, Taiwan, August 31 – September 1, 2002.

- Program Committee member for the *ACL-02 Workshop on Word Sense Disambiguation: Recent Successes and Future Directions*, Philadelphia, PN, July, 2002.

- Program Committee member for the *Twelfth International Conference on Inductive Logic Programming*, Sydney, Australia, July 9–12, 2002.

- Program Committee member for the *Clustering High Dimensional Data and its Applications Workshop*, Second SIAM International Conference on Data Mining, Arlington, VA, April 13, 2002.

- Program Committee member for the *International Workshop on Web Document Analysis*, Seattle, WA, Sept. 8, 2001.

- Program Committee member for the *Fifth Computational Natural Language Learning Workshop*, Toulouse, France, July 6–7, 2001.

- Co-organizer, *IJCAI-01 Workshop on Adaptive Text Extraction and Mining*, Seattle, WA, Aug., 2001.

- Program Committee member for the *Workshop on Web Mining at the First SIAM International Conference on Data Mining*, April 7, 2001.

- Program Committee member for the *Fourth Computational Natural Language Learning Workshop*, Lisbon, Portugal, September 14, 2000.

- Program Committee member for the *UAI-2000 Workshop on Fusion of Domain Knowledge with Data for Decision Support*, Stanford, CA, June 30, 2000.

- Program Committee member for the *Tenth International Workshop on Inductive Logic Programming*, London, U.K., July 24–28, 2000.

- Program Committee member for the *ACL-99 Workshop on Unsupervised Learning in Natural Language Processing*, College Park, Maryland, June 21, 1999.

- Program Committee member for the *Ninth International Workshop on Inductive Logic Programming*, Bled, Slovenia, June 24–26, 1999.

- Program Committee for the *Sixth Workshop on Very Large Corpora,* Montreal, Quebec, August 15–16, 1998.

- Program Committee member for the *Eighth International Conference on Inductive Logic Programming*, Madison, WI, July 22–24, 1998.

- Program Committee member for the *AAAI Spring Symposium on Applying Machine Learning to Discourse Processing,* Stanford, CA, March 23–25, 1998.

- International Advisory Committee member for the Special Interest Group on Natural Language Learning, Association for Computational Linguistics, 1997–2010.

- Program Committee member for the *International Conference on Computational Natural Language Learning*, Adelaide, Australia, January 22–24, 1998.

- Program Committee member for the *IJCAI-97 Workshop on Abduction and Induction in AI*, Nagoya, Japan, August 24, 1997.

- Program Committee member for the *IJCAI-97 Workshop on Frontiers of Inductive Logic Programming*, Nagoya, Japan, August 25, 1997.

- Program Committtee member for the *Third International Colloquium on Grammatical Inference*, Montpellier (France), September 25–27, 1996.

- Program Committee member for the *Third International Workshop on Multistrategy Learning*, Harpers Ferry, W. Va., May 23–25, 1996.

- Program Committee member for the *Conference on Empirical Methods in Natural Language Processing*, Philadelphia, PA, May 17–18, 1996.

- Program Committee member for the *Sixth International Workshop on Inductive Logic Programming*, Stockholm, Sweden, August 28–30, 1996.

- Program Committee member for the *Fifth International Workshop on Inductive Logic Programming*, Leuven, Belgium, September 4–6, 1995.

- Program Committee member for the *IJCAI-93 Workshop on Machine Learning and Knowledge Acquisition*, Chambery, France, August 29, 1993.

- Program Committee member for the *Second Singapore International Conference on Intelligent Systems*, Singapore, November 14–17, 1994.

- Program Committee member for the *Second International Workshop on Multistrategy Learning*, Harpers Ferry, W. Va., May 26–29, 1993.

- Program Committee member for *Applications of Artificial Intelligence XI: Knowledge-Based Systems in Aerospace and Industry*, Orlando, FL, April 12–16, 1993.

- Program Committee member for the 1991 Florida AI Research Symposium held in Coco Beach, Florida, April 1991.

- Workshop Committee member for the "Learning from Theory and Data" session of the *Eighth International Machine Learning Workshop*, held at Northwestern University, June 1991.

Journal, Conference, and Book Reviewing

- Reviewer for about 120 journal articles for *Artificial Intelligence; Cognitive Science; Machine Learning; Journal of Artificial Intelligence Research; Journal of Machine Learning Research; Computational Linguistics; Bioinformatics; Communications of the Association for Computing Machinery; Nature; Data Mining and Knowledge Discovery; New Generation Computing; Connection Science; IEEE Computer; IEEE Transactions on Knowledge and Data Engineering; IEEE Transactions on Systems, Man, and Cybernetics; IEEE Transactions on Pattern Analysis and Machine Intelligence; Decision Support Systems; The Journal of the Learning Sciences; The International Journal of Expert Systems: Research & Applications; Applied Intelligence*; Annals of Mathematics and Artificial Intelligence; and *International Journal on Artificial Intelligence Tools*.

- Reviewer for numerous papers for technical conferences: *National Conference on Artificial Intelligence* (1986, 1987, 1988), *International Joint Conference on Artificial Intelligence* (1989, 1991, 1993, 1995, 1997), *Annual Meeting of the Association for Computational Linguistics* (2000), *International Conference on Principles of Knowledge Representation and Reasoning* (1989), and *European Conference on Artificial Intelligence* (1990, 1992).

- Reviewer for technical books for Kluwer Academic Publishers, Morgan Kaufman Publishers, Benjamin/Cummings Publishers, MIT Press, J. Wiley & Sons, Addison-Wesley, Cambridge University Press, and McGraw Hill Publishers.

Grant Proposal Reviewing

- Member of the National Science Foundation Review Panel for AI Centers, 2024.

- Selection Committee for Computing Innovation Fellows 2021

- Reviewer for Computing Innovation Fellows 2020

- Member of the National Science Foundation Proposal Review Panel, Directorate for Computer Science and Engineering, 2020.

- Member of the National Science Foundation Proposal Review Panel, Office of Integrative Activities, 2019.

- Member of the National Science Foundation Proposal Review Panel, Directorate for Computer Science and Engineering, 2015.

- Member of the National Science Foundation Proposal Review Panel, Directorate for Computer Science and Engineering, 2009.

- Member of the National Science Foundation Proposal Review Panel, Directorate for Computer Science and Engineering, 2007.

- Member of the National Institutes of Health Proposal Review Panel, 2005.

- Member of the National Science Foundation Proposal Review Panel, Directorate for Computer Science and Engineering, 2003.

- Member of the National Science Foundation Proposal Review Panel, Directorate for Computer Science and Engineering,1999.

- Member of the National Science Foundation Proposal Review Panel, Directorate for Computer Science and Engineering, 1995.

- Member of the National Science Foundation Review Panel, Directorate for Computer Science and Engineering, 1992.

- Reviewer for about 15 other National Science Foundation grant proposals.

- Reviewer of grant proposals for NASA, Canadian National Science and Engineering Research Council, the Australian Research Council, Swedish Research Council for Engineering Sciences, Alberta Ingenuity Fund Canada, Science Foundation Ireland, and the Cooperative Grants Program of the U.S. Civilian Research and Development Foundation.

Other Service

- ACL Nominating Committee which selects recipients of ACL Fellows and the Lifetime Achievement and the Distinguished Service awards, 2023-2024.

- AAAI Fellows Selection Committee, 2021-2023.

- Participant, AI Roadmap Workshop 3: Learning and Robotics, Computing Community Consortium, January 17–18, 2019.

- AAAI Fellows Selection Committee, 2015-2017.

- Member of External Review Committee, Bren School of Information and Computer Sciences, March 7–9, 2012.

- Member of Autonomy Task Force, U.S. Defense Science Board, 2010–2012.

- Panelist, 2010 AAAI Doctoral Consortium (panel for advising Ph.D. students on dissertation proposals).

- Panelist, 2007 SIGART/AAAI Doctoral Consortium (panel for advising Ph.D. students on dissertation proposals).

- External Advisory Board Member, Pittsburgh Science of Learning Center, 2005–2008.

- Site Visit Review Panelist, National Science Foundation, Pittsburgh Science of Learning Center, May 2005.

- Invited Panelist, National Research Council Study on "Information Fusion in Counter-Terrorism", June 10–11, 2002.

- Panelist, SIGART AAAI-99 Doctoral Consortium (panel for advising Ph.D. students on dissertation proposals).