

Yonatan Bisk

Assistant Professor of Computer Science

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he/him

Positions

2021 –	Consulting Professor <i>Microsoft Research</i>	
2020 –	Assistant Professor <i>Carnegie Mellon University</i> Language Technologies Institute Robotics Institute (courtesy)	
2019 –	Visiting Researcher <i>Microsoft Research</i>	w/ Jianfeng Gao
2017 –	Postdoctoral Scholar University of Washington & Allen Institute for Artificial Intelligence	w/ Yejin Choi
2015 –	Postdoctoral Scholar Information Sciences Institute, University of Southern California	w/ Daniel Marcu

Education

2015	PhD in Computer Science <i>The University of Illinois at Urbana-Champaign</i> , Thesis: Unsupervised Grammar Induction with Combinatory Categorical Grammars Advisor: Julia Hockenmaier Committee: Jason Eisner, Dan Roth, ChengXiang Zhai
2009	BS in Computer Science <i>The University of Texas at Austin</i> Turing Scholar, Thesis: The Necessity of Separating Control and Logic When Grounding Language using Neuroevolution Advisor: Risto Miikkulainen Second Reader: Raymond Mooney

PhD Students

PhD	Hao Zhu	he/him	<i>Theory of Mind</i>	(co-G Neubig)	LTI	2019 –
PhD	Jared Fernandez	he/him	<i>Efficiency</i>	(co-E Strubell)	LTI	2020 –
PhD	Vidhi Jain	she/her	<i>Language to Control</i>		RI	2021 –
PhD	Tiffany Min	she/her	<i>Embodiment</i>	(co-R Salakhutdinov)	MLD	2021 –

Research Masters Students

MLT	Josh Zhanson	he/him	<i>Embodied Visual Reps</i>		LTI	2020 –
MLT	Yingshan Chang	she/her	<i>Multimodal Reasoning</i>		LTI	2020 –
MS	Xiaoyu Zhang	she/her	<i>Collaborative Robot Art</i>	(co-O Kroemer)	5th	2021 –

Professional Masters Students

MRSD	Jashkumar Diyora	he/him	<i>Modular Teleoperation with Autonomy</i>		RI	2021 –
MRSD	Shruti Gangopadhyay	she/her	<i>Modular Teleoperation with Autonomy</i>		RI	2021 –
MRSD	Jigar Patel	he/him	<i>Modular Teleoperation with Autonomy</i>		RI	2021 –
MRSD	Prakhar Pradeep	he/him	<i>Modular Teleoperation with Autonomy</i>		RI	2021 –
MRSD	Shivani Sivakumar	she/her	<i>Modular Teleoperation with Autonomy</i>		RI	2021 –
*	co-Z Erickson					

Alumni, Interns, and Undergraduates

Ugrad	Feiyu (Gavin) Zhu	<i>Video Summarization</i>	(co-C Paxton)	2021
Intern	Melanie Sclar	<i>Symmetric Theory-of-Mind</i>	(co-G Neubig)	2021
Intern	Blessing Bassey	<i>TextVQA</i>		2021

Journal Publications

1. **The Return of Lexical Dependencies: Neural Lexicalized PCFGs** 2020
Hao Zhu, [Yonatan Bisk](#), Graham Neubig,
Transactions of the Association for Computational Linguistics
2. **An HDP Model for Inducing Combinatory Categorical Grammars** 2013
[Yonatan Bisk](#), Julia Hockenmaier,
Transactions of the Association for Computational Linguistics

Conference Publications

3. **Dependency Induction Through the Lens of Visual Perception** 2021
Ruisi Su, Shruti Rijhwani, Hao Zhu, Junxian He, Xinyu Wang, [Yonatan Bisk](#), Graham Neubig,
The SIGNLL Conference on Computational Natural Language Learning
4. **Language Grounding with 3D Objects** 2021
Jesse Thomason, Mohit Shridhar, [Yonatan Bisk](#), Chris Paxton, Luke Zettlemoyer,
Conference on Robot Learning
5. **TACo: Token-aware Cascade Contrastive Learning for Video-Text Alignment** 2021
Jianwei Yang, [Yonatan Bisk](#), Jianfeng Gao,
International Conference on Computer Vision
6. **Few-shot Language Coordination by Modeling Theory of Mind** 2021
Hao Zhu, Graham Neubig, [Yonatan Bisk](#),
The Thirty-eighth International Conference on Machine Learning
7. **Grounding ‘Grounding’ in NLP** 2021
Khyathi Raghavi Chandu, [Yonatan Bisk](#), Alan W Black,
Findings of The 2021 Conference of the Association for Computational Linguistics
8. **An Empirical Study on the Generalization Power of Neural Representations Learned via Visual Guessing Games** 2021
Alessandro Suglia, [Yonatan Bisk](#), Ioannis Konstas, Antonio Vergari, Emanuele Bastianelli, Andrea Vanzo, Oliver Lemon,
The 2021 Conference of the European Chapter of the Association for Computational Linguistics, (Oral)
9. **Knowledge-driven Data Construction for Zero-shot Evaluation in Commonsense Question Answering** 2021
Kaixin Ma, Filip Ilievski, Jonathan Francis, [Yonatan Bisk](#), Eric Nyberg, Alessandro Oltramari,
35th AAAI Conference on Artificial Intelligence
10. **ALFWorld: Aligning Text and Embodied Environments for Interactive Learning** 2021
Mohit Shridhar, Xingdi Yuan, Marc-Alexandre Côté, [Yonatan Bisk](#), Adam Trischler, Matthew Hausknecht,
Proceedings of the International Conference on Learning Representations
11. **Imagining Grounded Conceptual Representations from Perceptual Information in Situated Guessing Games** 2020
Alessandro Suglia, Antonio Vergari, Ioannis Konstas, [Yonatan Bisk](#), Emanuele Bastianelli, Andrea Vanzo, Oliver Lemon,
The 28th International Conference on Computational Linguistics, (Oral)
12. **Experience Grounds Language** 2020
[Yonatan Bisk](#), Ari Holtzman, Jesse Thomason, Jacob Andreas, Yoshua Bengio, Joyce Chai, Mirella Lapata, Angeliki Lazaridou, Jonathan May, Aleksandr Nisnevich, Nicolas Pinto, Joseph Turian,
Proceedings of the 2020 Conference on Empirical Methods in Natural Language Processing (EMNLP), (Oral)
13. **RMM: A Recursive Mental Model for Dialog Navigation** 2020
Homero Roman Roman, [Yonatan Bisk](#), Jesse Thomason, Asli Celikyilmaz, Jianfeng Gao,
Proceedings of the 2020 Conference on Empirical Methods in Natural Language Processing: Findings
14. **ALFRED: A Benchmark for Interpreting Grounded Instructions for Everyday Tasks** 2020
Mohit Shridhar, Jesse Thomason, Daniel Gordon, [Yonatan Bisk](#), Winson Han, Roozbeh Mottaghi, Luke Zettlemoyer, Dieter Fox,
The IEEE Conference on Computer Vision and Pattern Recognition (CVPR)
15. **PIQA: Reasoning about Physical Commonsense in Natural Language** 2020
[Yonatan Bisk](#), Rowan Zellers, Ronan Le Bras, Jianfeng Gao, Yejin Choi,
Thirty-Fourth AAAI Conference on Artificial Intelligence, (Oral)
16. **Robust Navigation with Language Pretraining and Stochastic Sampling** 2019
Xiujun Li, Chunyuan Li, Qiaolin Xia, [Yonatan Bisk](#), Asli Celikyilmaz, Jianfeng Gao, Noah A. Smith, Yejin Choi,
Conference on Empirical Methods in Natural Language Processing and 9th International Joint Conference on Natural Language Processing

17. **Defending Against Neural Fake News** 2019
Rowan Zellers, Ari Holtzman, Hannah Rashkin, Yonatan Bisk, Ali Farhadi, Franziska Roesner, Yejin Choi,
Thirty-third Conference on Neural Information Processing Systems
18. **Improving Robot Success Detection using Static Object Data** 2019
Rosario Scalise, Jesse Thomason, Yonatan Bisk, Siddhartha Srinivasa,
Proceedings of the 2019 IEEE/RSJ International Conference on Intelligent Robots and Systems
19. **Early Fusion for Goal Directed Robotic Vision** 2019
Aaron Walsman, Yonatan Bisk, Saadia Gabriel, Dipendra Misra, Yoav Artzi, Yejin Choi, Dieter Fox,
Proceedings of the 2019 IEEE/RSJ International Conference on Intelligent Robots and Systems
20. **HellaSwag: Can a Machine Really Finish Your Sentence?** 2019
Rowan Zellers, Ari Holtzman, Yonatan Bisk, Ali Farhadi, Yejin Choi,
Proceedings of the Association for Computational Linguistics
21. **From Recognition to Cognition: Visual Commonsense Reasoning** 2019
Rowan Zellers, Yonatan Bisk, Ali Farhadi, Yejin Choi,
The IEEE Conference on Computer Vision and Pattern Recognition (CVPR), (Oral)
22. **Tactical Rewind: Self-Correction via Backtracking in Vision-and-Language Navigation** 2019
Liyiming Ke, Xiujuan Li, Yonatan Bisk, Ari Holtzman, Zhe Gan, Jingjing Liu, Jianfeng Gao, Yejin Choi, Sid-
dhartha Srinivasa,
The IEEE Conference on Computer Vision and Pattern Recognition (CVPR), (Oral)
23. **Prospection: Interpretable Plans From Language By Predicting the Future** 2019
Chris Paxton, Yonatan Bisk, Jesse Thomason, Arunkumar Byravan, Dieter Fox,
Proceedings of the International Conference on Robotics and Automation (ICRA)
24. **Shifting the Baseline: Single Modality Performance on Visual Navigation & QA** 2019
Jesse Thomason, Daniel Gordon, Yonatan Bisk,
Proceedings of the Annual Conference of the North American Chapter of the Association for Computational Linguistics
25. **Benchmarking Hierarchical Script Knowledge** 2019
Yonatan Bisk, Jan Buys, Karl Pichotta, Yejin Choi,
Proceedings of the Annual Conference of the North American Chapter of the Association for Computational Linguistics, (Oral)
26. **Character-based Surprisal as a Model of Reading Difficulty in the Presence of Errors** 2019
Michael Hahn, Frank Keller, Yonatan Bisk, Yonatan Belinkov,
The 41st Annual Meeting of the Cognitive Science Society, (Oral)
27. **SWAG: A Large-Scale Adversarial Dataset for Grounded Commonsense Inference** 2018
Rowan Zellers, Yonatan Bisk, Roy Schwartz, Yejin Choi,
Proceedings of the 2018 Conference on Empirical Methods in Natural Language Processing (EMNLP), (Oral)
28. **Synthetic and Natural Noise Both Break Neural Machine Translation** 2018
Yonatan Bisk, Yonatan Bisk,
Proceedings of the 6th International Conference on Learning Representations, (Oral)
29. **Learning Interpretable Spatial Operations in a Rich 3D Blocks World** 2018
Yonatan Bisk, Kevin Shih, Yejin Choi, Daniel Marcu,
Proceedings of the Thirty-Second Conference on Artificial Intelligence (AAAI-18)
30. **Natural Language Inference from Multiple Premises** 2017
Alice Lai, Yonatan Bisk, Julia Hockenmaier,
Proceedings of the Eighth International Joint Conference on Natural Language Processing, (Oral)
31. **Natural Language Communication with Robots** 2016
Yonatan Bisk, Deniz Yuret, Daniel Marcu,
Proceedings of the 15th Annual Conference of the North American Chapter of the Association for Computational Linguistics, (Oral)
32. **Supertagging with LSTMs** 2016
Ashish Vaswani, Yonatan Bisk, Kenji Sagae, Ryan Musa,
Proceedings of the 15th Annual Conference of the North American Chapter of the Association for Computational Linguistics (Short Papers), (Oral)
33. **Evaluating Induced CCG Parsers on Grounded Semantic Parsing** 2016
Yonatan Bisk, Siva Reddy, John Blitzer, Julia Hockenmaier, Mark Steedman,
Proceedings of the 2016 Conference on Empirical Methods in Natural Language Processing

34. **Probing the Linguistic Strengths and Limitations of Unsupervised Grammar Induction** 2015
Yonatan Bisk, Julia Hockenmaier,
Proceedings of the 53rd Annual Meeting of the Association for Computational Linguistics and the 7th International Joint Conference on Natural Language Processing (Volume 1: Long Papers), (Oral)
35. **Labeled Grammar Induction with Minimal Supervision** 2015
Yonatan Bisk, Christos Christodoulopoulos, Julia Hockenmaier,
Proceedings of the 53rd Annual Meeting of the Association for Computational Linguistics and the 7th International Joint Conference on Natural Language Processing (Volume 2: Short Papers)
36. **Simple Robust Grammar Induction with Combinatory Categorical Grammar** 2012
Yonatan Bisk, Julia Hockenmaier,
Proceedings of the Twenty-Sixth Conference on Artificial Intelligence (AAAI-12)
37. **Document-Topic Hierarchies from Document Graphs** 2012
Tim Weninger, Yonatan Bisk, Jiawei Han,
Proceedings of the 21st ACM international conference on Information and knowledge management (CIKM 2012)
38. **Normal-form parsing for CCGs with generalized composition and type-raising** 2010
Julia Hockenmaier, Yonatan Bisk,
Proceedings of the 23rd International Conference on Computational Linguistics (Coling 2010)

Workshop Publications

39. **KB-VLP: Knowledge Based Vision and Language Pretraining** 2021
Kezhen Chen, Qiuyuan Huang, Yonatan Bisk, Daniel McDuff, Jianfeng Gao,
ICML21 Workshop on Self-Supervised Learning
40. **A Benchmark for Structured Procedural Knowledge Extraction from Cooking Videos** 2020
Frank F. Xu, Lei Ji, Botian Shi, Junyi Du, Graham Neubig, Yonatan Bisk, Nan Duan,
Workshop on NLP Beyond Text
41. **Inducing Grammars with and for Neural Machine Translation** 2018
Ke Tran, Yonatan Bisk,
Proceedings of the 2nd Workshop on Neural Machine Translation
42. **Bridging HMMs and RNNs through Architectural Transformations** 2018
Jan Buys, Yonatan Bisk, Yejin Choi,
32nd Conference on Neural Information Processing Systems (NIPS 2018), *IRASL workshop*
43. **Towards a Dataset for Human Computer Communication via Grounded Language Acquisition** 2016
Yonatan Bisk, Daniel Marcu, William Wong,
Proceedings of the AAAI 2016 Workshop on Symbiotic Cognitive Systems
44. **Unsupervised Neural Hidden Markov Models** 2016
Ke Tran, Yonatan Bisk, Ashish Vaswani, Daniel Marcu, Kevin Knight,
Proceedings of the Workshop on Structured Prediction for NLP, (Oral)
45. **Induction of Linguistic Structure with Combinatory Categorical Grammars** 2012
Yonatan Bisk, Julia Hockenmaier,
NAACL HLT Workshop on Induction of Linguistic Structure

Tech Reports

46. **KAT: A Knowledge Augmented Transformer for Vision-and-Language** 2021
Liangke Gui, Borui Wang, Qiuyuan Huang, Alex Hauptmann, Yonatan Bisk, Jianfeng Gao,
ArXiv
47. **Learning When and What to Ask: a Hierarchical Reinforcement Learning Framework** 2021
Khanh Nguyen, Yonatan Bisk, Hal Daume III,
ArXiv
48. **FILM: Following Instructions in Language with Modular Methods** 2021
So Yeon Min, Devendra Singh Chaplot, Pradeep Ravikumar, Yonatan Bisk, Ruslan Salakhutdinov,
ArXiv
49. **WebQA: Multihop and Multimodal QA** 2021
Yingshan Chang, Mridu Narang, Hisami Suzuki, Guihong Cao, Jianfeng Gao, Yonatan Bisk,
ArXiv

50. **Worst of Both Worlds: Biases Compound in Pre-trained Vision-and-Language Models** 2021
Tejas Srinivasan, [Yonatan Bisk](#),
ArXiv
51. **Multi-View Learning for Vision-and-Language Navigation** 2020
Qiaolin Xia, Xiujuan Li, Chunyuan Li, [Yonatan Bisk](#), Zhifang Sui, Jianfeng Gao, Yejin Choi, Noah A. Smith,
ArXiv
52. **FIND: Identifying Functionally and Structurally Important Features in Protein Sequences with Deep Neural Networks** 2019
Ranjani Murali, James Hemp, Victoria Orphan, [Yonatan Bisk](#),
bioRxiv
53. **CHALET: Cornell House Agent Learning Environment** 2018
Claudia Yan, Dipendra Misra, Andrew Bennett, Aaron Walsman, [Yonatan Bisk](#), Yoav Artzi,
ArXiv Preprint 1801.07357
54. **Unsupervised Grammar Induction with Combinatory Categorical Grammars** 2015
[Yonatan Bisk](#),
University of Illinois at Urbana-Champaign

Thesis Committees

- **PhD** [Dylan Ebert](#) Ellie Pavlick, Brown
- **PhD** [Shikib Mehri](#) Maxine Eskenazi, CMU
- **PhD** [Volkan Cirik](#) Louis-Philippe Morency and Taylor Berg-Kirkpatrick, CMU
- **PhD** [Shruti Palaskar](#) Alan Black and Florian Metze, CMU
- **PhD** [Dheeraj Rajagopal](#) Ed Hovy, CMU
- **PhD** [Evangelia Spiliopoulou](#) Ed Hovy, CMU
- 2022 **MLT** [Aishwarya Jadhav](#) Katia Sycara, CMU
- 2021 **PhD** [Pengcheng Yin](#) Graham Neubig, CMU
- 2020 **PhD** [Zihang Dai](#) Yiming Yang, CMU
- 2021 **MLT** [Jing Wen](#) Katerina Fragkiadaki, CMU
- 2021 **Qual** [Mohit Sharma](#) Oliver Kroemer, CMU

Teaching

- 2021 **11-777 MultiModal Machine Learning** # Students: 42, SP
- 2021 **11-767 On-Device Machine Learning** *Co-Emma Strubell* # Students: 31, FA
- 2022 **11-777 MultiModal Machine Learning** # Students: , SP

Diversity and Inclusion

- 2022 **NAACL 2022 DEI Co-Chair**, ongoing
- 2020 **LTI DEI Committee**, ongoing
- 2019 **CrashCourse AI** Educational YouTube series targeted at high-school age viewers. Hosted by Jabril Ashe. Co-Written with Lana Yarosh and Tim Weninger, 1yr
- 2018 **ACM Council on Diversity & Inclusion** Investigating and initiating institutional change within ACM on behalf of underrepresented groups., 1yr
 - **Grace Hopper PC member** Review submissions to AI Technical Track, 1yr
- 2016 **NCWIT Collegiate Award** Review applications for the National Center for Women & Information Technology's Collegiate Award honoring college women, ISI 3yrs
- 2009 **NCWIT Aspirations in Computing** Review applications for the National Center for Women & Information Technology's Award for Aspirations in Computing which supports high-school girls interested in CS, UIUC, ISI 6yrs
 - **Tech Junket/Women in CS** Outreach for local Urbana-Champaign pre-college students, UIUC 2yrs
- 2008 **Freshman Research Mentor** Mentored students to perform research, UTexas 1yr
 - **First Bytes** Helped organize a summer camp for girls interested in CS, UTexas
 - **Co-Founded Breakfast Bytes** Professor talks for pre-college students, UTexas 1yr

- **CS Roadshow** CS presentations at Austin middle and high schools, UTexas

1yr

Funding and Awards

- 2021 **NSF EAGER**
Co-PI Graham Neubig, Dan Yurovsky, Aug 2021 – Dec 2022, \$300K
- **LTI Junior Chair**, Aug 2021 – Aug 2023
- 2020 **Facebook RFP** *Learning Dynamic Multimodal Inference for On-Device VQA*
Co-PI Emma Strubell, Sept 2020 – May 2021, \$75K
- 2020 **Google exploreCSR** *Broad & Inclusive Language Technology (BILT) @ CMU LTI*
Co-PI Emma Strubell, Graham Neubig, Summer 2021, \$15k

Organization (Workshops and Conference)

- 2022 **Workshop** *Embodied AI Workshop – Challenge Organizer*
Computer Vision and Pattern Recognition
- 2021 **Workshop** *Embodied AI Workshop – Challenge Organizer*
Computer Vision and Pattern Recognition
- 2020 **Workshop** *Embodied Vision, Actions & Language Workshop*
European Conference on Computer Vision
- **Workshop** *Workshop on Dataset Curation and Security*
NeurIPS
- 2019 **Workshop** *Spatial Language Understanding and Grounded communication for Robotics*
North American Chapter of the Association for Computational Linguistics
- 2018 **Conference** *Social Media Chair*
North American Chapter of the Association for Computational Linguistics
- **Workshop** *Generalization in the Age of Deep Learning*
North American Chapter of the Association for Computational Linguistics
- **Workshop** *Wordplay: Reinforcement and Language Learning in Text-Based Games* NeurIPS
- 2017 **Conference** *Student Scholarship Chair and Student Volunteer Coordinator*
Conference on Empirical Methods in Natural Language Processing
- **Workshop** *Language Grounding for Robotics*
Conference of the Association for Computational Linguistics

Area Chair / Action Editor

- 2022 **International Conference on Learning Representations**
 - **Association for the Advancement of Artificial Intelligence** *Senior Meta-Reviewer*
 - **Transactions on Machine Learning Research** *Action Editor*
 - **ACL Rolling Review**
- 2021 **International Conference on Learning Representations**
 - **Association for Computational Linguistics** *Machine Learning*
 - **Empirical Methods in Natural Language Proc** *Speech, Vision, Robotics, Multimodal Grounding*
 - **Neural Information Processing Systems (NeurIPS)**
 - **ACL Rolling Review**
- 2020 **Association for Computational Linguistics** *Language Grounding to Vision, Robotics and Beyond*
 - **Neural Information Processing Systems (NeurIPS)**
 - **Asia-Pacific chapter of the Association for Computational Linguistics**
- 2019 **Association for Computational Linguistics** *Vision, Robotics, Multimodal Grounding, and Speech*
- 2018 **International Conference on Computational Linguistics**
- 2016 **Conference on Lexical and Computational Semantics (*SEM)** *Sem. Parsing and Role Labeling*

Reviewer

NLP	ARR	Association for Computational Linguistics Rolling Review	2021
	ACL	Association for Computational Linguistics	2017, 2018
	CL	Computational Linguistics Journal	2017, <i>standing</i>
	CoLing	International Conference on Computational Linguistics	2016
	CoNLL	Conference on Computational Natural Language Learning	2016 – 2018
	EACL	European Chapter of the Association for Computational Linguistics	2014, 2017, 2020
	EMNLP	Empirical Methods in Natural Language Processing	2013 – 2020
	IJCNLP	International Joint Conference on Natural Language Processing	2017
	NAACL	N. American Chapter of the Association for Computational Ling	2016 – 2019
	NLE	Natural Language Engineering Journal	2016
	*SEM	Joint Conference on Lexical and Computational Semantics	2020
	TACL	Transactions of the Assoc. for Computational Linguistics	2019
Robo	CoRL	Conference on Robot Learning	2019 – 2021
	RSS	Robotics: Science and Systems	2022
	HRI	Human Robot Interaction	2020 – 2022
	ICRA	International Conference on Robotics and Automation	2019
	IJRR	International Journal of Robotics Research	2017
	IROS	IEEE/RSJ International Conference on Intelligent Robots and Systems	2019
	RA-L	IEEE Robotics and Automation Letters	2019
AI/ML	AAAI	Association for the Advancement of Artificial Intelligence	2018, 2021
	ICLR	International Conference on Learning Representations	2019 – 2020
	ICML	International Conference on Machine Learning	2019
	IJCAI	International Joint Conference on Artificial Intelligence	2019
	NeurIPS	Neural Information Processing Systems	2018 – 2019
CV	CVPR	Computer Vision and Pattern Recognition	2020

Invitations and Talks

- 2021 **Following Instructions and Asking Questions** *UIUC NLP*
WebQA: Multihop and Multimodal QA *PNNL Mega-AI Seminar*
Following Instructions and Asking Questions *Human Interaction for Robotic Navigation Workshop @ ICCV*
WebQA: Multihop and Multimodal *Microsoft Research Summit*
2nd Workshop on Advances in Language and Vision Research (ALVR) *NAACL*
Instructions, Abstraction, and Theory-of-Mind *Koç University AI center*
Understanding the Potential of Scaling Artificial Intelligence for Science Applications Panel *PNNL*
Guest Lecture: Embodiment for NLP *UPenn*
Guest Lecture: Multimodality in NLP *UWashington Linguistics*
- 2020 **The 2nd Workshop Beyond Vision and Language: Integrating Real-world Knowledge** *CoLing*
The University of Texas at Austin – Forum for AI
Cornell Learning Machines seminar
Stanford NLP seminar
SRI Center for Vision Technology Lab Panel *Embodied AI*
- 2018 **Colloquium Talk** *Northwest NLP*
- 2017 **Invited Talk** *University of Notre Dame NLP Seminar*
Invited Talk *University of California, Irvine AI/ML Seminar*
Invited Talk *Pacific Northwest National Laboratory*
- 2016 **Invited Poster** *The Impact of Computing in Our Physical World session of the CRA's Computing Community Consortium (CCC) Symposium on Computing Research*

- 2015 **Colloquium Talk** *Toyota Tech. Inst. of Chicago's Midwest Speech & Language Days*
- 2013 **Colloquium Talk** *Toyota Tech. Inst. of Chicago's Midwest Speech & Language Days*