## Yonatan Bisk

Assistant Professor of Computer Science

 $GHC~6703 \\ \boxtimes ybisk@cs.cmu.edu \\ he/him$ 

	Positions	
2020 –	Assistant Professor Carnegie Mellon University Language Technologies Institute Robotics Institute (courtesy)	
2022 –	Visiting Professor Meta Fundamental Al Research (FAIR)	w/ Dhruv Batra
2021 -	Consulting Professor Microsoft Research	
2019 –	Visiting Researcher Microsoft Research	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** The University of Illinois at Urbana-Champaign,

Thesis: Unsupervised Grammar Induction with Combinatory Categorial Grammars

Advisor: Julia Hockenmaier

Committee: Jason Eisner, Dan Roth, ChengXiang Zhai

2009 BS in Computer Science The University of Texas at Austin Turing Scholar,

Thesis: The Necessity of Separating Control and Logic When Grounding Language using

Neuroevolution

Advisor: Risto Miikkulainen Second Reader: Raymond Mooney

	PhD Students				TalkingT	oRobo	ts.com
PhD	Hao Zhu	he/him	Theory of Mind		(co-G Neubig)	LTI	2019 –
PhD	Jared Fernandez	he/him	Efficiency		(co-E Strubell)	LTI	2020 -
PhD	Vidhi Jain	she/her	Language to Control			RI	2021 –
PhD	Tiffany Min	she/her	Embodiment		(co-R Salakhutdinov)	MLD	2021 –
PhD	Yingshan Chang	she/her	Multimodal Reasoning	g		LTI	2022 –
PhD	Abitha Thankaraj	she/her	Language to Control		(co-A Kumar)	RI	2024 -
PhD	Jimin Sun	she/her	Tools			LTI	2024 –
PhD	Rosa Vitiello	she/her	Collaboration		(co-C Rose)	LTI	2024 –
PhD	Quanting Xie	he/him	LLMs for Robotics			RI	2024 –
	Alumni, Interns,	and	Undergraduates				
Ugrad	Claire Jin	she/her	Embodied Dialogue				2024
Ugrad	Maria Yampolsky	she/her	Audio				2024
Intern	Minyoung Hwang	she/her	Preference Learning				2024
MS	Quanting Xie	he/him	LLMs for Robotics			Med	hE 2023
MSAII	<b>Seed emergence</b> Harini Subramanyan Karthik Natarajan		Juanyun Mai Noel D Souza	-	a Morbale Zhang		2024
	,				<b>S</b>		

MRSD	Assistive Robotics for Elde	•	,	Dugalles:		1 /2 .	
	Abhinav Gupta Praveen Venkatesh	he/him	Atnarva Shaolin	Pusalkar		he/him	
	Shivam Tripathy	he/him he/him	Shaoin	Nataria		he/him	
MLT	· •	er <i>Embodied Dia</i>	logue		LTI	2022	_ ′
	•		_	(	LII	2022	
Ugrad	Xiang Fan	Transformer E	•	(co-E Strubell)			4
Intern	Andy Liu	Theory-of-Mir	nd	(co-G Neubig)			2
Intern	Deogratias Amani he/him	m Grounding					2
MRSD	Modular Teleop with Auto	onomy (*co- <mark>Z E</mark>	Erickson)				
	Jashkumar Diyora	he/him		angopadhyay		she/her	
	Jigar Patel	he/him	Prakhar	Pradeep		he/him	
	Shivani Sivakumar	she/her					
MCDS	Embodied Navigation and		17 1				
	Adhokshaja Madhwaraj	he/him		a Mahajan		he/him	
	Sai Vishwas Padigi	he/him	Vineeth	•		he/him	
MCDS	Malaika Vijay	she/her	Zneng (	Jessica) Zhong		she/her	
MCDS	Embodied Dialogue and T Xinyue Chen	she/her	Nikhil G	unta		he/him	
	Benny Jiang	he/him	Shubhar	•		he/him	
	Prasoon Varshney	he/him	Silabilal			, 111111	
MCDS	Novel Concept Learning	,					
	Bharani Ujjaini Kempaiah	she/her	Linyi Li			she/her	
MSAII	Visual Patent Search		•				
17107 111	Suchong Dong	she/her	Zhiyuan	Guo		he/him	
	Mansi Goyal	she/her	Marta M	lendez Simon		she/her	
	Sreenidhi Sundaram	she/her		n Den Berghe		he/him	
MLT	Yingshan Chang she/he	er <i>Multimodal R</i>	easoning		LTI	2020	<u> </u>
MLT	Josh Zhanson he/hir	m Embodied Vis	ual Reps		LTI	2020	— :
MS	Xiaoyu (Erin) Zhang she/he	er Collaborative	Robots	(co-O Kroemer)	5th	2021	- :
Ugrad	Feiyu (Gavin) Zhu	Video Summa	rization	(co-C Paxton)			:
Intern	Melanie Sclar	Symmetric Th	eory-of-Mind	(co-G Neubig)			:
Intern	Blessing Bassey	TextVQA	•	,			:
	Journal Publications	:					
1	Training Vision-Language	Transformers for					
	Liangke Gui, Yingshan Chang, Gao, <u>Yonatan Bisk</u>		Subhojit Som,	Alexander Hauptmar	ın, Jia	nteng	
_	Transactions on Machine Learn	_		LDCEC			
2	The Return of Lexical De Hao Zhu, Yonatan Bisk, Graha		urai Lexicali	zea PCFGs			
	Transactions of the Association		al Linguistics				
2	An HDP Model for Induci	· ·	_	Grammars			
3	Yonatan Bisk, Julia Hockenma		y Categoriai	Grammars			
	Transactions of the Association		al Linguistics				
	Conference Publicat	ions					
4	Vid2Robot: End-to-end V	ideo-conditione	d Policy Lea	rning with Cross-	Atten	tion	
	<b>Transformers</b> Vidhi Jain, Maria Attarian, Nik R Sanketi, Pierre Sermanet, St	khil J Joshi, Ayzaa	n Wahid, Dan	ny Driess, Quan Vuo	ng, Pa	nnag	

5	OpenEQA: Embodied Question Answering in the Era of Foundation Models Arjun Majumdar, Anurag Ajay, Xiaohan Zhang, Pranav Putta, Sriram Yenamandra, Mikael Henaff, Sneha Silwal, Paul Mcvay, Oleksandr Maksymets, Sergio Arnaud, Karmesh Yadav, Qiyang Li, Ben Newman, Mohit Sharma, Vincent Berges, Shiqi Zhang, Pulkit Agrawal, Yonatan Bisk, Dhruv Batra, Mrinal Kalakrishnan, Franziska Meier, Chris Paxton, Sasha Sax, Aravind Rajeswaran	2024
	Conference on Computer Vision and Pattern Recognition	
6	SOTOPIA: Interactive Evaluation for Social Intelligence in Language Agents Xuhui Zhou, Hao Zhu, Leena Mathur, Ruohong Zhang, Haofei Yu, Zhengyang Qi, Louis-Philippe Morency, Yonatan Bisk, Daniel Fried, Graham Neubig, Maarten Sap The Twelfth International Conference on Learning RepresentationsSpotlight	2024
7	MOSAIC: Learning Unified Multi-Sensory Object Property Representations for Robot Perception  Gyan Tatiya, Jonathan Francis, Ho-Hsiang Wu, Yonatan Bisk, Jivko Sinapov  IEEE International Conference on Robotics and Automation	2024
8	WebArena: A Realistic Web Environment for Building Autonomous Agents Shuyan Zhou, Frank F. Xu, Hao Zhu, Xuhui Zhou, Robert Lo, Abishek Sridhar, Xianyi Cheng, Tianyue Ou, Yonatan Bisk, Daniel Fried, Uri Alon, Graham Neubig The Twelfth International Conference on Learning Representations	2024
9	Spatial-Language Attention Policies for Efficient Robot Learning Priyam Parashar, Vidhi Jain, Xiaohan Zhang, Jay Vakil, Sam Powers, Yonatan Bisk, Chris Paxton Conference on Robot Learning	2023
10	SPAE: Semantic Pyramid AutoEncoder for Multimodal Generation with Frozen	2023
10	LLMs Lijun Yu, Yong Cheng, Zhiruo Wang, Vivek Kumar, Wolfgang Macherey, Yanping Huang, David A. Ross, Irfan Essa, Yonatan Bisk, Ming-Hsuan Yang, Kevin Murphy, Alexander Hauptmann, Lu Jiang Thirty-seventh Conference on Neural Information Processing Systems	2023
11	HomeRobot: Open-Vocabulary Mobile Manipulation Sriram Yenamandra, Arun Ramachandran, Karmesh Yadav, Austin Wang, Mukul Khanna, Theophile Gervet, Tsung-Yen Yang, Vidhi Jain, Alexander William Clegg, John Turner, Zsolt Kira, Manolis Savva, Angel Chang, Devendra Singh Chaplot, Dhruv Batra, Roozbeh Mottaghi, Yonatan Bisk, Chris Paxton	2023
	Conference on Robot Learning	
12	SPRING: GPT-4 Out-performs RL Algorithms by Studying Papers and Reasoning	2023
	Yue Wu, Shrimai Prabhumoye, So Yeon Min, <u>Yonatan Bisk</u> , Ruslan Salakhutdinov, Amos Azaria, Tom Mitchell, Yuanzhi Li  Thirty-seventh Conference on Neural Information Processing Systems	
13	HomeRobot Open Vocab Mobile Manipulation Challenge Sriram Yenamandra, Arun Ramachandran, Mukul Khanna, Karmesh Yadav, Devendra Singh Chaplot, Gunjan Chhablani, Alexander Clegg, Theophile Gervet, Vidhi Jain, Ruslan Partsey, Ram Ramrakhya, Andrew Szot, Tsung-Yen Yang, Aaron Edsinger, Charlie Kemp, Binit Shah, Zsolt Kira, Dhruv Batra, Roozbeh Mottaghi, Yonatan Bisk, Chris Paxton	2023
	Thirty-seventh Conference on Neural Information Processing Systems: Competition Track	
14	EXCALIBUR: Encouraging and Evaluating Embodied Exploration  Hao Zhu, Raghav Kapoor, So Yeon Min, Winson Han, Jiatai Li, Kaiwen Geng, Graham Neubig,  Yonatan Bisk, Aniruddha Kembhavi, Luca Weihs  Conference on Computer Vision and Pattern Recognition	2023
15	The Framework Tax: Disparities Between Inference Efficiency in Research and Deployment  Jared Fernandez, Jacob Kahn, Clara Na, Yonatan Bisk, Emma Strubell  The 2023 Conference on Empirical Methods in Natural Language Processing Oral	2023
16	Computational Language Acquisition with Theory of Mind	2023
	Andy Liu, Hao Zhu, Emmy Liu, <u>Yonatan Bisk</u> , Graham Neubig  The Eleventh International Conference on Learning Representations	
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17	Self-Supervised Object Goal Navigation with In-Situ Finetuning So Yeon Min, Yao-Hung Hubert Tsai, Wei Ding, Ali Farhadi, Ruslan Salakhutdinov, Yonatan Bisk, Jian Zhang	2023
	IEEE/RSJ International Conference on Intelligent Robots and Systems	
18	Don't Copy the Teacher: Data and Model Challenges in Embodied Dialogue So Yeon Min, Hao Zhu, Ruslan Salakhutdinov, Yonatan Bisk Conference on Empirical Methods in Natural Language Processing	2022
19	<b>EvEntS ReaLM: Event Reasoning of Entity States via Language Models</b> Evangelia Spiliopoulou, Artidoro Pagnoni, <u>Yonatan Bisk</u> , Eduard Hovy  Conference on Empirical Methods in Natural Language Processing	2022
20	On Advances in Text Generation from Images Beyond Captioning: A Case Study in Self-Rationalization Shruti Palaskar, Akshita Bhagia, Yonatan Bisk, Florian Metze, Alan W Black, Ana Marasovic Findings of the Conference on Empirical Methods in Natural Language Processing	2022
21	Transformers are Adaptable Task Planners Vidhi Jain, Yixin Lin, Eric Undersander, Yonatan Bisk, Akshara Rai Conference on Robot Learning	2022
22	Symmetric Machine Theory of Mind Melanie Sclar, Graham Neubig, Yonatan Bisk 39th International Conference on Machine Learning	2022
23	A Framework for Learning to Request Rich and Contextually Useful Information	2022
23	from Humans Khanh Nguyen, Yonatan Bisk, Hal Daume III 39th International Conference on Machine Learning,	2022
24	Simulated Language Learning from Communicative Goals and Linguistic Input Hao Zhu, Yonatan Bisk, Graham Neubig  Annual Meeting of the Cognitive Science SocietyOral	2022
25	HEAR 2021: Holistic Evaluation of Audio Representations Joseph Turian, Jordie Shier, Humair Raj Khan, Bhiksha Raj, Björn W. Schuller, Christian J. Steinmetz, Colin Malloy, George Tzanetakis, Gissel Velarde, Kirk McNally, Max Henry, Nicolas Pinto, Camille Noufi, Christian Clough, Dorien Herremans, Eduardo Fonseca, Jesse Engel, Justin Salamon, Philippe Esling, Pranay Manocha, Shinji Watanabe, Zeyu Jin, Yonatan Bisk	2022
26	Proceedings of Machine Learning Research (PMLR): NeurIPS 2021 Competition Track  KAT: A Knowledge Augmented Transformer for Vision-and-Language  Liangke Gui, Borui Wang, Qiuyuan Huang, Alexander Hauptmann, Yonatan Bisk, Jianfeng Gao  Annual Conference of the North American Chapter of the Association for Computational	2022
27	FILM: Following Instructions in Language with Modular Methods So Yeon Min, Devendra Singh Chaplot, Pradeep Ravikumar, Yonatan Bisk, Ruslan Salakhutdinov	2022
28	The Tenth International Conference on Learning Representations  WebQA: Multihop and Multimodal QA  Yingshan Chang, Mridu Narang, Hisami Suzuki, Guihong Cao, Jianfeng Gao, Yonatan Bisk	2022
	Conference on Computer Vision and Pattern RecognitionOral	2021
29	<b>Dependency Induction Through the Lens of Visual Perception</b> Ruisi Su, Shruti Rijhwani, Hao Zhu, Junxian He, Xinyu Wang, <u>Yonatan Bisk</u> , Graham Neubig The SIGNLL Conference on Computational Natural Language Learning	2021
30	Language Grounding with 3D Objects  Jesse Thomason, Mohit Shridhar, Yonatan Bisk, Chris Paxton, Luke Zettlemoyer  Conference on Robot Learning	2021
31	TACo: Token-aware Cascade Contrastive Learning for Video-Text Alignment Jianwei Yang, Yonatan Bisk, Jianfeng Gao International Conference on Computer Vision	2021
32	Few-shot Language Coordination by Modeling Theory of Mind Hao Zhu, Graham Neubig, Yonatan Bisk The Thirty-eighth International Conference on Machine Learning	2021

33	Grounding 'Grounding' in NLP Khyathi Raghavi Chandu, Yonatan Bisk, Alan W Black Findings of The 2021 Conference of the Association for Computational Linguistics	2021
34	An Empirical Study on the Generalization Power of Neural Representations Learned via Visual Guessing Games 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 LinguisticsOral	2021
35	Knowledge-driven Data Construction for Zero-shot Evaluation in Commonsense Question Answering Kaixin Ma, Filip Ilievski, Jonathan Francis, Yonatan Bisk, Eric Nyberg, Alessandro Oltramari 35th AAAI Conference on Artificial Intelligence	2021
36	ALFWorld: Aligning Text and Embodied Environments for Interactive Learning Mohit Shridhar, Xingdi Yuan, Marc-Alexandre Côté, Yonatan Bisk, Adam Trischler, Matthew Hausknecht	2021
37	International Conference on Learning Representations  Imagining Grounded Conceptual Representations from Perceptual Information in  Situated Guessing Games  Alessandro Suglia, Antonio Vergari, Ioannis Konstas, Yonatan Bisk, Emanuele Bastianelli,  Andrea Vanzo, Oliver Lemon  The 28th International Conference on Computational LinguisticsOral	2020
38	Experience Grounds Language  Yonatan Bisk, Ari Holtzman, Jesse Thomason, Jacob Andreas, Yoshua Bengio, Joyce Chai, Mirella Lapata, Angeliki Lazaridou, Jonathan May, Aleksandr Nisnevich, Nicolas Pinto, Joseph Turian  Conference on Empirical Methods in Natural Language ProcessingOral	2020
39	RMM: A Recursive Mental Model for Dialog Navigation  Homero Roman Roman, Yonatan Bisk, Jesse Thomason, Asli Celikyilmaz, Jianfeng Gao  Conference on Empirical Methods in Natural Language Processing: Findings	2020
40	ALFRED: A Benchmark for Interpreting Grounded Instructions for Everyday Tasks 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)	2020
41	PIQA: Reasoning about Physical Commonsense in Natural Language Yonatan Bisk, Rowan Zellers, Ronan Le Bras, Jianfeng Gao, Yejin Choi Thirty-Fourth AAAI Conference on Artificial IntelligenceOral	2020
42	Robust Navigation with Language Pretraining and Stochastic Sampling Xiujun Li, Chunyuan Li, Qiaolin Xia, <u>Yonatan Bisk</u> , Asli Celikyilmaz, Jianfeng Gao, Noah A. Smith, Yejin Choi	2019
43	Conference on Empirical Methods in Natural Language Processing and 9th International Joint Conference on Natural Language Processing  Defending Against Neural Fake News  Rowan Zellers, Ari Holtzman, Hannah Rashkin, Yonatan Bisk, Ali Farhadi, Franziska Roesner, Yejin Choi  Thirty-third Conference on Neural Information Processing Systems	2019
44	Improving Robot Success Detection using Static Object Data Rosario Scalise, Jesse Thomason, Yonatan Bisk, Siddhartha Srinivasa IEEE/RSJ International Conference on Intelligent Robots and Systems	2019
45	Early Fusion for Goal Directed Robotic Vision Aaron Walsman, Yonatan Bisk, Saadia Gabriel, Dipendra Misra, Yoav Artzi, Yejin Choi, Dieter Fox	2019
46	2019 IEEE/RSJ International Conference on Intelligent Robots and Systems  - RoboCup Best Paper Award finalist  HellaSwag: Can a Machine Really Finish Your Sentence?  Rowan Zellers, Ari Holtzman, Yonatan Bisk, Ali Farhadi, Yejin Choi  Association for Computational Linguistics	2019

47	From Recognition to Cognition: Visual Commonsense Reasoning Rowan Zellers, Yonatan Bisk, Ali Farhadi, Yejin Choi  The IEEE Conference on Computer Vision and Pattern RecognitionOral	2019
48	Tactical Rewind: Self-Correction via Backtracking in Vision-and-Language	2019
	Navigation Liyiming Ke, Xiujun Li, Yonatan Bisk, Ari Holtzman, Zhe Gan, Jingjing Liu, Jianfeng Gao, Yejin Choi, Siddhartha Srinivasa	
	The IEEE Conference on Computer Vision and Pattern RecognitionOral	
49	Prospection: Interpretable Plans From Language By Predicting the Future Chris Paxton, Yonatan Bisk, Jesse Thomason, Arunkumar Byravan, Dieter Fox International Conference on Robotics and Automation (ICRA)	2019
50	Shifting the Baseline: Single Modality Performance on Visual Navigation & QA  Jesse Thomason, Daniel Gordon, Yonatan Bisk	2019
	Annual Conference of the North American Chapter of the Association for Computational Linguistics	
51	Benchmarking Hierarchical Script Knowledge	2019
	Yonatan Bisk, Jan Buys, Karl Pichotta, Yejin Choi  Annual Conference of the North American Chapter of the Association for Computational  LinguisticsOral	
52	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 SocietyOral	
53	SWAG: A Large-Scale Adversarial Dataset for Grounded Commonsense Inference Rowan Zellers, Yonatan Bisk, Roy Schwartz, Yejin Choi	2018
	Conference on Empirical Methods in Natural Language ProcessingOral	2010
54	Synthetic and Natural Noise Both Break Neural Machine Translation Yonatan Belinkov, Yonatan Bisk 6th International Conference on Learning RepresentationsOral	2018
EE	Learning Interpretable Spatial Operations in a Rich 3D Blocks World	2018
55	Yonatan Bisk, Kevin Shih, Yejin Choi, Daniel Marcu  Thirty-Second Conference on Artificial Intelligence (AAAI-18)	2016
56	Natural Language Inference from Multiple Premises	2017
50	Alice Lai, Yonatan Bisk, Julia Hockenmaier  Eighth International Joint Conference on Natural Language ProcessingOral	2017
57	Natural Language Communication with Robots	2016
31	Yonatan Bisk, Deniz Yuret, Daniel Marcu	2010
	15th Annual Conference of the North American Chapter of the Association for Computational LinguisticsOral	
58	Supertagging with LSTMs	2016
	Ashish Vaswani, Yonatan Bisk, Kenji Sagae, Ryan Musa	
	15th Annual Conference of the North American Chapter of the Association for	
59	Computational Linguistics (Short Papers)Oral  Evaluating Induced CCG Parsers on Grounded Semantic Parsing	2016
39	Yonatan Bisk, Siva Reddy, John Blitzer, Julia Hockenmaier, Mark Steedman 2016 Conference on Empirical Methods in Natural Language Processing	2010
60	Probing the Linguistic Strengths and Limitations of Unsupervised Grammar	2015
00	Induction Yonatan Bisk, Julia Hockenmaier	2010
	53rd Annual Meeting of the Association for Computational Linguistics and the 7th International Joint Conference on Natural Language Processing (Volume 1: Long Papers)	
61	Oral  Labeled Grammar Induction with Minimal Supervision	2015
61	Yonatan Bisk, Christos Christodoulopoulos, Julia Hockenmaier	2013
	53rd Annual Meeting of the Association for Computational Linguistics and the 7th	
	International Joint Conference on Natural Language Processing (Volume 2: Short Papers)	

62	Simple Robust Grammar Induction with Combinatory Categorial Grammar Yonatan Bisk, Julia Hockenmaier  Twenty-Sixth Conference on Artificial Intelligence (AAAI-12)	2012
63	Document-Topic Hierarchies from Document Graphs	2012
	Tim Weninger, Yonatan Bisk, Jiawei Han	
	21st ACM international conference on Information and knowledge management (CIKM 2012)	
64	Normal-form parsing for CCGs with generalized composition and type-raising Julia Hockenmaier, Yonatan Bisk	2010
	23rd International Conference on Computational Linguistics (Coling 2010)	
_	Workshop Publications	
65	MAEA: Multimodal Attribution for Embodied Al Vidhi Jain, Jayant Sravan Tamarapalli, Sahiti Yerramilli, Yonatan Bisk	2022
66	Progress and Challenges in Building Trustworthy Embodied AI at NeurIPS 2022  Tackling AIDNovId with Action Attention and Common Sonso from Language	2022
66	Tackling AlfWorld with Action Attention and Common Sense from Language Models	2022
	Yue Wu, So Yeon Min, <u>Yonatan Bisk</u> , Ruslan Salakhutdinov, Shrimai Prabhumoye Language and Reinforcement Learning Workshop at NeurIPS 2022	
67	Worst of Both Worlds: Biases Compound in Pre-trained Vision-and-Language	2022
	Models Tejas Srinivasan, Yonatan Bisk	
	4th Workshop on Gender Bias in Natural Language Processing	
68	KB-VLP: Knowledge Based Vision and Language Pretraining Kezhen Chen, Qiuyuan Huang, Yonatan Bisk, Daniel McDuff, Jianfeng Gao ICML21 Workshop on Self-Supervised Learning	2021
69	A Benchmark for Structured Procedural Knowledge Extraction from Cooking	2020
	Videos Frank F. Xu, Lei Ji, Botian Shi, Junyi Du, Graham Neubig, <u>Yonatan Bisk</u> , Nan Duan Workshop on NLP Beyond Text	
70	Inducing Grammars with and for Neural Machine Translation Ke Tran, Yonatan Bisk	2018
	2nd Workshop on Neural Machine TranslationBest Paper	
71	Bridging HMMs and RNNs through Architectural Transformations  Jan Buys, Yonatan Bisk, Yejin Choi  23ad Conference on Neural Information Processing Systems (NURS 2018) IRASI workshop and the conference of the co	2018
72	32nd Conference on Neural Information Processing Systems (NIPS 2018), IRASL workshop  Towards a Dataset for Human Computer Communication via Grounded Language	2016
12	Acquisition	2010
	Yonatan Bisk, Daniel Marcu, William Wong	
	AAAI 2016 Workshop on Symbiotic Cognitive Systems	
73	Unsupervised Neural Hidden Markov Models Ke Tran, Yonatan Bisk, Ashish Vaswani, Daniel Marcu, Kevin Knight Workshop on Structured Prediction for NLPOral	2016
74	Induction of Linguistic Structure with Combinatory Categorial Grammars Yonatan Bisk, Julia Hockenmaier	2012
	NAACL HLT Workshop on Induction of Linguistic Structure	
	Preprint Publications	
75	Dialogue with Robots: Proposals for Broadening Participation and Research in the SLIVAR Community Casey Kennington, Malihe Alikhani, Heather Pon-Barry, Katherine Atwell, Yonatan Bisk, Daniel Fried, Felix Gervits, Zhao Han, Mert Inan, Michael Johnston, Raj Korpan, Diane Litman, Matthew Marge, Cynthia Matuszek, Ross Mead, Shiwali Mohan, Raymond Mooney, Natalie	2024
	Parde, Jivko Sinapov, Angela Stewart, Matthew Stone, Stefanie Tellex, Tom Williams  ArXiv	

76	VISREAS: Complex Visual Reasoning with Unanswerable Questions Syeda Nahida Akter, Sangwu Lee, Yingshan Chang, Yonatan Bisk, Eric Nyberg ArXiv	2024
77	AgentKit: Flow Engineering with Graphs, not Coding Yue Wu, Yewen Fan, So Yeon Min, Shrimai Prabhumoye, Stephen McAleer, Yonatan Bisk, Ruslan Salakhutdinov, Yuanzhi Li, Tom Mitchell ArXiv	2024
78	Skews in the Phenomenon Space Hinder Generalization in Text-to-Image Generation Yingshan Chang, Yasi Zhang, Zhiyuan Fang, Yingnian Wu, Yonatan Bisk, Feng Gao ArXiv	2024
79	Direct Preference Optimization of Video Large Multimodal Models from Language Model Reward Ruohong Zhang, Liangke Gui, Zhiqing Sun, Yihao Feng, Keyang Xu, Yuanhan Zhang, Di Fu, Chunyuan Li, Alexander Hauptmann, Yonatan Bisk, Yiming Yang ArXiv	2024
80	SOTOPIA-π: Interactive Learning of Socially Intelligent Language Agents Ruiyi Wang, Haofei Yu, Wenxin Zhang, Zhengyang Qi, Maarten Sap, Graham Neubig, Yonatan Bisk, Hao Zhu ArXiv	2024
81	Toward General-Purpose Robots via Foundation Models: A Survey and Meta-Analysis Yafei Hu, Quanting Xie, Vidhi Jain, Jonathan Francis, Jay Patrikar, Nikhil Keetha, Seungchan Kim, Yaqi Xie, Tianyi Zhang, Shibo Zhao, Yu Quan Chong, Chen Wang, Katia Sycara, Matthew Johnson-Roberson, Dhruv Batra, Xiaolong Wang, Sebastian Scherer, Zsolt Kira, Fei Xia, Yonatan Bisk ArXiv	2023

#### 82 Open X-Embodiment: Robotic Learning Datasets and RT-X Models

Open X-Embodiment Collaboration, Abby O'Neill, Abdul Rehman, Abhiram Maddukuri, Abhishek Gupta, Abhishek Padalkar, Abraham Lee, Acorn Pooley, Agrim Gupta, Ajay Mandlekar, Ajinkya Jain, Albert Tung, Alex Bewley, Alex Herzog, Alex Irpan, Alexander Khazatsky, Anant Rai, Anchit Gupta, Andrew Wang, Anikait Singh, Animesh Garg, Aniruddha Kembhavi, Annie Xie, Anthony Brohan, Antonin Raffin, Archit Sharma, Arefeh Yavary, Arhan Jain, Ashwin Balakrishna, Ayzaan Wahid, Ben Burgess-Limerick, Beomjoon Kim, Bernhard Schölkopf, Blake Wulfe, Brian Ichter, Cewu Lu, Charles Xu, Charlotte Le, Chelsea Finn, Chen Wang, Chenfeng Xu, Cheng Chi, Chenguang Huang, Christine Chan, Christopher Agia, Chuer Pan, Chuyuan Fu, Coline Devin, Danfei Xu, Daniel Morton, Danny Driess, Daphne Chen, Deepak Pathak, Dhruv Shah, Dieter Büchler, Dinesh Jayaraman, Dmitry Kalashnikov, Dorsa Sadigh, Edward Johns, Ethan Foster, Fangchen Liu, Federico Ceola, Fei Xia, Feiyu Zhao, Freek Stulp, Gaoyue Zhou, Gaurav S. Sukhatme, Gautam Salhotra, Ge Yan, Gilbert Feng, Giulio Schiavi, Glen Berseth, Gregory Kahn, Guanzhi Wang, Hao Su, Hao-Shu Fang, Haochen Shi, Henghui Bao, Heni Ben Amor, Henrik I Christensen, Hiroki Furuta, Homer Walke, Hongjie Fang, Huy Ha, Igor Mordatch, Ilija Radosavovic, Isabel Leal, Jacky Liang, Jad Abou-Chakra, Jaehyung Kim, Jaimyn Drake, Jan Peters, Jan Schneider, Jasmine Hsu, Jeannette Bohg, Jeffrey Bingham, Jeffrey Wu, Jensen Gao, Jiaheng Hu, Jiajun Wu, Jialin Wu, Jiankai Sun, Jianlan Luo, Jiayuan Gu, Jie Tan, Jihoon Oh, Jimmy Wu, Jingpei Lu, Jingyun Yang, Jitendra Malik, João Silvério, Joey Hejna, Jonathan Booher, Jonathan Tompson, Jonathan Yang, Jordi Salvador, Joseph J. Lim, Junhyek Han, Kaiyuan Wang, Kanishka Rao, Karl Pertsch, Karol Hausman, Keegan Go, Keerthana Gopalakrishnan, Ken Goldberg, Kendra Byrne, Kenneth Oslund, Kento Kawaharazuka, Kevin Black, Kevin Lin, Kevin Zhang, Kiana Ehsani, Kiran Lekkala, Kirsty Ellis, Krishan Rana, Krishnan Srinivasan, Kuan Fang, Kunal Pratap Singh, Kuo-Hao Zeng, Kyle Hatch, Kyle Hsu, Laurent Itti, Lawrence Yunliang Chen, Lerrel Pinto, Li Fei-Fei, Liam Tan, Linxi "Jim" Fan, Lionel Ott, Lisa Lee, Luca Weihs, Magnum Chen, Marion Lepert, Marius Memmel, Masayoshi Tomizuka, Masha Itkina, Mateo Guaman Castro, Max Spero, Maximilian Du, Michael Ahn, Michael C. Yip, Mingtong Zhang, Mingyu Ding, Minho Heo, Mohan Kumar Srirama, Mohit Sharma, Moo Jin Kim, Naoaki Kanazawa, Nicklas Hansen, Nicolas Heess, Nikhil J Joshi, Niko Suenderhauf, Ning Liu, Norman Di Palo, Nur Muhammad Mahi Shafiullah, Oier Mees, Oliver Kroemer, Osbert Bastani, Pannag R Sanketi, Patrick "Tree" Miller, Patrick Yin, Paul Wohlhart, Peng Xu, Peter David Fagan, Peter Mitrano, Pierre Sermanet, Pieter Abbeel, Priya Sundaresan, Qiuyu Chen, Quan Vuong, Rafael Rafailov, Ran Tian, Ria Doshi, Roberto Martín-Martín, Rohan Baijal, Rosario Scalise, Rose Hendrix, Roy Lin, Runjia Qian, Ruohan Zhang, Russell Mendonca, Rutav Shah, Ryan Hoque, Ryan Julian, Samuel Bustamante, Sean Kirmani, Sergey Levine, Shan Lin, Sherry Moore, Shikhar Bahl, Shivin Dass, Shubham Sonawani, Shuran Song, Sichun Xu, Siddhant Haldar, Siddharth Karamcheti, Simeon Adebola, Simon Guist, Soroush Nasiriany, Stefan Schaal, Stefan Welker, Stephen Tian, Subramanian Ramamoorthy, Sudeep Dasari, Suneel Belkhale, Sungjae Park, Suraj Nair, Suvir Mirchandani, Takayuki Osa, Tanmay Gupta, Tatsuya Harada, Tatsuya Matsushima, Ted Xiao, Thomas Kollar, Tianhe Yu, Tianli Ding, Todor Davchev, Tony Z. Zhao, Travis Armstrong, Trevor Darrell, Trinity Chung, Vidhi Jain, Vincent Vanhoucke, Wei Zhan, Wenxuan Zhou, Wolfram Burgard, Xi Chen, Xiaolong Wang, Xinghao Zhu, Xinyang Geng, Xiyuan Liu, Xu Liangwei, Xuanlin Li, Yao Lu, Yecheng Jason Ma, Yejin Kim, Yevgen Chebotar, Yifan Zhou, Yifeng Zhu, Yilin Wu, Ying Xu, Yixuan Wang, Yonatan Bisk, Yoonyoung Cho, Youngwoon Lee, Yuchen Cui, Yue Cao, Yueh-Hua Wu, Yujin Tang, Yuke Zhu, Yunchu Zhang, Yunfan Jiang, Yunshuang Li, Yunzhu Li, Yusuke Iwasawa, Yutaka Matsuo, Zehan Ma, Zhuo Xu, Zichen Jeff Cui, Zichen Zhang, Zipeng Fu, Zipeng Lin

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# Reasoning about the Unseen for Efficient Outdoor Object Navigation Quanting Xie, Tianyi Zhang, Kedi Xu, Matthew Johnson-Roberson, Yonatan Bisk

2023

2023

### Plan, Eliminate, and Track – Language Models are Good Teachers for Embodied Agents

Yue Wu, So Yeon Min, <u>Yonatan Bisk</u>, Ruslan Salakhutdinov, Amos Azaria, Yuanzhi Li, Tom Mitchell, Shrimai Prabhumoye

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85	Singh Chaplot, Changan Chen, Claudia Pé Anthony Francis, Chuang Gan, Kristen Gra Aniruddha Kembhavi, Jacob Krantz, Stefa Maksymets, Roberto Martín-Martín, Rooz Silvio Savarese, Manolis Savva, Mohit Shri	Workshop Tommaso Campari, Angel X. Chang, Devendra rez D'Arpino, Kiana Ehsani, Ali Farhadi, Li Fei-Fei, auman, David Hall, Winson Han, Unnat Jain, n Lee, Chengshu Li, Sagnik Majumder, Oleksandr och Mottaghi, Sonia Raychaudhuri, Mike Roberts, dhar, Niko Sünderhauf, Andrew Szot, Ben Talbot, Alexander Toshev, Joanne Truong, Luca Weihs, Jiajun
86	Multi-View Learning for Vision-and-	Language Navigation 2020 tan Bisk, Zhifang Sui, Jianfeng Gao, Yejin Choi, Noah
87	FIND: Identifying Functionally and Sequences with Deep Neural Network Ranjani Murali, James Hemp, Victoria OrphioRxiv	
88	CHALET: Cornell House Agent Lea Claudia Yan, Dipendra Misra, Andrew Ben ArXiv Preprint 1801.07357	rning Environment 2018 nett, Aaron Walsman, <u>Yonatan Bisk,</u> Yoav Artzi
	Thesis Committees	
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_	PhD Seungchan Kim	Sebastian Scherer, CMU
_	PhD Brendon Boldt	David Mortensen, CMU
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2021	MLT Jing Wen	Katerina Fragkiadaki, CMU
2021	Qual Mohit Sharma	Oliver Kroemer, CMU
_	Teaching	
2024	11-777 MultiModal Machine Learning	ng Co-Daniel Fried # Students: 135, SP
2023	11-851 Talking to Robots	# Students: 16, FA
	11-767 On-Device Machine Learning	Co-Emma Strubell # Students: 69, FA

	11-777 MultiModal Machine Learning	Co-Daniel Fried $\#$ Students	: 107, SP
2022	11-767 On-Device Machine Learning	Co-Emma Strubell # Student	s: 42, FA
	11-777 MultiModal Machine Learning	# Student	s: 94, SP
2021	11-767 On-Device Machine Learning	Co-Emma Strubell # Student	s: 31, FA
	11-777 MultiModal Machine Learning	# Student	s: 42, SP
	Diversity and Inclusion		
2022	NAACL 2022 DEI Co-Chair		
2021	Restructuring of LTI PhD Admissions,		2yr
2020	LTI DEI Committee,		2yrs
2019	<b>CrashCourse AI</b> Educational YouTube series targete Ashe. Co-Written with Lana Yarosh and Tim Wening		by Jabril <i>1yr</i>
2018	<b>ACM Council on Diversity &amp; Inclusion</b> Investigati ACM on behalf of underrepresented groups.,	ng and initiating institutional change	within <i>1yr</i>
_	Grace Hopper PC member Review submissions to	Al Technical Track,	1yr
2016	<b>NCWIT Collegiate Award</b> Review applications for the Technology's Collegiate Award honoring college wom		formation <i>3yrs</i>
2009	<b>NCWIT Aspirations in Computing</b> Review applica Information Technology's Award for Aspirations in Cointerested in CS, UIUC, ISI		girls
_	Tech Junket/Women in CS Outreach for local Urb 2yrs	pana-Champaign pre-college students,	<i>byrs</i> UIUC
2008	Freshman Research Mentor Mentored students to	perform research UTexas	1yr
_	First Bytes Helped organize a summer camp for girl		191
_	Co-Founded Breakfast Bytes Professor talks for pr		1yr
_	CS Roadshow CS presentations at Austin middle an		1yr
	(Senior) Area Chair / Action Editor		
2024	Conference on Robot Learning (CoRL)		Robo
_	Conference on Computer Vision and Pattern Re	cognition (CVPR)	CV
_	International Conference on Learning Representa	ations (ICLR)	AI/ML
_	European Chapter of the Association for Compu	tational Linguistics (EACL)	NLP
_	Senior AE: ACL Rolling Review (ARR)		NLP
_	AE: Transactions on Machine Learning Research	(TMLR)	AI/ML
2023	Neural Information Processing Systems (NeurIP	S)	AI/ML
_	International Conference on Machine Learning (	ICML)	AI/ML
_	AE: Transactions on Machine Learning Research	(TMLR)	AI/ML
_	Senior AE: ACL Rolling Review (ARR)		NLP
_	Ethics Co-Chair: Association for Computational	- ,	NLP
_	Empirical Methods in Natural Language Proc (E	,	NLP
2022	International Conference on Learning Representa	` '	AI/ML
_	Senior MR: Association for the Advancement of	- ,	AI/ML
_	Senior AC: Empirical Methods in Natural Langua	- '	NLP
_	AE: Transactions on Machine Learning Research	(TMLR)	AI/ML
_	Senior AE: ACL Rolling Review (ARR)	_,	NLP
_	Neural Information Processing Systems (NeurIP	•	AI/ML
2021	International Conference on Learning Representa	ations (ICLK)	AI/ML

_	Associati	ion for Computational Linguistics (ACL)	NLP
_	<b>Empirica</b>	l Methods in Natural Language Proc (EMNLP)	NLP
_	Neural In	nformation Processing Systems (NeurIPS)	AI/ML
_	ACL Roll	ling Review (ARR)	NLP
2020	Associati	ion for Computational Linguistics (ACL)	NLP
_	Neural In	nformation Processing Systems (NeurIPS)	AI/ML
_	Asia-Pac	ific chapter of the Association for Computational Linguistics (AAC	L) NLP
2019	Associati	ion for Computational Linguistics (ACL)	NLP
2018	Internati	onal Conference on Computational Linguistics	NLP
2016	Conferen	ce on Lexical and Computational Semantics (*SEM)	NLP
	Review	ver	
NLP	ARR	Association for Computational Linguistics Rolling Review	2021
	ACL	Association for Computational Linguistics	2017, 2018
	CL	Computational Linguistics Journal	2017 – 2022
	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, 17, 20
		Empirical Methods in Natural Language Processing	2013 – 2020
		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 – 2023
Robo	CoRL	Conference on Robot Learning	2019 – 2021,2023
	AURO	Autonomous Robots	2022
	RSS	Robotics: Science and Systems	2022, 2024
	HRI	Human Robot Interaction	2020 - 2024
	ICRA	International Conference on Robotics and Automation	2019,2023, 2024
	IJRR	International Journal of Robotics Research	2017
	IROS	IEEE/RSJ International Conference on Intelligent Robots and Syste	ms <i>2019,23–24</i>
	RA-L	IEEE Robotics and Automation Letters	2019,2023
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, 2023
	Organi	zation (Workshops and Conference)	
2022	_	p Embodied Al Workshop – Challenge Organizer	
2022	Computer	Vision and Pattern Recognition	
2021	Worksho	p Embodied AI Workshop – Challenge Organizer	

Computer Vision and Pattern Recognition

European Conference on Computer Vision

**Workshop** Embodied Vision, Actions & Language Workshop

2020

- 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: Reinformcent 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

#### Invitations and Talks

- 2024 **Talking to Robots** University Pennsylvania University of Maryland, College Park
- 2023 Are We Really Talking to Robots? "Dialogue with Robots" workshop, UPitt NSF Workshop Words # language Articulate Robots: Utilizing Language for Robot Learning RSS Workshop Following Instructions and Asking Questions Learning by Asking for Intelligent Robots and Agents RO-MAN Workshop
  - Following Instructions and Asking Questions Goal Conditioned RL Workshop @ NeurIPS
- 2022 Can we really connect language to robotics? CoRL Wksp on Language and Robot Learning
  How machines learn language: Useful but wrong? 12th Inter. Wksp on Language Production
  Following Instructions and Asking Questions Univ of Potsdam

Univ California Santa Barbara NLP

Georgia Tech NLP

Microsoft Research NYC

Penn State University

Universitat Hamburg Crossmodal Learning (CML) summer school

University of Stuttgart Institute of Natural Language Processing

University of Pittsburgh NLP

2021 Univ of Illinois at Urbana-Champaign NLP

Human Interaction for Robotic Navigation Workshop @ Inter. Conference on Computer Vision

WebQA: Multihop and Multimodal QA PNNL Mega-Al Seminar

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 Al center

Understanding the Potential of Scaling Artificial Intelligence for Science Applications Panel Pacific Northwest National Lab

Guest Lecture: Embodiment for NLP Univ of Pennsylvania

Guest Lecture: Multimodality in NLP UWashington Linguistics

2020 The 2nd Workshop Beyond Vision and Language: Integrating Real-world Knowledge

The University of Texas at Austin - Forum for AI

**Cornell Learning Machines seminar** 

Stanford NLP seminar

SRI Center for Vision Technology Lab Panel Embodied Al

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 CPA's County
- 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