# Yonatan Bisk

Assistant Professor of Computer Science

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

MechE 2023

he/him

he/him

2024

2023

	Positions				
2020 –	Assistant Professor Language Technologies Robotics Institute (cour				
2022 -	Visiting Professor M	leta Fundamental Al Research (FA	IR)	w/ Dhr	uv Batra
2021 -	Consulting Professor	r Microsoft Research			
2019 –	Visiting Researcher	Microsoft Research	1	w/ Jiant	eng Gao
2017 –	Postdoctoral Scholar University of Washingto	<b>r</b> on & Allen Institute for Artificial Intel	lligence	w/ Y	'ejin Choi
2015 –	Postdoctoral Scholar Information Sciences Ins	<b>r</b> stitute, University of Southern Califor	rnia	w/ Dan	iel Marcu
_	Education				
2015	Thesis: <b>Unsupervised</b> Advisor: Julia Hockenm	cience The University of Illinois a I Grammar Induction with Com aier er, Dan Roth, ChengXiang Zhai		nmars	
2009	-	ence The University of Texas at A of Separating Control and Logic V	When Grounding Language	using	
	PhD Students		TalkingTo	Robo	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	Vingshan Chang	14.64 1.15			
	Yingshan Chang	she/her Multimodal Reasoning		LTI	2022 –
PhD	Abitha Thankaraj	she/her Multimodal Reasoning she/her Language to Control	(co-A Kumar)	LTI RI	2022 – 2024 –
PhD PhD		•	(co-A Kumar)		
	Abitha Thankaraj Jimin Sun Rosa Vitiello	she/her Language to Control she/her Tools she/her Collaboration	(co-A Kumar) (co-C Rose)	RI LTI LTI	2024 - 2024 - 2024 -
PhD	Abitha Thankaraj Jimin Sun	she/her Language to Control she/her Tools	,	RI LTI	2024 – 2024 –
PhD PhD	Abitha Thankaraj Jimin Sun Rosa Vitiello Quanting Xie	she/her Language to Control she/her Tools she/her Collaboration	,	RI LTI LTI	2024 - 2024 - 2024 -
PhD PhD	Abitha Thankaraj Jimin Sun Rosa Vitiello Quanting Xie	she/her Language to Control she/her Tools she/her Collaboration he/him LLMs for Robotics	,	RI LTI LTI	2024 - 2024 - 2024 -
PhD PhD PhD	Abitha Thankaraj Jimin Sun Rosa Vitiello Quanting Xie Alumni, Interns,	she/her Language to Control she/her Tools she/her Collaboration he/him LLMs for Robotics , and Undergraduates	,	RI LTI LTI	2024 - 2024 - 2024 - 2024 -

 $_{
m he/him}$  LLMs for Robotics

Juanyun Mai

Noel D Souza

he/him

he/him

he/him

Assistive Robotics for Eldercare (\*co-Z Erickson)

Ameya Morbale

Bohao Zhang

Atharva Pusalkar

Shaolin Kataria

**Quanting Xie** 

Seed emergence

Karthik Natarajan

Praveen Venkatesh

Abhinav Gupta

Shivam Tripathy

Harini Subramanyan

MS

MSAII

MRSD

MLT	Jimin Sun	she/her	Embodied Dialog	ue		LTI	2022 - 2023
Ugrad	Xiang Fan		Transformer Effic	iency	(co-E Strubell)		2022
Intern	Andy Liu		Theory-of-Mind		(co-G Neubig)		2022
Intern	Deogratias Amani	he/him	Grounding		,		2022
MRSD	Modular Teleop with	Auton	omv (*co-Z Eric	kson)			2022
	Jashkumar Diyora		he/him	,	angopadhyay	5	she/her
	Jigar Patel		he/him	Prakhar I		]	he/him
	Shivani Sivakumar		she/her				
MCDS	Embodied Navigation		nteraction				2022
	Adhokshaja Madhwara	j	he/him		n Mahajan		he/him
	Sai Vishwas Padigi		he/him	Vineeth I	•		he/him
MCDS	Malaika Vijay  Embodied Dialogue a	and To	she/her	Zneng (J	essica) Zhong	5	she/her
MCD3	Xinyue Chen	and 10	she/her	Nikhil Gu	ınta	1	2022 he/him
	Benny Jiang		he/him	Shubham	•		he/him
	Prasoon Varshney		he/him	01143114111		•	,
MCDS	Novel Concept Learn	ing	,				2022
	Bharani Ujjaini Kempa	iah	she/her	Linyi Li		5	she/her
MSAII	Visual Patent Search	I					2022
	Suchong Dong		she/her	Zhiyuan		]	he/him
	Mansi Goyal		she/her		endez Simon		she/her
MIT	Sreenidhi Sundaram		she/her		Den Berghe		he/him
MLT	Yingshan Chang		Multimodal Reas	_		LTI	2020 – 2022
MLT	Josh Zhanson		Embodied Visual	-		LTI	2020 – 2022
MS	Xiaoyu (Erin) Zhang	she/her			(co-O Kroemer)	5th	2021 – 2022
Ugrad	Feiyu (Gavin) Zhu		Video Summariza	ntion	(co-C Paxton)		2021
Intern	Melanie Sclar		Symmetric Theor	y-of-Mind	(co-G Neubig)		2021
Intern	Blessing Bassey		<i>TextVQA</i>				2021
	Journal Publicat	ions					
	Training Vision-Lang	паде Т	ransformers from	Cantions			2023
1	Liangke Gui, Yingshan C					nn, Jiant	
	Gao, <u>Yonatan Bisk</u>		, ,		·		
	Transactions on Machine	e Learnir	ng Research				
2	The Return of Lexica	al Depe	endencies: Neura	l Lexicaliz	ed PCFGs		2020
	Hao Zhu, <u>Yonatan Bisk</u> ,		_				
	Transactions of the Asso			_	_		
3	An HDP Model for I		•	ategorial	Grammars		2013
	Yonatan Bisk, Julia Hock Transactions of the Asso			inguistics			
			•	guisties			
	Conference Publ	icatic	ons				
	OpenEQA: Embodie						2024
4	Arjun Majumdar, Anurag						
	Henaff, Sneha Silwal, Pa Qiyang Li, Ben Newman						
	Yonatan Bisk, Dhruv Ba			-			Κ,
	Aravind Rajeswaran	•	,		, -		
	Conference on Computer	Vision	and Pattern Recogr	nition			
5	SOTOPIA: Interactiv	e Eval	uation for Social	Intelligen	ce in Language <i>F</i>	Agents	2024
	Xuhui Zhou, Hao Zhu, L		-	_		_ouis-Ph	nilippe
	Morency, Yonatan Bisk,						
	The Twelfth Internationa	ı Contei	rence on Learning H	epresentation	onsSpotlight		

6	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
7	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
8	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
9	SPAE: Semantic Pyramid AutoEncoder for Multimodal Generation with Frozen 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
10	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 Conference on Robot Learning	2023
11	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	
12	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 Thirty-seventh Conference on Neural Information Processing Systems: Competition Track	2023
13	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
14	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
15	Computational Language Acquisition with Theory of Mind Andy Liu, Hao Zhu, Emmy Liu, Yonatan Bisk, Graham Neubig The Eleventh International Conference on Learning Representations	2023
16	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 IEEE/RSJ International Conference on Intelligent Robots and Systems	2023
17	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
18	EvEntS ReaLM: Event Reasoning of Entity States via Language Models Evangelia Spiliopoulou, Artidoro Pagnoni, Yonatan Bisk, Eduard Hovy Conference on Empirical Methods in Natural Language Processing	2022

19	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	2022
	Findings of the Conference on Empirical Methods in Natural Language Processing	
20	Transformers are Adaptable Task Planners Vidhi Jain, Yixin Lin, Eric Undersander, Yonatan Bisk, Akshara Rai Conference on Robot Learning	2022
21	Symmetric Machine Theory of Mind  Melanie Sclar, Graham Neubig, Yonatan Bisk 39th International Conference on Machine Learning	2022
22	A Framework for Learning to Request Rich and Contextually Useful Information from Humans Khanh Nguyen, Yonatan Bisk, Hal Daume III 39th International Conference on Machine Learning,	2022
23	Simulated Language Learning from Communicative Goals and Linguistic Input Hao Zhu, Yonatan Bisk, Graham Neubig Annual Meeting of the Cognitive Science SocietyOral	2022
24	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 Proceedings of Machine Learning Research (PMLR): NeurIPS 2021 Competition Track	2022
25	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
26	LinguisticsOral  FILM: Following Instructions in Language with Modular Methods  So Yeon Min, Devendra Singh Chaplot, Pradeep Ravikumar, Yonatan Bisk, Ruslan  Salakhutdinov	2022
	The Tenth International Conference on Learning Representations	
27	WebQA: Multihop and Multimodal QA Yingshan Chang, Mridu Narang, Hisami Suzuki, Guihong Cao, Jianfeng Gao, Yonatan Bisk Conference on Computer Vision and Pattern RecognitionOral	2022
28	<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
29	Language Grounding with 3D Objects  Jesse Thomason, Mohit Shridhar, Yonatan Bisk, Chris Paxton, Luke Zettlemoyer  Conference on Robot Learning	2021
30	TACo: Token-aware Cascade Contrastive Learning for Video-Text Alignment Jianwei Yang, Yonatan Bisk, Jianfeng Gao International Conference on Computer Vision	2021
31	Few-shot Language Coordination by Modeling Theory of Mind Hao Zhu, Graham Neubig, Yonatan Bisk The Thirty-eighth International Conference on Machine Learning	2021
32	Grounding 'Grounding' in NLP Khyathi Raghavi Chandu, Yonatan Bisk, Alan W Black Findings of The 2021 Conference of the Association for Computational Linguistics	2021
33	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	2021
34	The 2021 Conference of the European Chapter of the Association for Computational LinguisticsOral  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

35	ALFWorld: Aligning Text and Embodied Environments for Interactive Learning Mohit Shridhar, Xingdi Yuan, Marc-Alexandre Côté, Yonatan Bisk, Adam Trischler, Matthew Hausknecht	2021
	International Conference on Learning Representations	
36	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
37	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
38	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
39	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
40	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
41	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 Conference on Empirical Methods in Natural Language Processing and 9th International	2019
42	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
43	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
44	Early Fusion for Goal Directed Robotic Vision  Aaron Walsman, Yonatan Bisk, Saadia Gabriel, Dipendra Misra, Yoav Artzi, Yejin Choi, Dieter Fox	2019
45	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
46	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
47	Tactical Rewind: Self-Correction via Backtracking in Vision-and-Language 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	2019
48	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

49	Shifting the Baseline: Single Modality Performance on Visual Navigation & QA Jesse Thomason, Daniel Gordon, Yonatan Bisk Annual Conference of the North American Chapter of the Association for Computational	2019
50	Linguistics  Benchmarking Hierarchical Script Knowledge  Yonatan Bisk, Jan Buys, Karl Pichotta, Yejin Choi  Annual Conference of the North American Chapter of the Association for Computational	2019
51	LinguisticsOral Character-based Surprisal as a Model of Reading Difficulty in the Presence of Errors Michael Hahn, Frank Keller, Yonatan Bisk, Yonatan Belinkov The 41st Annual Meeting of the Cognitive Science SocietyOral	2019
52	SWAG: A Large-Scale Adversarial Dataset for Grounded Commonsense Inference Rowan Zellers, Yonatan Bisk, Roy Schwartz, Yejin Choi Conference on Empirical Methods in Natural Language ProcessingOral	2018
53	Synthetic and Natural Noise Both Break Neural Machine Translation Yonatan Belinkov, Yonatan Bisk 6th International Conference on Learning RepresentationsOral	2018
54	Learning Interpretable Spatial Operations in a Rich 3D Blocks World  Yonatan Bisk, Kevin Shih, Yejin Choi, Daniel Marcu  Thirty-Second Conference on Artificial Intelligence (AAAI-18)	2018
55	Natural Language Inference from Multiple Premises  Alice Lai, Yonatan Bisk, Julia Hockenmaier  Eighth International Joint Conference on Natural Language ProcessingOral	2017
56	Natural Language Communication with Robots  Yonatan Bisk, Deniz Yuret, Daniel Marcu  15th Annual Conference of the North American Chapter of the Association for	2016
57	Computational LinguisticsOral  Supertagging with LSTMs Ashish Vaswani, Yonatan Bisk, Kenji Sagae, Ryan Musa 15th Annual Conference of the North American Chapter of the Association for	2016
58	Computational Linguistics (Short Papers)Oral  Evaluating Induced CCG Parsers on Grounded Semantic Parsing  Yonatan Bisk, Siva Reddy, John Blitzer, Julia Hockenmaier, Mark Steedman  2016 Conference on Empirical Methods in Natural Language Processing	2016
59	Probing the Linguistic Strengths and Limitations of Unsupervised Grammar Induction  Yonatan Bisk, Julia Hockenmaier  53rd Annual Meeting of the Association for Computational Linguistics and the 7th International Joint Conference on Natural Language Processing (Volume 1: Long Papers)	2015
60	Oral  Labeled Grammar Induction with Minimal Supervision  Yonatan Bisk, Christos Christodoulopoulos, Julia Hockenmaier  53rd Annual Meeting of the Association for Computational Linguistics and the 7th	2015
61	International Joint Conference on Natural Language Processing (Volume 2: Short Papers)  Simple Robust Grammar Induction with Combinatory Categorial Grammar  Yonatan Bisk, Julia Hockenmaier  Twenty-Sixth Conference on Artificial Intelligence (AAAI-12)	2012
62	Document-Topic Hierarchies from Document Graphs Tim Weninger, Yonatan Bisk, Jiawei Han 21st ACM international conference on Information and knowledge management (CIKM 2012)	2012
63	Normal-form parsing for CCGs with generalized composition and type-raising Julia Hockenmaier, Yonatan Bisk 23rd International Conference on Computational Linguistics (Coling 2010)	2010
	Workshop Publications	
64	MAEA: Multimodal Attribution for Embodied Al Vidhi Jain, Jayant Sravan Tamarapalli, Sahiti Yerramilli, <u>Yonatan Bisk</u> Progress and Challenges in Building Trustworthy Embodied AI at NeurIPS 2022	2022

65	Tackling AlfWorld with Action Attention and Common Sense from Language  Models  Yue Wu, So Yeon Min, Yonatan Bisk, Ruslan Salakhutdinov, Shrimai Prabhumoye	2022
66	Language and Reinforcement Learning Workshop at NeurIPS 2022  Worst of Both Worlds: Biases Compound in Pre-trained Vision-and-Language	2022
66	Models Tejas Srinivasan, Yonatan Bisk 4th Workshop on Gender Bias in Natural Language Processing	2022
67	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
68	A Benchmark for Structured Procedural Knowledge Extraction from Cooking Videos Frank F. Xu, Lei Ji, Botian Shi, Junyi Du, Graham Neubig, Yonatan Bisk, Nan Duan Workshop on NLP Beyond Text	2020
69	Inducing Grammars with and for Neural Machine Translation Ke Tran, Yonatan Bisk 2nd Workshop on Neural Machine TranslationBest Paper	2018
70	Bridging HMMs and RNNs through Architectural Transformations  Jan Buys, Yonatan Bisk, Yejin Choi  32nd Conference on Neural Information Processing Systems (NIPS 2018), IRASL workshop	2018
71	Towards a Dataset for Human Computer Communication via Grounded Language Acquisition Yonatan Bisk, Daniel Marcu, William Wong AAAI 2016 Workshop on Symbiotic Cognitive Systems	2016
72	Unsupervised Neural Hidden Markov Models Ke Tran, Yonatan Bisk, Ashish Vaswani, Daniel Marcu, Kevin Knight Workshop on Structured Prediction for NLPOral	2016
73	Induction of Linguistic Structure with Combinatory Categorial Grammars  Yonatan Bisk, Julia Hockenmaier  NAACL HLT Workshop on Induction of Linguistic Structure	2012
	Preprint Publications	
74	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 Parde, Jivko Sinapov, Angela Stewart, Matthew Stone, Stefanie Tellex, Tom Williams ArXiv	2024
75	VISREAS: Complex Visual Reasoning with Unanswerable Questions Syeda Nahida Akter, Sangwu Lee, Yingshan Chang, Yonatan Bisk, Eric Nyberg ArXiv	2024
76	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
77	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
78	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

79	Vid2Robot: End-to-end Video-conditioned Policy Learning with Cross-Attention Transformers	2024
	Vidhi Jain, Maria Attarian, Nikhil J Joshi, Ayzaan Wahid, Danny Driess, Quan Vuong, Pannag R Sanketi, Pierre Sermanet, Stefan Welker, Christine Chan, Igor Gilitschenski, <u>Yonatan Bisk</u> , Debidatta Dwibedi  ArXiv	
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	2023

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

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

ArXiv

#### 83 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

Yue Wu, So Yeon Min, Yonatan Bisk, Ruslan Salakhutdinov, Amos Azaria, Yuanzhi Li, Tom Mitchell, Shrimai Prabhumoye **ArXiv** 

85	Singh Chaplot, Changan Chen, Claudia Pé Anthony Francis, Chuang Gan, Kristen Gra Aniruddha Kembhavi, Jacob Krantz, Stefa Maksymets, Roberto Martín-Martín, Roozl Silvio Savarese, Manolis Savva, Mohit Shri	Workshop Tommaso Campari, Angel X. Chang, Devendra rez D'Arpino, Kiana Ehsani, Ali Farhadi, Li Fei-Fei, numan, David Hall, Winson Han, Unnat Jain, n Lee, Chengshu Li, Sagnik Majumder, Oleksandr neh Mottaghi, Sonia Raychaudhuri, Mike Roberts, dhar, Niko Sünderhauf, Andrew Szot, Ben Talbot, slexander Toshev, Joanne Truong, Luca Weihs, Jiajun
86	Multi-View Learning for Vision-and-Qiaolin Xia, Xiujun Li, Chunyuan Li, Yona: A. Smith <i>ArXiv</i>	Language Navigation 2020 tan Bisk, Zhifang Sui, Jianfeng Gao, Yejin Choi, Noah
87		
88	ArXiv Preprint 1801.07357	rning Environment 2018 nett, Aaron Walsman, Yonatan Bisk, Yoav Artzi
	Thesis Committees	
_	PhD Gabe Sarch	Katerina Fragkiadaki and Mike Tarr, CMU
_	PhD Seungchan Kim	Sebastian Scherer, CMU
_	PhD Brendon Boldt	David Mortensen, CMU
_	PhD Xiaoyu Zhu	Alex Hauptmann, CMU
-	PhD Liangke Gui	Alex Hauptmann, CMU
2024	PhD Jielin Qiu	Lei Li & Christos Faloutsos, CMU
2024 2024	PhD Nikita Srivatsan PhD Lijun Yu	Taylor Berg-Kirkpatrick, CMU Alex Hauptmann, CMU
2024	MSR Mateo Guaman Castro	Sebastian Scherer, CMU
2023	PhD Kaixin Ma	Eric Nyberg, CMU
2023	PhD Nicholas Botzer	Tim Weninger, Notre Dame
2023	PhD Naoki Otani	Ed Hovy, CMU
2023	PhD Dylan Ebert	Ellie Pavlick, Brown
2022	PhD Shikib Mehri	Maxine Eskenazi , CMU
2022	PhD Shruti Palaskar	Alan Black and Florian Metze, CMU
2022	PhD Evangelia Spiliopoulou	Ed Hovy, CMU
2022	PhD Dheeraj Rajagopal	Ed Hovy, CMU
2022	PhD Volkan Cirik	Louis-Philippe Morency and Taylor Berg-Kirkpatrick, 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	
2024	11-777 MultiModal Machine Learnin	<del>-</del>
2023	11-851 Talking to Robots	# Students: 16, FA
	11-767 On-Device Machine Learning	-
	11-777 MultiModal Machine Learnii	ng Co-Daniel Fried # Students: 107, SP

2022	11-767 On-Device Machine Learning	Co-Emma Strubell # Studer	nts: 42, FA
	11-777 MultiModal Machine Learning	# Studer	its: 94, SP
2021	11-767 On-Device Machine Learning	Co-Emma Strubell # Studer	nts: 31, FA
	11-777 MultiModal Machine Learning	# Studer	its: 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 targeted at Ashe. Co-Written with Lana Yarosh and Tim Weninger,	high-school age viewers. Hoste	d by Jabril <i>1yr</i>
2018	<b>ACM Council on Diversity &amp; Inclusion</b> Investigating an ACM on behalf of underrepresented groups.,	nd initiating institutional chang	e within <i>1yr</i>
_	Grace Hopper PC member Review submissions to Al Te	echnical Track,	1yr
2016	<b>NCWIT Collegiate Award</b> Review applications for the N Technology's Collegiate Award honoring college women, IS		nformation <i>3yrs</i>
2009	NCWIT Aspirations in Computing Review applications	for the National Center for Wo	omen &
	Information Technology's Award for Aspirations in Compuinterested in CS, UIUC, ISI	ting which supports high-schoo	ol girls <i>6yrs</i>
_	<b>Tech Junket/Women in CS</b> Outreach for local Urbana-	Champaign pre-college students	s, UIUC
2008	Freshman Research Mentor Mentored students to perfo	rm research, UTexas	1yr
_	First Bytes Helped organize a summer camp for girls into	rested in CS, UTexas	
_	Co-Founded Breakfast Bytes Professor talks for pre-col	lege students, UTexas	1yr
_	CS Roadshow CS presentations at Austin middle and hig	h schools, UTexas	1yr
	(Senior) Area Chair / Action Editor		
2024	Conference on Robot Learning (CoRL)		Robo
_	Conference on Computer Vision and Pattern Recogn	` '	CV
_	International Conference on Learning Representation	` '	AI/ML
_	European Chapter of the Association for Computation	nal Linguistics (EACL)	NLP
_	Senior AE: ACL Rolling Review (ARR)		NLP
_	AE: Transactions on Machine Learning Research (TN	/ILR)	AI/ML
2023	Neural Information Processing Systems (NeurIPS)		AI/ML
_	International Conference on Machine Learning (ICM)	<b>,</b>	AI/ML
_	AE: Transactions on Machine Learning Research (TN	/ILR)	AI/ML
_	Senior AE: ACL Rolling Review (ARR)	otatian (ACI)	NLP
_	Ethics Co-Chair: Association for Computational Ling	` '	NLP
-	Empirical Methods in Natural Language Proc (EMNI		NLP AL/MI
2022	International Conference on Learning Representation Senior MR: Association for the Advancement of Artic	` '	AI/ML AI/ML
_	Senior AC: Empirical Methods in Natural Language F	• ,	NLP
_	AE: Transactions on Machine Learning Research (TN	,	AI/ML
_	Senior AE: ACL Rolling Review (ARR)	ien)	NLP
_	Neural Information Processing Systems (NeurIPS)		AI/ML
2021	International Conference on Learning Representation	s (ICLR)	AI/ML
	Association for Computational Linguistics (ACL)	- ( = )	NLP
_	Empirical Methods in Natural Language Proc (EMNI	LP)	NLP
_	Neural Information Processing Systems (NeurIPS)	,	AI/ML
			′

2020 - - 2019 2018 2016	Associati Neural Ir Asia-Paci Associati Internatio	ing Review (ARR) on for Computational Linguistics (ACL) nformation Processing Systems (NeurIPS) ific chapter of the Association for Computational Linguistics (AACL on for Computational Linguistics (ACL) onal Conference on Computational Linguistics ce on Lexical and Computational Semantics (*SEM)	NLP NLP AI/ML NLP NLP NLP
2010			
	Review		
NLP	ARR	Association for Computational Linguistics Rolling Review	2021
	ACL	Association for Computational Linguistics	2017, 2018 2017 – 2022
	CL CoLing	Computational Linguistics Journal International Conference on Computational Linguistics	2017 – 2022
	CoNLL	Conference on Computational Natural Language Learning	2010 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 20	19 – 2021,2023
	AURO	Autonomous Robots	2022
	RSS	Robotics: Science and Systems	2022, 2024
	HRI	Human Robot Interaction	2020 – 2024
	ICRA		019,2023, 2024
	IJRR	International Journal of Robotics Research	2017
	IROS	IEEE/RSJ International Conference on Intelligent Robots and System	
	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 2018 – 2019
CV	CVPR	Neural Information Processing Systems Computer Vision and Pattern Recognition	2016 – 2019 2020, 2023
CV	CVPK	Computer vision and rattern recognition	2020, 2023
	Organi	zation (Workshops and Conference)	
2022		p Embodied AI Workshop – Challenge Organizer Vision and Pattern Recognition	
2021		p Embodied AI Workshop – Challenge Organizer Vision and Pattern Recognition	
2020		p Embodied Vision, Actions & Language Workshop	
		Conference on Computer Vision	
-	Workshop NeurIPS	<b>p</b> Workshop on Dataset Curation and Security	
2019		<b>p</b> Spatial Language Understanding and Grounded communication for Robo erican Chapter of the Association for Computational Linguistics	tics
2018	Conferen	ce 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

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

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 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 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 CRA's Computing Community Consortium (CCC) Symposium on Computing Research
- 2015 Colloquium Talk Toyota Tech. Inst. of Chicago's Midwest Speech & Language Days