

Alane Suhr

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Research Interests

My research interests span natural language processing, machine learning, and computer vision. I build systems that use language to interact with people, design models and datasets that address problems in language grounding, e.g., to images, and develop learning algorithms for acquiring language in interaction.

Education

- Cornell University**, New York, NY, USA 2016–2022 (expected)
PhD in Computer Science
Advisor: Yoav Artzi
- Ohio State University**, Columbus, OH, USA 2012–2016
BS in Computer Science & Engineering with Honors, *summa cum laude*
Minor in Linguistics

Research and Software Engineering Positions

- Graduate Research Assistant**, Cornell University 2017–present
Department of Computer Science
Advisor: Yoav Artzi
- Research Intern**, Google 2019
Google AI Language
Collaborators: Ming-Wei Chang, Peter Shaw, and Kenton Lee
- Undergraduate Research Assistant**, Ohio State University 2015–2016
Department of Linguistics
Advisor: Marie-Catherine de Marneffe
- Software Engineering Intern**, Google
Adwords Express 2015
Google Shopping 2014
- Software Development Intern**, Kosada, Inc.
Vuo 2013
Timestream (iOS development) 2012

Awards and Honors

- Facebook PhD Fellowship 2020–present
National Science Foundation Graduate Research Fellowship 2018–present
Outstanding Paper Award (at NAACL) 2018
Outstanding TA Award (Cornell CIS) 2018
Best Resource Paper (at ACL) 2017
AI2 Key Scientific Challenges Award 2017
ParIAI Research Award 2017
AWS Cloud Credits for Research 2017
Microsoft Research Women's Fellowship 2017
Eminence Fellowship (Ohio State University) 2012–2016

Publications

Publications

- Noriyuki Kojima, Alane Suhr, and Yoav Artzi. Continual learning for grounded instruction generation by observing human behavior. *TACL*, 2021. To appear.
- Anna Effenberger, Rhia Singh, Eva Yan, Alane Suhr, and Yoav Artzi. Analysis of language change in collaborative instruction following. *Findings of EMNLP*, 2021.
- Alane Suhr, Ming-Wei Chang, Peter Shaw, and Kenton Lee. Exploring Unexplored Generalization Challenges for Cross-Database Semantic Parsing. *ACL*, 2020.
- Alane Suhr, Claudia Yan, Jack Schluger*, Stanley Yu*, Hadi Khader**, Marwa Mouallem**, Iris Zhang, and Yoav Artzi. Executing instructions in situated collaborative interactions. *EMNLP-IJCNLP*, 2019.
- Alane Suhr*, Stephanie Zhou*, Ally Zhang, Iris Zhang, Huajun Bai, and Yoav Artzi. A corpus for reasoning about natural language grounded in photographs. *ACL*, 2019.
- Howard Chen, Alane Suhr, Dipendra Misra, Noah Snaveley, and Yoav Artzi. Touchdown: Natural language navigation and spatial reasoning in visual street environments. *CVPR*, 2019.
- Alane Suhr and Yoav Artzi. Situated mapping of sequential instructions to actions with single-step reward observation. *ACL*, 2018.
- Alane Suhr, Srinivasan Iyer, and Yoav Artzi. Learning to map context-dependent sentences to executable formal queries. *NAACL-HLT*, 2018. **Oustanding Paper Award.**
- Alane Suhr, Mike Lewis, James Yeh, and Yoav Artzi. A corpus of natural language for visual reasoning. *ACL*, 2017. **Best Resource Paper Award.**

Workshop Papers and Other Publications

- Alane Suhr, Mike Lewis, James Yeh, and Yoav Artzi. Evaluating visual reasoning through grounded language understanding. *AI Magazine*, 2018.
- Stephanie Zhou*, Alane Suhr*, and Yoav Artzi. Visual reasoning with natural language. *AAAI Symposium on Natural Communication for Human-Robot Collaboration*, 2017.

*,** Equal contribution

Invited Talks, Posters, and Interviews

- NLP with Friends. *Learning and Using Natural Language in Interaction*. Nov 2021.
- Deepmind. *Grounded Natural Language Understanding in Interaction*. May 2021.
- University of Pittsburgh – CS 3730 (Computational Modeling of Discourse and Grounded Communication) guest lecture. *Grounded Language: Visual Reasoning and Collaborative Instruction Following*. Oct 2020.
- New York Academy of Science – Natural Language, Dialogue, and Speech Symposium STAR Talks. *Executing Instructions in Situated Collaborative Interactions*. Nov 2019.
- Cornell University – CIS @ 20 (Poster). *Learning to Understand Natural Language in Collaborative Interactions*. Oct 2019.

University of Massachusetts Amherst – MLFL (Machine Learning and Friends Lunch). *Modeling and Learning Agents that Understand Language in Context*. Feb 2019.

University of Pennsylvania – CLunch (Computational Linguistics and Lunch). *Modeling and Learning Agents that Understand Language in Context*. Nov 2018.

AI2 – NLP Highlights Podcast. *Episode 38: A Corpus of Natural Language for Visual Reasoning*. Oct 2017.

Tutorials

Crowdsourcing beyond annotation: case studies in benchmark data collection. Presented at *EMNLP*. In 2021 collaboration with Clara Vania, Nikita Nangia, Maarten Sap, Mark Yatskar, Samuel R. Bowman, and Yoav Artzi.

Neural semantic parsing. Presented at *ACL*. In collaboration with Matt Gardner, Pradeep Dasigi, Srinivasan Iyer, and Luke Zettlemoyer. 2018

Teaching Experience

Graduate Teaching Assistant for *CS 5740: Natural Language Processing* at Cornell Tech. Spring 2018

Graduate Teaching Assistant for *CS 4700: Foundations of Artificial Intelligence* at Cornell University. Fall 2016

Grader for *CSE 5525: Speech and Language Processing* at Ohio State University. Spring 2016

Co-organizer and Instructor of the STEM and Robotics Club at Columbus North International School, 2014 – 2016 supported via Eminence Fellowship and P12 Initiative at Ohio State.

Tutor in pre-calculus at Linden-McKinley STEM Academy, via the Eminence Fellowship's *Forward First* initiative. Spring 2013

Co-instructor of the iOS Development Group for Media, Marketing, and Communications Scholars at Ohio State. 2012–2014

Mentoring Experience

Undergraduate Students

Anya Ji, Cornell	2021 – present
Anna Effenberger, Cornell	2020
Rhia Singh, CUNY	2020
Eva Yan, CUNY	2020
Jack Schluger, Cornell	2018–2019
Stanley Yu, Columbia → Google	2018
Hadi Khader, Technion → Intel	2018
Marwa Mouallem, Technion → IBM	2018
Stephanie Zhou, Cornell → UMD PhD program	2017–2018

Masters Students

Iris Zhang, Cornell Tech → Facebook	2018 – 2019
Yong Huang, Cornell Tech → UC Irvine PhD program	2019
Huajun Bai, Cornell Tech → blockdynamics	2018

Professional Activity

Workshop Organization

ViGIL: Visually Grounded Interaction and Language, at *NAACL*; with Cătălina Cangea, Abhishek Das, Drew Hudson, Jacob Krantz, Stefan Lee, Jiayuan Mao, Florian Strub, Erik Wijmans; Scientific Committee: Mateusz Malinowski, Aaron Courville, Olivier Pietquin, Harm de Vries 2021

IntEx-SemPar: Interactive Executable Semantic Parsing, at *EMNLP*; with Ben Bogin, Srinivasan Iyer, Victoria Lin, Panupong (Ice) Pasupat, Pengcheng Yin, Tao Yu, Rui Zhang, Victor Zhong; Steering Committee: Jonathan Berant, Graham Neubig, Yunyao Li, Caiming Xiong, Dragomir Radev, Luke Zettlemoyer 2020

ViGIL: Visually Grounded Interaction and Language, at *NeurIPS*; with Florian Strub, Harm de Vries, Erik Wijmans, Drew Hudson, Abhishek Das, Stefan Lee; Scientific Committee: Mateusz Malinowski, Chris Manning, Aaron Courville, Olivier Pietquin 2019

Senior Program Committee

Area Chair for NAACL-HLT, Resources and Evaluation track 2021

Conference Reviewing **Outstanding reviewer*

EMNLP, ACL*, NeurIPS, ICLR*, ICML, IJCAI 2021

EMNLP, ACL, NeurIPS*, CoNLL 2020

EMNLP, ACL, NeurIPS, CoNLL, NAACL-HLT 2019

EMNLP, ACL, COLING 2018

EMNLP, AAAI 2017

Workshop Reviewing

RoboNLP-SpLU, NLP4Prog, ALVR 2021

ACL SRW, LANTERN 2020

NAACL-HLT SRW, RoboNLP, SiVL, MRQA 2019

NAACL-HLT SRW, GenDeep 2018

Department Service

Co-President of PhD Students at Cornell Tech (PACT) 2019