

# Rodolfo Corona Rodriguez

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rcorona@berkeley.edu · rcorona.github.io · (210) 912 2989

## Education

### University of California Berkeley

*PhD in Computer Science*

*Advised by Trevor Darrell and Dan Klein*

Berkeley, CA

July 2019 - Present

### University of Amsterdam

*Fulbright Student Research Grant*

Amsterdam, Netherlands

June 2018 - June 2019

### University of Texas at Austin

*B.S., Computer Science*

*Turing Scholar, McNair Scholar*

GPA: 3.84

Honors Thesis: *An Analysis of Using Semantic Parsing for Speech Recognition*

Austin, TX

May 2018

## Interests

Embodied AI, Language Grounding, 3D Vision, Vision & Language, Robotics.

## Publications

[1] Li, B. **Corona, R.**, Mangalam, K., Chen, C., Flaherty, D., Bolongie, S., Weinberger, K. Q., Malik, J., Darrell, T., and Klein, D., “Re-evaluating the Need for Visual Signals in Unsupervised Grammar Induction” in *Findings of the 2024 Conference of the North American Chapter of the Association for Computational Linguistics* (NAACL), Mexico City, Mexico, June 2024.

[2] Mitra, C., Anwar, A., **Corona, R.**, Klein, D., Darrell, T., and Thomason, J., “Which One? Leveraging Context Between Objects and Multiple Views for Language Grounding” in *Proceedings of the 2024 Conference of the North American Chapter of the Association for Computational Linguistics* (NAACL), Mexico City, Mexico, June 2024.

[3] **Corona, R.**, Zhu, S., Klein, D., and Darrell, T., “Voxel-informed Language Grounding” in *Proceedings of the 2022 Conference of the Association for Computational Linguistics* (ACL), Dublin, Ireland, May. 2022.

[4] **Corona, R.**, Fried, D., Devin, C., Klein, D., and Darrell, T., “Modular Networks for Compositional Instruction Following,” in *Proceedings of the 2021 Conference of The North American Chapter of the Association for Computational Linguistics* (NAACL), Virtual, June. 2021.

[5] **Corona, R.**, Alaniz, S., and Akata, Z., “Modeling Conceptual Understanding in Image Reference Games,” in *Proceedings of the Thirty-third Conference on Advances in Neural Information Processing Systems (NeurIPS) (Spotlight presentation)*, Vancouver, BC, Dec. 2019.

[6] **Corona, R.**, Thomason, J., and Mooney, R.J., “Improving Black-box Speech Recognition using Semantic Parsing.” *8th International Joint Conference on Natural Language Processing (IJCNLP)*, Taipei, Taiwan, Nov. 2017.

## Workshop Publications

[1] Gaddy, D., Fried, D., Kitaev, N., Stern, M., **Corona, R.**, DeNero, J., and Klein, D., “Interactive Assignments for Teaching Structured Neural NLP” in *Proceedings of the Fifth Workshop on Teaching NLP, NAACL 2021*, Virtual, June. 2021.

[2] Lin, A.S, Wu, L., **Corona, R.**, Tai, K., Huang, Q., and Mooney, R.J., “Generating Animated Videos of Human Activities from Natural Language Descriptions,” *Proceedings of the NeurIPS Workshop on Visually Grounded Interaction and Language (ViGIL)*, Montreal, Quebec, Dec. 2018.

## Invited Talks

**Escuela Politécnica Nacional, AI and Vision Lab** Quito, Ecuador  
*Title: Comparative Referential Expression Grounding* February 21st, 2024

**Grupo Bursátil Mexicano (GBM)** Virtual  
*Title: Vision and Language in AI* December 6th, 2023

## Research Experience

**University of California Berkeley** Berkeley, California  
*Advised by Trevor Darrell and Dan Klein* July 2019 - Present  
Working on embodied AI and language grounding.

**University of Amsterdam** Amsterdam, Netherlands  
*Advised by Zeynep Akata* Summer 2018 - Spring 2019  
Research in XAI, particularly in the area of multiagent systems at the intersection between computer vision and NLP.

**University of Texas at Austin** Austin, TX  
*Advised by Raymond J. Mooney* Fall 2015 - Spring 2018  
Collected speech dataset, annotated with transcripts and semantic forms, and researched use for semantic parsing in speech recognition. Also worked on projects at intersection between NLP and robotics, as well as NLP and computer graphics.

**University of Texas at Austin**

Austin, TX

*Advised by Qixing Huang*

Fall 2016 - Spring 2018

Augmented motion capture dataset with natural language descriptions through crowdsourcing. Worked on using deep learning techniques for generating 3D animations of human motion given natural language descriptions.

**University of Massachusetts Amherst, REU Intern**

Amherst, MA

*Advised by Joydeep Biswas*

Summer 2016

Implemented a particle filter for localization of an outdoor robot using wheel odometry and GPS sensors. Collected dataset of robot sensor readings to test particle filter. Inquired into methods for performing outdoor visual localization.

Research  
Presentations

2022 SACNAS Conference

San Juan, PR

*Graduate Oral Presentation*

October 27 - 29, 2022

*Title: Voxel-Informed Language Grounding*

**Outstanding Research Presentation Award  
in Computer & Information Sciences**

Fulbright Berlin Seminar

Berlin, Germany

*Fulbright Ceremony Presentation*

March 18th, 2019

*Title: Explainable AI*

IJCNLP 2017

Taipei, Taiwan

*Poster presentation*

Nov. 27 - Dec. 2, 2017

*Title: Improving Black-box Speech Recognition*

*Using Semantic Parsing*

2017 Gulf Coast Undergraduate Research Symposium

Rice University

*10-minute Oral Presentation*

Houston, TX

*Title: Improving Black-box Speech Recognition*

November 4, 2017

*Using Semantic Parsing*

**Outstanding Presentation Award**

2017 SACNAS Conference

Salt Lake City, UT

*Poster Presentation*

October 19 - 21, 2017

*Title: Improving Black-box Speech Recognition*

*Using Semantic Parsing*

**Presenter Award in Computer & Information Sciences**

	19th Annual Texas National McNair Research Conference <i>10-minute oral presentation</i> <i>Title: An Analysis of Using Semantic Parsing for Speech Recognition</i>	Denton, TX February 16-19, 2017
Honors	NSF GRFP Fellow Ford Foundation Fellow Berkeley Chancellor's Fellowship Fulbright Student Research Grant GEM Fellowship (Declined) UT Austin College of Natural Sciences Research Excellence Award NAACL Scholarship for Jelinek Memorial Summer School UT Austin College of Natural Sciences Book Award for Academic Excellence Tracor/Frank McBee, Jr. Scholarship	Fall 2020 - Present Fall 2020 - Present Fall 2019 2018 - 2019 Academic Year Fall 2018 Spring 2018 Summer 2017 Spring 2016 2015 - 2016 Academic Year
Service	BAIR REU Organizer <i>Helped organize the summer 2021 BAIR Research Experience for Undergraduates, which recruited students from HBCUs.</i>	Spring 2021 - Summer 2022
	SUPERB REU Mentor <i>Mentored a visiting undergraduate student on a summer research project at UC Berkeley.</i>	Summer 2022
	TTE REU Mentor <i>Mentored a visiting community college student on a summer research project at UC Berkeley.</i>	Summer 2022
	RIIAA Board Member <i>Co-organizing an annual Latin American AI conference aimed at increasing participation in the AI community from Latin American researchers.</i>	Summer 2020 - Present
	BAIR Mentoring Program Organizer <i>Organized graduate student mentoring in the AI lab for undergrads.</i>	Spring 2020 - Fall 2021
	Berkeley EECS Bias Busters <i>Helped facilitate presentations and discussions about bias in the UCB EECS department and other organizations.</i>	2019 - 2020 Academic Year
	Coding in the Classroom <i>Helped teach elementary school kids to program Lego Mindstorm robots.</i>	2017 - 2018 Academic Year
	RoboCup@Home 2017 <i>Worked on natural language processing components for UT Austin Villa team.</i> <b>Team won 3<sup>rd</sup> Place</b>	Summer 2017

EMNLP 2016  
*Student Volunteer*

November 2016

Undergraduate Research Journal  
*Natural Sciences Assistant Editor*

2015 - 2016 Academic Year

Theatre for Dialogue  
*Interactive theatre for educating UT students  
about interpersonal and relationship violence.*

2014 - 2015 Academic Year

Project M.A.L.E.S.

Fall 2014

*Mentored at-risk high school students in the Austin area for college-readiness.*