




MARYNEL VÁZQUEZ

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Google Scholar 

I am an Assistant Professor in Yale's Computer Science Department. I study fundamental problems in Human-Robot Interaction, especially those related to enabling situated group interactions. My research approach is interdisciplinary: it combines elements of artificial intelligence, behavioral science, and design.

EDUCATION

- Ph. D., Robotics** August 2017
Carnegie Mellon University, Pittsburgh, PA
Dissertation: *Reasoning About Spatial Patterns of Human Behavior During Group Conversations with Robots*
Committee: A. Steinfeld (co-advisor), S. E. Hudson (co-advisor), K. Kitani, B. Scassellati (Yale University)
- M. S., Robotics** May 2013
Carnegie Mellon University, Pittsburgh, PA
- Computer Engineering** November 2008
Universidad Simón Bolívar, Caracas, VE
Summa cum laude

RESEARCH POSITIONS

- Assistant Professor**, Computer Science Department, Yale University, CT Summer 2018 - Present
Lead of the Interactive Machines Group (<http://interactive-machines.com/>)
- Post Doctoral Scholar**, Computer Science Department, Stanford University, CA Summer 2017 - 2018
Member of the Stanford Vision and Learning Lab
- Lab Associate (Intern)**, Disney Research, Pittsburgh, PA Summer 2012, Fall 2013, Fall 2014

PRIZES, HONORS & AWARDS

- Four best paper nomination awards (HRI'21, IROS'18 and RO-MAN'16)
- One best poster nomination award (HAI'20)
- 2020 Amazon Research Award
- 2019 Amazon Research Award
- 2014-2015 Generation Google Scholar
- Finalist of the 2012 Google Anita Borg Memorial Scholarship
- 2010 Apple Women in Engineering Scholar

FUNDING

- **HCC: Medium: Proactive Physical Assistance for Collaborative Human-Robot Teams.** Principal Investigator: Brian Scassellati (Yale). Co-PI(s): Marynel Vázquez, Julian Jara-Ettinger (Yale). Award Amount: \$1,199,999. Funding Period: Oct. 1, 2021 - Sept. 30, 2025
- **2020 Amazon Research Award: Evaluating Social Robot Navigation via Online Human-Driven Simulations.** PI: Marynel Vázquez. Award Amount: \$80,000 + \$20,000 in AWS credits.
- **Yale Center for Research Computing, 2020-2021 AWS Research Credits Program.** PI: Marynel Vázquez. Award Amount: \$8,000 in AWS credits.

- **2019 Amazon Research Award: Improving Robot Navigation via Group Interaction Awareness.** PI: Marynel Vázquez. Award Amount: \$80,000 + \$20,000 in AWS credits.
- **NRI: FND: Spatial Patterns of Behavior in Human-Robot Interaction Under Environmental Spatial Constraints.** PI: Marynel Vázquez. Award Amount: \$499,059. Funding Period: Sept. 1, 2019 - Aug. 31, 2022.

BOOK CHAPTERS

- [B1] Sarah Gillet, **Marynel Vázquez**, Christopher Peters, Fangkai Yang, and Iolanda Leite. Multiparty Interaction Between Humans and Socially Interactive Agents. In C. Pelachaud, B. Lugrin, and D. Traum, editors, *Handbook on Socially Interactive Agents*, chapter 17. ACM, (in press).

JOURNAL ARTICLES

- [J4] **Marynel Vázquez**, Alexander Lew, Eden Gorevoy, and Joe Connolly. Pose Generation for Social Robots in Conversational Group Formations. *Frontiers in Robotics and AI*, page 341, December 2021. [2020 Scopus' CiteScore: 4.4]
- [J3] Brian Scassellati and **Marynel Vázquez**. The Potential of Socially Assistive Robots During Infectious Disease Outbreaks. *Science Robotics*, 5(44), July 2020. [JCR Impact Factor: 18.684]
- [J2] Mason Swofford, John Peruzzi, Nathan Tsoi, Sydney Thompson, Roberto Martín-Martín, Silvio Savarese, and **Marynel Vázquez**. Improving Social Awareness Through DANTE: Deep Affinity Network for Clustering Conversational Interactants. *Proc. ACM Hum.-Comput. Interact.*, 4(CSCW1), May 2020.
- [J1] **Marynel Vázquez** and Aaron Steinfeld. An Assisted Photography Framework to Help Visually Impaired Users Properly Aim a Camera. *ACM Transactions on Computer-Human Interaction (TOCHI)*, 21(5):25, 2014. [ISI Impact Factor: 1.293]

CONFERENCE PUBLICATIONS

- [C24] Sydney Thompson*, Abhijit Gupta*, Anjali W. Gupta, Austin Chen, and **Marynel Vázquez**. Conversational Group Detection with Graph Neural Networks. In *Proceedings of the 23rd ACM International Conference on Multimodal Interaction (ICMI)*. ACM, October 2021. [* denotes equal contribution]
- [C23] Nathan Tsoi, Mohamed Hussein, Olivia Fugikawa, J. D. Zhao, and **Marynel Vázquez**. An Approach to Deploy Interactive Robotic Simulators on the Web for HRI Experiments: Results in Social Robot Navigation. In *Proceedings of the IEEE/RSJ International Conference on Intelligent Robots and Systems (IROS)*. IEEE, September 2021. [45% Accept. Rate]
- [C22] Kevin Chen, Junshen K. Chen, Jo Chuang, **Marynel Vázquez**, and Silvio Savarese. Topological Planning with Transformers for Vision-and-Language Navigation. In *IEEE/CVF Conference on Computer Vision and Pattern Recognition (CVPR)*, June 2021. [23% Accept. Rate]
- [C21] Nathan Tsoi, Joe Connolly, Emmanuel Adéniran, Amanda Hansen, Kaitlynn T. Pineda, Timothy Adamson, Sydney Thompson, Rebecca Ramnauth, **Marynel Vázquez**, and Brian Scassellati. Challenges Deploying Robots During a Pandemic: An Effort to Fight Social Isolation Among Children. In *Proceedings of the 2021 ACM/IEEE International Conference on Human-Robot Interaction (HRI)*, March 2021. **Best Paper Award Finalist**. [23% Accept. Rate]
- [C20] **Marynel Vázquez**, Yofti Milkessa, Michelle M. Li, and Neha Govil. Gaze by Semi-Virtual Robotic Heads: Effects of Eye and Head Motion. In *IEEE/RSJ International Conference on Intelligent Robots and Systems (IROS)*. IEEE, October 2020. [47% Accept. Rate]

- [C19] Kevin Chen, **Marynel Vázquez**, and Silvio Savarese. Localizing Against Drawn Maps via Spline-Based Registration. In *IEEE/RSJ International Conference on Intelligent Robots and Systems (IROS)*. IEEE, October 2020. [47% Accept. Rate]
- [C18] Joe Connolly, Viola Mocz, Nicole Salomons, Joseph Valdez, Nathan Tsoi, Brian Scassellati, and **Marynel Vázquez**. Prompting Prosocial Human Interventions in Response to Robot Mistreatment. In *Proceedings of the 2020 ACM/IEEE International Conference on Human-Robot Interaction (HRI)*, March 2020. [24% Accept. Rate]
- [C17] Tim Adamson, C. Burton Lyng-Olsen, Kendrick Umstatted, and **Marynel Vázquez**. Designing Social Interactions with a Humorous Robot Photographer. In *Proceedings of the 2020 ACM/IEEE International Conference on Human-Robot Interaction (HRI)*, March 2020. [24% Accept. Rate]
- [C16] Kevin Chen, Juan Pablo de Vicente, Gabriel Sepulveda, Fei Xia, Alvaro Soto, **Marynel Vázquez**, and Silvio Savarese. A Behavioral Approach to Visual Navigation with Graph Localization Networks. In *Proceedings of Robotics: Science and Systems (R:SS)*, June 2019. [31% Accept. Rate]
- [C15] Ashwini Pokle, Roberto Martín-Martín, Patrick Goebel, Vincent Chow, Hans Magnus Ewald, Junwei Yang, Zhenkai Wang, Amir Sadeghian, Dorsa Sadigh, Silvio Savarese, and **Marynel Vázquez**. Deep Local Trajectory Replanning and Control for Robot Navigation. In *Proceedings of the 2019 IEEE International Conference on Robotics and Automation (ICRA)*, May 2019. [46% Accept. Rate]
- [C14] Xiaoxue Zang, Ashwini Pokle, **Marynel Vázquez**, Kevin Chen, Juan Carlos Niebles, Alvaro Soto, and Silvio Savarese. Translating Navigation Instructions in Natural Language to a High-Level Plan for Behavioral Robot Navigation. In *Proceedings of the 2018 Conference on Empirical Methods in Natural Language Processing (EMNLP)*, October 2018. [25.5% Accept. Rate]
- [C13] Noriaki Hirose, Amir Sadeghian, **Marynel Vázquez**, Patrick Goebel, and Silvio Savarese. GONet: A Semi-Supervised Deep Learning Approach For Traversability Estimation. In *Proceedings of the 2018 IEEE/RSJ International Conference on Intelligent Robots and Systems (IROS)*, October 2018. *Finalist of the Best Paper Award on Safety Security and Rescue Robotics in memory of Motohiro Kiso*. [46.7% Accept. Rate]
- [C12] Xiang Zhi Tan, **Marynel Vázquez**, Elizabeth J Carter, Cecilia G Morales, and Aaron Steinfeld. Inducing Bystander Interventions During Robot Abuse with Social Mechanisms. In *Proceedings of the 2018 ACM/IEEE International Conference on Human-Robot Interaction (HRI)*, pages 169–177. ACM, March 2018. [23% Accept. Rate]
- [C11] **Marynel Vázquez**, Elizabeth J Carter, Braden McDorman, Jodi Forlizzi, Aaron Steinfeld, and Scott E Hudson. Towards Robot Autonomy in Group Conversations: Understanding the Effects of Body Orientation and Gaze. In *Proceedings of the 2017 ACM/IEEE International Conference on Human-Robot Interaction (HRI)*, pages 42–52. ACM, 2017. [24% Accept. Rate]
- [C10] **Marynel Vázquez**, Aaron Steinfeld, and Scott E. Hudson. Maintaining Awareness of the Focus of Attention of a Conversation: A Robot-Centric Reinforcement Learning Approach. In *2016 IEEE International Symposium on Robot and Human Interactive Communication (RO-MAN)*. IEEE, 2016. *Finalist of the Best Paper Award (Tech. category) and the RSJ/KROS Distinguished Interdisciplinary Research Award*. [47% Accept. Rate]
- [C9] **Marynel Vázquez**, Aaron Steinfeld, and Scott E Hudson. Parallel Detection of Conversational Groups of Free-Standing People and Tracking of their Lower-Body Orientation. In *IEEE/RSJ International Conference on Intelligent Robots and Systems (IROS)*. IEEE, 2015. [48% Accept. Rate]
- [C8] **Marynel Vázquez**, Eric Brockmeyer, Ruta Desai, Chris Harrison, and Scott E Hudson. 3D Printing Pneumatic Device Controls with Variable Activation Force Capabilities. In *Proceedings of the 33rd Annual ACM Conference on Human Factors in Computing Systems (CHI)*, pages 1295–1304, 2015. [25% Accept. Rate]

- [C7] **Marynel Vázquez**, Aaron Steinfeld, Scott E Hudson, and Jodi Forlizzi. Spatial and Other Social Engagement Cues in a Child-Robot Interaction: Effects of a Sidekick. In *Proceedings of the 2014 ACM/IEEE international conference on Human-Robot Interaction (HRI)*, pages 391–398, 2014. [24% Accept. Rate]
- [C6] Munjal Desai, Mikhail Medvedev, **Marynel Vázquez**, Sean McSheehy, Sofia Gadea-Omelchenko, Christian Bruggeman, Aaron Steinfeld, and Holly Yanco. Influence of Situation Awareness on Control Allocation for Remote Robots. In *IEEE International Conference on Technologies for Practical Robot Applications (TePRA)*, 2013.
- [C5] **Marynel Vázquez** and Aaron Steinfeld. Helping Visually Impaired Users Properly Aim a Camera. In *Proceedings of the 14th international ACM SIGACCESS Conference on Computers and Accessibility (ASSETS)*, pages 95–102, 2012. [28% Accept. Rate]
- [C4] Munjal Desai, Mikhail Medvedev, **Marynel Vázquez**, Sean McSheehy, Sofia Gadea-Omelchenko, Christian Bruggeman, Aaron Steinfeld, and Holly Yanco. Effects of Changing Reliability on Trust of Robot Systems. In *Proceedings of the 7th ACM/IEEE International Conference on Human Robot Interaction (HRI)*, 2012. [25% Accept. Rate]
- [C3] **Marynel Vázquez** and Aaron Steinfeld. An Assisted Photography Method for Street Scenes. In *2011 IEEE Workshop on Applications of Computer Vision (WACV)*, pages 89–94. IEEE, 2011.
- [C2] **Marynel Vázquez**, Alexander May, Aaron Steinfeld, and Wei-Hsuan Chen. A Deceptive Robot Referee in a Multiplayer Gaming Environment. In *Collaboration Technologies and Systems (CTS), 2011 International Conference on*, pages 204–211. IEEE, 2011.
- [C1] **Marynel Vázquez** and Carolina Chang. Real-time Video Smoothing for Small RC Helicopters. In *Proceedings of the 2009 IEEE International Conference on Systems, Man and Cybernetics (SMC)*, pages 4019–4024, 2009.

PEER-REVIEWED SHORT PAPERS

- [S8] Joe Connolly, Nathan Tsoi, and **Marynel Vázquez**. Perceptions of conversational group membership based on robots’ spatial positioning: Effects of embodiment. In *Companion of the 2021 ACM/IEEE International Conference on Human-Robot Interaction*, Companion HRI ’21, 2021.
- [S7] Nathan Tsoi, Mohamed Hussein, Jeacy Espinoza, Xavier Ruiz, and **Marynel Vázquez**. Sean: Social environment for autonomous navigation. In *Proceedings of the 8th International Conference on Human-Agent Interaction (HAI)*, pages 281–283, 2020. *Finalist of the Best Poster Award (Runner Up 1st Place)*.
- [S6] Jamie Large, Graham Stodolski, and **Marynel Vázquez**. Studying human-agent interactions in space invaders. In *Proceedings of the 8th International Conference on Human-Agent Interaction (HAI)*, page 245–247, 2020.
- [S5] Xiaoxue Zang, **Marynel Vázquez**, Juan Carlos Niebles, Alvaro Soto, and Silvio Savarese. Behavioral indoor navigation with natural language directions. In *Companion of the 2018 ACM/IEEE International Conference on Human-Robot Interaction (HRI)*, pages 283–284. ACM, 2018.
- [S4] **Marynel Vázquez**, Elizabeth J. Carter, Jodi Forlizzi, Scott E. Hudson, and Aaron Steinfeld. Methods for studying group interactions in hri. In *Robots in Groups and Teams, CSCW 2017 Workshops*, 2017.
- [S3] **Marynel Vázquez**, Elizabeth J Carter, Jo Ana Vaz, Jodi Forlizzi, Aaron Steinfeld, and Scott E Hudson. Social group interactions in a role-playing game. In *Proceedings of the Tenth Annual ACM/IEEE International Conference on Human-Robot Interaction (HRI) Extended Abstracts*, pages 9–10. ACM, 2015.

[S2] **Marynel Vázquez** and Aaron Steinfeld. Facilitating photographic documentation of accessibility in street scenes. In *CHI'11 Extended Abstracts on Human Factors in Computing Systems*, pages 1711–1716. ACM, 2011.

[S1] **Marynel Vázquez**, Alexander May, and Wei-Hsuan Chen. Shaketime! a persuasive robotic game. In *Proceedings of the 9th AAAI Conference on Enabling Intelligence Through Middleware*, 2010.

TECHNICAL REPORTS

[T1] **Marynel Vázquez**. *Reasoning About Spatial Patterns of Human Behavior During Group Conversations with Robots*. PhD thesis, Carnegie Mellon University, Jul 2018.

SELECTED PRESS

The Atlantic (04/19/2021). "No, You're Crying About a Helicopter on Mars"

Yale Engineering Magazine (11/23/2020). "Bleep-Bloop-Bleep! Say 'Cheese,' Human"

The Wall Street Journal (11/02/2020). "What Makes People Abuse Robots"

Analytics Insight (08/21/2020). "Demystifying the pro-social behavior of robots through Abuse"

IEEE Spectrum (08/19/2020). "Can Robots Keep Humans from Abusing Other Robots?"

The Norwalk Hour (07/03/2020). "Let's play, without leaving homes"

CT Insider (07/01/2020). "You can't come over, but we can play with the robot, thanks to Yale students"

Yale News (06/09/2020). "Fighting Social Isolation with Robots"

Stanford News (09/28/2018). "Stanford's JackRabbit 2: The polite pedestrian robot"

Nvidia Blog (04/03/2018). "Robot See, Robot Do: Bots Learn by Watching Human Behavior"

The Architect Show (09/01/2017). "AI Show: Marynel Vázquez on social integration for robots and people"

The Economist (08/08/2015). "Summon the comfy chairs! Domestic furniture may soon have a mind of its own"

3Deveryday.com (05/12/2015). "Variable Activation 3D Printed Controls Researched by Disney"

3DPrint.com (05/11/2015). "Disney is Researching Variable Activation 3D Printed Controls"

The Link Magazine (09/01/2013). "Maker culture: Bringing research to life"

KinectHacks (03/01/2011). "Kinect with Interactive Projection Mapping"

INVITED TALKS

DREAM/CITRIS People and Robots Seminar Series , Berkeley, CA	November 2021
Talking Robotics , Virtual Seminar	October 2021
Rice Computer Science Seminar , TX, USA	October 2021
LatinX in AI Workshop, ICML 2021	July 2021
2nd Workshop on Visual Perception for Navigation in Human Environments, CVPR 2021	June 2021
CS@Mines Seminar , Colorado School of Mines, CO, USA	November 2020
Yale Computer Systems Lab , Yale University, CT, USA	March 2020
15th Annual HRI Pioneers Workshop (Keynote speaker) , UK – cancelled due to COVID	March 2020
National Robotics Initiative PI Meeting , VA, USA	February 2020
Behavioral Science Forum on AI , Johns Hopkins University, MD, USA	September 2019
Google PAIR , Google, CA, USA	June 2019
Platform for Situated Intelligence Workshop , Microsoft Research, WA, USA	June 2019
Stanford Human-Computer Interaction Seminar , Stanford University, CA, USA	May 2019
Autonomous Mobile Robotics Laboratory , UMass Amherst, CT, USA	November 2018
NSF Workshop on Embodied Conversational Agents and Social Robots , CO, USA	October 2018
Nvidia GTC Conference , CA, USA	March 2018
NASA Ames Intelligent Robotics Group (IRG) , CA, USA	November 2017
Stanford AI Lab , Stanford University, CA, USA	June 2017

Robotics Institute, Carnegie Mellon University, PA, USA	April 2017
Computer Science Department, University of Texas at Austin, NY, USA	April 2017
Computer Science Department, Yale University, CT, USA	March 2017
Computer Science Department, Columbia University, NY, USA	March 2017
Disney Research Los Angeles, CA, USA	March 2017
Human Centered Design and Engineering, University of Washington, WA, USA	March 2017
Computer Science Department, CU Boulder, CO, USA	Feb 2017
Robotics Seminar, Oregon State University, OR, USA	Feb 2017
CSCW-17 Robots in Groups and Teams Workshop, OR, USA	February 2017
3D Printing Summit, Carnegie Mellon University, PA, USA	January 2017
Social Robotics Lab, Yale University, CT, USA	July 2015
International Social Human-Robot Interaction Summer School, CBG, UK	August 2013
Human-Robot Interaction Pioneers Workshop, MA, USA	March 2012
Computer Engineering Department, Universidad Simón Bolívar, Caracas, VE	September 2011

TEACHING

Courses that I designed and was the instructor for:

– Building Interactive Machines, Yale University

This project-based course brings together methods from Machine Learning, Computer Vision, Robotics, and Human-Computer Interaction to enable interactive machines to perceive and act in dynamic environments. Part of the course examines approaches for perception with a variety of devices and algorithms; the other part focuses on methods for decision making. The course is a combination of lectures, reviews of state-of-the-art papers, discussions, coding assignments, and a final team project.

Offerings: Fall 2021 (CPSC 459/559), Fall 2020 (CPSC 459/559), Fall 2019 (re-numbered to CPSC 459/559), Fall 2018 (CPSC 659)

– Introduction to Human-Computer Interaction, Yale University

This course introduces students to the interdisciplinary field of Human-Computer Interaction (HCI). It covers principles and techniques in the design, development, and evaluation of interactive systems, and provides students with an introduction to UX Design and User-Centered Research. Additionally, some classes will focus on emergent areas within HCI. The course is organized as a series of lectures, presentations, a mid-term exam, and group projects on designing new interactive systems.

Offerings: Spring 2021 (re-numbered to CPSC 484/548), Spring 2019 (CPSC 429/529)

GUEST LECTURES

CPSC 472/572: Intelligent Robotics, Yale University, CT, USA	September 2021
CS331B: Interactive Simulation for Robot Learning, Stanford University, CA, USA	May 2021
CGSC 395: Junior Colloquium in Cognitive Science, Yale University, CT, USA	November 2020
CPSC 470/570: Artificial Intelligence, Yale University, CT, USA	April 2020
CPSC 472/572: Intelligent Robotics, Yale University, CT, USA	September 2019
CPSC 470/570: Artificial Intelligence, Yale University, CT, USA	February 2019
RI 16-867: Human-Robot Interaction, Carnegie Mellon University, PA, USA	April 2017

STUDENT SUPERVISION

Current Ph.D. Students

1. Nathan Tsoi (2019 -)
2. Sydney Thompson (2019 -)
3. Kate Candon (2020 -)

4. Qiping Zhang (2021 -)
5. Austin Narcomey (2021 -)

Ph.D. Dissertation Committee Member

1. Aditi Ramachandran, Yale Computer Science (advisor: B. Scassellati; defended: 06/28/2018)
2. Corina Grigore, Yale Computer Science (advisor: B. Scassellati; defended: 08/28/2018)
3. Sarah Sebo, Yale Computer Science (advisor: B. Scassellati; defended: 05/13/2020)
4. Tao Yu, Yale Computer Science (advisor: Dragomir Radev; defended: 03/10/2020)
5. Angelique Taylor, UCSD Computer Science and Engineering (advisor: Laurel Riek; defended: 06/04/2021)
6. Gabriel Sepúlveda, Pontificia Universidad Católica de Chile (advisor: Álvaro Soto)
7. Andrew Morgan, Yale Mechanical Engineering (advisor: Aaron Dollar)
8. Irene Li, Yale Computer Science (advisor: Dragomir Radev)

Ph.D. Area Exam Member

1. Sherry Qiu, Yale Computer Science (advisor: Julie Dorsey; exam date: 05/30/2019)
2. Nicole Salomons, Yale Computer Science (advisor: B. Scassellati; exam date: 11/15/2018)
3. Jake Brawer, Yale Computer Science (advisor: B. Scassellati; exam date: 11/14/2018)
4. Alexander Tong, Yale Computer Science (advisor: Smita Krishnaswamy; exam date: 07/08/2020)
5. Tim Adamson, Yale Computer Science (advisor: Brian Scassellati; exam date: 07/15/2021)

Completed M.S. Independent Projects (Yale CPSC 692)

1. Yifan Li, *Future Engagement* (Fall 2021)
2. Jason Chen, *Sound Localization* (Spring 2019)

Completed Undergraduate Thesis Projects (Yale CPSC 490 unless noted)

2021-2022

1. Joe Connolly
2. Greg Schwartz
3. Alex (Sasha) Lew (Computing and the Arts)
4. Yofti Milkessa

2020-2021

1. Yash Samantaray, *Determining Socially Acceptable Positions in Typical Human Group Formations Using a Wasserstein Generative Adversarial Network*
2. Sally Ma, *Learning Motion Policies with Variational Autoencoder, Feature Disentanglement, and Temporal Coherence* (Statistics & Data Science)
3. Will Hu, *Learning to Orient in Group Conversations via Social State Abstraction*
4. Malak Khan, *3-Dimensional Human Mental State Modeling Through Video Footage*
5. Daniel Lee, *Deep Learning-based Anomaly Detection for Social Robot Navigation* (Statistics & Data Science) and *Direct Metric Optimization for Multi-Class Object Recognition* (CS)

2019-2020

1. Simon Mendelsohn, *Human-AI Interaction and Space Invaders*
2. Sally Ma, *Learning to Orient Towards the Focus of Attention in a Group Conversation Using Variational Auto-encoders*
3. Ananya Parthasarathy, *An Investigation of AI-Human Cooperation*
4. Isabella Teng, *Evaluating In-the-Wild Human-Robot Interactions With A Social Robot Photographer*
5. Allan Wu, *Deep Learning-Based Anomaly Detection for Time Series*
6. Claire Gorman, *Tabula Rasa* (Computing and the Arts)
7. Joseph Valdez, *Investigating Social Influences within Human Robot Interactions* (Psychology)

2018-2019

1. Dibyanoy Bhattacharjee, *Long-Distance Human Gaze Tracking for Interactive Robots*
2. Peter Zhou, *Long-Distance Human Gaze Tracking for Interactive Robots*
3. David Shin, *Group Size and Behavior Patterns in Gaze Direction by Robots*
4. Kendrick Umstadd, *Marie: An Artificially Intelligent Camera*
5. Jared Weinstein, *Multi-agent RL for Cooperation in Social Dilemmas*
6. Roland Huang, *Deep Empathy Prediction Using Attention-based Multimodal Fusion*
7. Julia Lu, *Deep Empathy Prediction Using Attention-based Multimodal Fusion*
8. Tommy Huang, *?Where (Computing and the Arts)*
9. Jack Wesson, *Optical Glow (Computing and the Arts)*
10. Devon Merlette, *Yale Logo Detection (Computing and the Arts)*
11. Alexander Wisowaty, *Group Human-Robot Interaction: A Review (Cognitive Science)*

Completed Undergraduate Directed Research Projects (Yale CPSC 290)

2021-2022

1. Megha Joshi, *Investigation of Robots Influencing Social Context Based on Gaze Behavior*

2020-2021

1. Austin Chen, *Conversational Group Detection through Deep Learning and Graph Clustering*
2. Yoony Kim, *Human-Agent Interactions in Space Invaders*
3. Olivia Fugikawa, *Evaluating the ROS Navigation Stack with SEAN and SEAN-EP*

2019-2020

1. Jeacy Espinoza, *Implementation of a Virtual Box for Controlled and Effective Human-Robot Interaction*
2. William Hu, *VAEViz: A Visualization Tool for Understanding Variational Autoencoders*
3. Greg Schwartz, *Using Reputation-sensitive Motivation to Improve Cooperation in Intertemporal Social Dilemmas*
4. Abhijit Gupta, *Improving Social Awareness and Group Detection through Deep Learning*
5. Malak Khan, *Spatial Patterns of Behavior in HRI Under Environmental Spatial Constraints*

2018-2019

1. Joe Connolly, *Investigating Robot Abuse in Human-Robot Interaction Scenarios*
2. Simon Mendelsohn, *Creating and Studying Interactive 3-Dimensional Models of Robots*
3. Ileana Valdez, *Decreasing the Mona Lisa Effect in Robot Gaze (Fall) and Reducing the Mona Lisa Effect Through a Gaze Calibration Package (Spring)*
4. Annie Gao, *Enhancing Human Interaction and Camera Technique in Robot Photography*
5. Ananya Parthasarathy, *Investigating Robot Abuse in Social Situations*

Supervised Undergraduate Research Assistants and Research Fellows

1. Anjali Gupta (2021, Hahn Scholar)
2. Alec Xiang (2021)
3. Jamie Large (2020)
4. Graham Stodolski (2020, 2020 Yale College First-Year Summer Research Fellow)
5. J.D. Zhao (2020, 2020 Yale College First-Year Summer Research Fellow)
6. Abhijit Gupta (2020-2021)
7. Xavier Ruiz (2020)
8. Eden Gorevoy (2019-2021, Hahn Scholar)
9. Annie Gao (2019)
10. Joe Connolly (2019-2021)
11. Joseph Valdez (2019)
12. Greg Schwartz (2019-2021, 2019 Yale College First-Year Summer Research Fellow)

13. Michelle M. Li (2019, 2019 STARS Summer Research fellow)
14. Yofti Milkessa (2019-2020, 2019 STARS Summer Research fellow)

High-school Interns

1. C. Burton Lyng-Olsen (2019; now undergrad at Yale)
2. Neha Govil (2018; now undergrad at MIT)

STUDENT AWARDS

Nathan Tsoi (PhD Student): Teresa and Joshy Joseph Scholar (by the Nathan Hale Associates Program), 2021 HRI Pioneer, Alan J. Perlis Graduate Fellow

Joe Connolly (Undergrad Research Assistant): 2020 HRI Pioneer

PROFESSIONAL ACTIVITIES

NSF National Robotics Initiative/Foundation Research in Robotics PI Meeting	2021-2022
Technical Co-Chair for the annual PI meeting	
Kimball Smith Series, Yale University, CT, USA	2021
Panelist in the AI Ethics on the Global Stage event	
Frontiers in Robotics & AI	2021
Co-editor of the Social Dynamics in Multi-Agent Groups and Teams Research Topic	
At Large Steering Committee Member, ACM/IEEE Int'l Conf. on Human-Robot Interaction	2021-2023
(Junior) At Large Steering Committee Member of the HRI Conference	
2021 HRI Late-Breaking Reports, ACM/IEEE Int'l Conf. on Human-Robot Interaction	2020-2021
Co-Chair for the Late Breaking Reports venue	
Computing Innovation Fellows Program	2020, 2021
Served as reviewer to support PhD graduates in computing in light of the COVID-19 pandemic	
U.S. Robotics Roadmap Workshop, UMass Lowell, MA, USA	November 2019
Collaborated with colleagues to help define the 2020 U.S. Robotics Roadmap	
Dagstuhl Seminar 19411: Social Agents for Teamwork and Group Interactions, GER	October 2019
Invited participant	
NESS-NextGen Data Science Day, Yale University, CT, USA	October 2018
Panelist in "Recent developments and future trends in machine learning/deep learning"	
Women in Robotics IV at Robotics: Science and Systems 2018, PA, USA	June 2018
Workshop co-organizer	
The First Workshop on Joint Detection, Tracking, and Prediction in the Wild, UT, USA	June 2018
Workshop co-organizer	
National Science Foundation Panel Member, VA, USA	2018-2021
Invited reviewer	
Women in Robotics III, R:SS Workshops, MA, USA	July 2017
Invited panelist	
2013 HRI Pioneers Workshop, ACM/IEEE Int'l Conf. on Human-Robot Interaction	2012-2013
Member of the organizing committee for the workshop	

Program Committees

- ACM/IEEE International Conference on Human Robot Interaction (HRI), 2018-2020
- ACM Conference on Human Factors in Computing Systems (CHI), 2018-2022

- International Joint Conference on Artificial Intelligence (IJCAI), 2021-2024 (senior PC member)
- AAAI Conference on Artificial Intelligence, 2021
- ACM Symposium on User Interface Software and Technology (UIST), 2018, 2019

Occasional Reviewer

Journals: Frontiers Robotics and AI, Transactions on Human Robotics Interaction (THRI), Autonomous Robots (AURO), International Journal of Robotics Research (IJRR), ACM on Interactive, Multimedia, Wearable and Ubiquitous Technologies (IMWUT)

Conferences: ACM/IEEE International Conference on Human-Robot Interaction (HRI), ACM Conference on Human Factors in Computing Systems (CHI), ACM User Interface Software and Technology Symposium (UIST), IEEE/RSJ International Conference on Intelligent Robots and Systems (IROS), International Symposium on Robot and Human Interactive Communication (RO-MAN), ACM International Conference on Multimodal Interaction (ICMI), IEEE-RAS International Conference on Humanoid Robots (HUMANOIDS), Robotics: Science and Systems (R:SS)

YALE UNIVERSITY COMMITTEES / SERVICE

- Freshman Advisor for CS Majors, 2021-2022
- Member of the Cognitive Science Executive Committee, 2021-2022
- Member of the Cognitive Science Faculty Recruiting Committee 2021-2022
- Member of the Computer Science Faculty Recruiting Committee & AI Specialist Cmte., 2020-2022
- Member of the Computer Science PhD Admissions Committee, 2018-2022

OUTREACH ACTIVITIES

Women in Robotics , MA, USA Presented my research to the robotics community in the Boston area	August 2021
Yale Young Global Scholars (YYGS) Program , Yale University, CT, USA Presented my research to high-school students from all around the world	June 2021
Harvard WECODE 2021 Invited panelist for the session "State of the Art CS Research"	March 2021
INFORMS en Español Presented my research in Spanish to Hispanic/Latinx students from all around the world	December 2020
Yale Computer Science (CS) Information Session for URM , Yale University, CT, USA Served as panelist to help attract prospective graduate students to our graduate programs in CS	November 2020
Future Digileaders 2020 , KTH, Stockholm, SE Invited panelist for the session "What to expect from an academic career"	November 2020
College Insider podcast , ATHENA by Women in STEM Invited speaker in podcast that strives to support female high school students interested in STEM careers	November 2020
CodeHaven , Yale University, CT, USA Presented my work to more than a 100 middle school children from the local New Haven area	November 2020
SheCode , Yale University, CT, USA Talked about robotics to 30 middle school girls from the local New Haven area	October 2020
Yale Young Global Scholars (YYGS) Program , Yale University, CT, USA Presented my research to high-school students from all around the world	July 2020

Yale Undergrad Summer Online Research Workshop , Yale University, CT, USA Presented my research to Yale undergrads who received Yale College research fellowships	July 2020
Faculty STARS Lecture Series , Yale University, CT, USA Presented my research to historically underrepresented Yale students in the sciences and engineering	February 2020
Yale Young Global Scholars (YYGS) Program , Yale University, CT, USA Presented my research to high-school students from all around the world	June 2019
Stanford AI4ALL , Stanford University, CA, USA Demonstrated my research in robotics to 9th grade female students	June 2018
Creative Technology Nights (TechNights) , Carnegie Mellon University, PA, USA Regularly volunteered to help run Computer Science workshops for local middle school girls	2014-2017
Fusion Forum , Carnegie Mellon University, PA, USA Introduced CMU's Robotics Institute to people from Historically Black Colleges	November 2013
Third National Robotics Competition (CCSBOTS) , Caracas, VE Presented my research to undergraduate students in Venezuela to motivate them to engage in research	September 2013
National Robotics Week , Carnegie Mellon University, PA, USA Demonstrated my research to attendees from the Pittsburgh area	March 2011
First Lego League , National Robotics Engineering Center, PA, USA Served as a judge in the event	December 2009
Gwen's girls and Women@SCS , Carnegie Mellon University, PA, USA Helped run a robotics workshop for middle school girls from at risk backgrounds	October 2009

MEMBERSHIPS

- Association for Computing Machinery, SIGCHI
- IEEE, Robotics and Automation Society Membership
- AAAI