NICK WALKER

Ph.D. Student in Computer Science

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Education

2018— The University of Washington, Seattle, WA.
- Ph.D. Computer Science

2018–20 The University of Washington, Seattle, WA.
- MS Computer Science

2014–18 The University of Texas, Austin, TX.
- BSA Computer Science
- Polymathic Scholar (Interdisciplinary Honors)

Conference

[c8] "Influencing Behavioral Attributions to Robot Motion During Task Execution." N. Walker, C. Mavrogiannis, S. Srinivasa, M. Cakmak. *Conf. Robot Learning*. London, UK, November 2021

[c7] "Learning Backchanneling Behaviors for a Social Robot via Data Augmentation from Human-Human Conversations." M. Murray, N. Walker, A. Nanavati, P. Alves-Oliveira, N. Filippov, A. Sauppe, B. Mutlu, M. Cakmak. *Conf. Robot Learning*. London, UK, November 2021

[c6] "Human Perceptions of a Curious Robot that Performs Off-Task Actions." N. Walker, K. Weatherwax, J. Alchin, L. Takayama, M. Cakmak. *ACM/IEEE Int. Conf. Human-Robot Interaction*. Oxford, UK, March 2020

[c5] "Open-World Reasoning for Service Robots." Y. Jiang*, N. Walker*, J. Hart, P. Stone. *Proc. 29th Int. Conf. Automated Planning Scheduling*. Berkeley, July 2019

[c4] "Improving Grounded Natural Language Understanding through Human-Robot Dialog." J. Thomason, A. Padmakumar, J. Sinapov, N. Walker, Y. Jiang, H. Yedidsion, J. Hart, P. Stone, R. J. Mooney. *Int. Conf. Robotics Automation*. Montreal, May 2019

[c3] "PRISM: Pose Registration for Integrated Semantic Mapping." J. W. Hart, R. Shah, S. Kirmani, N. Walker, K. Baldauf, N. John, P. Stone. *2018 IEEE/RSJ Int. Conf. Intelligent Robots Systems*. Madrid, Spain, October 2018

[c2] "Automatic Curriculum Graph Generation for Reinforcement Learning Agents." M. Svetlik, M. Leonetti, J. Sinapov, R. Shah, N. Walker, P. Stone. *Proc. Thirty-First AAAI Conf. Artificial Intelligence*. San Francisco, February 2017

[c1] "Wearable ear EEG for brain interfacing." E. D. Schroeder, N. Walker, A. S. Danko. *Proc. of SPIE 10051, Neural Imaging Sensing*. San Francisco, February 2017

Journal

[j1] "Jointly Improving Parsing and Perception for Natural Language Commands through Human-Robot Dialog." J. Thomason, A. Padmakumar, J. Sinapov, N. Walker, Y. Jiang, H. Yedidsion, J. Hart, P. Stone, R. J. Mooney. *Journal of Artificial Intelligence Research*. February 2020

Refereed Symposium, Workshop

[w5] "Influencing Behavioral Attributions to Robot Motion During Task Execution." N. Walker, C. Mavrogiannis, S. Srinivasa, M. Cakmak. *Proc. 2021 ICRA Workshop Modern Approaches for Intrinsically-Motivated Intelligent Behavior.* Xi'an, China, June 2021

[w4] "Desiderata for Planning Systems in General-Purpose Service Robots." N. Walker*, Y. Jiang*, M. Cakmak, P. Stone. *Proc. of 2019 ICAPS Workshop Planning Robotics.* Berkeley, July 2019

[w3] "Neural Semantic Parsing with Anonymization for Command Understanding in General-Purpose Service Robots." N. Walker, Y.-T. Peng, M. Cakmak. *RoboCup 2019: Robot Soccer World Cup XXIII.* Sydney, July 2019

[w2] "LAAIR: A Layered Architecture for Autonomous Interactive Robots." Y. Jiang*, N. Walker*, M. Kim, N. Brissonneau, D. S. Brown, J. W. Hart, S. Niekum, L. Sentis, P. Stone. *AAAI Fall Symp. Reasoning Learning in Real-World Systems for Long-Term Autonomy.* Arlington, October 2018

[w1] "Interaction and Autonomy in RoboCup@Home and Building-Wide Intelligence." J. Hart, H. Yedidsion, Y. Jiang, N. Walker, R. Shah, J. Thomason, A. Padmakumar, R. Fernandez, J. Sinapov, R. Mooney, P. Stone. *AAAI Fall Symp. Artificial Intelligence Human-Robot Interaction.* Arlington, October 2018

Recognition

2020— Graduate Research Fellowship – *National Science Foundation*

2018–19 Computer Science & Engineering Research Fellowship – *Allen School, UW*

2018 Best Poster, with UT Austin Villa – *RoboCup@Home DSPL*

2018 Commencement Student Speaker – *College of Natural Sciences, UT*

2018 GRFP Honorable Mention – *National Science Foundation*

2018 Dean's Honored Graduate – *College of Natural Sciences, UT*

2018 Outstanding Undergraduate Researcher Award Honorable Mention – *Computing Research Association*

2017 TIDES Fellowship – *Texas Institute for Discovery Education in Science, UT*

2014–18 College of Natural Sciences Scholarship – *College of Natural Sciences, UT*

Outreach

2019 Demo Assistant – *UW Engineering Discovery Days*
- Organized and helped run an exhibit demonstrating our lab's research

2019 Program Assistant – *UTCS Robotics Camp*
- Helped high school students assemble robot kit, program intelligent behaviors

2017, 2018 Demo Assistant – *Explore UT*
- Ran demos on our robots and explained lab's research to community members

2017, 2018 Workshop Assistant – *UT Introduce a Girl to Engineering Day*
- Taught grade school girls about electricity using Play-Doh and LEDs

2017, 2018 Workshop Instructor – *UT Computer Science, Code Longhorn & First Bytes Camps*
- Taught high school students from underrepresented groups about web technologies

2016–18 Peer Mentor – *Freshman Research Initiative*
- Helped first- and second-year students formulate their research projects

Service

2020 NSF GRFP Seminar Coordinator – *Allen School Graduate Student Committee, UW*
2020 Organizer – *Practical Service Robots Workshop, RSS*
2020 Organizer – *Imitation Learning Workshop, RSS*
2019— Technical Committee – *RoboCup@Home*
2019— Peer Mentor – *Allen School First Year Graduate Student Mentoring, UW*
2018 Reader – *Allen School Ph.D. Admissions Committee, UW*

Reviewing

ICRA	2021, 2019
IROS	2021
RA-L	2021
RSS	2021
SSRR	2021
TAFFC	2020
TCDS	2020
THRI	2020

Work and Teaching Experience

2021 Spring Teaching Assistant – *UW CSE 478*
- Updated assignments and supported undergraduates using an autonomous race-car platform

2019 Winter Teaching Assistant – *UW CSE 481C*
- Developed assignments and supported undergraduates using the Kuri robot

2016 Summer Research Engineer Intern – *USAA*
- Developed experimental brain-computer interface software and hardware
- Work contributed to a SPIE conference publication

2015 Summer Research Engineer Intern – *USAA*
- Characterized the performance of automated speech transcription vendors
- Developed evaluation methodology that led to a patent application

Skills

- Experienced with robotics software – *ROS, C++, Python*
- Experienced with robotics platforms – *Fetch, Kuri, HSR, BWIBot*
- Proficient with user research – *Study Design, Hypothesis Testing, Amazon Mechanical Turk*
- Proficient with machine learning techniques, tools – *PyTorch, Numpy, Pandas*
- Proficient with web technologies – *PHP, Typescript, HTML, CSS*
- Handy with digital media – *Premiere, Photoshop, Illustrator, InDesign*

Personal

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flickr.com/photos/nickwalker-us