NICK WALKER

Ph.D. Student in Computer Science

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nickwalker.us

Education

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

2014–2018 The University of Texas, Austin, TX.
- B.S.A. Computer Science Honors
- Polymathic Scholar (Interdisciplinary Honors)

Working Papers

[A] J. Thomason, A. Padmakumar, J. Sinapov, N. Walker, Y. Jiang, H. Yedidsion, J. W. Hart, P. Stone, R. Mooney. Jointly Improving Parsing and Perception for Natural Language Commands through Human-Robot Dialog. *In review.*

[B] Y. Jiang*, N. Walker*, J. W. Hart, P. Stone. Open-world Planning for Service Robots. *In review..*

[C] M. Kim, M. Arduengo, N. Walker, Y. Jiang, J. W. Hart, P. Stone, L. Sentis. An Architecture for Person-Following using Active Target Search. *In review..*

Refereed Conference

[1] J. Hart, R. Shah, S. Kirmani, N. Walker, K. Baldauf, N. John, P. Stone. PRISM: Pose Registration for Integrated Semantic Mapping. In *Proc. IEEE/RSJ Int. Conf. Intelligent Robots and Systems (IROS)*. Madrid, July 2018

[2] M. Svetlick, M. Leonetti, J. Sinapov, R. Shah, N. Walker, P. Stone. Automatic Curriculum Graph Generation for Reinforcement Learning Agents. In *Proc. 31st AAAI Conf. Artificial Intelligence*. San Francisco, February 2017

[3] E. Schroeder, N. Walker, A. Danko. Wearable Ear EEG for Brain Interfacing. In *Proc. SPIE Neural Imaging Sensing*. San Francisco, February 2017

Refereed Workshop, Symposium

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

[5] J. W. Hart, H. Yedidsion, Y. Jiang, N. Walker, R. Shah, J. Thomason, A. Padmakumar, R. Fernandez, J. Sinapov, R. Mooney and P. Stone. Interaction and Autonomy in RoboCup@ Home and Building-Wide Intelligence. In *AAAI Fall Symposium on Interactive Learning in Artificial Intelligence for Human-Robot Interaction*. Arlington, October 2018

Presentations

2018 RoboCup@Home Domestic Standard Platform League 2018, Montreal. N. Walker with UT Austin Villa. Poster. **Best DSPL Poster**

2017 AAAI 2017, San Francisco. Automatic Curriculum Graph Generation for Reinforcement Learning Agents. N. Walker, R. Shah. Oral Spotlight, Poster.

Recognition

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

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

2018 Commencement Student Speaker – *College of Natural Sciencets, 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*

Research Competitions

2018 5th Place, RoboCup@Home DSPL, UT Austin Villa@Home – *RoboCup Federation*

2017 3rd Place, RoboCup@Home DSPL, UT Austin Villa@Home – *RoboCup Federation*

Research Affiliations

2018— Human-Centered Robotics Lab - *University of Washington*
- PI: Maya Cakmak

2017–18 UT Austin Villa@Home - *University of Texas at Austin*
- PIs: P. Stone, L. Sentis, S. Niekum, A. Thomaz, R. Mooney. Supervisor: Justin Hart

2015–18 Building Wide Intelligence Project - *UT AI Lab*
- PI: Peter Stone. Supervisors: Matteo Leonetti, Jivko Sinapov, Justin Hart

Outreach

2018 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 BWI's research to community members

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

2016, 2017 Workshop Instructor – *UT Computer Science, Code Longhorn & First Bytes*
- 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

2018-19 Contributor – *RoboCup@Home Rulebook*
2018-19 Reader – *Allen School Ph.D. Admissions Committee*
2018- Member – *Allen School Robotics Web Presence Committee*

Meeting Participation

- AAAI-FSS 2018 , Arlington
- RoboCup@Home 2018, Montreal
- AAAI 2017, San Francisco
- Toyota Research Institute HSR Training 2017, Palo Alto

Work and Teaching Experience

Winter 2019 Teaching Assistant – *UW CSE 517A*
- Developed assignments and supported students using the Kuri robot for their undergraduate robotics capstone course

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

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

Skills

- Experience with robotics software *(ROS, C++, Python)*
- Experience with robotics platforms *(HSR, BWIArmBot)*
- Proficient in embedded development *(C, C++)*
- Proficient with web technologies *(PHP, Typescript, HTML, CSS)*
- Handy with creative tasks in Photoshop, Illustrator, InDesign, Premiere

Personal

nickwalker.us
github.com/nickswalker
twitter.com/nickwalker_us
flickr.com/photos/nickwalker-us/
linkedin.com/in/niwalker

Interests: Classical violin, photography, running, foil fencing, type design