

# Laura Stegner

*Curriculum Vitae — October 2024*

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<https://laurastegner.com>

I am a PhD Candidate researching Human-Robot Interaction with a focus on healthcare contexts. My research goal is to design, build, and evaluate intelligent systems that can support complex tasks in everyday environments. I take an interdisciplinary approach to my work, utilizing qualitative, quantitative, and technical approaches from across computer science, engineering, social science, nursing, and design disciplines. I am seeking tenure-track faculty and post-doctoral fellowship opportunities.

## EDUCATION

- 2019–Current **PhD in Computer Sciences**, *University of Wisconsin–Madison (UW–Madison)*, USA, Research area: Human-Robot Interaction, Advisor: Dr. Bilge Mutlu  
Doctoral minor: Kinesiology
- 2019–2022 **MS in Computer Sciences**, *UW–Madison*, USA
- 2014–2019 **BS in Electrical Engineering**, *University of Cincinnati (UC)*, Ohio, USA  
Summa Cum Laude, Distinguished University Honors Scholar
- Fall 2018 **Exchange Student**, *Newcastle University*, Newcastle upon Tyne, UK  
Full semester academic exchange
- Summer 2015 **Study Abroad**, *Seoul National University*, South Korea  
Summer language and culture program

## AWARDS and HONORS

- 2024 **Cisco Distinguished Graduate Fellowship**  
9 months of full PhD funding
- 2023 **Heidelberg Laureate Forum Foundation Travel Grant**  
Full funding to attend the Heidelberg Laureate Forum as a Young Researcher
- 2023 **Golden Brick Award**  
UW–Madison departmental award for outstanding service
- 2023 **Best Talk**  
Audience favorite award at UW–Madison Computer Science Symposium
- 2020 **National Science Foundation Graduate Fellowship**  
3 years of full PhD funding and 2 years of additional program support
- 2019 **LUCID Training Program**  
2 years of full PhD funding
- 2019 **Presidential Leadership Medal of Excellence**  
Recognized for outstanding service and leadership during undergraduate studies

- 2018 **Rowe Scholarship Fund**  
Full support for an exchange semester at Newcastle University
- 2018 **DAAD RISE Germany Scholar**  
3 months research support at the Max-Planck Institute for Software Systems
- 2017 **Mantei/Mae Award, also awarded in 2018 and 2019**  
Selected by UC Electrical Engineering and Computer Science Department

## PUBLICATIONS

### REFEREED FULL PAPERS

- [DIS '24] **Understanding On-the-Fly End-User Robot Programming,**  
**L. Stegner,\* Y. Hwang,\* D. Porfirio, and B. Mutlu** | *\*Equal contribution*  
Designing Interactive Systems Conference 2024
- [DIS '24] **“This really lets us see the entire world:” Designing a conversational telepresence robot for homebound older adults,**  
**Y. Hu, L. Stegner, Y. Kotturi, C. Zhang, Y. Peng, F. Huq, Y. Zhao, J. Bigham, B. Mutlu**  
Designing Interactive Systems Conference 2024
- CHI '23 **Situated Participatory Design: A Method for In Situ Design of Robotic Interaction with Older Adults,**  
**L. Stegner, E. Senft, and B. Mutlu**  
Proceedings of the 2023 CHI Conference on Human Factors in Computing Systems
- [HRI '23] **Sketching Robot Programs On the Fly,**  
**D. Porfirio, L. Stegner, M. Cakmak, A. Sauppé, A. Albarghouthi, and B. Mutlu**  
Proceedings of the 2023 ACM/IEEE International Conference on Human-Robot Interaction
- [DIS '22] **Designing for Caregiving: Integrating Robotic Assistance in Senior Living Communities,**  
**L. Stegner and B. Mutlu**  
Designing Interactive Systems Conference 2022
- [CHI '21] **Figaro: A Tabletop Authoring Environment for Human-Robot Interaction,**  
**D. Porfirio, L. Stegner, M. Cakmak, A. Sauppé, A. Albarghouthi, and B. Mutlu**  
Proceedings of the 2021 CHI Conference on Human Factors in Computing Systems
- [FASE 2021] **Paracosm: A test framework for autonomous driving simulations,**  
**R. Majumdar, and A. Mathur, M. Pirron, L. Stegner and D. Zufferey**  
24th International Conference on Fundamental Approaches to Software Engineering

### POSTERS and WORKSHOPS

- [HRI '24 Workshop] **Towards Leveraging End-User Knowledge for Long-Term Use of Robots in Care Facilities,**  
**L. Stegner, Y. Hwang, D. Porfirio, and B. Mutlu**  
Human-Robot Interaction for Aging in Place Workshop at HRI '24

- [AAAI FSS '23] **Considerations for End-User Development in the Caregiving Domain,**  
**L. Stegner, D. Porfirio, M. Roberts, and L. Hiatt**  
 The Association for the Advancement of Artificial Intelligence 2023 Fall Symposium on  
 Unifying Representations for Robot Application Development (UR-RAD)
- [IROS '23 Workshop] **Towards Extending Person-Centered Care to Address Care Technology,**  
**L. Stegner, E. Senft, T. Roberts, and B. Mutlu**  
 Geriatrics AI Workshop at IROS 2023
- [CHI '23 Workshop] **Knowing Who Knows What: Designing Socially Assistive Robots with**  
**Transactive Memory System,**  
**Y. Hu, L. Stegner, and B. Mutlu**  
 Socially Assistive Robots as Decision Makers Workshop at CHI '23
- [HRI '23 Workshop] **Factors that Affect Personalization of Robots for Older Adults,**  
**L. Stegner, E. Senft, and B. Mutlu**  
 CONCATENATE Workshop at HRI '23
- [RISE Germany '18 Poster] **Programming-Direct Manipulation Integration for Simulation Environ-**  
**ments,**  
**R. Majumdar, A. Mathur, M. Pirron, L. Stegner and D. Zufferey**  
 2018 RISE Germany Meeting
- [ACS CRM '16 Poster] **Determination of manganese using cathodic stripping voltammetry and**  
**lead using anodic stripping voltammetry,**  
**L. Stegner, W. Kang, E. Haynes, W.R. Heineman, I. Papautsky**  
 2016 American Chemical Society Central Regional Meeting
- [AAS '14 Poster] **Using Kepler data to classify the evolutionary state of red giant stars,**  
**D. Miller, [and 20 others, including D. Ciardi, S. Howell, and L. Stegner]**  
 2014 American Astronomical Society Meeting

## ACADEMIC SERVICE

### EVENT ORGANIZATION

- [AAAI FSS '24] **Symposium Organizer, Unifying Representations for Robot Application Devel-**  
**opment (UR-RAD)**
- [DIS '24 Workshop] **Chair, RoboCare Design Workshop: Understanding, Translating, Operationalizing,**  
**and Scaling Up Design Knowledge Regarding Robotic Systems for Care Assistance**
- [HRI '24 Workshop] **Co-Chair, End-User Development for Human-Robot Interaction (EUD4HRI)**
- [DIS '24 Workshop] **Chair, RoboCare Design Workshop: Understanding, Translating, Operationalizing,**  
**and Scaling Up Design Knowledge Regarding Robotic Systems for Care Assistance**
- [AAAI FSS '23] **Symposium Organizer, Unifying Representations for Robot Application Devel-**  
**opment (UR-RAD)**

## REFEREE SERVICE

- Information Technology & People
- International Journal of Social Robotics
- ACM/IEEE International Conference on Human-Robot Interaction (HRI)
- ACM Conference on Designing Interactive Systems (DIS)
- ACM Conference on Computer Supported Cooperative Work (CSCW)
- HRI Workshop on Participatory Design and End-User Programming for Human-Robot Interaction

## STUDENT VOLUNTEER

- DIS '24

## LEADERSHIP and OUTREACH

2020–2024 **Treasurer**, *Student Association for Computing Machinery (ACM)*

2017–2019 **Vice President**, *Eta Kappa Nu Honor Society*

## OUTREACH

2023–2024 **ACM-W student chapter mentor**, *Monthly meetings with mentoring family*

2021–2024 **People and Robots Lab Tours**, *3-5 annually*

2023 **High school outreach day**, *Organized and hosted half-day lab visit and lead panel*

2023 **New Grad Student Mentor**, *Provided assistance to a small group of incoming graduate students through several remote meetings prior to their first semester*

2014–2018 **Math and Reading Tutor**, *Cincinnati Public Schools*

## INVITED TALKS

2024 **Collaborative Learning and Adaptive Robots Group**, *National University of Singapore, Virtual*

2023 **Human-Computer Interaction Laboratory**, *University of Maryland, USA*

2023 **Intuitive Computing Lab**, *Johns Hopkins University, Maryland, USA*

2023 **Lightning Talk & Poster Flash**, *Heidelberg Laureate Forum, Heidelberg, Germany*

2023 **MIRRORLab Summer Speaker Series**, *Colorado School of Mines, Virtual*

2023 **Computer Science Seminar Series**, *National Robotarium and Edinburgh Centre for Robotics, Edinburgh, Scotland*

## TEACHING

- 2022 **Guest Lecturer**, *UW-Madison SOC WORK/SOC 422: Social Issues in Aging*  
Design considerations for robots in senior living communities
- 2022 **Session Instructor**, *UW-Madison Grandparents University*  
Co-organized and led interactive lab on social robotics for children and their grandparents
- 2021 **Workshop Facilitator**, *UW-Madison Psychology Research Experience Program*  
Created hands-on virtual workshop introducing natural language processing with Python
- 2019 **Teaching Assistant**, *UC College of Engineering and Applied Science*  
Led weekly discussion sessions for project-based introductory engineering course
- 2019 **Lab Instructor**, *UC Department of Electrical Engineering and Computer Science*  
Designed and led labs for intro programming course using the Zumo32U4 bots from Polulu
- 2017 **Peer Mentor**, *UC Center for First Year Experience*  
Planned and taught weekly classes for freshman engineers to ease college transition

## MENTORING and SUPERVISION

- Pedro Goulart, *MS*
- Allen Chien, *BS*
- Yuqing Wang, *BS*
- Soft Liampisan, *BS*
- Yi Cheng Lee, *BS*
- Shanshan Li, *BS*
- Mary Kristjanson, *BS*
- Wen Jie Lee, *BS*
- Julian Zhu, *BS*
- Kartikeye Khanna, *BS*
- Sai Akarsh Ache, *BS*
- Zach Potter, *BS*
- Emma Liu, *BS*

## RESEARCH and INDUSTRY EXPERIENCE

- Jun–Sep 2023 & **NREIP Researcher**, *US Naval Research Laboratory*, Washington, DC, USA,  
May–Aug 2024 PI: Dr. Laura Hiatt  
Improving alignment of user expectations and robot task execution for user-specified tasks
- Jun–Sep 2018 & **Research Intern**, *Max Planck Institute for Software Systems (MPI-SWS)*,  
May–Aug 2019 Kaiserslautern, Germany, PI: Dr. Rupak Majumdar  
Creating parameterized test environments for autonomous car controllers
- Aug–Dec 2017 **Research Co-op**, *Novel Device Lab / Eccrine Systems, Inc.*, Cincinnati, Ohio,  
USA, PI: Dr. Jason Heikenfeld  
Developing and characterizing a sweat flow-rate sensor

- Jan–May 2017 **Protection and Controls Intern**, *American Electric Power*, Columbus, Ohio, USA, Supervisor: Rachel Perdew  
Assisted with detailed scoping for substation networking projects; Performed quality review of schematic and wiring diagrams
- May–Aug 2016 **Manufacturing Systems Co-op**, *Sandvik Hyperion*, Worthington, Ohio, USA, Supervisor: Mark Harrand  
Designed method to import data from sister plant into local database
- Aug–Dec 2015 **Manufacturing Systems Co-op**, *Sandvik Hyperion*, Worthington, Ohio, USA, Supervisor: Mark Harrand  
Developed database modules and end-user software to digitize process improvement tracking