

Laura Stegner

Curriculum Vitae — July 2024

+1 (614) 233 1383

✉ stegner@wisc.edu

<https://laurastegner.com>

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

RESEARCH EXPERIENCE

- 2019–Current **Research Assistant**, *People and Robots Lab*, *UW–Madison*, Wisconsin, USA, PI: Dr. Bilge Mutlu
Building end-user interfaces for integrating robots into care facilities
- 2023–2024 **NREIP Researcher**, *US Naval Research Laboratory*, Washington, DC, USA (Summers only), PI: Dr. Laura Hiatt
Improving alignment of user expectations and robot task execution for user-specified tasks
- 2018–2019 **Research Intern**, *Max Planck Institute for Software Systems (MPI-SWS)*, Kaiserslautern, Germany (Summers only), PI: Dr. Rupak Majumdar
Creating parameterized test environments for autonomous car controllers
- 2017–2018 **Research Co-op**, *Novel Device Lab / Eccrine Systems, Inc.*, Cincinnati, Ohio, USA (Part time), PI: Dr. Jason Heikenfeld
Developing and characterizing a sweat flow-rate sensor

AWARDS and HONORS

- 2023 **Heidelberg Laureate Forum**, *Invited to attend 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*
- 2019 **Presidential Leadership Medal of Excellence**, *Recognized for outstanding service and leadership during undergraduate studies*
- 2017 **Mantei/Mae Award**, *Selected by UC Electrical Engineering and Computer Science Department*, also awarded in 2018 and 2019

FUNDING

- 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*
- 2020 **National Science Foundation Graduate Fellowship**, *3 years of full PhD funding and 2 years of additional support*
- 2019 **LUCID Training Program**, *2 years of full PhD funding*
- 2018 **Rowe Scholarship Fund**, *Full support for exchange semester at Newcastle University*
- 2018 **DAAD RISE Germany Scholar**, *3 months research support at MPI-SWS*

PUBLICATIONS

REFEREED FULL PAPERS

Understanding On-the-Fly End-User Robot Programming

L. Stegner,* Y. Hwang,* D. Porfirio, and B. Mutlu | *Equal contribution

DIS '24: Designing Interactive Systems Conference

“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. Bigam, B. Mutlu

DIS '24: Designing Interactive Systems Conference

- 2023 **Situated Participatory Design: A Method for In Situ Design of Robotic Interaction with Older Adults**

L. Stegner, E. Senft, and B. Mutlu

CHI '23: Proceedings of the 2023 CHI Conference on Human Factors in Computing Systems

Sketching Robot Programs On the Fly

D. Porfirio, **L. Stegner**, M. Cakmak, A. Sauppé, A. Albarghouthi, and B. Mutlu

HRI '23: Proceedings of the 2023 ACM/IEEE International Conference on Human-Robot Interaction

- 2022 **Designing for Caregiving: Integrating Robotic Assistance in Senior Living Communities**

L. Stegner and B. Mutlu

DIS '22: Designing Interactive Systems Conference

- 2021 **Figaro: A Tabletop Authoring Environment for Human-Robot Interaction**

D. Porfirio, **L. Stegner**, M. Cakmak, A. Sauppé, A. Albarghouthi, and B. Mutlu

CHI '21: Proceedings of the 2021 CHI Conference on Human Factors in Computing Systems

Paracosm: A test framework for autonomous driving simulations

R. Majumdar, and A. Mathur, M. Pirron, **L. Stegner** and D. Zufferey

FASE 2021: 24th International Conference on Fundamental Approaches to Software Engineering

POSTERS and WORKSHOPS

2024 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 2024

2023 Considerations for End-User Development in the Caregiving Domain

L. Stegner, D. Porfirio, M. Roberts, and L. Hiatt

UR-RAD at AAAI 2023 Fall Symposium Series

2023 Towards Extending Person-Centered Care Theory to Address Care Technology

L. Stegner, E. Senft, T. Roberts, and B. Mutlu

Geriatrics AI Workshop at IROS 2023

2023 Knowing Who Knows What: Designing Socially Assistive Robots with Trans-active Memory System

Y. Hu, **L. Stegner**, and B. Mutlu

SARs: TMI Workshop at CHI '23

2023 Factors that Affect Personalization of Robots for Older Adults

L. Stegner, E. Senft, and B. Mutlu

CONCATENATE Workshop at HRI '23

2018 Programming-Direct Manipulation Integration for Simulation Environments

R. Majumdar, A. Mathur, M. Pirron, **L. Stegner** and D. Zufferey

2018 RISE Germany Meeting

2016 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

2014 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

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

EVENT ORGANIZATION

DIS 2024 Workshop, *RoboCare Design Workshop: Understanding, Translating, Operationalizing, and Scaling Up Design Knowledge Regarding Robotic Systems for Care Assistance*, Organizer and General Chair

HRI 2024 Workshop, *End-User Development for Human-Robot Interaction (EUD4HRI)*, Organizer and Facilitator

AAAI 2023 Fall Symposium Series, *Unifying Representations for Robot Application Development (UR-RAD)*, Organizer

STUDENT VOLUNTEER

DIS 2024

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

MASTERS STUDENTS

Mentoring students for semester- or year-long independent study:

Pedro Goulart

UNDERGRADUATE DEVELOPERS

Supervising students for semester- or year-long software development tasks which contribute to larger research projects:

Allen Chien, Yuqing Wang, Soft Liampisan, Yi Cheng Lee, Wen Jie Lee, Julian Zhu, Kartikeye Khanna

UNDERGRADUATE RESEARCH ASSISTANTS

Supervising students for semester- or year-long independent research projects:

Shanshan Li, Mary Kristjanson, Sai Akarsh Ache, Zach Potter, Emma Liu

INDUSTRY EXPERIENCE

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