# Laura Stegner

*Curriculum Vitae — October 2023*

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## 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
Programming techniques for assistive robots in care settings

Summer 2023 **NREIP Researcher**, *Naval Research Laboratory*, Washington, DC, USA, PI: Dr. Laura Hiatt
Understanding Implicit Assumptions from Underspecified Robot 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

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

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

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

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

Geriatronics AI Workshop at IROS 2023

2023 **Knowing Who Knows What: Designing Socially Assistive Robots with Transactive 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

International Journal of Social Robotics

ACM/IEEE International Conference on Human-Robot Interaction (HRI)

HRI Workshop on Participatory Design and End-User Programming for Human-Robot Interaction

### EVENT ORGANIZATION

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

## OUTREACH

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

2023 **High school outreach day**, *Organized and hosted half-day program*

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

## LEADERSHIP

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

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

## INVITED TALKS

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 Firt Year Experience*
Planned and taught weekly classes for freshman engineers to ease college transition

## MENTORING

### UNDERGRADUATES

2023–Current **Mary Kristjanson**, *Robotic teleoperation interface for Wizard-of-Oz field studies*

2022–2023 **Julian Zhu**, *Mobile app development for managing resident profiles*

2023 **Sai Akarsh Ache**, *Developing a taxonomy for social robot personalization*

2021–2022 **Zach Potter**, *Mobile app development for care robot programming*

2021 **Kartikeye Khanna**, *Web-based controller for Stretch robot from Hello-Robot*

2021 **Emma Liu**, *Autonomous mapping with Stretch robot from Hello-Robot*

## 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