

# Laura Stegner

Curriculum Vitae — March 2024

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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

- 2024 **Towards Leveraging End-User Knowledge for Long-Term Use of Robots in Care Facilities**  
**L. Stegner**, Y. Hwang, D. Porfirio, and B. Mutlu  
[Accepted] 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 AAI 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 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

## 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

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

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

## OUTREACH

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

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 **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

### UNDERGRADUATES

- 2023–Current **Soft Liampisan**, *Front end development for robot interface tool for caregivers*
- 2023–Current **Yi Cheng Lee**, *Back end development for robot interface tool for caregivers*
- 2023–Current **Wen Jie Lee**, *Extending React component to integrate additional virtual robots*
- 2023–Current **Shanshan Li**, *Designing emotion expressions for Hello Robot's Stretch robot*
- 2023–Current **Mary Kristjanson**, *Designing emotion expressions for Hello Robot's Stretch robot*
- 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