

Bengisu Cagiltay

PHD STUDENT · COMPUTER SCIENCES

University of Wisconsin-Madison, 1210 W Dayton St, Madison, WI 53706

✉ bengisu@cs.wisc.edu | 🏠 bengisucagiltay.com | 📺 bengisucagiltay | 🐦 @bengisucagiltay

Research Interests

Qualitative researcher focusing on designing social companion robots *for children and families*.

Interdisciplinary research in Human-Computer Interaction(HCI), Human-Robot Interaction (HRI), Child-Robot Interaction.

Education

University of Wisconsin-Madison

PHD COMPUTER SCIENCES, MINOR: HUMAN DEVELOPMENT AND FAMILY STUDIES

- Advisor: Dr. Bilge Mutlu

Madison, Wisconsin

Fall 2020 – present

Middle East Technical University

MS COGNITIVE SCIENCE

- Advisor: Dr. Cengiz Acarturk
- “An investigation of interactions with conversational violations: Insights from visual perception and Gricean Maxim violations”

Ankara, Turkey

2018 – 2020

Bilkent University

BS COMPUTER SCIENCE

Ankara, Turkey

2014 – 2018

Research Experience

Graduate Research Assistant – People and Robots Laboratory

ADVISOR: DR. BILGE MUTLU

- *Designing Learning Companion Robots for Children*

Conducting qualitative and quantitative research in human-robot interaction and designing educational robots for children.

Laboratory Website: peopleandrobots.wisc.edu

Madison, WI

Jun. 2019 – Ongoing

Meta (Formerly Facebook) – Privacy Org

QUALITATIVE UX RESEARCHER INTERN

- Project: Privacy Education for Teens, Privacy Regulatory Readiness, UX Research Team

Menlo Park, CA

May. 2022 – Sep. 2022

University of Eastern Finland – Dept. of Special Education

ADVISOR: DR. EIJA KARNA

- *PEICAS - Peer Interactions involving Children with Autism Spectrum disorder in inclusive classrooms*

Collaborated on an interdisciplinary eye-tracking study to understand social participation patterns of children with autism.

Project Website: peicas.fi

Joensuu, Finland

Sep. 2019 – Sep. 2022

Middle East Technical University – Dept. of Cognitive Science

ADVISOR: DR. CENGİZ ACARTURK

- *Visual Cognition Research using Eye-Tracking Technologies*

Conducted research in the domain of visual cognition and human-computer interactions using eye-tracking technologies.

Proficiency in Tobii and SMI eye-tracking devices and software.

Ankara, Turkey

Feb. 2018 – Nov. 2020

Nielsen Data Analytics

FREELANCE RESEARCHER

- *Neuro-Marketing Research*

Conducted data collection and analysis of a multi-modal neuro-marketing study using eye tracking (Tobii Pro Glasses 2) and functional near-infrared spectroscopy, i.e. fNIRS.

Istanbul, Turkey

2019

University of Alabama – Dept. of Educational Neuroscience and Computer Sciences

Tuscaloosa, AL

ADVISORS: DR. FIRAT SOYLU AND DR. JEFF GRAY

Jul. 2017 – Sep. 2017

• Embodied Learning Design and Educational Neuroscience Lab

Advisor: Dr. Firat Soylu

Supported ongoing research in numerical cognition, number gestures, and finger counting in mathematical development, using neuroimaging techniques, i.e. EEG.

Laboratory Website: elden.ua.edu

• Computer Science Department

Advisor: Dr. Jeff Gray

Mentored in a summer programming class for high-school students.

Publications

* equal contribution; + mentored graduate student

PUBLISHED

Cagiltay, B., Mutlu, B., & Kerr, M. (2023). Family Theories in Child-Robot Interactions: Understanding Families as a Whole for Child-Robot Interaction Design. In *Interaction Design and Children (IDC 23)* ACM.

Cagiltay, B., Mutlu, B., & Michaelis, J. E. (2023). “My Unconditional Homework Buddy:” Exploring Children’s Preferences for a Homework Companion Robot. In *Interaction Design and Children (IDC 23)* ACM.

Cagiltay, B. (2023, April). Designing for In-Home Long-Term Family-Robot Interactions: Family Preferences, Connection-Making, and Privacy. In *Extended Abstracts of the 2023 CHI Conference on Human Factors in Computing Systems* ACM.

Praveena, P*, **Cagiltay, B.***, Gleicher, M., & Mutlu, B. (2023, April). Exploring the Use of Collaborative Robots in Cinematography. In *Extended Abstracts of the 2023 CHI Conference on Human Factors in Computing Systems* ACM.

Cagiltay, B.*, Michaelis, J. E.*, Ibtasar, R., & Mutlu, B. (2023, March). “Off Script:” Design Opportunities Emerging from Long-Term Social Robot Interactions In-the-Wild. In *Proceedings of the 2023 ACM/IEEE International Conference on HRI*.

Lee, C., **Cagiltay, B.**, Sullivan, D., & Mutlu, B. (2023, March). Demonstrating the Potential of Interactive Product Packaging for Enriching Human-Robot Interaction. In *Companion of the 2023 ACM/IEEE International Conference on HRI*

Cagiltay, B., Michaelis, J., Sebo, S., and Mutlu, B. 2022. Exploring Children’s Preferences for Taking Care of a Social Robot. In *Interaction Design and Children (IDC 22)*. ACM. **Best Short Paper Award**

Cagiltay, B., White, N., Ibtasar, R., Mutlu, B., & Michaelis, J. (2022, July) Understanding Factors that Shape Children’s Long Term Engagement with an In-Home Learning Companion Robot. In *Interaction Design and Children (IDC 22)* ACM.

Lee, C.+, **Cagiltay, B.**, & Mutlu, B. (2022, May) The Unboxing Experience: Exploration and Design of Initial Interactions Between Children and Social Robots. In *CHI Conference on Human Factors in Computing Systems (CHI’22)*. Article 151, 1–14. ACM. **Best Paper Honorable Mention Award**

Tang, B., Chandrasekaran, V., **Cagiltay, B.**, Sullivan, D., Fawaz, K., Mutlu, B. (HRI 2022) Confidant: A Privacy Controller for Social Robots. In *Proceedings of the 2022 ACM/IEEE International Conference on Human-Robot Interaction (HRI’22)*. IEEE

Suero Montero, C., **Cagiltay, B.**, Dindar, K., Kärnä, E., Kilpiä, A., Pihlainen, K., Kämäräinen, A. (2022) Analysing Inclusive Groups’ Peer Interactions Using Mobile Eye Tracking in Educational Context, In *EDULEARN22 Proceedings*

Suero Montero, C., Kilpiä, A., Kamarainen, A., **Cagiltay, B.**, Kärnä, E., Cagiltay, K., Pihlainen, K., & Karasu, N. (2022). Mobile Eye Tracking Research in Inclusive Classrooms: Children’s Experiences. In *2022 International Conference on Advanced Learning Technologies (ICALT)* IEEE

Cagiltay, B.*, White, N. T*, Michaelis, J. E., & Mutlu, B. (2021, June). Designing Emotionally Expressive Social Commentary to Facilitate Child-Robot Interaction. In *Interaction Design and Children* (pp. 314-325). ACM.

Ho, H. R., **Cagiltay, B.**, White, N. T., Hubbard, E. M., & Mutlu, B. (2021, June). RoboMath: Designing a Learning Companion Robot to Support Children’s Numerical Skills. In *Interaction Design and Children*. (pp. 283-293). ACM.

Zhao, F., White, N., **Cagiltay, B.**, Niedenthal, P., Michaelis, J. E., & Mutlu, B. (2021). Designing Emotional Expressions for a Reading Companion Robot. In *Society for Affective Science Conference (SAS 2021)*.

Cagiltay, B., Ho, H. R., Michaelis, J. E., & Mutlu, B. (2020, June). Investigating family perceptions and design preferences for an in-home robot. In *Proceedings of the interaction design and children conference* (pp. 229-242). ACM.

Cagiltay, B. (2020). An investigation of interactions with conversational violations: Insights from visual perception and Gricean Maxim violations (*Master’s thesis, Middle East Technical University*)

Mentoring

- 2022–2023 **Amy Koike**, PhD Student, Computer Sciences, University of Wisconsin-Madison
2021–2022 **Christine Lee**, PhD Student, Computer Sciences, University of Wisconsin-Madison
2021–2023 **Batuhan Bayraktar**, Honors Thesis, Computer Sciences, University of Wisconsin-Madison
2022–2023 **Jingyu Chen**, NSF REU, Computer Sciences, University of Wisconsin-Madison
2022 **Lisette Lurker**, NSF REU, Computer Sciences, University of Wisconsin-Madison

Awards, Fellowships, & Grants

- 2023 **CHI 2023 Doctoral Consortium Award**, CHI Conference of Human Factors in Computing \$ 1,800

Professional Development

- Chaired Workshop**, IDC 2023 – “From Child-Centered to Family-Centered Interaction Design” Website: bit.ly/idc23fcid
Doctoral Consortium Attendee, CHI 2023 – Attended among 20 fellow doctoral students, accepted out of 115 submissions.
Morgridge Entrepreneurial Bootcamp, Attended, June 2023, University of Wisconsin-Madison
Frontiers Journal, Special Research Topic Topic Coordinator, 2023, Title: “From Child-Centered to Family-Centered Design for New Technology”
Digital Media Workshop (Demo) Cognitive Developmental Society 2022. A Reading Companion Robot for Children.

SERVICE AND OUTREACH

- 2023, Oct **First Annual Midwest HRI Meetup**, Student Co-Organizer, University of Wisconsin-Madison, Chicago, IL
University of Chicago (Host), University of Illinois at Chicago
2023, Oct **ACM CSCW 2023**, Student Volunteer Minneapolis
2023, May **People and Robots Lab**, Hiring Manager, Editor and Illustrator Positions Madison, WI
2023, Jul **Grandparents University**, Teaching Assistant Madison, WI
2023, Spr. **Monona Grove Liberal Arts Charter School**, LEGO Fun Camp Mentor Madison, WI
2020, Fall **4H Wisconsin**, Junkdrawer Robotics Mentor Oneida, WI
2017–Cur. **First Lego League Volunteer**, Referee and Robot Design Judge Turkey & USA
May 2019 **World Robot Olympiad**, Referee Turkey
LEGO Robot Education Mentor, Mentored in STEM summer camps to teach underprivileged middle school students robotics and science. (1) Turkish Education
2011 Volunteers Foundation (TEGV) LEGO Robot Camp Mentor, Ankara, Turkey (2) Turkish Turkey
National Science Foundation (TUBITAK) Science Camp Mentor, Hatay, Turkey (3) Atılım
University Fun Science Camp Mentor, Ankara, Turkey

PEER REVIEW

- ACM/SIG Conferences: CHI, HRI, DIS, IDC, HAI
Special Recognition for Outstanding Reviews Two (2) in Human Factors in Computing Systems (CHI) Papers and Pictorials, One (1) in Designing Interactive Systems (DIS) Papers and Pictorials
– Journals: International Journal of Social Robotics, International Journal of Child Computer Interaction, Interaction Studies Journal, Frontiers in Robotics and AI

GRANTS CONTRIBUTED TO

NSF Award # 1906854, 2247381, 2202802