

# Bilge Mutlu, PhD | Curriculum Vitae — March 2026

Department of Computer Sciences, University of Wisconsin–Madison  
1205 University Avenue, Madison, WI 53706 USA

EMAIL: [bilge@cs.wisc.edu](mailto:bilge@cs.wisc.edu)

HOME PAGE: <http://bilgemutlu.com>

LAB: <https://peopleandrobots.wisc.edu>

GOOGLE SCHOLAR: <https://scholar.google.com/citations?user=VGr54BoAAAAJ>

## Research Mission

To advance a design-led understanding of how robotic, AI, and interactive systems should behave in human environments; to develop tools and methods that help designers and engineers create meaningful human–technology interactions; and to enable the responsible integration of embodied AI into everyday life.

## Appointments

### ACADEMIC APPOINTMENTS

2025– Founding Director, *Institute for Design & Embodied AI (IDEA)* — *in development*

2021– *Sheldon B. & Marianne S. Lubar* Professor

2015–2021 Associate Professor

2009–2015 Assistant Professor

University of Wisconsin–Madison

*Tenure Home:* Department of Computer Sciences

*Affiliate Appointments:*

Wisconsin Institute for Discovery (WID), *Discovery Fellow*

Department of Industrial & Systems Engineering

Department of Psychology

McPherson Eye Research Institute (MERI)

### VISITING ACADEMIC APPOINTMENTS

2023–2024 *Digital Futures Scholar in Residence*, KTH Department of Robotics, Perception, and Learning, Sweden

2016–2017 *Visiting Professor*, Johns Hopkins University, Malone Center for Engineering Healthcare — *concurrent appointment*

2016–2017 *Visiting Professor*, George Washington University, Department of Biomedical Engineering — *concurrent appointment*

2007–2008 *Research Intern*, Intelligent Robotics and Communication Laboratory, ATR International, Kyoto, Japan

### PROFESSIONAL APPOINTMENTS

1999–2001 Industrial Designer, Arcelik Corporation, Design Group, Istanbul, Turkey

## Education

2009 PHD, Human–Computer Interaction, School of Computer Science, Carnegie Mellon University

2004 MDES, Interaction Design, Fulbright Fellow, School of Design, Carnegie Mellon University

2003 MS, Product Design, Institute of Science and Technology, Istanbul Technical University, Istanbul, Turkey

1999 BID, Industrial Design, Department of Industrial Design, Middle East Technical University, Ankara, Turkey, *Summa Cum Laude*

## Honors & Awards

### HONORS, AWARDS & DISTINCTIONS

2026 *Stephen Wright* Professorship, Department of Computer Sciences, University of Wisconsin–Madison; “*For excellence in research of human-robot interaction and human centered AI, and for exemplary service to the department over a sustained period*”

2025 *Excellence in Honors Thesis Advising Award*, L&S Honors Program, University of Wisconsin–Madison

2022 *Vilas Associates Competition*, University of Wisconsin–Madison

2021 *H.I. Romnes Faculty Fellowship*, University of Wisconsin–Madison

*Sheldon B. and Marianne S. Lubar* Professorship, Department of Computer Sciences, University of Wisconsin–Madison

2020 *Provost’s Early Career Award*, University of Wisconsin–Madison

2013 *Allen Newell Award for Research Excellence*, Carnegie Mellon University, Forlizzi, Kiesler, DiSalvo, Mutlu, Lee, Torrey; “*Elucidation of the fundamental principles of human-robot interaction and its associated methods*”

2012 NSF CAREER Award

2010 *World Technology Network Fellow Finalist*, WTN Award in I.T. Hardware

2002 *Fulbright Fellowship*, U.S. Department of State

1999 *Summa Cum Laude*, Dept. Industrial Design & School of Architecture, Middle East Technical University

### PAPER AWARDS & NOMINATIONS

2025 *Honorable Mention* (Top 251 in 5020), ACM/SigCHI Human Factors in Computing (CHI 2025)  
Kim, Sato, White, Ho, Lee, Hwang, & Mutlu: *Bridging Generations using AI-Supported Co-Creative Activities*

*Sustainability Recognition*, ACM/IEEE Human-Robot Interaction (HRI 2025)  
Pelikan, Mutlu, & Reeves: “*Making Sense of Public Space for Robot Design*”

*Best Technical Paper Award* (Top 6 in 400), ACM/IEEE Human-Robot Interaction (HRI 2025)  
Mahadevan, Lewis, Li, Mutlu, Tang, & Grossman: “*ImageInThat: Manipulating Images to Convey User Instructions to Robots*”

2024 *Pioneering Research Award Finalist*, IEEE International Conference on Robot and Human Interactive Communication (RO-MAN 2024)  
Xu, Cagiltay, Michaelis, Sebo, & Mutlu: *Robots in Family Routines: Development of and Initial Insights from the Family-Robot Routines Inventory*

*Honorable Mention* (Top 150 in 4028), ACM/SigCHI Human Factors in Computing (CHI 2024)  
Ho, Hubbard, & Mutlu: “*It’s Not a Replacement: Enabling Parent-Robot Collaboration to Support In-Home Learning Experiences of Young Children*”

*Best Design Paper Award* (Top 6 in 352), ACM/IEEE Human-Robot Interaction (HRI 2024)  
Koike, Wehner, & Mutlu: *Sprout: Designing Expressivity for Robots Using Fiber-Embedded Actuation*

2023 *UBICOMP 10-Year Impact Award*, ACM Pervasive and Ubiquitous Computing (UbiComp 2013)  
Hoque, Courgeon, Martin, Mutlu, & Picard: *MACH: My Automated Conversation coach*

*Best Systems Paper Award* (Top 5 in 250), ACM/IEEE Human-Robot Interaction (HRI 2023)  
Schoen, Sullivan, Zhang, Rakita, & Mutlu: *Lively: Enabling Multimodal, Lifelike, and Extensible Real-time Robot Motion*

2022 *Meritorious Poster Award* (Top 59 in 1394), American Speech–Language–Hearing Association (ASHA 2017)  
Clough, Tanguay, Mutlu, Turkstra, & Duff: *Using Bag-of-Words and Hierarchical Clustering to Explore Differences in Emoji Perception after Traumatic Brain Injury*

- Best Short Paper (Top 2 in 102), ACM Interaction Design and Children (IDC '22)  
Cagiltay, Michaelis, Sebo, & Mutlu: *Exploring Children's Preferences for Taking Care of a Social Robot*
- Honorable Mention (Top 131 in 2597), ACM/SigCHI Human Factors in Computing (CHI 2022)  
Lee, Cagiltay, & Mutlu: *The Unboxing Experience: Exploration and Design of Initial Interactions Between Children and Social Robots*
- 2020  
Honorable Mention (Top 12 in 279), ACM/IEEE Human-Robot Interaction (HRI 2020)  
Praveena, Rakita, Mutlu, & Gleicher: *Supporting Perception of Weight through Motion-induced Sensory Conflicts in Robot Teleoperation*
- 2019  
First Runner-Up, IEEE Transactions on Automation Science and Engineering Googol Best New Application Paper Award of 2019  
Pearce, Mutlu, Shah, & Radwin: *Optimizing Makespan and Ergonomics in Integrating Collaborative Robots into Manufacturing Processes*
- Honorable Mention Award (Top 7 in 142), ACM Interaction Design and Children (IDC 2019)  
Michaelis & Mutlu: *Supporting Interest in Science Learning with a Social Robot*
- 2018  
Best Paper Award (Top 3 in 375), ACM Symposium on User Interface Software and Technology (UIST 2018)  
Porfirio, Sauppé, Albarghouti, & Mutlu: *Authoring and Verifying Human-Robot Interactions*
- Best Paper Award (Top 4 in 206), ACM/IEEE Human-Robot Interaction (HRI 2018)  
Rakita, Mutlu, & Gleicher: *An Autonomous Dynamic Camera Method for Effective Remote Teleoperation*
- 2017  
Meritorious Poster Award (Top 55 in 1895), American Speech–Language–Hearing Association (ASHA 2017)  
Beadle, Turkstra, Mutlu, & Duff: *Effects of Traumatic Brain Injury on Social Network Size, Life Satisfaction & Loneliness*
- Honorable Mention (Top 97 in 2424), ACM/SigCHI Human Factors in Computing (CHI 2017)  
Andrist, Mutlu, & Gleicher: *Looking Coordinated: Bidirectional Gaze Mechanisms for Collaborative Interaction with Virtual Characters*
- 2016  
Best Paper Award Nominee (Top 10 in 306), IEEE Human-Robot Communication (RO-MAN 2016)  
Bodden, Rakita, Mutlu, & Gleicher: *Evaluating Intent-Expressive Robot Arm Motion*
- 2015  
Meritorious Poster Award (Top 54 in 1573), American Speech–Language–Hearing Association (ASHA 2015)  
Duff, Rigon, Mutlu, & Turkstra: *Effects of Emotion Type & Intensity on Impairments in Facial Emotion Recognition Following TBI*
- Best Paper Award (Top 21 in 2150), ACM/SigCHI Human Factors in Computing (CHI 2015)  
Sauppé & Mutlu: *The Social Impact of a Robot Co-Worker in Industrial Settings*
- Honorable Mention (Top 119 in 2150), ACM/SigCHI Human Factors in Computing (CHI 2015)  
Andrist, Mutlu, & Tapos: *Look Like Me: Matching Robot Personality via Gaze to Increase Motivation*
- 2014  
Best Paper Award Nominee (Top 5 in 132), ACM/IEEE Human-Robot Interaction (HRI 2014)  
Andrist, Tan, Gleicher, & Mutlu: *Conversational Gaze Aversion for Humanlike Robots*
- 2013  
Best Paper Award (Top 5 in 392), ACM Pervasive and Ubiquitous Computing (UbiComp 2013)  
Hoque, Courgeon, Martin, Mutlu, & Picard: *MACH: My Automated Conversation coach*
- Highly Commended Paper (Top 3 in 61), Intelligent Virtual Agents (IVA 2013)  
Andrist, Mutlu, & Gleicher: *Conversational Gaze Aversion for Virtual Agents*
- Best Paper Award Runner-Up (Top 5 in 183), Robotics: Science and Systems (RSS 2013)  
Huang & Mutlu: *Modeling and Evaluating Narrative Gestures for Humanlike Robots*
- 2011  
Best Paper Award (Top 3 in 149), ACM/IEEE Human-Robot Interaction (HRI 2011)  
Mumm & Mutlu: *Human-Robot Proxemics: Physical and Psychological Distancing in Human-Robot Interaction*
- 2009  
Best Paper Award (Top 1 in 120), ACM/IEEE Human-Robot Interaction (HRI 2009)  
Mutlu, Shiwa, Kanda, Ishiguro, & Hagita: *Footing in Human-Robot Conversations: How Robots Might Shape Participant Roles Using Gaze Cues*
- 2008  
Best Paper Award (Top 1 in 134), ACM/IEEE Human-Robot Interaction (HRI 2008) Mutlu & Forlizzi: *Robots in Organizations: Workflow, Social, and Environmental Factors in Human-Robot Interaction*

## Research Grants & Gifts

Total externally funded research: approx. \$30M federal + \$2M industry (PI/co-PI).

### FEDERAL GRANTS

2024–2029	NSF EEC-2330040 — <i>Center: NSF Engineering Research Center for Human Augmentation via Dexterity (HAND)</i> ; <b>Mutlu</b> (UW–Madison PI); \$603,257 (Center Total: \$26,000,000)
2023–2027	NSF IIS-2312354 — <i>Collaborative Research: HCC: Medium: Designing Social Companion Robots for Long-term Interaction</i> ; <b>Mutlu</b> (PI), Sebo (PI), Michaelis (PI); \$1,200,000
2023–2027	NSF IIS-2247381 — <i>SA TC: CORE: Medium: Designing Privacy-Aware Social Companion Robots</i> ; Fawaz (PI), <b>Mutlu</b> , Kirkorian; \$1,200,000
2022–2027	NSF DGE-2152163 — <i>Integrating Robots into the Future of Work</i> ; <b>Mutlu</b> (PI), Niedenthal, Radwin, Zinn, Jacobs; \$3,000,000
2022–2025	NSF IIS-2202803 — <i>HCC: Small: PATHWiSE - Supporting Teacher Authoring of Robot-Assisted Homework</i> ; Michaelis (PI), <b>Mutlu</b> (PI); \$600,000
2022–2027	NSF DUE-2201723 — <i>Trans-modal Analysis: A Mathematical and Computational Framework for Equity Assessment of Multi-modal STEM Learning Processes</i> ; Shaffer (PI), Cai, <b>Mutlu</b> ; \$2,499,974
2021–2026	NHLBI R61HL151870-01A1 — <i>Using Smart Displays to Implement an Evidence-Based eHealth System for Older Adults with Multiple Chronic Conditions</i> ; Gustafson (PI), Mares (PI), Brown, Kim, <b>Mutlu</b> , Quanbeck, Shah; \$3,858,326
2021–2024	NSF CMMI-2026478 — <i>FW-HTF-RM: Human-Robot Collaboration for Manual Work</i> ; Radwin (PI), <b>Mutlu</b> , Li, Smeeding, Jacobs; \$1,500,000
2020–2025	AHRQ R18HS026853 — <i>Using Smart Devices to Implement an Evidence-based eHealth System for Older Adults</i> ; Gustafson (PI), Mares, <b>Mutlu</b> , Mahoney; \$1,987,467
2019–2023	NSF IIS-1925043 — <i>NRI: INT: COLLAB: Program Verification and Synthesis for Collaborative Robots</i> ; <b>Mutlu</b> (PI), Albarghouthi, Sauppé; \$958,887
2019–2023	NIH 2R01HD071089-06A1 — <i>Designing Computer-Mediated Communication Supports to Improve Social Participation After Traumatic Brain Injury</i> ; <b>Mutlu</b> (Co-PI), Duff (Co-PI), Turkstra; \$948,801
2019–2022	NASA 80NSSC19M0124 P00001 — <i>Effective Human-Robot Teaming to Advance Aviation Manufacturing</i> ; <b>Mutlu</b> (PI), Gleicher, Zinn, Radwin, Gardner (Boeing), Cook (Boeing), Reid (Boeing); \$2,997,761
2019–2020	NSF CMMI-1928425 — <i>FW-HTF-P: Human-Robot Collaboration for Enhancing Work Capabilities</i> ; Radwin (PI), <b>Mutlu</b> , Li; \$149,999
2019–2020	NSF DRL-1906854 — <i>STEMMates: Designing Companion Robots with Socially Situated Interest Scaffolds for Informal, In-home STEM Learning</i> ; <b>Mutlu</b> (PI); \$300,000
2019–2020	DOJ 2018-R2-CX-0025 — <i>Harnessing Existing Technologies to Mitigate Driving Distraction Among Law Enforcement Officers</i> ; Noyce (PI), Lee, <b>Mutlu</b> ; \$464,621
2018–2024	NSF IIS-1830242 — <i>NRI: FND: Communicating Physical Interactions</i> ; Gleicher (PI), <b>Mutlu</b> , Zinn; \$749,986
2018–2023	NSF IIS-1822872 — <i>ROBO-VI: A Virtual-Internship-Based Hybrid Learning Technology to Prepare Traditional and Non-Traditional Students to Work with Collaborative Robots</i> ; <b>Mutlu</b> (PI), Ruis, Shaffer; \$499,123
2016–2018	NSF IIS-1651129 — <i>EAGER: Representations and Methods for Verifiable Human-Robot Interactions</i> ; <b>Mutlu</b> (PI), Albarghouthi, Sauppé; \$299,877
2013–2017	DOT DTRT13-G-UTC47 — <i>Human Factors for Crash Imminent Safety in Intelligent Vehicles</i> ; Lee (PI), <b>Mutlu</b> ; \$299,131
2014–2015	NSF CMMI-1426824 — <i>NRI: Models &amp; Instruments for Integrating Effective Human-Robot Teams into Manufacturing</i> ; <b>Mutlu</b> (PI); \$589,959
2014–2015	NASA NNX14AL45H — <i>Automated Task Monitoring, Feedback and Training for Critical Missions</i> ; <b>Mutlu</b> (PI); \$272,000
2012–2017	NSF CISE-IIS-1227530 — <i>DIP: BioSourcing: A Crowdsourcing Approach to Increasing Public Understanding in Computational Biosciences</i> ; Squire (PI), Shapiro, <b>Mutlu</b> , Ferris; \$1,349,989

- 2012–2017 NIH 1R01HD071089-01A1 — *Social Perception & social communication in adults with traumatic brain injury*; Turkstra (PI), **Mutlu**, Duff; \$2,787,779
- 2012–2015 NASA NNX12AN14H — *Effective Human-Robot Collaborative Work for Critical Missions*; **Mutlu** (PI); \$264,000  
NSF CISE-IIS-1208632 — *NRI-Small: Perceptually Inspired Dynamics for Robot Arm Motion*; Gleicher (PI), **Mutlu**, Ferrier; \$799,942
- 2012–2017 NSF CISE-IIS-1149970 — *CAREER: Designing Socially Adept Robots*; **Mutlu** (PI); \$498,245  
NSF CISE-IIS-1117652 — *Embodied Mediated Communication in Collaborative Work*; **Mutlu** (PI), Takayama; \$487,810
- 2010–2013 NSF CISE-IIS-1017952 — *Designing Effective Gaze Mechanisms for Cross-Modal Embodied Agents*; **Mutlu** (PI), Gleicher; \$499,050

#### CORPORATE/FOUNDATION GRANTS/GIFTS

- 2005–2007 Honda Research Institute–US — *Embodied Learning For AI-Mediated Cultural Exchange (EMBRACE)*; **Mutlu** (PI); \$564,756
- 2023 Google, Inc., Google Award for Inclusion Research — *Supporting Social Participation for Older Adults through Robotic Telepresence*; **Mutlu** (PI); \$60,000
- 2023–2024 UW–Madison OVCRGE — *Assistive Technologies to Support Skill Development in Adults with Down Syndrome*; Sterling (PI), **Mutlu**; \$49,078
- 2022–2023 UW–Madison Discovery2Product PRIME Grant — *Assessing How Assistive Programming Tools Can Facilitate the Integration of Collaborative Robots into Manufacturing*; **Mutlu** (PI); \$48,841
- 2021–2024 McDonnell Foundation Award — *Faces in the Wild: Understanding Real-World Communication of Emotions* Niedenthal (PI), **Mutlu**, Ward, Li; \$250,000
- 2016–2027 Toyota Corporation CSRC-042 — *Mechanisms for Enhancing Human-Automation Coordination and Situation Awareness in Autonomous Driving (Phase 2)*; Lee (PI), **Mutlu**; \$254,879
- 2015–2016 Toyota Corporation CSRC-042 — *Mechanisms for Enhancing Human-Automation Coordination and Situation Awareness in Autonomous Driving (Phase 1)*; Lee (PI), **Mutlu**; \$502,718
- 2013 Google, Inc., Glass Awards — *Improving Everyday Learning Using Glass* **Mutlu** (PI); \$27,860
- 2013 Fujitsu Laboratories Ltd., Japan — *Designing a Robotic Motivational Coach*; **Mutlu** (PI); \$50,000
- 2012–2013 UW–Madison OVCRGE — *Designing Effective Computer-Based Protocols for Early Detection of Autism*; **Mutlu** (PI); \$39,729
- 2011–2012 UW–Madison OVCRGE — *Educational Brain-Computer Interfaces*; **Mutlu** (PI); \$34,970
- 2010 Google, Inc., Faculty Research Awards — *Designing Adaptive Educational Interfaces*; **Mutlu** (PI); \$40,000
- 2009–2012 Waltham Foundation, U.K. — *Does Interaction with Animals Help us in interpreting Human Social Behavior?* **Mutlu** (PI), Takayama, Kiesler, Kanda; \$14,100
- 2009 Mitsubishi Heavy Industries, Ltd., Japan — *Wakamaru Humanlike Robot Equipment Loan*; **Mutlu** (PI), Kiesler
- 2006–2007 Ford Motor Company — *Posture Recognition for In-Car Seating*; **Mutlu** (PI), Krause; \$2,000

#### Selected Invited Talks

Selected high-profile invited seminars, lectures, and keynotes.

- 2025 *Design Seminar*, Apple Studio, Apple Inc.  
“*Design Spaces, Places, and Tools for Human-Robot Interaction*”
- 2025 *Department Seminar*, Faculty of Architecture, Middle East Technical University  
“*Designing Robots as Products, Tools, Platforms*”
- 2024 *ME512 Seminar*, Department of Mechanical Engineering, Northwestern University  
“*Enabling Everyday Use of Robots as Products, Tools, Platforms*”
- 2024 *Department Seminar*, Department of Information Technology, Uppsala University

- 2023 “Enabling Everyday Use of Robots as Products, Tools, Platforms”  
Distinguished Lecture, Digital Futures, KTH Royal Institute of Technology
- 2022 “Enabling Everyday Use of Robots as Products, Tools, Platforms”  
Keynote Speaker, Furhat Conference on Social Robotics  
“Taking Social Robots Out of the Lab and Onto the Road”
- 2020 Distinguished Lecture, Department of Biomedical Engineering, George Washington University  
“Designing Robots for Human Interaction”
- 2018 Distinguished Lecture, Department of Computer Science, Northwestern University  
“Designing Robots for Human Interaction”
- 2018 Invited Talk, Koç University (as part of the Istanbul Design Biennial Program)  
“Designing Whole Interactions for Robotic Products”
- 2017 Conference Keynote Speaker, International Conference on Intelligent Virtual Agents (IVA)  
“Virtual and Physical: Two Frames of Mind”

## Publications

See my [Google Scholar](#), [Scopus](#), [ResearchGate](#), [DLPB](#), [ACM](#) profiles for a full list of publications. For brevity, only journal and selective, full-length conference papers are included below.

### JOURNAL ARTICLES (76)

- 2026 Jacobs, L., **Mutlu, B.**, Radwin, R., & Smeeding, T. [Cobots as Workforce Partners: Overcoming Barriers Through Policy Opportunities](#). *Journal of Policy Analysis and Management* 45 (1), e70083.
- 2025 Landucci, G., Gustafson Sr, D. H., Mares, M. L., Pe-Romashko, K., Curtin, J. J., Hu, Y., ... & **Mutlu, B.** [Using Smart Displays to Implement an eHealth System for Older Adults With Multiple Chronic Conditions: Randomized Controlled Trial](#). *JMIR Aging*, 8, e75991.
- Sullivan, D., White, N. T., Hu, Y., DW Clifton, J., & **Mutlu, B.** [Robot Primals: Exploring World Beliefs as a Source for Robot Behavior Design](#). *ACM Transactions on Human-Robot Interaction*, 15(1), 1–23.
- Konstant, A., White, N., **Mutlu, B.**, & Radwin, R. G. [Ergonomics analysis for a simulation approach to human-robot collaborative task allocation](#). *IJSE Transactions on Occupational Ergonomics and Human Factors*, 1–11.
- Wright, L. L., Vegesna, P., Michaelis, J. E., **Mutlu, B.**, & Sebo, S. [Robotic reading companions can mitigate oral reading anxiety in children](#). *Science Robotics*, 10(106), eadu5771.
- Michaelis, J. E., & **Mutlu, B.** [How can educational robots enhance family life? Through careful integration](#). *Science Robotics*, 10(106), eadu6123.
- Johnson, H., & **Mutlu, B.** [Accessible Technology for Adults with Down Syndrome: A Scoping Review](#). *ACM Transactions on Accessible Computing*, 18(3), 1–57.
- Zhang, S., Li, J., Cagiltay, B., Kirkorian, H., **Mutlu, B.**, & Fawaz, K. [A qualitative exploration of parents and their children's uses and gratifications of ChatGPT](#). *Family Relations*, 74(3), 1056–1071.
- Konstant, A., Orr, N., Hagenow, M., Gundrum, I., Hu, Y. H., **Mutlu, B.**, ... & Radwin, R. G. [Human–Robot Collaboration With a Corrective Shared Controlled Robot in a Sanding Task](#). *Human Factors*, 67(3), 246–263.
- 2024 Wohltjen, S., Colón, Y. I., Zhu, Z., Miller, K., Huang, W. C., **Mutlu, B.**, ... & Niedenthal, P. M. [Uniting theory and data: the promise and challenge of creating an honest model of facial expression](#). *Cognition and Emotion*, 1–15.
- Toma, C. L., Hwang, J., Kakonge, L., Morrow, E. L., Turkstra, L. S., **Mutlu, B.**, & Duff, M. C. [Does Facebook use provide social benefits to adults with traumatic brain injury?](#) *Cyberpsychology, Behavior, and Social Networking*, 27(3), 214–220.
- Ramesh, B., Konstant, A., Praveena, P., Senft, E., Gleicher, M., **Mutlu, B.**, ... & Radwin, R. G. [Manually acquiring targets from](#)

- multiple viewpoints using video feedback. *Human Factors*, 66(2), 470–489.
- Liu, L., Schoen, A. J., Henrichs, C., Li, J., **Mutlu, B.**, Zhang, Y., & Radwin, R. G. Human robot collaboration for enhancing work activities. *Human Factors*, 66(1), 158–179.
- 2023 Clough, S., Tanguay, A. F., **Mutlu, B.**, Turkstra, L. S., & Duff, M. C. How do Individuals With and Without Traumatic Brain Injury Interpret Emoji? Similarities and Differences in Perceived Valence, Arousal, and Emotion Representation. *Journal of Nonverbal Behavior*, 47(4), 489–511.
- Hagenow, M., Senft, E., Orr, N., Radwin, R., Gleicher, M., **Mutlu, B.**, Posey, D., & Zinn, M. Coordinated Multi-Robot Shared Autonomy Based on Scheduling and Demonstrations. *IEEE Robotics and Automation Letters*, 8(12), 8335–8342.
- Turkstra, L. S., Hosseini-Moghaddam, S., **Mutlu, B.**, & Duff, M. C. Facial affect recognition in context in adults with and without TBI. *Frontiers in Psychology*, 14, 1111686.
- Clough, S., Morrow, E., **Mutlu, B.**, Turkstra, L., & Duff, M. C. Emotion recognition of faces and emoji in individuals with moderate-severe traumatic brain injury. *Brain Injury*, 1–15.
- 2022 Zhao, F., Lim, H., Morrow, E. L., Turkstra, L. S., Duff, M. C., & **Mutlu, B.** Designing evidence-based support aids for social media access for individuals with moderate-severe traumatic brain injury: A preliminary acceptability study. *Frontiers in Digital Health*, 4, 991814.
- Ahmadi, R., Lim, H., **Mutlu, B.**, Duff, M., Toma, C., & Turkstra, L. Facebook Experiences of Users With Traumatic Brain Injury: A Think-Aloud Study. *JMIR Rehabilitation and Assistive Technologies*, 9(4), e39984.
- Henry, K. E., Kornfield, R., Sridharan, A., Linton, R. C., Groh, C., Wang, T., Wu, A., **Mutlu, B.**, & Saria, S. Human-machine teaming is key to AI adoption: clinicians' experiences with a deployed machine learning system. *NPJ Digital Medicine*, 5(1), 1–6.
- Ramesh, B., Konstant, A., Praveena, P., Senft, E., Gleicher, M., **Mutlu, B.**, ... & Radwin, R. G. Manually Acquiring Targets From Multiple Viewpoints Using Video Feedback. *Human Factors*.
- Gustafson, D. H., Mares, M. L., Johnston, D. C., Landucci, G., Pe-Romashko, K., Vjorn, O. J., ... & **Mutlu, B.** Using Smart Displays to Implement an eHealth System for Older Adults With Multiple Chronic Conditions: Protocol for a Randomized Controlled Trial. *JMIR Research Protocols*, 11(5), e37522.
- Zhao, F., Wood, A., **Mutlu, B.**, & Niedenthal, P. Faces synchronize when communication through spoken language is prevented. *Emotion*.
- 2021 Kornfield, R., Rae, I., & **Mutlu, B.** So close and yet so far: How embodiment shapes the effects of distance in remote collaboration. *Communication Studies*.
- Bhat, P., Senft, E., Zinn, M., Gleicher, M., **Mutlu, B.**, Cook, R., & Radwin, R. G. Assessing limited visibility feedback for overhead manufacturing assembly tasks. *Applied Ergonomics*, 97, 103531.
- Hagenow, M., Senft, E., Radwin, R., Gleicher, M., **Mutlu, B.**, & Zinn, M. Informing Real-time Corrections in Corrective Shared Autonomy Through Expert Demonstrations. *IEEE Robotics and Automation Letters*, 6(4), 6442–6449.
- Senft, E., Hagenow, M., Radwin, R., Zinn, M., Gleicher, M., & **Mutlu, B.** Situated Live Programming for Human-Robot Collaboration. *Frontiers in Robotics & AI*.
- Morrow, E. L., Zhao, F., Turkstra, L., Toma, C., **Mutlu, B.**, & Duff, M. C. Computer-mediated communication in adults with and without moderate-to-severe traumatic brain injury: survey of social media use. *JMIR Rehabilitation and Assistive Technologies*, 8(3), e26586.
- Rakita, D., **Mutlu, B.**, & Gleicher, M. Single-query Path Planning Using Sample-efficient Probability Informed Trees. *IEEE Robotics and Automation Letters*, 6(3), 4624–4631.
- Hagenow, M., Senft, E., Radwin, R., Gleicher, M., **Mutlu, B.**, & Zinn, M. Corrective Shared Autonomy for Addressing Task Variability. *IEEE Robotics and Automation Letters*, 6(2), 3720–3727.
- 2020 **Mutlu, B.** Virtual and Physical: Two Frames of Mind. *iScience*, 24(2), 101965.
- Rakita, D., **Mutlu, B.**, & Gleicher, M. An Analysis of RelaxedIK: An Optimization-based Framework for Generating Accurate

and Feasible Robot Arm Motions. *Autonomous Robots*, 44(7), 1341–1358.

Turkstra, L. S., **Mutlu, B.**, Ryan, C. W., Despins-Stafstien, E. E., Richmond, E. K., Hosokawa, E., & Duff, M. Sex and gender differences in emotion recognition and Theory of Mind after TBI: A narrative review and directions for future research. *Frontiers in Neurology*, 11, 59.

2019

Rakita, D., **Mutlu, B.**, Gleicher, M., & Hiatt, L. M. Shared control–based bimanual robot manipulation. *Science Robotics*, 4(30), eaaw0955.

Flynn, M. A., Rigon, A., Kornfield, R., **Mutlu, B.**, Duff, M. C., & Turkstra, L. S. Characterizing computer-mediated communication, friendship, and social participation in adults with traumatic brain injury. *Brain Injury*, 1–8.

Rigon, A., Voss, M. W., Turkstra, L. S., **Mutlu, B.**, & Duff, M. C. Functional neural correlates of facial affect recognition impairment following TBI. *Brain Imaging and Behavior*, 13(2), 526–540.

Byom, L., Duff, M., **Mutlu, B.**, & Turkstra, L. Facial emotion recognition of older adults with traumatic brain injury. *Brain Injury*, 33(3), 322–332.

Deng, E., **Mutlu, B.**, & Mataric, M. J. Embodiment in Socially Interactive Robots. *Foundations and Trends in Robotics*, 7(4), 251–356.

2018

Bodden, C., Rakita, D., **Mutlu, B.**, & Gleicher, M. A flexible optimization-based method for synthesizing intent-expressive robot arm motion. *The International Journal of Robotics Research*, 37(11), 1376–1394.

**Mutlu, B.**, Duff, M. C., & Turkstra, L. S. Social-Cue Perception and Mentalizing Ability Following Traumatic Brain Injury: A Human-Robot Interaction Study. *Brain Injury*, 1–9.

Flynn, M. A., **Mutlu, B.**, Duff, M. C., & Turkstra, L. S. Friendship quality, friendship quantity, and social participation in adults with traumatic brain injury. *Seminars in Speech and Language*.

Politis, A., **Mutlu, B.**, Turkstra, L., & Duff, M. Psychological Distress and Communication Challenges in Adults With TBI. *Archives of Physical Medicine and Rehabilitation*, 99(11), e146.

Michaelis, J., & **Mutlu, B.** Reading Socially: Transforming the In-Home Reading Experience with a Learning-Companion Robot. *Science Robotics*, 3(21), eaat5999.

Rigon, A., Voss, M. W., Turkstra, L. S., **Mutlu, B.**, & Duff, M. C. White matter correlates of different aspects of facial affect recognition impairment following traumatic brain injury. *Social Neuroscience*, 1–15.

Rigon, A., Turkstra, L. S., **Mutlu, B.**, & Duff, M. C. Facial-Affect Recognition Deficit as a Predictor of Different Aspects of Social-Communication Impairment in Traumatic Brain Injury. *Neuropsychology*, 32(4), 476.

Rigon, A., Voss, M., Turkstra, L. S., **Mutlu, B.**, & Duff, M. C. Functional Neural Correlates of Facial Affect Recognition Impairment Following TBI. *Brain Imaging and Behavior*, 1–15.

Pearce, M., **Mutlu, B.**, Shah, J., & Radwin, R. Optimizing Makespan and Ergonomics in Integrating Collaborative Robots Into Manufacturing Processes. *IEEE Transactions on Automation Science and Engineering*, 1–13.

Turkstra, L., Norman, R. S., **Mutlu, B.**, & Duff, M. C. Impaired theory of mind in adults with traumatic brain injury: A replication and extension of findings. *Neuropsychologia*, 111, 117–122.

Rigon, A., Voss, M. W., Turkstra, L., **Mutlu, B.**, & Duff, M. C. Different aspects of facial affect recognition impairment following traumatic brain injury: The role of perceptual and interpretative abilities. *Journal of Clinical and Experimental Neuropsychology*, 1–15.

2017

Turkstra, L., Kraning, S. G., Riedeman, S. K., **Mutlu, B.**, Duff, M., & VanDenHeuvel, S. Labelling Facial Affect in Context in Adults with and without TBI. *Brain Impairment*, 18(1), 49–61.

Turkstra, L., Duff, M., Politis, A., & **Mutlu, B.** Detection of text-based social cues in adults with traumatic brain injury. *Neuropsychological Rehabilitation*, 1–15.

Szafir, D., **Mutlu, B.**, & Fong, T. Designing Planning and Control Interfaces to Support User Collaboration with Flying Robots. *International Journal of Robotics Research*.

Rigon, A., Voss, M., Turkstra, L., **Mutlu, B.**, & Duff, M. Relationship between individual differences in functional connectivity

- and facial-emotion recognition abilities in adults with traumatic brain injury. *NeuroImage: Clinical*, 13, 370–377.
- Andrist, S., Bohus, D., **Mutlu, B.**, & Schlangen, D. Turn-Taking and Coordination in Human-Machine Interaction. *AI Magazine*, 37(4), 5–6.
- 2016 Pejsa, T., Rakita, D., **Mutlu, B.**, & Gleicher, M. Authoring directed gaze for full-body motion capture. *ACM Transactions on Graphics (TOG)*, 35(6), 161.
- Rigon, A., Turkstra, L., **Mutlu, B.**, & Duff, M. C. The female advantage: Sex as a protective factor against emotion recognition impairment following traumatic brain injury. *Cognitive, Affective, & Behavioral Neuroscience*, 16(5), 866–875.
- Rigon, A., Voss, M., Turkstra, L., **Mutlu, B.**, & Duff, M. C. Fronto-temporal structural connectivity is associated with social communication impairment following traumatic brain injury. *Journal of the International Neuropsychological Society*, 22(7), 705–716.
- Gibson, M., Lee, J., Venkatraman, V., Price, M., Lewis, J., Montgomery, O., **Mutlu, B.**, Domeyer, J., & Foley, J. Situation Awareness, Scenarios, and Secondary Tasks: Measuring Driver Performance and Safety Margins in Highly Automated Vehicles. *SAE International Journal of Passenger Cars—Electronic and Electrical Systems*, 9(2016-01-0145), 237–242.
- Price, M. A., Venkatraman, V., Gibson, M., Lee, J., & **Mutlu, B.** Psychophysics of Trust in Vehicle Control Algorithms. *SAE Technical Paper* (2016-01-0144).
- 2015 Andrist, S., Collier, W., Gleicher, M., **Mutlu, B.**, & Shaffer, D. Look Together: Analyzing Gaze Coordination with Epistemic Network Analysis. *Frontiers in Psychology*, 6, 1016.
- Huang, C.-M., Andrist, S., Sauppé, A., & **Mutlu, B.** Using Gaze Patterns to Predict Task Intent in Collaboration. *Frontiers in Psychology*, 6, 1049.
- Sauppé, A., & **Mutlu, B.** Effective Task Training Strategies for Human and Robot Instructors. *Autonomous Robots*, 1–17.
- Ruhland, K., Peters, C. E., Andrist, S., Badler, J. B., Badler, N. I., Gleicher, M., **Mutlu, B.**, & McDonnell, R. A Review of Eye Gaze in Virtual Agents, Social Robotics and HCI: Behaviour Generation, User Interaction and Perception. *Computer Graphics Forum*.
- Pejsa, T., Andrist, S., **Mutlu, B.**, & Gleicher, M. Gaze and Attention Management for Embodied Conversational Agents. *ACM Transactions on Interactive and Intelligent Systems (TiiS)*, 5(1), Article 3, 34 pages.
- 2014 Huang, C.-M., & **Mutlu, B.** Multivariate Evaluation of Interactive Robot Systems. *Autonomous Robots*, 1–15.
- Kim, Y., & **Mutlu, B.** How social distance shapes human–robot interaction. *International Journal of Human-Computer Studies*, 72(12), 783–795.
- 2013 Broz, F., Lehmann, H., & **Mutlu, B.**, & Nakano, Y. Introduction to the Special Issue on Gaze in Human-Robot Communication. *Interaction Studies*, 14(3), VII–XVI.
- Byom, L., & **Mutlu, B.** Theory of Mind: Mechanisms, Methods, and New Directions. *Frontiers in Human Neuroscience*, 7, 413.
- Huang, C.-M., & **Mutlu, B.** The Repertoire of Robot Behavior: Enabling Robots to Achieve Interaction Goals through Social Behavior. *Journal of Human-Robot Interaction*, 2(2), 80–102.
- Pejsa, T., **Mutlu, B.**, & Gleicher, M. Stylized and Performative Gaze for Character Animation. *Computer Graphics Forum*, 32(2), 143–152.
- 2012 De Simone, J. J., Kuo, L.-H., Verbruggen, T., & **Mutlu, B.** Is Cheating a Human Function? The Roles of Presence, State Hostility, and Enjoyment in an Unfair Video Game. *Computers in Human Behavior*, 28(6), 2351–2358.
- Mutlu, B.**, Kanda, T., Forlizzi, J., Hodgins, J., & Ishiguro, H. Conversational Gaze Mechanisms for Humanlike Robots. *ACM Transactions on Interactive Intelligent Systems*, 1(2), 33 pages.
- Duff, M., **Mutlu, B.**, Byom, L., & Turkstra, L. Beyond utterances: Distributed cognition as a framework for studying discourse in adults with acquired brain injury. *Seminars in Speech and Language*, 33(1), 44–54.
- 2011 **Mutlu, B.** Designing Embodied Cues for Dialog with Robots. *AI Magazine*, 32(4), 17–30.
- Bohus, D., Horvitz, E., Kanda, T., **Mutlu, B.**, & Raux, A. Introduction to the Special Issue on Dialog with Robots. *AI Magazine*,

32(4), 15–16.

Mumm, J., & **Mutlu, B.** [Designing Motivational Agents: The Role of Praise, Social Comparison, and Embodiment in Computer Feedback](#). *Computers in Human Behavior*, 27(5), 1643–1650.

#### FULL-LENGTH CONFERENCE PAPERS (141)

Links to individual articles are available through my [Google Scholar](#) profile.

2026

Hu, Y., Kuribayashi, M., Wang, A., Kayukawa, S., Sato, D., **Mutlu, B.**, Takagi, H., & Asakawa, C. Robot-Assisted Group Tours for Blind People. In *Proceedings of the ACM/SigCHI Conference on Human Factors in Computing (CHI'26)*.

Liu, Z., Wang, Y., Ho, H.-R., Wu, Y., Zhao, Y., & **Mutlu, B.** AskNow: An LLM-powered Interactive System for Real-Time Question Answering in Large-Scale Classrooms. In *Proceedings of the ACM/SigCHI Conference on Human Factors in Computing (CHI'26)*.

Johnson, H. L., Spalitta, H., Kim, C. Y., & **Mutlu, B.** Supporting Money Management among Adults with Down Syndrome: A Multi-Technology Probe Study. In *Proceedings of the ACM/SigCHI Conference on Human Factors in Computing (CHI'26)*.

Xu, M. F., Zhao, E., Zhang, Y., Michaelis, J. E., Sebo, S., & **Mutlu, B.** Designing Robots for Families: In-Situ Prototyping for Contextual Reminders on Family Routines. In *Proceedings of the ACM/IEEE Human-Robot Interaction (HRI'26)*.

Kim, Y., Lee, C. P., & **Mutlu, B.** Speaking with Screens: Design Space and Principles for Informational Robot Screens. In *Proceedings of the ACM/IEEE Human-Robot Interaction (HRI'26)*.

Kim, C. Y., White, N. T., He, E., Sala, F., & **Mutlu, B.** RoboCritics: Enabling Reliable End-to-End LLM Robot Programming through Expert-Informed Critics. In *Proceedings of the ACM/IEEE Human-Robot Interaction (HRI'26)*.

Kamino, W., Cagiltay, B., **Mutlu, B.**, Jung, M. F., & Šabanović, S. Kept Alive, Bricked, Revived: Community Articulation Work and Value Renegotiation Beyond A Robot's Commercial Failure. In *Proceedings of the ACM/IEEE Human-Robot Interaction (HRI'26)*.

Koike, A., Guo, S. G., He, X., Kim, C. Y., Sullivan, D., & **Mutlu, B.** Elements of Robot Morphology: Supporting Designers in Robot Form Exploration. In *Proceedings of the ACM/IEEE Human-Robot Interaction (HRI'26)*.

2025

Hu, Y., Sato, A. J., Du, J., Ye, C., Zhu, A., Praveena, P., & **Mutlu, B.** NarraGuide: an LLM-based Narrative Mobile Robot for Remote Place Exploration. In *Proceedings of the 38th Annual ACM Symposium on User Interface Software and Technology (UIST'25)* (pp. 1-15).

Kim, C. Y., Sato, A. J., White, N. T., Ho, H. R., Lee, C. P., Hwang, Y., & **Mutlu, B.** Bridging Generations using AI-Supported Co-Creative Activities. *Proceedings of the 2025 CHI Conference on Human Factors in Computing Systems (CHI'25)*. Honorable Mention (Top 251 in 5020).

Lee, C., Porfirio, D., Wang, X. J., Zhao, K., & **Mutlu, B.** VeriPlan: Integrating Formal Verification and LLMs into End-User Planning. *Proceedings of the 2025 CHI Conference on Human Factors in Computing Systems (CHI'25)*.

Ho, H. R., Kargeti, N., Liu, Z., & **Mutlu, B.** SET-PAiREd: Designing for Parental Involvement in Learning with an AI-Assisted Educational Robot. *Proceedings of the 2025 CHI Conference on Human Factors in Computing Systems (CHI'25)*.

Pelikan, H. R., **Mutlu, B.**, & Reeves, S. Making Sense of Public Space for Robot Design. *Proceedings of the 2025 ACM/IEEE International Conference on Human-Robot Interaction*.

Lin, T. H., Dinner, H., Leung, T. L., **Mutlu, B.**, Trafton, J. G., & Sebo, S. Connection-Coordination Rapport (CCR) Scale: A Dual-Factor Scale to Measure Human-Robot Rapport. *Proceedings of the 2025 ACM/IEEE International Conference on Human-Robot Interaction*.

Mahadevan, K., Lewis, B., Li, J., **Mutlu, B.**, Tang, A., & Grossman, T. ImageInThat: Manipulating Images to Convey User Instructions to Robots. *Proceedings of the 2025 ACM/IEEE International Conference on Human-Robot Interaction*. Best Technical Paper Award (Top 6 in 400).

Xu, M. F., & **Mutlu, B.** Exploring the Use of Robots for Diary Studies. *Proceedings of the 2025 ACM/IEEE International Conference on Human-Robot Interaction*.

Hu, Y., Zhu, A., Toma, C. L., & **Mutlu, B.** Designing Telepresence Robots to Support Place Attachment. *Proceedings of the*

2025 ACM/IEEE International Conference on Human-Robot Interaction.

2024

Hu, Y., Lim, H., Kakonge, L., Mitchell, J. T., Johnson, H. L., Turkstra, L., ... & **Mutlu, B.** SMART-TBI: Design and Evaluation of the Social Media Accessibility and Rehabilitation Toolkit for Users with Traumatic Brain Injury. *Proceedings of the International ACM SIGACCESS Conference on Computers and Accessibility (ASSETS'24)*.

Xu, M. F., Cagiltay, B., Michaelis, J., Sebo, S., & **Mutlu, B.** Robots in Family Routines: Development of and Initial Insights from the Family-Robot Routines Inventory. *Proceedings of the 33rd IEEE International Conference on Robot and Human Interactive Communication (RO-MAN 2024)*. Pioneering Research Award Finalist.

Hu, Y., Stegner, L., Kotturi, Y., Zhang, C., Peng, Y.-H., Hue, F., Zhao, Y., Bigham, J. P., & **Mutlu, B.** "This really lets us see the entire world." Designing a conversational telepresence robot for homebound older adults. *Proceedings of ACM Conference on Designing Interactive Systems (DIS'24)*.

Stegner, L., Hwang, Y., Porfirio, D., & **Mutlu, B.** Understanding On-the-Fly End-User Robot Programming. *Proceedings of ACM Conference on Designing Interactive Systems (DIS'24)*.

Koike, A., Cagiltay, B., & **Mutlu, B.** Tangible Scenography as a Holistic Design Method for Human-Robot Interaction. *Proceedings of ACM Conference on Designing Interactive Systems (DIS'24)*.

Lee, C. P., Praveena, P., & **Mutlu, B.** REX: Designing User-centered Repair and Explanations to Address Robot Failures. *Proceedings of ACM Conference on Designing Interactive Systems (DIS'24)*.

Lee, C. P., Lee, M. K., & **Mutlu, B.** The AI-DEC: A Card-based Design Method for User-centered AI Explanations. *Proceedings of ACM Conference on Designing Interactive Systems (DIS'24)*.

Ho, H.-R., Hubbard, E., & **Mutlu, B.** "It's Not a Replacement." Enabling Parent-Robot Collaboration to Support In-Home Learning Experiences of Young Children. *Proceedings of the 2024 CHI Conference on Human Factors in Computing Systems (CHI'24)*. Honorable Mention (Top 150 in 4028).

Johnson, H., Sterling, A., & **Mutlu, B.** "It Is Easy Using My Apps." Understanding Technology Use and Needs of Adults with Down Syndrome. *Proceedings of the 2024 CHI Conference on Human Factors in Computing Systems (CHI'24)*.

Cagiltay, B., & **Mutlu, B.** Toward Family-Robot Interactions: A Family-Centered Framework in HRI. *Proceedings of the 2024 ACM/IEEE International Conference on Human-Robot Interaction*.

Hagenow, M., Senft, E., Radwin, R., Gleicher, M., Zinn, M., & **Mutlu, B.** A System for Human-Robot Teaming through End-User Programming and Shared Autonomy. *Proceedings of the 2024 ACM/IEEE International Conference on Human-Robot Interaction*.

Koike, A., Wehner, M., & **Mutlu, B.** Sprout: Designing Expressivity for Robots Using Fiber-Embedded Actuator. *Proceedings of the 2024 ACM/IEEE International Conference on Human-Robot Interaction*. Best Design Paper (Top 6 in 352).

Sullivan, D., White, N. T., Schoen, A., & **Mutlu, B.** Making Informed Decisions: Supporting Cobot Integration Considering Business and Worker Preferences. *Proceedings of the 2024 ACM/IEEE International Conference on Human-Robot Interaction*.

Kim, C. Y., Lee, C. P., & **Mutlu, B.** Understanding Large-Language Model (LLM)-powered Human-Robot Interaction. *Proceedings of the 2024 ACM/IEEE International Conference on Human-Robot Interaction*.

2023

Hu, Y., Lim, H., Johnson, H. L., O'Shaughnessy, J. M., Kakonge, L., Turkstra, L., Duff, M., Toma, C., & **Mutlu, B.** Investigating Day-to-day Experiences with Conversational Agents by Users with Traumatic Brain Injury. *Proceedings of the 25th International ACM SIGACCESS Conference on Computers and Accessibility*.

Konstant, A., Orr, N., Hagenow, M., Senft, E., Gundrum, I., **Mutlu, B.**, Zinn, M., Gleicher, M., & Radwin, R. G. Human-Robot Collaboration in a Sanding Task. *Proceedings of the Human Factors and Ergonomics Society Annual Meeting*.

Praveena, P., Wang, Y., Senft, E., Gleicher, M., & **Mutlu, B.** Periscope: A Robotic Camera System to Support Remote Physical Collaboration. *Computer Supported Cooperative Work (CSCW)*.

Cagiltay, B., **Mutlu, B.**, & Kerr, M. L. Family Theories in Child-Robot Interactions: Understanding Families as a Whole for Child-Robot Interaction Design. *Proceedings of the 22nd Annual ACM Interaction Design and Children Conference*.

Cagiltay, B., **Mutlu, B.**, & Michaelis, J. E. "My Unconditional Homework Buddy." Exploring Children's Preferences for a Homework Companion Robot. *Proceedings of the 22nd Annual ACM Interaction Design and Children Conference*.

Ho, H. R., White, N. T., Hubbard, E. M., & **Mutlu, B.** Designing Parent-child-robot Interactions to Facilitate In-Home Parental Math Talk with Young Children. *Proceedings of the 22nd Annual ACM Interaction Design and Children Conference*.

Lim, H., Kakonge, L., Hu, Y., Turkstra, L., Duff, M., Toma, C., & **Mutlu, B.** So, I Can Feel Normal: Participatory Design for Accessible Social Media Sites for Individuals with Traumatic Brain Injury. *Proceedings of the 2023 CHI Conference on Human Factors in Computing Systems*.

Stegner, L., Senft, E., & **Mutlu, B.** Situated participatory design: A method for in situ design of robotic interaction with older adults. *Proceedings of the 2023 CHI Conference on Human Factors in Computing Systems*.

Schoen, A., Sullivan, D., Zhang, Z. D., Rakita, D., & **Mutlu, B.** Lively: Enabling Multimodal, Lifelike, and Extensible Real-time Robot Motion. *Proceedings of the 2023 ACM/IEEE International Conference on Human-Robot Interaction*. Best Systems Paper (Top 5 in 250).

Porfirio, D., Stegner, L., Cakmak, M., Sauppé, A., Albarghouthi, A., & **Mutlu, B.** Sketching Robot Programs On the Fly. *Proceedings of the 2023 ACM/IEEE International Conference on Human-Robot Interaction*.

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

2022

Senft, E., Hagenow, M., Praveena, P., Radwin, R., Zinn, M., Gleicher, M., & **Mutlu, B.** A Method For Automated Drone Viewpoints to Support Remote Robot Manipulation. *Proceedings of the 2022 IEEE/RSJ International Conference on Intelligent Robots and Systems (IROS 2022)*.

Hagenow, M., Senft, E., Laske, E., Hambuchen, K., Fong, T., Radwin, R., Gleicher, M., **Mutlu, B.**, & Zinn, M. Registering Articulated Objects With Human-in-the-loop Corrections. *Proceedings of the 2022 IEEE/RSJ International Conference on Intelligent Robots and Systems (IROS 2022)*.

Stegner, L., & **Mutlu, B.** Designing for Caregiving: Integrating Robotic Assistance in Senior Living Communities. *Proceedings of the ACM Designing Interactive Systems Conference (DIS'22)*.

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

Cagiltay, B., Michaelis, J., Sebo, S., & **Mutlu, B.** Exploring Children's Preferences for Taking Care of a Social Robot. *Proceedings of the Interaction Design and Children Conference (IDC'22)*. Best Short Paper (Top 2 in 102).

Lee, C. P., Cagiltay, B., & **Mutlu, B.** The Unboxing Experience: Exploration and Design of Initial Interactions Between Children and Social Robots. *Proceedings of the CHI Conference on Human Factors in Computing Systems*. Honorable Mention (Top 131 in 2597).

Zhang, B., Hagenow, M., **Mutlu, B.**, Gleicher, M., & Zinn, M. Assessing the Perceived Realism of Kinesthetic Haptic Renderings Under Parameter Variations. *Proceedings of the 2022 IEEE Haptics Symposium (HAPTICS)*.

Murray, M., Walker, N., Nanavati, A., Alves-Oliveira, P., Filippov, N., Sauppe, A., **Mutlu, B.**, & Cakmak, M. Learning backchanneling behaviors for a social robot via data augmentation from human-human conversations. *Proceedings of the Conference on Robot Learning*.

Schoen, A., White, N. T., Henrichs, C., Siebert-Evenstone, A., Shaffer, D. W., & **Mutlu, B.** CoFrame: A System for Training Novice Cobot Programmers. *Proceedings of the 2022 ACM/IEEE International Conference on Human-Robot Interaction*.

Praveena, P., Molina, L., Wang, Y., Senft, E., **Mutlu, B.**, & Gleicher, M. Understanding Control Frames in Multi-Camera Robot Telemanipulation. *Proceedings of the 2022 ACM/IEEE International Conference on Human-Robot Interaction*.

Tang, B., Sullivan, D., Cagiltay, B., Chandrasekaran, V., Fawaz, K., & **Mutlu, B.** CONFIDANT: A Privacy Controller for Social Robots. *Proceedings of the 2022 ACM/IEEE International Conference on Human-Robot Interaction*.

Rakita, D., **Mutlu, B.**, & Gleicher, M. PROXIMA: An Approach for Time or Accuracy Budgeted Collision Proximity Queries. *Proceedings of Robotics: Science and Systems (RSS)*.

2021

Senft, E., Hagenow, M., Welsh, K., Radwin, R., Zinn, M., Gleicher, M., & **Mutlu, B.** Task-Level Authoring for Remote Robot Teleoperation. *Proceedings of the ACM Symposium on User Interface Software and Technology (UIST 2021)*.

Hu, Y., Feng, L., **Mutlu, B.**, & Admoni, H. Exploring the Role of Social Robot Behaviors in a Creative Activity. *Proceedings of the Designing Interactive Systems Conference 2021*.

White, N. T., Cagiltay, B., Michaelis, J. E., & **Mutlu, B.** Designing Emotionally Expressive Social Commentary to Facilitate Child-Robot Interaction. *Proceedings of the Interaction Design and Children Conference*.

Ho, H. R., Cagiltay, B., White, N. T., Hubbard, E. M., & **Mutlu, B.** RoboMath: Designing a Learning Companion Robot to Support Children's Numerical Skills. *Proceedings of the Interaction Design and Children Conference*.

Rakita, D., **Mutlu, B.**, & Gleicher, M. Strobe: An Acceleration Meta-algorithm for Optimizing Robot Paths using Concurrent Interleaved Sub-Epoch Pods. *Proceedings of the IEEE International Conference on Robotics and Automation (ICRA)*.

Chandrasekaran, V., Banerjee, S., **Mutlu, B.**, & Fawaz, K. PowerCut and Obfuscator: An Exploration of the Design Space for Privacy-Preserving Interventions for Smart Speakers. *Proceedings of the Seventeenth Symposium on Usable Privacy and Security (SOUPS 2021)*.

Henrichs, C., Zhao, F., & **Mutlu, B.** Designing Interface Aids to Assist Collaborative Robot Operators in Attention Management. *Proceedings of the 30th IEEE International Conference on Robot & Human Interactive Communication (RO-MAN 2021)*.

Hagenow, M., Zhang, B., **Mutlu, B.**, Gleicher, M., & Zinn, M. Recognizing Orientation Slip in Human Demonstrations. *Proceedings of the IEEE International Conference on Robotics and Automation (ICRA)*.

Rakita, D., Shi, H., **Mutlu, B.**, & Gleicher, M. CollisionIK: A Per-Instant Pose Optimization Method for Generating Robot Motions with Environment Collision Avoidance. Submitted to ICRA 2021.

Kang, D., Ho, T., Marquardt, N., **Mutlu, B.**, & Bianchi, A. ToonNote: Improving Communication in Computational Notebooks Using Interactive Data Comics. *Proceedings of the CHI Conference on Human Factors in Computing Systems (CHI 2021)*.

Porfirio, D., Stegner, L., Cakmak, M., Sauppe, A., Albarghouthi, A., & **Mutlu, B.** Figaro: A Tabletop Authoring Environment for Human-Robot Interaction. *Proceedings of the CHI Conference on Human Factors in Computing Systems (CHI 2021)*.

Siebert-Evenstone, A., Michaelis, J. E., Shaffer, D. W., & **Mutlu, B.** Safety First: Developing a Model of Expertise in Collaborative Robotics. *Proceedings of the International Conference on Quantitative Ethnography*.

2020

Schoen, A., Henrichs, C., Strohkirch, M., & **Mutlu, B.** Authr: A Task Authoring Environment for Human-Robot Teams. *Proceedings of the ACM Symposium on User Interface Software and Technology (UIST 2020)*.

Zhao, F., Henrichs, C., & **Mutlu, B.** Task Interdependence in Human-Robot Teaming. *Proceedings of the 29th IEEE International Conference on Robot and Human Interactive Communication (RO-MAN 2020)*.

Cagiltay, B., Ho, H. R., Michaelis, J. E., & **Mutlu, B.** Investigating family perceptions and design preferences for an in-home robot. *Proceedings of the Interaction Design and Children Conference (IDC 2020)*.

Porfirio, D., Sauppé, A., Albarghouthi, A., & **Mutlu, B.** Transforming Robot Programs Based on Social Context. *Proceedings of the 2020 ACM/SIGCHI Conference on Human Factors in Computing Systems (CHI 2020)*.

Michaelis, J. E., Siebert-Evenstone, A., Shaffer, D., & **Mutlu, B.** Collaborative or Simply Uncaged? Understanding Human-Cobot Interactions in Automation. *Proceedings of the 2020 ACM/SIGCHI Conference on Human Factors in Computing Systems (CHI 2020)*.

Rakita, D., **Mutlu, B.**, & Gleicher, M. Effects of Onset Latency and Robot Speed Delays on Mimicry-Control Teleoperation. *Proceedings of the 2020 ACM/IEEE International Conference on Human-Robot Interaction (HRI 2020)*.

Terzioglu, Y., **Mutlu, B.**, & Sahin, E. Designing Social Cues for Collaborative Robots: The Role of Gaze and Breathing in Human-Robot Collaboration. *Proceedings of the 2020 ACM/IEEE International Conference on Human-Robot Interaction (HRI 2020)*.

Praveena, P., Rakita, D., **Mutlu, B.**, & Gleicher, M. Supporting Perception of Weight through Motion-induced Sensory Conflicts in Robot Teleoperation. *Proceedings of the 2020 ACM/IEEE International Conference on Human-Robot Interaction (HRI 2020)*. Honorable Mention Award (Top 12 in 279).

2019

Porfirio, D., Fisher, E., Sauppé, A., Albarghouthi, A., & **Mutlu, B.** Bodystorming Human-Robot Interactions. *Proceedings of the 31st ACM User Interface Software and Technology Symposium (UIST 2019), New Orleans, Louisiana*.

Michaelis, J. E., & **Mutlu, B.** Supporting Interest in Science Learning with a Social Robot. *Proceedings of the 18th ACM International Conference on Interaction Design and Children*. Honorable Mention Award (Top 7 in 142).

- Rakita, D., **Mutlu, B.**, & Gleicher, M. Remote Telemanipulation with Adapting Viewpoints in Visually Complex Environments. *Robotics: Science and Systems (RSS 2019) XV*.
- Praveena, P., Rakita, D., **Mutlu, B.**, & Gleicher, M. User-Guided Offline Synthesis of Robot Arm Motion from 6-DoF Paths. *Proceedings of the IEEE International Conference on Robotics and Automation (ICRA)*.
- Rakita, D., **Mutlu, B.**, & Gleicher, M. STAMPEDE: A Discrete-Optimization Method for Solving Pathwise-Inverse Kinematics. *Proceedings of the IEEE International Conference on Robotics and Automation (ICRA)*.
- Praveena, P., Subramani, G., **Mutlu, B.**, & Gleicher, M. Characterizing Input Methods for Human-to-robot Demonstrations. *Proceedings of the ACM/IEEE International Conference on Human-Robot Interaction (HRI 2019)*.
- 2018 Porfirio, D, Sauppé, A., Albarghouthi, A., & **Mutlu, B.** Authoring and Verifying Human-Robot Interactions. *Proceedings of the 31st ACM User Interface Software and Technology Symposium (UIST 2018), Berlin, Germany*. Best Paper Award (Top 3 in 375 submissions).
- Paxton, C., Jonathan, F., Hundt, H., **Mutlu, B.**, & Hager, G. D. Evaluating Methods for End-User Creation of Robot Task Plans. *Proceedings of the IEEE/RAS International Conference on Intelligent Robots (IROS 2018)*.
- Rakita, D., **Mutlu, B.**, & Gleicher, M. RelaxedIK: Real-time Synthesis of Accurate and Feasible Robot Arm Motion. *Robotics: Science and Systems (RSS 2018)*.
- Rakita, D., **Mutlu, B.**, & Gleicher, M. An Autonomous Dynamic Camera Method for Effective Remote Teleoperation. *Proceedings of the 2018 ACM/IEEE International Conference on Human-Robot Interaction (HRI 2018)*. Best Paper Award: Technical Advances in HRI (Top 4 in 206 submissions).
- Rakita, D., **Mutlu, B.**, & Gleicher, M. Shared Dynamic Curves: A Shared-Control Telemanipulation Method for Motor Task Training. *Proceedings of the 2018 ACM/IEEE International Conference on Human-Robot Interaction (HRI 2018)*.
- 2017 Liu, O. D., Rakita, D., **Mutlu, B.**, & Gleicher, M. Understanding Human-Robot Interaction in Virtual Reality. *Proceedings of the 26th IEEE International Symposium on Robot and Human Interactive Communication (RO-MAN 2017), Lisbon, Portugal*.
- Pejsa, J., Gleicher, M., & **Mutlu, B.** Who, Me? How Virtual Agents Can Shape Conversational Footing in Virtual Reality. *Proceedings of the International Conference on Intelligent Virtual Agents (IVA 2017), Stockholm, Sweden*.
- Michaelis, J., & **Mutlu, B.** Someone to Read with: Design of and Experiences with an In-Home Learning Companion Robot for Reading. *Proceedings of the ACM/SIGCHI Conference on Human Factors in Computing Systems (CHI 2017), Denver, CO*.
- Andrist, D., Gleicher, M., & **Mutlu, B.** Looking Coordinated: Bidirectional Gaze Mechanisms for Collaborative Interaction with Virtual Characters. *Proceedings of the ACM/SIGCHI Conference on Human Factors in Computing Systems (CHI 2017), Denver, CO*. Honorable Mention (Top 97 in 2424 submissions).
- Choi, M., Kornfield, R., Takayama, L., & **Mutlu, B.** Movement Matters: Effects of Motion and Mimicry on Perception of Similarity and Closeness in Robot-Mediated Communication. *Proceedings of the ACM/SIGCHI Conference on Human Factors in Computing Systems (CHI 2017), Denver, CO*.
- Rakita, D., **Mutlu, B.**, & Gleicher, M. A Motion Retargeting Method for Effective Mimicry-based Teleoperation of Robot Arms. *Proceedings of the ACM/IEEE International Conference on Human-Robot Interaction (HRI 2017), Vienna, Austria*.
- 2016 Rakita, D., **Mutlu, B.**, & Gleicher, M. Motion synopsis for robot arm trajectories. *Proceedings of the IEEE International Symposium on Robot and Human Interactive Communication (RO-MAN 2016), New York City, NY*.
- Bodden, C., Rakita, D., **Mutlu, B.**, & Gleicher, M. Evaluating intent-expressive robot arm motion. *Proceedings of the IEEE International Symposium on Robot and Human Interactive Communication (RO-MAN 2016), New York City, NY*.
- Huang, C.-M., & **Mutlu, B.** Anticipatory Robot Control for Efficient Human-Robot Collaboration. *Proceedings of the ACM/IEEE International Conference on Human-Robot Interaction (HRI 2016), Christchurch, New Zealand*.
- 2015 Huang, C.-M., **Mutlu, B.**, & Cakmak, M. Adaptive Coordination Strategies for Human-Robot Handovers. *Proceedings of Robotics: Science and Systems (RSS 2015)*.
- Sauppé, A., & **Mutlu, B.** The Social Impact of a Robot Co-Worker in Industrial Settings. *Proceedings of the ACM/SIGCHI Conference on Human Factors in Computing Systems (CHI 2015), Seoul, South Korea*. Best Paper Award (Top 21 in 2150 submissions).

Johnson, S., Rae, I., **Mutlu, B.**, & Takayama, L. Can You See Me Now? How Field of View Affects Collaboration in Robotic Telepresence. *Proceedings of the ACM/SIGCHI Conference on Human Factors in Computing Systems (CHI 2015)*, Seoul, South Korea.

Andrist, S., **Mutlu, B.**, & Tapus, A. Look Like Me: Matching Robot Personality via Gaze to Increase Motivation. *Proceedings of the ACM/SIGCHI Conference on Human Factors in Computing Systems (CHI 2015)*, Seoul, South Korea. Honorable Mention (Top 119 in 2150 submissions).

Szafir, D., **Mutlu, B.**, & Fong, T. Designing Mechanisms to Communicate Directionality in Flying Robots. *Proceedings of the ACM/IEEE International Conference on Human-Robot Interaction (HRI 2015)*, Portland, OR.

Andrist, S., Ziadee, M., Boukaram, H.-A., Sakr, M., & **Mutlu, B.** Effects of Culture on the Credibility of Robot Speech: A Comparison between English and Arabic. *Proceedings of the ACM/IEEE International Conference on Human-Robot Interaction (HRI 2015)*, Portland, OR.

Sauppé, A., Szafir, D., Huang, C.-M., & **Mutlu, B.** From 9 to 90: Engaging Learners of All Ages. *Proceedings of the 46th ACM Technical Symposium on Computer Science Education (SIGCSE 2015)*, Kansas City, MO.

Johnson, S., Gibson, M., & **Mutlu, B.** Handheld or Handsfree?: Remote Collaboration via Lightweight Head-Mounted Displays and Handheld Devices. *Proceedings of the ACM Conference on Computer-Supported Collaborative Work and Social Computing (CSCW 2015)*, Vancouver, BC, Canada.

2014

Ruhland, K., Andrist, S., Peters, C., Badler, J., Badler, N., Gleicher, M., **Mutlu, B.**, & McDonnell, R. Look me in the eyes: A survey of eye and gaze animation for virtual agents and artificial systems. *EG 2014, STAR (State of The Art Report)*.

Sauppé, A., & **Mutlu, B.** Effective Task Training Strategies for Instructional Robots. *Proceedings of Robotics: Science and Systems (RSS 2014)*.

Sauppé, A., & **Mutlu, B.** Design Patterns for Exploring and Prototyping Human-Robot Interactions. *Proceedings of the ACM/SIGCHI Conference on Human Factors in Computing Systems (CHI 2014)*, Toronto, ON, Canada.

Rae, I., **Mutlu, B.**, & Takayama, L. Bodies in Motion: Mobility, Presence, and Task Awareness in Telepresence. *Proceedings of the ACM/SIGCHI Conference on Human Factors in Computing Systems (CHI 2014)*, Toronto, ON, Canada.

Andrist, S., Tan, X. Z., Gleicher, M., & **Mutlu, B.** Conversational Gaze Aversion for Humanlike Robots. *Proceedings of the ACM/IEEE International Conference on Human-Robot Interaction (HRI 2014)*, Bielefeld, Germany. Best Paper Award Nominee (Top 5 in 132 submissions).

Huang, C.-M., & **Mutlu, B.** Learning-Based Modeling of Multimodal Behaviors for Humanlike Robots. *Proceedings of the ACM/IEEE International Conference on Human-Robot Interaction (HRI 2014)*, Bielefeld, Germany.

Szafir, D., **Mutlu, B.**, & Fong, T. Communication of Intent in Assistive Free Flyers. *Proceedings of the ACM/IEEE International Conference on Human-Robot Interaction (HRI 2014)*, Bielefeld, Germany.

Sauppé, A., & **Mutlu, B.** Robot Deictics: How Gesture and Context Shape Referential Communication. *Proceedings of the ACM/IEEE International Conference on Human-Robot Interaction (HRI 2014)*, Bielefeld, Germany.

Sauppé, A., & **Mutlu, B.** How Social Cues Shape Task Coordination and Communication. *Proceedings of the ACM Conference on Computer Supported Cooperative Work and Social Computing (CSCW 2014)*, Maryland, MD.

2013

Miller, S., **Mutlu, B.**, & Lee, J. D. Artifact Usage, Context, and Privacy Management in Logging and Tracking Personal Health Information in Older Adults. *Proceedings of the 2013 International Annual Meeting of the Human Factors and Ergonomics Society (HFES 2013)*.

Hoque, E., Courgeon, M., Martin, J.-C., **Mutlu, B.**, Picard, R. MACH: My Automated Conversation coach. *Proceedings of the 12th ACM International Joint Conference on Pervasive and Ubiquitous Computing (Ubicomp '13)*, Zurich, Switzerland. Best Paper Award (Top 5 in 392 submissions).

Andrist, S., **Mutlu, B.**, & Gleicher, M. Conversational Gaze Aversion for Virtual Agents. *Proceedings of Intelligent Virtual Agents (IVA 2013)*, Edinburgh, UK. Highly Commended Paper Award (Top 3 in 61 submissions).

Huang, C.-M., & **Mutlu, B.** Modeling and Evaluating Narrative Gestures for Humanlike Robots. *Proceedings of Robotics: Science and Systems Conference (RSS 2013)*, Berlin, Germany. Best Paper Award Runner-Up (Top 5 in 183 submissions).

- Szafir, D., & **Mutlu, B.** ARTFuL: Adaptive Review Technology for Flipped Learning. *Proceedings of the 2013 ACM annual conference on Human Factors in Computing Systems (CHI 2013)*, Paris, France.
- Rae, I., Takayama, L., & **Mutlu, B.** In-body Experiences: Embodiment, Control, and Trust in Embodied Mediated Communication. *Proceedings of the 2013 ACM annual conference on Human Factors in Computing Systems (CHI 2013)*, Paris, France.
- Andrist, S., Spannan, E., & **Mutlu, B.** Rhetorical Robots: Making Robots More Effective Speakers Using Linguistic Cues of Expertise. *Proceedings of the 8th ACM/IEEE Conference on Human-Robot Interaction (HRI 2013)*, Tokyo, Japan.
- Rae, I., Takayama, L., & **Mutlu, B.** The Influence of Height on Robotic Communication Products. *Proceedings of the 8th ACM/IEEE Conference on Human-Robot Interaction (HRI 2013)*, Tokyo, Japan.
- 2012 Terrell, A., & **Mutlu, B.** A Regression-based Approach to Modeling Addressee Backchannels. *Proceedings of the 13th Annual Meeting of the Special Interest Group on Discourse and Dialogue (SIGDIAL 2012)*, Seoul, South Korea.
- Szafir, D., & **Mutlu, B.** Pay Attention! Designing Adaptive Agents that Monitor and Improve User Engagement. *Proceedings of the 30th ACM/SIGCHI Conference on Human Factors in Computing (CHI 2012)*, Austin, TX.
- Rae, I., Takayama, L., & **Mutlu, B.** One of the Gang: Supporting In-group Behavior for Embodied Mediated Communication. *Proceedings of the 30th ACM/SIGCHI Conference on Human Factors in Computing (CHI 2012)*, Austin, TX.
- Andrist, S., Pejisa, T., **Mutlu, B.**, Gleicher, M. Designing Effective Gaze Mechanisms for Virtual Agents. *Proceedings of the 30th ACM/SIGCHI Conference on Human Factors in Computing (CHI 2012)*, Austin, TX.
- Huang, C.-M., & **Mutlu, B.** Robot Behavior Toolkit: Generating Effective Social Behaviors for Robots. *Proceedings of the 7th ACM/IEEE Conference on Human-Robot Interaction (HRI 2012)*, Boston, MA.
- Chidambaram, V., Chiang, Y.-H., & **Mutlu, B.** Designing Persuasive Robots: How Robots Might Persuade People Using Vocal and Nonverbal Cues. *Proceedings of the 7th ACM/IEEE Conference on Human-Robot Interaction (HRI 2012)*, Boston, MA.
- 2011 Khan, F., Zhu, J., & **Mutlu, B.** How Do Humans Teach: On Curriculum Learning and Teaching Dimension. *Proceedings of Advances in Neural Information Processing Systems (NIPS 2011)*, Granada, Spain.
- Mumm, J., & **Mutlu, B.** Human-Robot Proxemics: Physical and Psychological Distancing in Human-Robot Interaction. *Proceedings of the 6th ACM/IEEE Conference on Human-Robot Interaction (HRI 2011)*, Lausanne, Switzerland. Best Paper Award (Top 3 in 149 submissions).
- 2009 **Mutlu, B.**, Shiwa, T., Kanda, T., Ishiguro, H., & Hagita, N. Footing in Human-Robot Conversations: How Robots Might Shape Participant Roles Using Gaze Cues. *Proceedings of the 4th ACM/IEEE Conference on Human-Robot Interaction (HRI 2009)*, San Diego, CA. Best Paper Award (1 in 120 submissions).
- Mutlu, B.**, Yamaoka, F., Kanda, T., Ishiguro, H., & Hagita, N. Nonverbal Leakage in Robots: Communication of Intentions through Seemingly Unintentional Behavior. *Proceedings of the 4th ACM/IEEE Conference on Human-Robot Interaction (HRI 2009)*, San Diego, CA.
- 2008 **Mutlu, B.**, & Forlizzi, J. Robots in Organizations: Workflow, Social, and Environmental Factors in Human-Robot Interaction. *Proceedings of the 3rd ACM/IEEE Conference on Human-Robot Interaction (HRI 2008)*, Amsterdam, The Netherlands. Best Paper Award (1 in 134 submissions).
- 2007 **Mutlu, B.**, Krause, A., Forlizzi, J., Guestrin, C., & Hodgins, J. Robust, Low-Cost, Non-Intrusive Recognition of Seated Postures. *Proceedings of the 20th ACM Symposium on User Interface Software and Technology (UIST 2007)*, Newport, RI.
- 2006 **Mutlu, B.**, Forlizzi, J., Nourbakhsh, I., & Hodgins, J. The Use of Abstraction and Motion in the Design of Social Interfaces. *Proceedings of the ACM Conference on Designing Interactive Systems (DIS 2006)*, State College, PA.
- Mutlu, B.**, Forlizzi, J., & Hodgins, J. A Storytelling Robot: Modeling and Evaluation of Human-like Gaze Behavior. *Proceedings of the IEEE-RAS Conference on Humanoid Robots (Humanoids 2006)*, Genova, Italy.
- Mutlu, B.**, Osman, S., Forlizzi, J., Hodgins, J., & Kiesler, S. Task Structure and User Attributes as Elements of Human-Robot Interaction Design. *Proceedings of the 15th IEEE Symposium on Robot and Human Interactive Communication (RO-MAN 2006)*, Hatfield, U.K..
- 2005 Forlizzi, J., DiSalvo, C., Zimmerman, J., **Mutlu, B.**, & Hurst, A. The SenseChair: The lounge chair as an intelligent assistive

- device for elders. *Proceedings of the ACM Conference on Designing for User Experiences (DUX 2005), Fort Mason, CA.*
- 2004 Forlizzi, J., **Mutlu, B.**, & DiSalvo, C. A Study of How Products Contribute to the Emotional Aspects of Human Experience. *Proceedings of the 2004 Design & Emotion Conference, Ankara, Turkey.*
- Mutlu, B.**, & Forlizzi, J. The Chaotic Nature of Human Experience: An Alternative Approach to Determinacy in Understanding Emotions and Experience. *Proceedings of the 2004 Design & Emotion Conference, Ankara, Turkey.*
- 2003 **Mutlu, B.**, & Er, H. A. Design Innovation: Historical and Theoretical Perspectives on Product Innovation by Design. *Proceedings of the 5th European Academy of Design Conference, Barcelona, Spain.*

## Teaching & Curriculum Development

Selected courses and curricular initiatives I developed and taught.

### INSTRUCTION & COURSE DEVELOPMENT

Designed and taught a comprehensive Human-Computer Interaction (HCI) curriculum serving computer science and interdisciplinary undergraduate and graduate students. I have consistently earned strong student evaluations (typically above 6.3/7.0). Courses taught include:

- 2026–present *CS-271 Interaction Design Studio* – Undergraduate studio course on interaction design fundamentals.
- 2021–present *CS-772 Building Interactive Systems* – Graduate-level course at the intersection of HCI, machine learning, robotics, and systems.
- 2009–present *CS/Psych/EdPsych-770 Human-Computer Interaction* – Graduate seminar integrating HCI theory and methods.
- 2019–present *CS-571 Building User Interfaces* – UX design and development course covering web, mobile, voice interfaces.
- 2009–present *CS-270 Fundamentals of HCI* – Introductory, non-major course focused on user-centered design, usability.
- 2009–present *CS-570 Introduction to HCI* – Hands-on course for CS majors on real-world applications of HCI methods.

### PROGRAM & CURRICULUM LEADERSHIP

- 2025–present Led the development of a professional master's program in robotics, to be jointly offered by the Departments of Computer Sciences & Mechanical Engineering.
- 2020–present Director and PI of *INTEGRATE*, an NSF NRT training program spanning computing, engineering, psychology, economics, and policy focused on robotics and the future of work.
- 2018–2019 Developed and offered “Agile Research Studio,” a credit-bearing undergraduate research experience.
- 2017–present Co-creator and instructor for *Mad UX*, a remote graduate certificate in UX design (in collaboration with the iSchool).
- 2009– Developed and led the HCI PhD qualifying exam

## Graduate Advising & Student Mentoring

Across my career, I have advised 28 PhD students (graduated and current), mentored 6 postdoctoral scholars, hosted 8 international visiting scholars and students, and supervised 11 MS students (graduated and current) as well as many undergraduate researchers.

### PAST PHD ADVISEES

- 2020–2025 [Dr. Bengisu Çagiltay](#) (CS) *Koc University, Faculty*
- 2019–2025 [Dr. Laura Stegner](#) (CS) *George Washington University, Faculty*
- [Dr. Nathan White](#) (CS) *Intrinsic*

- 2017–2024 [Dr. Olivia Zhao](#) (Psych) *Apple*  
[Dr. Pragathi Praveena](#) (CS) *Carnegie Mellon University, Postdoctoral Researcher*
- 2016–2024 [Dr. Andrew Schoen](#) (CS) *Semio*
- 2016–2022 [Dr. David Porfirio](#) (CS) *George Mason University, Faculty*
- 2016–2019 [Dr. Joseph Michaelis](#) (Ed Psych) *University of Chicago Illinois, Faculty*
- 2015–2022 [Dr. Daniel Rakita](#) (CS) *Yale University, Faculty*
- 2012–2015 [Dr. Daniel Szafr](#) (CS) *UNC-Chapel Hill, Faculty*
- 2011–2015 [Dr. Chien-Ming Huang](#) (CS) *Johns Hopkins University, Faculty*
- 2010–2016 [Dr. Sean Andrist](#) (CS) *Microsoft Research*  
[Dr. Tomislav Pejsa](#) (CS) *Meta*
- 2010–2015 [Dr. Irene Rae](#) (CS) *Google*  
[Dr. Allison \(Terrell\) Sauppé](#) (CS) *University of Wisconsin–La Crosse, Faculty*
- 2010–2014 [Dr. Dee Miller](#) (ISyE) *Adobe*

#### CURRENT PHD ADVISEES

- 2025–present [Heidi Spalitta](#) (CS)  
[Xinyu Jessica Wang](#) (CS)  
[Xinning He](#) (CS)
- 2025–present [Michael Xu](#) (CS)  
[Yuna Hwang](#) (CS)
- 2022–present [Hailey Johnson](#) (CS)
- 2021–present [Amy Koike](#) (CS)  
[Callie Kim](#) (CS)  
[Christine Lee](#) (CS)
- 2020–present [Dakota Sullivan](#) (CS)  
[Yaxin Hu](#) (CS)  
[Irene Ho](#) (Ed Psych/CS)

#### PAST POSTDOCTORAL ADVISEES

- 2023–2025 [Dr. Arissa J. Sato](#) (CS)
- 2021–2024 [Dr. Sophie Wohltjen](#) (Psych) *University of Tennessee, Faculty*  
[Dr. Hajin Lim](#) (CS) *Seoul National University, Faculty*
- 2019–2022 [Dr. Emmanuel Senft](#) (CS) *Idiap Research Institute, Group Lead*

#### CURRENT POSTDOCTORAL ADVISEES

- 2025–present [Dr. Tugce Nur Pekcetin](#) (CS) *Fulbright Fellow*  
[Dr. Serena Ge Guo](#) (iSchool)

## Service & Leadership

Selected roles reflecting leadership in the HCI, robotics, and design research communities.

## SCHOLARLY LEADERSHIP

- 2020–present Secretary-Treasurer, *Human-Computer Interaction Consortium (HCIC)*
- 2013–2020 Member, Board of Governors (UW–Madison representative), *Human-Computer Interaction Consortium (HCIC)*
- 2018–2021 Co-chair, *Steering Committee of the ACM/IEEE Human-Robot Interaction (HRI) Conference*
- 2011–2014 Elected Member, *Steering Committee of the ACM/IEEE Human-Robot Interaction (HRI) Conference*

## MAJOR EDITORIAL ROLES

- 2018–2024 Founding Chief Editor, *Frontiers in Robotics and AI* (HRI section)
- 2017–present Associate Editor, *Human–Computer Interaction Journal*
- 2020–present Associate Editor, *Foundations and Trends in Human–Computer Interaction*
- 2013–2016 Associate Editor, *Journal of Human–Robot Interaction*
- 2013–2017 Associate Editor, *IEEE Transactions on Affective Computing*
- 2011–2013 Associate Editor, *Journal of Entertainment Computing*
- 2012–2013 Managing Technical Editor, *Journal of Human–Robot Interaction*

## CONFERENCE ORGANIZATION

- 2017 General Co-Chair, *ACM/IEEE HRI Conference*
- 2016 Program Co-Chair, *IEEE ROMAN Conference*
- 2015 Program Co-Chair, *ACM/IEEE HRI Conference*
- 2013–2014 Program Subcommittee Co-chair, *ACM Conference on Human Factors in Computing (CHI)*
- 2011 Program Co-Chair, *International Conference on Social Robotics (ICSR)*

## Service at the University & Department

Selected university- and department-level contributions.

### UNIVERSITY SERVICE

- 2025–present Faculty Rights and Responsibilities Committee
- 2022–2024 Physical Sciences Divisional Committee (Vice Chair in Year 2)

### DEPARTMENT SERVICE (COMPUTER SCIENCES)

- 2011–2021 Faculty Hiring Committee (Chair, 2018–2021)
- 2021–2024 New CDIS Building Committee
- 2019–2020 Budget Committee
- 2020–2021 Chair’s Advisory Committee
- 2009–2024 Publicity Committee
- 2012–2015 Facilities Committee

### ADDITIONAL CAMPUS ROLES

- 2009–2019 Faculty Advisor, Undergraduate Research Scholars
- 2011–2013 Advisory Board Member, DesignLab

## **Selected Media & Public Engagement**

Selected coverage in major media outlets.

*The Economist* — Interviewed for feature on robots in human work (“Our friends electric”).

*WIRED* — Interviewed for “This Warehouse Robot Reads Human Body Language.”

*MIT Technology Review* — Multiple articles featuring research on social robotics and robot behavior design.

*New Scientist* — Extensive coverage and interviews on robot communication and education.

*Popular Science* — Research featured in articles on educational and social robots.

*Discover Magazine* — Research featured in story on robotic reading companions for children.

*Voice of America / Science Nation* — Broadcast coverage of research on adaptive and instructional robotics.