BILGE MUTLU, *PHD*, CURRICULUM VITAE

University of Wisconsin–Madison
Department of Computer Sciences
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Group Website: http://hci.cs.wisc.edu

RESEARCH INTERESTS

Mission: Building human-centered principles and methods for designing robotic technologies and enabling their seamless integration into human environments

Interests: Human-computer interaction (HCI); human-robot interaction (HRI); robotics; design research; user-centered design; design for accessibility

EMPLOYMENT

Associate Professor *with tenure*, 2015–Present

Assistant Professor, 2009–2015
University of Wisconsin–Madison
Tenure Home: Department of Computer Sciences
Affiliate Appointments: Department of Industrial & Systems Engineering, Department of Psychology, McPherson Eye Research Institute (MERI)

Visiting Professor, 2016–2017
Johns Hopkins University, Department of Computer Science, Malone Center for Engineering Healthcare
George Washington University, Department of Biomedical Engineering

Researcher Intern, Fall 2007 & Fall 2008
Intelligent Robotics and Communication Laboratory, ATR International, Kyoto, Japan

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

EDUCATION

Ph.D. in Human-Computer Interaction, 2004–2009
HCI Institute, School of Computer Science, Carnegie Mellon University
Dissertation Title: Designing Gaze Behavior for Humanlike Robots
Committee: Jodi Forlizzi (co-chair), Jessica Hodgins (co-chair), Sara Kiesler, Justine Cassell

Master of Design in Interaction Design, *Fulbright Fellow*, 2004
School of Design, Carnegie Mellon University

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

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

HONORS & AWARDS

PAPER AWARDS & NOMINATIONS

A.14 **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*

A.13 **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*

A.12 **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*

A.11 **Best Paper Award Nominee** (Top 10 in 306[1]), *IEEE Human-Robot Communication (RO-MAN 2016)*
Bodden, Rakita, Mutlu, & Gleicher: *Evaluating Intent-Expressive Robot Arm Motion*

A.10 **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*

A.9 **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*

A.8 **Honorable Mention** (Top 119 in 2150), *ACM/SigCHI Human Factors in Computing (CHI 2015)*
Andrist, Mutlu, & Tapus: *Look Like Me: Matching Robot Personality via Gaze to Increase Motivation*

A.7 **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*

A.6 **Best Paper Award** (Top 5 in 392), *ACM Pervasive and Ubiquitous Computing (UbiComp 2013)*
Hoque, Courgeon, Martin, Mutlu, & Picard: *MACH: My Automated Conversation coacH*

A.5 **Highly Commended Paper** (Top 3 in 61), *Intelligent Virtual Agents (IVA 2013)*
Andrist, Mutlu, & Gleicher: *Conversational Gaze Aversion for Virtual Agents*

A.4 **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*

A.3 **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*

A.2 **Best Paper Award** (#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*

A.1 **Best Paper Award** (#1 in 134), *ACM/IEEE Human-Robot Interaction (HRI 2008)*
Mutlu & Forlizzi: Robots in Organizations: *Workflow, Social, and Environmental Factors in Human-Robot Interaction*

HONORS & AWARDS TO ME

Elected to co-chair the HRI Steering Committee, 2018–present
Elected to co-chair the HRI Steering Committee for a three-year term

Allen Newell Award for Research Excellence, Carnegie Mellon University, 2013
With Jodi Forlizzi, Sara Kiesler, Carl DiSalvo, Min Kyung Lee, and Cristen Torrey for the "Elucidation of the fundamental principles of human-robot interaction and its associated methods."

Elected to the HRI Steering Committee, 2011–2014
Elected as one of six members for a three-year term

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[1] Number of total submissions to the conference.

NSF CAREER Award, 2012

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

Doctoral Consortia, June 2006, March 2007, March 2008, & April 2008
CHI 2008, HRI 2008, HRI 2007, & DIS 2006

Fulbright Fellowship, 2002 – 2004

Graduated Summa Cum Laude & Valedictorian, 1999
Middle East Technical University, Ankara, Turkey
Ranked first among 31 graduates of the Department of Industrial Design and 154 graduates of the School of Architecture.

HONORS & AWARDS TO STUDENTS

Daniel Rakita, *HRI 2018 Best Paper Award: Technical Advances in HRI*, 2018

Sean Andrist, *CHI Honorable Mention Award*, 2017

Daniel Rakita, *RO-MAN 2016 Best Paper Award Nominee*, 2016

Daniel Rakita, *SIGGRAPH Student Research Competition First Place*, 2015

Allison Sauppé, *CHI Best Paper Award*, 2015

Sean Andrist, *CHI Honorable Mention Award*, 2015

Zhi Tan, *CRA Outstanding Undergraduate Researcher Award — Honorable Mention*, 2014

Zhi Tan, *UW-Madison College of Letters & Science Scholarship*, 2014

Steven Johnson, *NASA Space Technology Research Fellowship*, 2014 – 2018

Sean Andrist, *HRI 2014 Best Paper Award Nominee*, 2014

Zhi Tan, *HRI 2014 Best Paper Award Nominee*, 2014

Zhi Tan, *UW–Madison Hilldale Undergraduate Research Fellowship*, 2014

Sean Andrist, *HRI Pioneers Workshop*, 2014

Daniel Szafir, *CHI Doctoral Consortium*, 2014

Daniel Szafir, *HRI Pioneers Workshop*, 2014

Allison Sauppé, *CSCW Doctoral Consortium*, 2014

Sean Andrist, *ICMI Doctoral Consortium*, 2013

Chien-Ming Huang, *ICMI Doctoral Consortium*, 2013

Irene Rae, *Microsoft Research Internship*, 2013

Chien-Ming Huang, *RSS 2013 Best Paper + Best Poster Award Runner-Up*, 2013

Irene Rae, *Heidelberg Laureate Forum*, 2013

Sean Andrist, *IVA 2013 Highly Commended Paper Award*, 2013

Sean Andrist, *Chateaubriand Fellowship*, 2013 – 2014

Daniel Szafir, *NASA Space Technology Research Fellowship*, 2012 – 2016

Irene Rae, *CHI Doctoral Consortium*, 2013

Allison Terrell, *HRI Pioneers Workshop*, 2013

Chien-Ming Huang, *CHI Doctoral Consortium*, 2012

Chien-Ming Huang, *HRI Pioneers Workshop*, 2012

Irene Rae, *HRI Pioneers Workshop*, 2011

Jonathan Mumm, *HRI 2011 Best Paper Award*, 2011

PUBLICATIONS[2]

EDITED BOOKS & PROCEEDINGS

E.4 **MUTLU, B.**, TSCHELIGI, W.,(C) WIESS, A.,(C) & YOUNG, J.(C) (2017). *Proceedings of the 2017 ACM/IEEE International Conference on Human-Robot Interaction*. ACM.

E.3 BROZ, F.,(C) LEHMANN, H.,(C) **MUTLU, B.**, & NAKANO, Y.(C) (2015). *Gaze in Human-Robot Communication*. John Benjamins.

E.2 ADAMS, J.,(C) SMART, W.,(C) **MUTLU, B.**, & TAKAYAMA, L.(C) (2015). *Proceedings of the Tenth Annual ACM/IEEE International Conference on Human-Robot Interaction*. ACM.

E.1 **MUTLU, B.**, BARTNECK, C.,(C) HAM, J.,(C) EVERS, V.,(C) & KANDA, T.(C) (2011). *Social Robotics: Proceedings of the Third International Conference on Social Robotics*. Springer.

BOOK CHAPTERS

B.3 **MUTLU, B.**, ROY, N.,(C) & ŠABANOVIĆ, S.(C) (2017). Cognitive Human-Robot Interaction. In B. Siciliano & O. Khatib (Eds.) *Handbook of Robotics (2nd ed.)*. Springer. doi: 10.1007/978-3-319- 32552-1

B.2 DUFF, M.(C), **MUTLU, B.**, BYOM, L.(C), & TURKSTRA, L.(C) (2015). Communication as distributed cognition: Novel theoretical and methodological approaches to disruptions in social communication following acquired brain injury. In R. Bahr & E. Silliman (Eds.) *Handbook of Communication Disorders*. Routledge.

B.1 **MUTLU, B.**, ANDRIST, S.(S), & SAUPPÉ, A.(S) (2014). Enabling Human-Robot Dialogue. In J. Markowitz (Ed.) *Robots that Talk and Listen*. De Gruyter.

JOURNAL ARTICLES

UNDER REVIEW

J.34 **MUTLU, B.**, DUFF, M. C.(C) & TURKSTRA, L. S.(C) (Under Review). Social-Cue Perception and Mentalizing Ability Following Traumatic Brain Injury: A Human-Robot Interaction Study. *Submitted to Brain Injury.*

2018

J.33 RIGON, A.,(C) VOSS, M.,(C) TURKSTRA, L. S.,(C) **MUTLU, B.**, & DUFF, M. C.(C) (2018). White Matter Correlates of Different Aspects of Facial Affect Recognition Impairment Following Traumatic Brain Injury. *To Appear in Social Neuroscience*.

J.32 RIGON, A.,(C) TURKSTRA, L. S.,(C) **MUTLU, B.**, & DUFF, M. C.(C) (2018). Facial-Affect Recognition Deficit as a Predictor of Different Aspects of Social-Communication Impairment in Traumatic Brain Injury. *Neuropsychology*, 32(4), 476.

J.31 RIGON, A.,(C) VOSS, M.,(C) TURKSTRA, L. S.,(C) **MUTLU, B.**, & DUFF, M. C.(C) (2018). Functional Neural Correlates of Facial Affect Recognition Impairment Following TBI. *Brain Imaging and Behavior*, 1-15.

J.30 PEARCE, M.,(S) **MUTLU, B.**, SHAH, J.,(C) & RADWIN, R.(C) (2018). Optimizing Makespan and Ergonomics in Integrating Collaborative Robots Into Manufacturing Processes. *IEEE Transactions on Automation Science and Engineering*, 1–13.
Impact factor: 2.67

J.29 TURKSTRA, L.,(C) NORMAN, R.S.,(O) **MUTLU, B.**, & DUFF, M.C.(C) (2018). Impaired theory of mind in adults with traumatic brain injury: A replication and extension of findings. *Neuropsychologia*, 111, 117-122.
Impact factor: 3.20

[2] Collaborators are denoted by (C), thesis advisors by (A), students under my supervision by (S), and students under the supervision of others by (O). Journal papers are denoted by "J," conference papers with "C," book chapters with "BC," workshop papers with "W," and edited volumes with "E." Impact factors for journals and acceptance rates for conferences are provided where data is available.

J.28 RIGON, A.,(O) VOSS, M.W.,(O) TURKSTRA, L.,(C) **MUTLU, B.**, & DUFF, M.C.(C) (2018). 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.
Impact factor: 1.84

2017

J.27 TURKSTRA, L.,(C) KRANING, S.G.,(O) RIEDEMAN, S.K.,(O) **MUTLU, B.**, DUFF, M.,(C) & VANDENHEUVEL, S.(O) (2017). Labelling Facial Affect in Context in Adults with and without TBI. *Brain Impairment*, 18(1), 49-61.
Impact factor: 0.57

J.26 TURKSTRA, L.,(C) DUFF, M.,(C) POLITIS, A.,(O) & **MUTLU, B.** (2017). Detection of text-based social cues in adults with traumatic brain injury. *Neuropsychological Rehabilitation, 1–15.*
Impact factor: 2.28

J.25 SZAFIR, D.,(S) **MUTLU, B.**, & FONG, T.(C) (2017). Designing Planning And Control Interfaces To Support User Collaboration With Flying Robots. *International Journal of Robotics Research*.
Impact factor: 2.49

J.24 RIGON, A.,(O) VOSS, M.,(O) TURKSTRA, L.,(C) **MUTLU, B.**, & DUFF, M.(C) (2017). Relationship between individual differences in functional connectivity and facial-emotion recognition abilities in adults with traumatic brain injury. *NeuroImage: Clinical*, 13, 370-377.
Impact factor: 3.86

J.23 ANDRIST, S.,(S) BOHUS, D.,(C) **MUTLU, B.**, & SCHLANGEN, D.(C) (2017). Turn-Taking And Coordination In Human-Machine Interaction. *AI Magazine*, 37(4), 5-6.
Impact factor: 1.17

2016

J.22 TURKSTRA, L.,(C) KRANING, S.,(O) RIEDEMAN, S.,(O) **MUTLU, B.**, DUFF, M.,(C) & VANDENHEUVEL, S.(O)(2016). Labelling Facial Affect in Context in Adults with and without TBI. *Brain Impairment*, 1-13.
Impact factor: 0.57

J.21 PEJSA, T., RAKITA, D., MUTLU, B., & GLEICHER, M. (2016). Authoring Directed Gaze For Full-Body Motion Capture. *ACM Transactions On Graphics (TOG)*, 35(6), 161.
Impact factor: 4.10

J.20 RIGON, A.,(O) TURKSTRA, L.,(C) **MUTLU, B.**, & DUFF, M.C.(C) (2016). The Female Advantage: Sex As A Protective Factor Against Emotion Recognition Impairment Following Traumatic Brain Injury. To appear in *Cognitive, Affective, & Behavioral Neuroscience,* 16(5), 866-875.
Impact factor: 3.29

J.19 RIGON, A.,(O) VOSS, M.,(O) TURKSTRA, L.,(C) **MUTLU, B.**, & DUFF, M.C.(C) (2016). Fronto-Temporal Structural Connectivity Is Associated With Social Communication Impairment Following Traumatic Brain Injury. *Journal of the International Neuropsychological Society*, 22(7), 705–716.
Impact factor: 2.96

J.18 GIBSON, M.,(O) LEE, J.,(C) VENKATRAMAN, V.,(O) PRICE, M.,(O) LEWIS, J.,(O) MONTGOMERY, O.,(O) **MUTLU, B.,** DOMEYER, J.,(C) & FOLEY, J.(C) (2016). 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.

2015

J.17 ANDRIST, S.,(S) COLLIER, W.,(O) GLEICHER, M.,(C) **MUTLU, B.**, & SHAFFER, D.(C) (2015). Look Together: Analyzing Gaze Coordination with Epistemic Network Analysis. *Frontiers in Psychology*, 6 (1016). doi: 10.3389/fpsyg.2015.01016
Impact factor: 2.60, OPEN-ACCESS

J.16 HUANG, C.-M.,[S] ANDRIST, S.,[S] SAUPPÉ, A.[S] & **MUTLU, B.** (2015). Using Gaze Patterns to Predict Task Intent in Collaboration. *Frontiers in Psychology*, 6 (1049). doi: 10.3389/fpsyg.2015.01049
Impact factor: 2.60, OPEN-ACCESS

J.15 SAUPPÉ, A.[S] & **MUTLU, B.** (2015). Effective Task Training Strategies for Human and Robot Instructors. *Autonomous Robots*, 1–17. doi: 10.1007/s10514-015-9461-0
Impact factor: 2.07

J.14 RUHLAND, K.,[O] PETERS, C. E.,[C] ANDRIST, S.,[S] BADLER, J. B.,[C] BADLER, N. I.,[C] GLEICHER, M.,[C] **MUTLU, B.** & MCDONNELL, R.[C] (2015). A Review of Eye Gaze in Virtual Agents, Social Robotics and HCI: Behaviour Generation, User Interaction and Perception. In *Computer Graphics Forum*. doi: 10.1111/cgf.12603
Impact factor: 1.60

J.13 PEJSA, T.,[S] ANDRIST, S.,[S] **MUTLU, B.** & GLEICHER, M.,[C] (2015). Gaze and Attention Management for Embodied Conversational Agents. *ACM Transactions on Interactive and Intelligent Systems (TiiS),* 5 (1), Article 3, 34 pages. doi: 10.1145/2724731

2014

J.12 HUANG, C.-M.[S] & **MUTLU, B.** (2014). Multivariate Evaluation of Interactive Robot Systems. *Autonomous Robots*, 1–15. doi: 10.1007/s10514-014-9415-y
Impact factor: 2.07

J.11 KIM, Y.[O] & **MUTLU, B.** (2014). How social distance shapes human–robot interaction. *International Journal of Human-Computer Studies*, 72 (12), 783–795. doi: 10.1016/j.ijhcs.2014.05.005.
Impact factor: 2.27

2013

J.10 BROZ, F.,[C] LEHMANN, H.,[C] & **MUTLU, B.**, & NAKANO, Y.[C] (2013). Introduction to the Special Issue on Gaze in Human-Robot Communication. *Interaction Studies,* 14:3 (2013), VII–XVI. doi 10.1075/is.14.3.001int

J.9 BYOM, L.[O] & **MUTLU, B.** (2013). Theory of Mind: Mechanisms, Methods, and New Directions. *Frontiers in Human Neuroscience*, 7(413). doi: 10.3389/fnhum.2013.00413. PubMed PMID: 23964218.
Impact factor: 2.91, OPEN-ACCESS

J.8 HUANG, C.-M.[S] & **MUTLU, B.** (2013). The Repertoire of Robot Behavior: Enabling Robots to Achieve Interaction Goals through Social Behavior. *Journal of Human-Robot Interaction*, 2(2), 80–102. doi: 10.5898/JHRI.2.2.Huang
OPEN-ACCESS

J.7 PEJSA, T.,[S] **MUTLU, B.**, & GLEICHER, M.[C] (2013). Stylized and Performative Gaze for Character Animation. *Computer Graphics Forum* 32(2), 143–152. doi: 10.1111/cgf.12034.
Impact factor: 1.64, Acceptance rate: 25% (Proceedings of EUROGRAPHICS 2013)

2012

J.6 DE SIMONE, J.J.,[O] KUO, L.-H.,[O] VERBRUGGEN, T.,[O] & **MUTLU, B.** (2012). 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. doi: 10.1016/j.chb.2012.07.005.
Impact factor: 2.27

J.5 **MUTLU, B.**, KANDA, T.,[C] FORLIZZI, J.,[A] HODGINS, J.,[A] & ISHIGURO, H.[C] (2012). Conversational Gaze Mechanisms for Humanlike Robots. *ACM Transactions on Interactive Intelligent Systems*, 1(2), 33 pages. doi: 10.1145/2070719.2070725.

J.4 DUFF, M.,[C] **MUTLU, B.**, BYOM, L.,[O] & TURKSTRA, L.[C] (2012). 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. doi: 10.1055/s-0031-1301162. PubMed PMID: 22362323.

2011

J.3 **MUTLU, B.** (2011). Designing Embodied Cues for Dialog with Robots. *AI Magazine*, 32(4), 17–30.
Impact factor: 0.81, OPEN-ACCESS

J.2 BOHUS, D.,[C] HORVITZ, E.,[C] KANDA, T.,[C] **MUTLU, B.**, AND RAUX, A.[C] (2011). Introduction to the Special Issue on Dialog with Robots. *AI Magazine*, 32(4), 15–16.
Impact factor: 0.81, OPEN-ACCESS

J.1 MUMM, J.[S] & **MUTLU, B.** (2011). Designing Motivational Agents: The Role of Praise, Social Comparison, and Embodiment in Computer Feedback. *Computers in Human Behavior*, 27(5), 1643-1650.
Impact factor: 2.27

REFEREED FULL CONFERENCE PAPERS

UNDER REVIEW

C.59 PRAVEENA, P.,[S] GLEICHER, M.,[C] & **MUTLU, B.** (Under Review). A comparison of four interaction methods for robot imitation learning. *Submitted to the 2018 Conference on Robot Learning (CoRL 2018)*.

C.58 PORFIRIO, D.,[S] **MUTLU, B.**, SAUPPÉ, A.,[C] & ALBARGHOUTHI, A.[C] (Under Review). Adapting Robot Programs to Social Context. *Submitted to the 2018 Conference on Robot Learning (CoRL 2018)*.

C.57 PORFIRIO, D.,[S] **MUTLU, B.**, SAUPPÉ, A.,[C] & ALBARGHOUTHI, A.[C] (Under Review). Authoring and Verifying Human-Robot Interactions. *Submitted to 31st ACM User Interface Software and Technology Symposium (UIST 2018)*.

2018

C.56 RAKITA, D.,[S] **MUTLU, B.**, & GLEICHER, M.[C] (2018). RelaxedIK: Real-time Synthesis of Accurate and Feasible Robot Arm Motion. *Robotics: Science and Systems (RSS 2018)*.

C.55 RAKITA, D.,[S] **MUTLU, B.**, & GLEICHER, M.[C] (2018). An Autonomous Dynamic Camera Method for Effective Remote Teleoperation. In *Proceedings of the 2018 ACM/IEEE International Conference on Human-Robot Interaction* (pp. 325-333). ACM.
Acceptance rate: 24%
Best Paper Award: Technical Advances in HRI (Top 4 in 206 Submissions)

C.54 AKITA, D.,[S] **MUTLU, B.**, & GLEICHER, M.[C] (2018). Shared Dynamic Curves: A Shared-Control Telemanipulation Method for Motor Task Training. In *Proceedings of the 2018 ACM/IEEE International Conference on Human-Robot Interaction* (pp. 23-31). ACM.
Acceptance rate: 24%

2017

C.53 LIU, O. D.,[S] RAKITA, D.,[S] **MUTLU, B.**, & GLEICHER, M.[C] (2017). Understanding Human-Robot Interaction in Virtual Reality. In *Proceedings of the 26th IEEE International Symposium on Robot and Human Interactive Communication (RO-MAN 2017),* Lisbon, Portugal.
Acceptance rate: Unknown

C.52 PEJSA, J.,[S] GLEICHER, M., & **MUTLU, B.** (2017). Who, Me? How Virtual Agents Can Shape Conversational Footing in Virtual Reality. In *Proceedings of International Conference on Intelligent Virtual Agents (IVA 2017)*, Stockholm, Sweden.
Acceptance rate: 19%

C.51 MICHAELIS, J.[S] & **MUTLU, B.** (2017). Someone to Read with: Design of and Experiences with an In-Home Learning Companion Robot for Reading. In *Proceedings of the ACM/SigCHI Conference on Human Factors in Computing (CHI 2017)*, Denver, CO.
Acceptance rate: 25%

C.50 ANDRIST, D.,[S] GLEICHER, M.,[C] & **MUTLU, B.** (2017). Looking Coordinated: Bidirectional Gaze Mechanisms for Collaborative Interaction with Virtual Characters. In *Proceedings of the ACM/SigCHI Conference on Human Factors in Computing (CHI 2017)*, Denver, CO.
Acceptance rate: 25%
Honorable Mention (Top 97 in 2424 Submissions)

C.49 CHOI, M.,[S] KORNFIELD, R.,[S] TAYAKAMA, L.,[C] & **MUTLU, B.** (2017). Movement Matters: Effects of Motion and Mimicry on Perception of Similarity and Closeness in Robot-Mediated Communication. In *Proceedings of the ACM/SigCHI Conference on Human Factors in Computing (CHI 2017)*, Denver, CO.
Acceptance rate: 25%

C.48 RAKITA, D., **MUTLU, B.**, & GLEICHER, M. (2017). A Motion Retargeting Method for Effective Mimicry-based Teleoperation of Robot Arms. In *Proceedings of the ACM/IEEE International Conference on Human-Robot*

Interaction (HRI 2017), Vienna, Austria.
Acceptance rate: 24%

2016

C.47 RAKITA, D.,[S] **MUTLU, B.**, & GLEICHER, M.[C] (2016). Motion synopsis for robot arm trajectories. In *Proceedings of the IEEE International Symposium on Robot and Human Interactive Communication (RO-MAN 2016)*, New York City, NY.
Acceptance rate: 47%

C.46 BODDEN, C.,[S] RAKITA, D.,[S] **MUTLU, B.**, & GLEICHER, M.[C] (2016). Evaluating intent-expressive robot arm motion. In *Proceedings of the IEEE International Symposium on Robot and Human Interactive Communication (RO-MAN 2016)*, New York City, NY.
Acceptance rate: 47%

C.45 HUANG, C.-M.[S] & **MUTLU, B.** (2016). Anticipatory Robot Control for Efficient Human-Robot Collaboration. To appear at *the ACM/IEEE International Conference on Human-Robot Interaction (HRI 2016)*, Christchurch, New Zealand.
Acceptance rate: 25%

2015

C.44 HUANG, C.-M.,[S] **MUTLU, B.**, & CAKMAK, M.[C] (2015). Adaptive Coordination Strategies for Human-Robot Handovers. In *Robotics: Science and Systems (RSS 2015).*
Acceptance rate: 27%

C.43 SAUPPÉ, A.[S] & **MUTLU, B.** (2015). The Social Impact of a Robot Co-Worker in Industrial Settings. In *Proceedings of the ACM/SigCHI Conference on Human Factors in Computing (CHI 2015),* Seoul, South Korea.
Acceptance rate: 23%
Best Paper Award (Top 21 in 2150 submissions)

C.42 JOHNSON, S.,[S] RAE, I.,[S] **MUTLU, B.**, & TAKAYAMA, L.[C] (2015). Can You See Me Now? How Field of View Affects Collaboration in Robotic Telepresence. In *Proceedings of the ACM/SigCHI Conference on Human Factors in Computing (CHI 2015),* Seoul, South Korea.
Acceptance rate: 23%

C.41 ANDRIST, S.,[S] **MUTLU, B.**, & TAPUS, A.[C] (2015). Look Like Me: Matching Robot Personality via Gaze to Increase Motivation. In *Proceedings of the ACM/SigCHI Conference on Human Factors in Computing (CHI 2015),* Seoul, South Korea.
Acceptance rate: 23%
Honorable Mention (Top 119 in 2150 submissions)

C.40 SZAFIR, D.,[S] **MUTLU, B.**, & FONG, T.[C] (2015). Designing Mechanisms to Communicate Directionality in Flying Robots. In *Proceedings of the ACM/IEEE International Conference on Human-Robot Interaction (HRI 2015)*, Portland, OR.
Acceptance rate: 25%

C.39 ANDRIST, S.,[S] ZIADEE, M.,[O] BOUKARAM, H.-A.,[O] SAKR, M.,[C] & **MUTLU, B.** (2015). Effects of Culture on the Credibility of Robot Speech: A Comparison between English and Arabic. In *Proceedings of the ACM/IEEE International Conference on Human-Robot Interaction (HRI 2015)*, Portland, OR.
Acceptance rate: 25%

C.38 SAUPPÉ, A.,[S] SZAFIR, D.,[S] HUANG, C.-M.[S] & **MUTLU, B.** (2015). From 9 to 90: Engaging Learners of All Ages. In *Proceedings of the 46th ACM Technical Symposium on Computer Science Education (SIGCSE 2015),* Kansas City, MO.
Acceptance rate: 36%

C.37 JOHNSON, S.,[S] GIBSON, M.,[O] & **MUTLU, B.** (2015). Handheld or Handsfree?: Remote Collaboration via Lightweight Head-Mounted Displays and Handheld Devices. In *Proceedings of ACM Conference on Computer-Supported Collaborative Work and Social Computing (CSCW 2015)*, Vancouver, BC, Canada.
Acceptance rate: 28%

2014

C.36 RUHLAND, K.(O), ANDRIST, S.(S), PETERS, C.(C), BADLER, J.(C), BADLER, N.(C), GLEICHER, M.(C), **MUTLU, B.**, & MCDONNELL, R(C). (2014). "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)*, 69–91. doi: 10.2312/egst.20141036

C.35 SAUPPÉ, A.(S) & **MUTLU, B.** (2014). Effective Task Training Strategies for Instructional Robots. In *Proceedings of Robotics: Science and Systems (RSS 2014).*
Acceptance rate: 32%, OPEN-ACCESS

C.34 SAUPPÉ, A.(S) & **MUTLU, B.** (2014). Design Patterns for Exploring and Prototyping Human-Robot Interactions. In *Proceedings of the ACM/SigCHI Conference on Human Factors in Computing (CHI 2014)*, Toronto, ON, Canada.
Acceptance rate: 23%

C.33 RAE, I.,(S) **MUTLU, B.**, & TAKAYAMA, L.(C) (2014). Bodies in Motion: Mobility, Presence, and Task Awareness in Telepresence. In *Proceedings of the ACM/SigCHI Conference on Human Factors in Computing (CHI 2014)*, Toronto, ON, Canada.
Acceptance rate: 23%

C.32 ANDRIST, S.,(S) TAN, X. Z.,(S) GLEICHER, M.(C), & **MUTLU, B.** (2014). Conversational Gaze Aversion for Humanlike Robots. In *Proceedings of the ACM/IEEE Interaction Conference on Human-Robot Interaction (HRI 2014)*, Bielefeld, Germany.
Acceptance rate: 24%
Best Paper Award Nominee (Top 5 in 132 submissions)

C.31 HUANG, C.-M.(S) & **MUTLU, B.** (2014). Learning-Based Modeling of Multimodal Behaviors for Humanlike Robots. In *Proceedings of the ACM/IEEE Interaction Conference on Human-Robot Interaction (HRI 2014)*, Bielefeld, Germany.
Acceptance rate: 24%

C.30 SZAFIR, D.,(S) **MUTLU, B.**, & FONG, T.(C) (2014). Communication of Intent in Assistive Free Flyers. In *Proceedings of the ACM/IEEE Interaction Conference on Human-Robot Interaction (HRI 2014),* Bielefeld, Germany.
Acceptance rate: 24%

C.29 SAUPPÉ, A.(S) & **MUTLU, B.** (2014). Robot Deictics: How Gesture and Context Shape Referential Communication. In *Proceedings of the ACM/IEEE Interaction Conference on Human-Robot Interaction (HRI 2014)*, Bielefeld, Germany.
Acceptance rate: 24%

C.28 SAUPPÉ, A.(S) & **MUTLU, B.** (2014). How Social Cues Shape Task Coordination and Communication. In *Proceedings of the ACM Conference on Computer Supported Cooperative Work and Social Computing (CSCW 2014),* Maryland, MD.
Acceptance rate: 27%

2013

C.27 MILLER, S.,(S) **MUTLU, B.**, & LEE, J.D.(C) (2013). Artifact Usage, Context, and Privacy Management in Logging and Tracking Personal Health Information in Older Adults. In *Proceedings of the 2013 International Annual Meeting of the Human Factors and Ergonomics Society (HFES 2013)*.

C.26 HOQUE, E.,(O) COURGEON, M.,(C) MARTIN, J.-C.,(C) **MUTLU, B.**, & PICARD, R.(C) (2013). MACH: My Automated Conversation coacH. In *Proceedings of the 12th ACM International Joint Conference on Pervasive and Ubiquitous Computing (Ubicomp '13),* Zurich, Switzerland.
Acceptance rate: 23%
Best Paper Award (Top 5 in 392 submissions)

C.25 ANDRIST, S.,(S) **MUTLU, B.**, & GLEICHER, M.(C) (2013). Conversational Gaze Aversion for Virtual Agents. In *Proceedings of Intelligent Virtual Agents (IVA 2013)*, Edinburgh, UK.

Acceptance rate: 30%
"Highly Commended Paper" Award (Top 3 in 61 submissions)

C.24 HUANG, C.-M.[S] & **MUTLU, B.** (2013). Modeling and Evaluating Narrative Gestures for Humanlike Robots. In *Proceedings of Robotics: Science and Systems Conference (RSS 2013)*, Berlin, Germany.
Acceptance rate: 30%, OPEN-ACCESS
Best Paper Award Runner-Up (Top 5 in 183 submissions)

C.23 SZAFIR, D.[S] & **MUTLU, B.** (2013). ARTFuL: Adaptive Review Technology for Flipped Learning. In *Proceedings of the 2013 ACM annual conference on Human factors in computing systems (CHI 2013),* Paris, France.
Acceptance rate: 20%

C.22 RAE, I.,[S] TAKAYAMA, L.,[C] & **MUTLU, B.** (2013). In-body Experiences: Embodiment, Control, and Trust in Embodied Mediated Communication. In *Proceedings of the 2013 ACM annual conference on Human factors in computing systems (CHI 2013),* Paris, France.
Acceptance rate: 20%

C.21 ANDRIST, S.,[S] SPANNAN, E.,[O] & **MUTLU, B.** (2013). Rhetorical Robots: Making Robots More Effective Speakers Using Linguistic Cues of Expertise. In *Proceedings of the 8th ACM/IEEE Conference on Human-Robot Interaction (HRI 2013),* Tokyo, Japan.
Acceptance rate: 24%

C.20 RAE, I.,[S] TAKAYAMA, L.,[C] & **MUTLU, B.** (2013). The Influence of Height on Robotic Communication Products. To appear in *Proceedings of the 8th ACM/IEEE Conference on Human-Robot Interaction (HRI 2013),* Tokyo, Japan.
Acceptance rate: 24%

2012

C.19 TERRELL, A.[S] & **MUTLU, B.** (2012). A Regression-based Approach to Modeling Addressee Backchannels. In *Proceedings of the 13th Annual Meeting of the Special Interest Group on Discourse and Dialogue (SIGDIAL 2012)*, Seoul, South Korea.
OPEN-ACCESS

C.18 SZAFIR, D.[S] & **MUTLU, B.** (2012). Pay Attention! Designing Adaptive Agents that Monitor and Improve User Engagement. In *Proceedings of the 30th ACM/SigCHI Conference on Human Factors in Computing (CHI 2012)*, Austin, TX.
Acceptance rate: 23%

C.17 RAE, I.,[S] TAKAYAMA, L.,[C] & **MUTLU, B.** (2012). One of the Gang: Supporting In-group Behavior for Embodied Mediated Communication. In *Proceedings of the 30th ACM/SigCHI Conference on Human Factors in Computing (CHI 2012),* Austin, TX.
Acceptance rate: 23%

C.16 ANDRIST, S.,[S] PEJSA, T.,[S] **MUTLU, B.**, & GLEICHER, M.[C]. (2012). Designing Effective Gaze Mechanisms for Virtual Agents. In *Proceedings of the 30th ACM/SigCHI Conference on Human Factors in Computing (CHI 2012),* Austin, TX.
Acceptance rate: 23%

C.15 HUANG, C.-M.[S] & **MUTLU, B.** (2012). Robot Behavior Toolkit: Generating Effective Social Behaviors for Robots. In *Proceedings of to the 7th ACM/IEEE Conference on Human-Robot Interaction (HRI 2012),* Boston, MA.
Acceptance rate: 25%

C.14 CHIDAMBARAM, V.,[O] CHIANG, Y.-H.,[O] & **MUTLU, B.** (2012). Designing Persuasive Robots: How Robots Might Persuade People Using Vocal and Nonverbal Cues. In *Proceedings of to the 7th ACM/IEEE Conference on Human- Robot Interaction (HRI 2012),* Boston, MA.
Acceptance rate: 25%

2011

C.13 KHAN, F.,(S) ZHU, J.,(C) & **MUTLU, B.** (2011). How Do Humans Teach: On Curriculum Learning and Teaching Dimension. In *Proceedings of Advances in Neural Information Processing Systems (NIPS)*, 25, Granada, Spain.
Acceptance rate: 22%. OPEN-ACCESS

C.12 MUMM, J.(S) & **MUTLU, B.** (2011). Human-Robot Proxemics: Physical and Psychological Distancing in Human-Robot Interaction. In *Proceedings of to the 6th ACM/IEEE Conference on Human-Robot Interaction (HRI 2011)*, Lausanne, Switzerland.
Acceptance rate: 22%
Best Paper Award (Top 3 in 149 submissions)

2009

C.11 **MUTLU, B.**, SHIWA, T.,(O) KANDA, T.,(C) ISHIGURO, H.,(C) & HAGITA, N.(C) (2009). Footing in Human-Robot Conversations: How Robots Might Shape Participant Roles Using Gaze Cues. In *Proceedings of the 4th ACM/IEEE Conference on Human-Robot Interaction (HRI 2009)*, San Diego, CA.
Acceptance rate: 19%
Best Paper Award (#1 in 120 submissions)

C.10 **MUTLU, B.**, YAMAOKA, F.,(O) KANDA, T.,(C) ISHIGURO, H.,(C) & HAGITA, N.(C) (2009). Nonverbal Leakage in Robots: Communication of Intentions through Seemingly Unintentional Behavior. In *Proceedings of the 4th ACM/IEEE Conference on Human-Robot Interaction (HRI 2009)*, San Diego, CA.
Acceptance rate: 19%

2008

C.9 **MUTLU, B.** & FORLIZZI, J.(A) (2008). Robots in Organizations: Workflow, Social, and Environmental Factors in Human-Robot Interaction. In *Proceedings of the 3rd ACM/IEEE Conference on Human-Robot Interaction (HRI 2008)*, Amsterdam, The Netherlands.
Acceptance rate for oral presentations: 18%
Best Paper Award (#1 in 134 submissions)

2007

C.8 **MUTLU, B.**, KRAUSE, A.,(O) FORLIZZI, J.,(A) GUESTRIN, C.,(C) & HODGINS, J.(A) (2007). Robust, Low-Cost, Non-Intrusive Recognition of Seated Postures. In *Proceedings of 20th ACM Symposium on User Interface Software and Technology (UIST 2007)*, Newport, RI.
Acceptance rate: 19%

2006

C.7 **MUTLU, B.**, FORLIZZI, J.,(A) NOURBAKHSH, I.,(C) & HODGINS, J.(A) (2006). The Use of Abstraction and Motion in the Design of Social Interfaces. In *Proceedings of the ACM Conference on Designing Interactive Systems (DIS 2006)*, State College, PA.
Acceptance rate: 25%

C.6 **MUTLU, B.**, FORLIZZI, J.,(A) & HODGINS, J.(A) (2006). A Storytelling Robot: Modeling and Evaluation of Human-like Gaze Behavior. In *Proceedings of the IEEE-RAS Conference on Humanoid Robots (Humanoids 2006)*, Genova, Italy.

C.5 **MUTLU, B.**, OSMAN, S.,(O) FORLIZZI, J.,(A) HODGINS, J.,(A) & KIESLER, S.(C) (2006). Task Structure and User Attributes as Elements of Human-Robot Interaction Design. In *Proceedings of the 15th IEEE Symposium on Robot and Human Interactive Communication (Ro-Man 2006)*, Hatfield, U.K.

2005

C.4 FORLIZZI, J.,(A) DISALVO, C.,(O) ZIMMERMAN, J.,(C) **MUTLU, B.**, & HURST, A.(O) (2005). The SenseChair: The lounge chair as an intelligent assistive device for elders. In *Proceedings of the ACM Conference on Designing for User Experiences (DUX 2005)*, Fort Mason, CA.

2004

C.3 FORLIZZI, J.,[A] **MUTLU, B.**, & DISALVO, C.[O] (2004). A Study of How Products Contribute to the Emotional Aspects of Human Experience. In *Proceedings of the 2004 Design & Emotion Conference*. Ankara, Turkey.

C.2 **MUTLU, B.** & FORLIZZI, J.[A] (2004). The Chaotic Nature of Human Experience: An Alternative Approach to Determinacy in Understanding Emotions and Experience. In *Proceedings of the 2004 Design & Emotion Conference*. Ankara, Turkey.

2003

C.1 **MUTLU, B.** & ER, H.A.[A] (2003). Design Innovation: Historical and Theoretical Perspectives on Product Innovation by Design. In *Proceedings of the 5th European Academy of Design Conference*. Barcelona, Spain.

REFEREED SHORT CONFERENCE PAPERS

2015

S.6 RAKITA, D.,[S] PEJSA, T.,[S] **MUTLU, B.**, & GLEICHER, M.[C] (2015). Inferring gaze shifts from captured body motion. In *ACM SIGGRAPH 2015 Posters* (p. 77).

S.5 KANAOKA, T.[O] & **MUTLU, B.** (2015). Designing a Motivational Agent for Behavior Change in Physical Activity. In *Proceedings of the 33rd Annual ACM Conference Extended Abstracts on Human Factors in Computing Systems (CHI EA '15)*, Seoul, South Korea.
Acceptance rate: 45%

2008

S.4 **MUTLU, B.** (2008). The Design of Gaze Behavior for Embodied Social Agents. In *Doctoral Consortium Extended Abstracts of the ACM/SigCHI Conference on Human Factors in Computing (CHI 2008)*, Florence, Italy.
Acceptance rate: < 25%

2006

S.3 **MUTLU, B.** (2006). An Empirical Framework for Designing Social Products. In *Doctoral Consortium Extended Abstracts of the 2006 ACM Conference on Designing Interactive Systems (DIS 2006)*, University Park, PA.

S.2 **MUTLU, B.**, OSMAN, S.,[O] FORLIZZI, J.,[A] HODGINS, J.,[A] & KIESLER, S.[C] (2006). Perceptions of ASIMO: An exploration on co-operation and competition with humans and humanoid robots. In *Extended Abstracts of the 1st ACM/IEEE Human-Robot Interaction Conference (HRI 2006)*, Salt Lake City, UT.
Acceptance rate: 29%

2005

S.1 KEYANI, P.,[O] HSIEH, G.,[O] **MUTLU, B.**, EASTERDAY, M.,[O] & FORLIZZI, J.[A] (2005). DanceAlong: Supporting Positive Social Exchange and Exercise for the Elderly Through Dance. In *Extended Abstracts of the ACM/SigCHI Conference on Human Factors in Computing Systems (CHI 2005)*, Portland, OR.
Acceptance rate: 25%

REFEREED WORKSHOP & SYMPOSIUM PAPERS

2018

W.10 **MUTLU, B.**, TURKSTRA, L.,[C] & DUFF, M.[C] (2017). Social-cue perception and mentalizing ability following traumatic brain injury: A human-robot interaction study. *Brain Injury,* 31 (6-7) 936–937.

W.9 RIGON, A.,[C] VOSS, M.,[C] TURKSTRA, L.,[C] **MUTLU, B.**, & DUFF, M.[C] (2017). Neural mechanism underlying facial affect recognition deficits in TBI: An FMRI study. *Brain Injury,* 31 (6-7), 942–942.

2017

W.8 RIGON, A., VOSS, M., TURKSTRA, L., **MUTLU, B.**, & DUFF, M. (2017). Neural mechanism underlying facial affect recognition deficits in TBI: An FMRI study. *Brain Injury,* 31 (6–7), 942–942

W.7 **MUTLU, B.**, TURKSTRA, L., & DUFF, M. (2017) Social-cue perception and mentalizing ability following traumatic brain injury: A human-robot interaction study. *Brain Injury*, 31 (6–7), 936–937.

2014

W.6 HUANG, C.-M.[S] & **MUTLU, B.** (2014). Modeling Human-Robot Interactions as a System of Distributed Cognition. In *Proceedings of 2014 AAAI Fall Symposium Artificial Intelligence and Human-Robot Interaction,* Arlington, VA.

W.5 **MUTLU, B.** (2014). From Tele-presence to Tele-mobility: Exploring the Design Space for Robotic Communication Products. In *Proceedings of Human-Computer Interaction Consortium (HCIC 2014) Workshop*, Watsonville, CA.

2013

W.4 RAE, I.,[S] **MUTLU, B.**, TAKAYAMA, L.,[C] & MCCUNE, S.[C] (2013). The Effects of Dog Ownership on Social Cognition Skills. Paper presented at the *International Association of Human-Animal Interaction Organizations*, Chicago, Illinois.

W.3 **MUTLU, B.**, TERRELL, A.,[S] & HUANG, C.-M.[S] (2013). Coordination Mechanisms in Human-Robot Collaboration. In *Proceedings of the Workshop on Collaborative Manipulation held at the 2013 ACM/IEEE Human-Robot interaction Conference*, Tokyo, Japan.

2012

W.2 ANDRIST, S.,[S] PEJSA, T.,[S] **MUTLU, B.**, & GLEICHER, M.[C] (2012). A Head-Eye Coordination Model for Animating Gaze Shifts of Virtual Characters. In *Proceedings of the 4th Workshop on Eye Gaze in Intelligent Human-Machine Interaction held at the International Conference on Multimodal Interfaces*, Santa Monica, CA.

2010

W.1 KHAN, F.,[S] **MUTLU, B.**, & ZHU, J.[C] (2010). Modeling Social Behavior: Efficient Features for Predicting Listener Nods. In *Proceedings of the Workshop on Modeling Human Communication Dynamics held at the Conference on Neural Information Processing Systems (NIPS)*, Vancouver, BC.

THESES

T.3 **MUTLU, B.** (2009). Designing Gaze Behavior for Humanlike Robots. *Doctoral Dissertation. Technical Report # CMU-HCII-09-101.* Human-Computer Interaction Institute, Carnegie Mellon University, Pittsburgh, PA, USA.

T.2 **MUTLU, B.** (2004). The Chaotic Nature of Human Experience: Insights on the Subject Matter of Design towards Establishing a Science of Design. *Master of Design Thesis.* Carnegie Mellon University, Pittsburgh, PA, USA.

T.1 **MUTLU, B.** (2003). New User-Centered Methods for Design Innovation: A Study on the Role of Emerging Methods in Innovative Product Design and Development. *Master of Science Thesis.* Istanbul Technical University, Istanbul, Turkey.

TECHNICAL/POLICY REPORTS

R.2 PRICE, M. A.,[O] VENKATRAMAN, V.,[O] GIBSON, M.,[O] LEE, J.,[C] & **MUTLU, B.** (2016). Psychophysics of Trust in Vehicle Control Algorithms (No. 2016-01-0144). *SAE Technical Paper*.

R.1 **MUTLU, B.** (2012). Interaction with Robotic Technologies. In M. Veloso (Ed.) *NSF/WTEC Panel Report on Human-Robot Interaction: Japan, South Korea, and China.*

PATENTS

P.2 **MUTLU, B.** & SZAFIR, D.[S] (2012). Teaching System for Improving Information Retention Based on Brain-State Monitoring. U.S. Patent Application 13/437,699.

P.1 BUKULMEZ, B.,[C] TARTAN, A.,[C] ALTUN, U.,[C] YALCIN, M.,[C] ULUCAY, Z.,[C] BUYUKCAN, E.,[C] **MUTLU, B.**, UCKU, E.,[C] & MENEKSE, O.[C] (2003). Cooker. International Patent # WO/2003/005865.

RESEARCH GRANTS & GIFTS

FEDERAL GRANTS

National Science Foundation IIS-1651129
EAGER: Representations and Methods for Verifiable Human-Robot Interactions
Investigators: Bilge Mutlu (PI), Aws Albarghouthi, Allison Sauppé
Period: 2016 – 2018
Amount: $299,877

Department of Transportation DTRT13-G-UTC47 (Subaward through Ohio State University: University Transportation Centers Program).
Human Factors for Crash Imminent Safety in Intelligent Vehicles
Investigators: John Lee (PI), Bilge Mutlu
Period: 2013 – 2017
Amount: $299,131

National Science Foundation CMMI-1426824
NRI/Collaborative Research: Models & Instruments for Integrating Effective Human-Robot Teams into Manufacturing
Investigators: Bilge Mutlu (PI)
Period: 2014 – 2017
Amount: $589,959

National Aeronautics and Space Administration NNX14AL45H
Automated Task Monitoring, Feedback and Training for Critical Missions
Investigator: Bilge Mutlu (PI)
Period: 2014 – 2015 (Awarded as fellowship to Steven Johnson)
Amount: $272,000

National Science Foundation CISE-IIS-1227530
DIP: BioSourcing: A Crowdsourcing Approach to Increasing Public Understanding in Computational Biosciences
Investigators: Kurt Squire (PI), Benjamin Shapiro, Bilge Mutlu, Michael Ferris
Period: 2012 – 2017
Amount: $1,349,989

National Science Foundation CISE-IIS-1241348
REU Supplement for Embodied Mediated Communication in Collaborative Work
Investigators: Bilge Mutlu (PI), Leila Takayama
Period: 2012 – 2013
Amount: $16,000

National Institutes of Health 1R01HD071089-01A1
Social Perception and social communication in adults with traumatic brain injury
Investigators: Lyn Turkstra (PI), Bilge Mutlu, Melissa Duff
Period: 2012 – 2017
Amount: $2,787,779

National Aeronautics and Space Administration NNX12AN14H
Effective Human-Robot Collaborative Work for Critical Missions
Investigator: Bilge Mutlu (PI)

Period: 2012 – 2015 (Awarded as fellowship to Daniel Szafir)
Amount: $264,000

National Science Foundation CISE-IIS-1208632
NRI-Small: Perceptually Inspired Dynamics for Robot Arm Motion
Investigator: Michael Gleicher (PI), Bilge Mutlu, Nicola Ferrier
Period: 2012 – 2016
Amount: $799,942

National Science Foundation CISE-IIS-1149970
CAREER: Designing Socially Adept Robots
Investigator: Bilge Mutlu (PI)
Period: 2012 – 2017
Amount: $498,245

National Science Foundation CISE-IIS-1117652
Embodied Mediated Communication in Collaborative Work
Investigators: Bilge Mutlu (PI), Leila Takayama
Period: 2012 – 2015
Amount: $487,810

National Science Foundation CISE-IIS-1017952
Designing Effective Gaze Mechanisms for Cross-Modal Embodied Agents
Investigator: Bilge Mutlu (PI), Michael Gleicher
Period: 2010 – 2013
Amount: $499,050

CORPORATE AND FOUNDATION GIFTS & GRANTS

Toyota Corporation CSRC-042
Mechanisms for Enhancing Human-Automation Coordination and Situation Awareness in Autonomous Driving (Phase 2)
Investigator: John Lee (PI), Bilge Mutlu
Period: 2016–Present
Amount: $254,879

Toyota Corporation CSRC-042
Mechanisms for Enhancing Human-Automation Coordination and Situation Awareness in Autonomous Driving (Phase 1)
Investigator: John Lee (PI), Bilge Mutlu
Period: 2015–2016
Amount: $502,718

Google, Inc., Glass Awards
Improving Everyday Learning Using Glass
Investigator: Bilge Mutlu (PI)
Period: 2013–Present
Amount: $27,860

Fujitsu Laboratories Ltd., Japan
Designing a Robotic Motivational Coach
Investigator: Bilge Mutlu (PI)
Period: 2013 – Present
Amount: $50,000

The University of Wisconsin–Madison Graduate School
Designing Effective Computer-Based Protocols for Early Detection of Autism
Investigator: Bilge Mutlu (PI)
Period: 2012 – 2013
Amount: $39,729

The University of Wisconsin–Madison Graduate School
Educational Brain-Computer Interfaces
Investigator: Bilge Mutlu (PI)
Period: 2011 – 2012
Amount: $34,970

Google, Inc., Faculty Research Awards
Designing Adaptive Educational Interfaces
Investigator: Bilge Mutlu (PI)
Period: 2010 – Present
Amount: $40,000.

Waltham Foundation, U.K.
Does Interaction with Animals Help us in interpreting Human Social Behavior?
Investigators: Bilge Mutlu (PI), Leila Takayama, Sara Kiesler, & Takayuki Kanda
Period: 2009 – 2012
Amount: $14,100.

Mitsubishi Heavy Industries, Ltd., Japan
Wakamaru Humanlike Robot Equipment Loan
Investigators: Bilge Mutlu (PI), Sara Kiesler
Period: 2009 – Present
Amount: Equipment loan

Ford Motor Company
Posture Recognition for In-Car Seating
Investigator: Bilge Mutlu (PI), Andreas Krause
Period: 2006 – 2007
Amount: $2,000.

SELECTED PRESS COVERAGE

Voice of America (US), 2016
Opinion sought for "It's Elementary. The Problem with Artificial Intelligence Agents"

UW Science Narratives (US), 2016
A five-part video series featuring research program

MIT Technology Review (US), 2015
Research covered in "*Teach Your Robot to Do the Dishes*"

Control Design (US), 2015
Research covered in "*Researchers Study How to Make Robots More Like Your Co-Workers*"

MIT Technology Review (US), 2014
Opinion sought for "*Next-Generation Robot Needs Your Help*"

New Scientist (UK), 2014
Opinion sought for *"Meet Jibo, the cute social robot that knows the family"*

New Scientist (UK), 2014
Opinion sought for *"Make robots useful by teaching them to talk like us"*

Popular Science (US), 2014
Research covered in *"Robots Seem More Thoughtful If They Glance Away While They Talk"*

AAAS Science Update (US), 2014
Research covered in *"Robot Gaze Aversion"*

New Scientist (UK), 2014
Research covered in *"The robot tricks to bridge the uncanny valley"*

The Economist (UK), 2013
Opinion sought for *"Working with Robots: Our friends electric"*

WORT-FM (US), 2013
Opinion sought for *"Psychology and Technology"*

New Scientist (UK), 2013
Opinion sought for *"Robot inquisition keeps witnesses on the right track"*

Huffington Post (US), 2012
Opinion sought for *"'You, Robot': Personal Robots For The Masses"*

New Scientist (UK), 2012
Research covered in *"Mind-reading robot teachers keep students focused"*

Discovery News (US), 2012
Research covered in *"Mind-reading robot teachers head to class"*

Engadget (US), 2012
Research covered in *"Mind-reading robotic teachers are more... Anyone? Anyone? Attention-grabbing"*

La Repubblica (Italy), 2012
Research covered in *"U.S.: Robot teacher seeks out distracted students"*

Voice of America (US), 2012
Research covered in *"Designing Humanlike Robots"*

Science Nation (US), 2012
Research covered in *"Robots that can Teach Humans"*

New Scientist (UK), 2010
Research covered in *"Innovation: Teaching Robots Some Manners"*

Quo Magazine (Spain), 2010
Opinion sought for *"How Safe Are Robots? (in Spanish)"*

MIT Technology Review (US), 2010
Opinion sought for *"A Giant Leap for Humanoid Kind"*

Plug & Pray (Germany), 2010
Research covered in *"Scientific work appeared in award-winning feature documentary 'Plug & Pray'"*

Cumhuriyet (Turkey), 2010
Research covered in *"Towards Artificial Intelligence (in Turkish)"*

New Scientist (UK), 2010
Research covered in *"Learning to Love to Hate Robots"*

Aktüel (Turkey), 2010
Research covered in *"Teaching Japanese Robots (in Turkish)"*

New Scientist (UK), 2009
Research covered in *"Robot Body Language Helps Humans"*

MIT Technology Review (US), 2009
Research covered in *"Making Robots Give the Right Glances"*

TALKS

KEYNOTES

Conference Keynote Speaker, August 2017
International Conference on Intelligent Virtual Agents (IVA), Stockholm, Sweden
"Virtual and Physical: Two Frames of Mind"

Symposium Keynote Speaker, March 2016
Shared Autonomy in Research and Practice, AAAI 2016 Fall Symposium Series, Washington, DC
"Human Factors of Shared Autonomy"

Workshop Keynote Speaker, March 2016
The 3rd Workshop on Public Space Human-Robot Interaction (PubRob 2016), Ro-MAN Conference, New York, NY
"Designing for the Wild, Wild West: Seven Challenges in the Design of Robots for Public Use"

Workshop Keynote Speaker, March 2012
Gaze in HRI Workshop, HRI Conference, Boston, MA
"Designing Effective Gaze Mechanisms for Social Robots"

INVITED TALKS

University of Iowa Computing Conference, February 2016
University of Iowa, Iowa City, IA
"Human-Centered Principles and Methods for Designing Robotic Technologies"

LCSR Seminar Series, February 2016
Johns Hopkins University, Baltimore, MD
"Human-Centered Principles and Methods for Designing Robotic Technologies"

Humanity Centered Robotics Initiative Speaker Series, December 2015
Brown University, Providence, RI
"Human-Centered Principles and Methods for Designing Robotic Technologies"

Seminar Speaker, August 2015
Navy Center for Applied Research in Artificial Intelligence, Navy Research Laboratory, Washington DC
"Human-Centered Principles and Methods for Designing Robotic Technologies"

GVU Brown Bag Seminar Speaker, November 2014
GVU Center, Georgia Institute of Technology, Atlanta, GA.
"Human-Centered Principles and Methods for Designing Robotic Technologies"

IRIM Seminar Speaker, November 2014
Institute for Robotics and Intelligent Machines, Georgia Institute of Technology, Atlanta, GA.
"Human-Centered Principles and Methods for Designing Robotic Technologies"

DUB Seminar, October 2014
University of Washington, Seattle, WA.
"Human-Centered Principles and Methods for Designing Robotic Technologies"

Colloquium Speaker, October 2014
Department of Computer Science, University of Southern California, Los Angles, CA.
"Human-Centered Principles and Methods for Designing Robotic Technologies"

Seminar Speaker, October 2014
Department of Informatics, University of California Irvine, Irvine, CA.
"Human-Centered Principles for Designing Robotic Technologies"

Colloquium Speaker, October 2014
Department of Information Science, Cornell University, Ithaca, NY.
"Human-Centered Principles for Designing Robotic Technologies"

Toyota AI Seminar Speaker, October 2014
Department of Computer Science and Engineering, University of Michigan, Ann Arbor, MI.
"Human-Centered Principles and Methods for Designing Robotic Technologies"

Colloquium Speaker, April 2014
Robotics Institute, Carnegie Mellon University, Pittsburgh, PA.
"Human-Centered Principles for Designing Robotic Products"

Summer School Lecturer, August 2013
Social Human-Robot Interaction Summer School, Cambridge, UK.
"Human-Robot Interaction Design"

Seminar Speaker, January 2013
NASA Ames Research Center, Intelligent Robotics Group, Mountain View, CA.
"Designing Robotic Technologies that Help Us Help Ourselves"

Invited Speaker, August 2012
Vanderbilt Agency Conference, Vanderbilt University, Nashville, TN.
"Designing Agentic Robots"

Panel Speaker, March 2012
HRI Pioneers Workshop, HRI Conference, Boston, MA.
"From Washing Machines to Social Robots"

Colloquium Speaker, February 2012
Robotics and Intelligent Machines, Georgia Institute of Technology, Atlanta, GA.
"Helping Us Help Ourselves: Designing Effective Social Robots"

Invited Speaker, December 2011
Viterbi School of Engineering, University of Southern California, Los Angles, LA.
"Helping Us Help Ourselves: Designing Effective Social Robots"

Invited Speaker, October 2010
Department of Neurology, University of Iowa, Iowa City, IA.
"Computational Modeling of Social Behavior"

Panel Speaker, November 2008
3rd CPATH (CISE Pathways to Revitalized Undergraduate Computing Education) Workshop on Social Robots, Schenectady, NY.
"Designing Social Behavior for Robots"

OTHER SEMINARS

Seminar Speaker, September 2017
HAMLET Seminar Series, University of Wisconsin–Madison, Madison, WI.
"Virtual and Physical: Two Frames of Mind"

Seminar Speaker, October 2013
Psychology Honors Society (Psi Chi), University of Wisconsin–Madison, Madison, WI.
"Helping Us Help Ourselves: Designing Effective Social Robots"

Seminar Speaker, March 2012
HUB Computer Science Student Organization, University of Wisconsin–Madison, Madison, WI.
"Helping Us Help Ourselves: Designing Effective Social Robots"

Seminar Speaker, March 2012
Human Factors & Ergonomics Society, University of Wisconsin–Madison, Madison, WI.
"Helping Us Help Ourselves: Designing Effective Social Robots"

Lab Seminar Speaker, March 2012
Affective Computing Group, Massachusetts Institute of Technology, Cambridge, MA.
"Helping Us Help Ourselves: Designing Effective Social Robots"

Colloquium Speaker, November 2010
Department of Psychology, University of Wisconsin–Madison, Madison, WI.
"Designing Socially Adept Technologies"

Colloquium Speaker, November 2010
Department of Communication Arts, University of Wisconsin–Madison, Madison, WI.
"Designing Socially Adept Technologies"

Colloquium Speaker, February 2010
Department of Industrial and Systems Engineering, University of Wisconsin–Madison, Madison, WI.
"Designing Social Behavior"

Colloquium Speaker, December 2009
Affective Neuroscience Laboratory, Waisman Center, University of Wisconsin–Madison, Madison, WI.
"Designing Social Behavior"

Colloquium Speaker, March 2009
Robotics Institute, Carnegie Mellon University, Pittsburgh, PA.
"Designing Social Behavior for Humanlike Robots"

Seminar Speaker, September 2008
Department of Adaptive Machine Systems, Graduate School of Engineering, Osaka University, Japan
"The Design of Gaze Behavior for Social Robots"

PROFESSIONAL SERVICE

EDITORIAL WORK

Chief Editor
Frontiers in Robotics & AI, "Human-Robot Interaction" Section, 2018 – present

Managing Technical Editor
Journal of Human-Robot Interaction, 2012 – 2013

Associate Editor
Human-Computer Interaction Journal, 2017 – present
Journal of Human-Robot Interaction, 2013 – 2016
IEEE Transactions on Affective Computing, 2013 – 2017
Journal of Entertainment Computing, 2011 – 2013

Guest Editor
Frontiers in Robotics and AI, 2016
Interaction Studies, 2013
AI Magazine, 2011, 2016

PROGRAM COMMITTEE WORK

Program Co-Chair
IEEE International Symposium on Robot and Human Interactive Communication (RO-MAN), 2016
ACM/IEEE Human-Robot Interaction Conference (HRI), 2015
International Conference on Social Robotics (ICSR), 2011

Program Subcommittee Co-Chair
ACM Conference on Human Factors in Computing (CHI), 2013, 2014

Program Regional Co-Chair
IEEE International Symposium on Robot and Human Interactive Communication (RO-MAN), 2015

Conference Program Committee Member
ACM/IEEE Human-Robot Interaction Conference (HRI), 2010, 2011, 2012, 2013, 2014
ACM Conference on Human Factors in Computing (CHI), 2012
ACM International Conference on Multimodal Interfaces (ICMI), 2012
Robotics: Science and Systems (RSS), 2011, 2013, 2014
AAAI Conference on Artificial Intelligence (AAAI), 2014
Intelligent Virtual Agents (IVA), 2014

Workshop & Symposia Program Committee Member
HRI "Pioneers" Workshop, 2012, 2013, 2014
AISB Symposium "New Frontiers in Human-Robot Interaction," 2014
HRI Workshop on "Attention Models in Robotics," 2014
PETMEI Workshop on "Pervasive Eye Tracking and Mobile Eye-Based Interaction," 2012, 2013

ICMI Workshop on "Speech and Gesture Production in Virtually and Physically Embodied Agents," 2012
ICMI Workshop on "Eye Gaze in Intelligent Human Machine Interaction," 2012

REFEREE SERVICE

Funding Agency Panelist
International Study Panelist – HRI in Japan, Korea, & China (NSF), 2011
National Science Foundation (NSF), 2010, 2011, 2011, 2012, 2012, 2012, 2013, 2015, 2016
National Aeronautics and Space Administration (NASA), 2012

Funding Agency External Reviewer
Natural Sciences and Engineering Research Council of Canada (NSERC), 2010
Swiss National Science Foundation (SNF), 2012
Icelandic Research Fund (RANNIS), 2012
National Science Foundation (NSF), 2014

Referee for Journal Articles
International Journal of Robotics Research
Journal of Human-Robot Interaction
Interaction Studies Journal
International Journal of Design
Computers in Human Behavior
Computers & Education
ACM Transactions on Intelligence and Interactive Systems
International Journal of Social Robotics
ACM Transactions on Autonomous and Adaptive Systems
Autonomous Robots
IEEE Transactions on Robotics
IEEE Journal on Systems, Man and Cybernetics, Part A
IEEE Transactions on Human Machine Systems
Journal of Human Factors and Ergonomics Society

Referee for Conference Proceedings
ACM/SigCHI Conference in Human Factors in Computing (CHI)
ACM/IEEE Human-Robot Interaction Conference (HRI)
ACM/SigCHI Symposium on User Interface and Software Technology (UIST)
IEEE International Symposium on Robot-Human Interactive Communication (Ro-Man)
IEEE International Conference on Robotics and Automation (ICRA)
IEEE/RSJ International Conference on Intelligent Robots and Systems (IROS)
ACM/SigCHI Conference on Computer Supported Collaborative Work (CSCW)
Robotics: Science and Systems Conference (RSS)
ACM SIGGRAPH Conference
IEEE-RAS Conference on Humanoid Robots
ACM Conference on Designing Pleasurable Products (DPPI)
ACM/SigCHI Conference on Creativity and Cognition (CC)
ACM Conference on Designing Interactive Systems (DIS)
IADIS International Conference on Interfaces and Human-Computer Interaction (ICHI)

WORKSHOPS & SYMPOSIA ORGANIZATION

Symposium: *Turn-taking and Coordination in Human-Machine Interaction*
Co-organizers: Sean Andrist (UW–Madison), Dan Bohus (Microsoft Research), Eric Horvitz (Microsoft Research), David Schlangen (Bielefeld University)
AAAI Spring 2015 Symposium, to be held in Stanford, CA, in March 2014.

Workshop: *Human-Robot Collaboration for Industrial Manufacturing*
Co-organizers: Allison Sauppé (UW–Madison), Matthew Gombolay (MIT), Julie Shah (MIT)
Robotics: Science and Systems Conference, held in Berkeley, CA in July 2014.

Workshop Series: *Culture-Aware Robotics*
Co-organizers: Matthias Rehm (Aalborg U.), Maja Matarić (USC), Tatsuya Nomura (Ryukoku U.)
#1: Human-Robot Interaction Conference, held in Bielefeld, Germany in March 2014.
#2: Autonomous Agents and Multi-Agent Systems Conference, held in Paris, France in May 2014.
#3: JSAI International Symposia on AI, to be held in Yokohama, Japan in November 2014.

Workshop: *HRI Face-to-Face: Gaze and Speech Communication*
Co-organizers: Frank Broz (University of Plymouth), Hagen Lehmann (University of Hertfordshire), Yukiko Nakano (Seikei University)
Human-Robot Interaction Conference, held in Tokyo, Japan in March 2013.

Workshop: *Gaze in HRI: From Modeling to Communication Workshop*
Co-organizers: Frank Broz (University of Plymouth), Hagen Lehmann (University of Hertfordshire), Yukiko Nakano (Seikei University)
Human-Robot Interaction Conference, held in Boston, MA in March 2012.

Symposium: *Dialog with Robots*
Co-organizers: Dan Bohus (Microsoft Research), Eric Horvitz (Microsoft Research), Takayuki Kanda (ATR), and Antoine Raux (Honda Research).
AAAI Fall 2010 Symposium, held in Arlington, VA, in November 2010.

Symposium: *Experimental Design for Real-World Systems*
Co-organizers: David Feil-Seifer (USC), Heidy Maldonado (Stanford), Leila Takayama (Stanford), and Katherine Tsui (UMass Lowell).
AAAI Spring 2009 Symposium, held in Palo Alto, CA, in March 2009.

Workshop: *Social Responsibility in HRI: Conducting our Research, Changing the World*
Co-organizers: Peter Kahn (UW), Nathan Frier (RPI), Vanessa Evers (U Amsterdam), Victoria Groom (Stanford), and Takayuki Kanda (ATR).
Human-Robot Interaction Conference, held in San Diego, CA in March 2009.

Workshop: *Human-Robot Interaction*
Co-organizers: Jodi Forlizzi, Sara Kiesler, Pamela Hinds (Stanford), Terry Fong (NASA), Brian Scassellati (Yale), Myung Suk Kim (KAIST), and Cristen Torrey.
Invitational Workshop, Carmel, California in August 2006.

CONFERENCE ORGANIZING COMMITTEE ROLES

Steering Committee Co-Chair
ACM/IEEE Human-Robot Interaction Conference (HRI), 2018–Present

General Co-Chair
ACM/IEEE Human-Robot Interaction Conference (HRI), 2017

Short Papers Co-Chair
ACM/IEEE Human-Robot Interaction Conference (HRI), 2010

Doctoral Consortium Co-Chair
ACM International Conference on Multimodal Interfaces (ICMI), 2012

Special Sessions Co-Chair
International Conference on Computer Supported Collaborative Learning (CSCL), 2013

Tutorials Co-Chair
ACM Conference on Computer-Supported Cooperative Work (CSCW), 2011

Design Chair
ACM/IEEE Human-Robot Interaction Conference (HRI), 2011

Session Chair
ACM/SigCHI Human Factors in Computing (CHI), 2013 Papers Session: Autism
ACM/IEEE Human-Robot Interaction Conference (HRI), 2013 Papers Session: Groups and public places

ACM/IEEE Human-Robot Interaction Conference (HRI), 2012 Papers Session: Talking with Robots: Linguistics and Natural Language

UNIVERSITY SERVICE

Facilities Committee
Department of Computer Sciences, 2012 – 2013, 2014 – 2015

Faculty Hiring Committee
Department of Computer Sciences, 2011 – 2012, 2013 – 2014, 2014 – 2015

Publicity Committee
Department of Computer Sciences, 2009 – 2012

Faculty Advisor
Undergraduate Research Scholars, 2009 – 2010

Advisory Board Member
DesignLab, 2011 – 2013
WID Living Environments Laboratory, 2011 – 2013

ADVISING

GRADUATE ADVISEES[3]

Olivia Zhao(m), 2017 – Present
Department of Psychology, University of Wisconsin–Madison
Co-advised with Paula Niedenthal (Psychology)

David Porfirio(f), 2016 – Present
Department of Computer Sciences, University of Wisconsin–Madison

Andrew Schoen(m), 2016– Present
Department of Computer Sciences, University of Wisconsin–Madison

Joseph Michaelis(m), 2016 – Present
Department of Computer Sciences, University of Wisconsin–Madison

Daniel Rakita(m), 2015 – Present
Department of Computer Sciences, University of Wisconsin–Madison
Co-advised with Michael Gleicher (CS)

GRADUATED & PAST ADVISEES

Sean Andrist(m), 2010 – 2016
Department of Computer Sciences, University of Wisconsin–Madison
Researcher at Microsoft Research, Redmond
Co-advised with Michael Gleicher (CS)

Tomislav Pejsa(m), 2010 – 2016
Department of Computer Sciences, University of Wisconsin–Madison
Researcher at Magic Leap
Co-advised with Michael Gleicher (CS)

Daniel Szafir, 2012 – 2015
PhD in Computer Science, University of Wisconsin–Madison
Assistant Professor, Department of Computer Science, ATLAS Institute, University of Colorado Boulder

[3] Students funded by me are denoted by (m), students on fellowships by (f), and self-funded students by (s).

Chien-Ming Huang, 2011 – 2015
PhD in Computer Science, University of Wisconsin–Madison
Assistant Professor, Department of Computer Science, Johns Hopkins University

Irene Rae, 2010 – 2015
PhD in Computer Science, University of Wisconsin–Madison
Researcher, Microsoft Corporation

Allison (Terrell) Sauppé, 2010 – 2015
PhD in Computer Science, University of Wisconsin–Madison
Assistant Professor of Computer Science, University of Wisconsin–La Crosse

Margaret Pearce(m), 2015 – 2016
Department of Computer Sciences, University of Wisconsin–Madison
Software developer at Ford Motor Company

Christopher Bodden(m), 2015 – 2016
Department of Computer Sciences, University of Wisconsin–Madison
Software developer

Dongning Wang(m), 2015 – 2016
Department of Computer Sciences, University of Wisconsin–Madison
Researcher, American Family

Steven Johnson, 2013 – 2015
MSc in Computer Science, University of Wisconsin–Madison
Engineer at Google, Inc.

Shiyu Luo, 2013 – 2014
Department of Electrical and Computer Engineering, University of Wisconsin–Madison
"Rocket scientist" at Rocket Fuel Inc.

Shadeequa Miller, 2010 – 2014
PhD in Industrial and Systems Engineering, University of Wisconsin–Madison
Co-advised with John Lee (ISyE); Senior Systems Engineer at Siemens Healthcare Innovation Center

Faisal Khan, 2009 – 2011
MSc in Computer Science, University of Wisconsin–Madison
Engineer at Argonne National Labs

Zhi Tan, 2013 – Present
BS in Computer Science, University of Wisconsin–Madison
PhD student at Robotics Institute, Carnegie Mellon University

Jonathan Mumm, 2009 – 2011
BS in Computer Science, University of Wisconsin–Madison
Developer evangelist at Tokbox

Nathalie Cheng, 2009 – 2011
BA in Human-Computer Interaction (L&S Individual Major), University of Wisconsin–Madison
User experience designer at Lab 126

UNDERGRADUATE ADVISING

Since Spring 2010, I have advised approximately 75 undergraduate students at varying degrees of involvement and length. Due to increased demand in undergraduate research, which reached 25 students in Fall 2017, I replaced individual advising to running an "Agile Research Studio" in the context of a class offered to advanced undergraduates in CS and other related areas. More information on this class is provided below in the section titled "Curriculum Development."

VISITING STUDENTS & SCHOLARS

Dr. Javi Gorostiza, 2014 – 2015
Assistant Professor at Carlos III University of Madrid, Spain

Toshikazu Kanaoka, 2013 – 2014
Research Engineer at Fujitsu Laboratories Ltd., Japan

Victoria Schroeder, 2013
Neuro-Cognitive Psychology, Ludwig Maximilian University, Germany

Jingjing Du, 2012
Information and System Engineering, Politecnico di Torino, Italy

Yunkyung Kim, 2011
Department of Industrial Design, Korea Advanced Institute of Science and Technology, Korea

Kohei Yoshikawa, 2010 – 2011
Department of Systems Innovation, Osaka University, Japan

THESIS COMMITTEE MEMBER[4]

D **Feng Liu**; PhD Thesis; Advisor: Michael Gleicher; 2010
Dissertation Title: *Technologies for Creating Good Camera Motion*
Department of Computer Sciences, University of Wisconsin–Madison

D **Bryan Gibson**; PhD Thesis; Advisor: Jerry Zhu; 2012–2014
Dissertation Title: *Using Machine Learning to Understand and Influence Human Categorization Behavior*
Department of Computer Sciences, University of Wisconsin–Madison

D **Danielle Albers**; PhD Thesis; Advisor: Michael Gleicher; 2013–2015
Dissertation Title: *Perceptually Informed Scalable Sequence Comparison*
Department of Computer Sciences, University of Wisconsin–Madison

D **Michael Correll**; PhD Thesis; Advisor: Michael Gleicher; 2013–2015
Dissertation Title: Dissertation Title: *Improved Visual Statistics for Decision-Making*
Department of Computer Sciences, University of Wisconsin–Madison

D **Fatemah Panahi**; PhD Thesis; Advisor: Jeffrey Naughton; 2014–2016
Dissertation Title: *Human-Centric Entity Matching*
Department of Computer Sciences, University of Wisconsin–Madison

D **Nathan Mitchell**; PhD Thesis; Advisor: Eftychios Sifakis; 2014–2016
Dissertation Title: *Soft Body Simulation for Surgical Training*
Department of Computer Sciences, University of Wisconsin–Madison

D **Alper Sarikaya**; PhD Thesis; Advisor: Michael Gleicher; 2015–2017
Dissertation Title: *Exploratory Visual Summaries of Complex Data Elements*
Department of Computer Sciences, University of Wisconsin–Madison

D **Joshua Hare**; PhD Thesis; Advisor: Suman Banerjee; 2015–Present
Dissertation Title: *Towards Robust, Scalable Internet Connectivity For Public Transit Vehicles*
Department of Computer Sciences, University of Wisconsin–Madison

U **Lindsey Byom**; PhD Thesis; Advisor: Lyn Turkstra; 2011–2013
Dissertation Title: *The Role of Theory of Mind and Executive Function in Conversational Appropriateness Following Traumatic Brain Injury*
Department of Communication Science and Disorders, University of Wisconsin–Madison

U **Tony McDonald**; PhD Thesis; Advisor: John Lee; 2012–2015
Dissertation Title: *Understanding Driver Fatigue and Its Effects Through the Lens of Machine Learning*
Department of Industrial and Systems Engineering, University of Wisconsin–Madison

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[4] D, U, and O denote students from the Department, the University, and other institutions, respectively.

U **Vindhya Venkatraman**; PhD Thesis; Advisor: John Lee; 2013–Present
Dissertation Title: *Driver-Vehicle Automation Behavior-Response Interaction*
Department of Industrial and Systems Engineering, University of Wisconsin–Madison

U **Rashmi Premnath**; PhD Thesis; Advisor: John Lee; 2013–Present
Dissertation Title: *A Game-Theoretic Approach to "Matching" Ridesharing Needs of Older Adults through their Social Networks*
Department of Industrial and Systems Engineering, University of Wisconsin–Madison

U **Joonbum Lee**; PhD Thesis; Advisor: John Lee; 2013–2015
Dissertation Title: *Predicting and Evaluating Distraction Potential By Using a Computational Model*
Department of Industrial and Systems Engineering, University of Wisconsin–Madison

U **Elease McLaurin**; PhD Thesis; Advisor: John Lee; 2014–Present
Dissertation Title: *Developing Customized Feedback for Teen Drivers*
Department of Industrial and Systems Engineering, University of Wisconsin–Madison

U **Ja Young Lee**; PhD Thesis; Advisor: John Lee; 2015–Present
Dissertation Title: *TBD*
Department of Industrial and Systems Engineering, University of Wisconsin–Madison

U **Erin Chiou**; PhD Thesis; Advisor: John Lee; 2015–2016
Dissertation Title: *Trusting Technology: Designing for Cooperation*
Department of Industrial and Systems Engineering, University of Wisconsin–Madison

U **Garrett Smith**; PhD Thesis; Advisor: Sadhana Puntambekar; 2012–2014
Dissertation Title: *Exploring the Effects of Perceptual Modality on Learning when Combining Physical and Virtual Science Laboratory Environments*
Learning Sciences PhD Program, University of Wisconsin–Madison

U **Adam Politis**; PhD Thesis; Advisor: Lyn Turkstra; 2014–Present
Dissertation Title: *TBD*
Department of Communication Science and Disorders, University of Wisconsin–Madison

U **Bern Jordan**; PhD Thesis; Advisor: Gregg Vanderheiden; 2014–2015
Dissertation Title: *A functional-device-needs/user-sensible-input model for auto-generation of individualized, accessible interfaces*
Department of Industrial and Systems Engineering, University of Wisconsin–Madison

U **Rachel Kornfield**; PhD Thesis; Advisor: Dhavan Shah; 2017–Present
Dissertation Title: *Designing peer-to-peer communication environments to enhance wellbeing: A study of therapeutic expression effects in three digital mental health support forums*
School of Journalism and Mass Communication, University of Wisconsin–Madison

U **Caitlin Weber**; Master's Thesis; Advisor: Lyn Turkstra; 2013–2014
Dissertation Title: *Sex-Based Differences in Emotion Recognition in Context in Typical Adults*
Department of Communication Science and Disorders, University of Wisconsin–Madison

O **Ehsan Hoque**; PhD Thesis; Advisor: Rosalind Picard; 2012–2013
Dissertation Title: *Social Training Companion: Helping People Improve their Social Skills*
Affective Computing Group, Media Arts & Sciences, Massachusetts Institute of Technology

O **David Lu**; PhD Thesis; Advisor: Bill Smart; 2012–2014
Dissertation Title: *Stylized Physical Action for Human Robot Interaction*
Department of Computer Science & Engineering, Washington University in St. Louis

O **Matthew Gombolay**; PhD Thesis; Advisor: Julie Shah; 2014–2016
Dissertation Title: *Human-Machine Collaborative Optimization via Apprenticeship Scheduling*
Interactive Robotics Group, CSAIL & AeroAstro, Massachusetts Institute of Technology

TEACHING

COURSES TAUGHT

University of Wisconsin–Madison (Instructor)

Term	Course #	Course Title	Size*	Evaluation
Fall 2017	CS/Psych-770	Human-Computer Interaction	58	5.82/7.00
Fall 2015	CS/Psych-770	Human-Computer Interaction	38	4.42/5.00
Fall 2014	CS/Psych-770	Human-Computer Interaction	32	4.88/5.00
Fall 2013	CS/Psych-770	Human-Computer Interaction	19	4.74/5.00
Spring 2013	CS-570	Introduction Human-Computer Interaction	31	4.77/5.00
Spring 2013	CS-270	Fundamentals of Human-Computer Interaction	4	4.25/5.00
Fall 2012	CS/Psych-770	Human-Computer Interaction	21	4.80/5.00
Fall 2011	CS/Psych-770	Human-Computer Interaction	29	4.45/5.00
Spring 2011	CS-570	Introduction Human-Computer Interaction	22	4.75/5.00
Spring 2011	CS-270	Fundamentals of Human-Computer Interaction	4	4.75/5.00
Fall 2010	CS/Psych-770	Human-Computer Interaction	17	4.59/5.00
Spring 2010	CS-570	Introduction Human-Computer Interaction	21	4.69/5.00
Fall 2009	CS/Psych-770	Human-Computer Interaction	7	4.57/5.00
		Overall average		**4.62/5.00**

* Size of the subset of the class roster who provided evaluations.

Carnegie Mellon University (Teaching Assistant)

Term	Course #	Course Title	Course Lead
Spring 2008	HCI 650	Basic Interaction Design	John Zimmerman
Fall 2007	HCI 610	HCI Methods	Bonnie John & Chris Neuwirth
Spring 2004	Design 702	Graduate Design Seminar II	Jodi Forlizzi
Spring 2003	Design 725	Advanced Interface & Interaction Design	Jodi Forlizzi

CURRICULUM DEVELOPMENT IN THE DEPARTMENT

I designed the entire curriculum for HCI in the Department of Computer Sciences at UW–Madison including two undergraduate courses, one graduate course, and the HCI PhD area qualifier.

CS-270, Fundamentals of Human-Computer Interaction: The goal of this undergraduate course is to introduce non-CS majors to user-centered design of software products. The course brings together two key components: (1) fundamental principles of human-computer interaction from affordances to metaphors and (2) methods for user research, iterative design, and usability evaluation. Through a combination of lectures, hands-on exercises, and weeklong assignments, the course offers freshmen and sophomores an entry-level introduction to human-computer interaction.

CS-570, Introduction to Human-Computer Interaction: This undergraduate course extends CS-270 with a significant project component and targets CS majors. As a third component, students contextualize and gain hands-on experience on the principles and methods they learn in the other components in real-world design problems such as designing web-based services, mobile applications, and embodied interfaces. Students from the course regularly pursue industry positions in interaction design at companies such as Google, Amazon, and Epic.

CS/Psych-770, Human-Computer Interaction: The goal of this graduate course is to introduce computer science and psychology students to fundamental and current research in human-computer-interaction-related topics and research methods in human-computer interaction. It combines three components: (1) a seminar component that introduces fundamental principles of and seminal and current research in human-computer interaction through lectures and discussion, (2) a methods component that covers qualitative and quantitative research methods through lectures, hands-on activities, and assignments, and (3) a project component that involves carrying out a complete empirical research project from development to reporting.

HCI PhD Qualifier: The PhD qualifier in HCI assesses the breadth and depth of knowledge, particularly of material covered in CS-570 and CS/Psych-770, in students who wish to pursue research in this area. The development of the area qualifier involved establishing a list of core readings in the area and writing a unique set of qualifier questions every semester. The HCI area qualifier has been administered in Spring 2017, Spring 2016, Spring 2015, Fall 2014, Spring 2014, Fall 2013, Spring 2013, Fall 2012, Spring 2012, and Fall 2011.

CURRICULUM DEVELOPMENT ON CAMPUS

I have co-developed and co-directed a new interdepartmental graduate certificate program on **User Experience Design**, called "**Mad UX**," in collaboration with the UW–Madison iSchool. The program accepted its first cohort of students in Fall 2017. This highly innovative program enables professionals worldwide to pursue advanced training in user experience design remotely through high-quality video-based lectures, rich instructional material based on theory and practice, moderated group discussions, and feedback sessions with instructors.

Additionally, I have started offering an "**Agile Research Studio**" for advanced undergraduates interested in gaining research experience in HCI, robotics, ubiquitous computing, and other related areas of computer science. This three-credit CS elective was first offered to 16 undergraduates in Spring 2018.

OUTREACH

PUBLIC TALKS

Science on Tap, Wisconsin Institutes for Discovery, December 2017
Held a discussion on the topic of "Robotics & Artificial Intelligence" with approximately 100 members of the public

Big Ideas for Busy People, Wisconsin Institutes for Discovery, October 2015
Gave a lecture titled "The Psychology of Interacting with Robots" to an audience of 100 members of the public

A.E. Memorial Speaker, Watertown High School, Watertown, WI, May 2013
Gave a lecture to an audience of 250 high-school students on designing robotic technology

SoundWaves: Music & Science Explored, Wisconsin Institutes for Discovery, May 2013
Gave a lecture on social robots to an audience of 100 members of the public

TARGETED PROGRAMS

Social Robots Major, Grandparents University, 2011, 2012, 2013, 2014, 2015, 2016, 2017, 2018
Outreach program targeted at senior UW–Madison alumni and their grandchildren. More than 100 children aged 8-14 and their grandparents have participated in 2001–2014. Co-taught by graduate students Allison Sauppé, Sean Andrist, Daniel Szafir, Chien-Ming Huang, Joseph Michaelis, David Porfirio, Andrew Schoen, and Pragathi Praveena.

Social Robots Summer Camp, Global Wisconsin Idea Program (GWIP), July 2011
Outreach program targeted at American and international high-school students. Taught by graduate student Allison Sauppé. Twenty high-school students (9 American, 11 Chinese) participated.

FIELD DEMONSTRATIONS

Robots as Museum Guides, UW–Madison Geology Museum, November 2011
Graduate students Alicia Maxwell and Mahtab Ghazizadeh developed interactive robotic displays for collections at the University of Wisconsin–Madison Geology Museum. Hundreds of children and parents participated in two demonstrations.

Human-Robot Dance Performance, Wisconsin Science Festival, September 2011
Graduate students Faisal Khan and Chien-Ming Huang co-developed a human-robot dance performance for the opening night of the First Wisconsin Science Festival in collaboration with Dance faculty Chris Walker.

HOSTED LAB VISITS

"Open Lab" Event, National Robotics Week, 2010, 2013, 2014, 2015, 2016, 2017, 2018
Members of the public including children and parents participated in a daylong event organized as a part of the first National Robotics Week—an annual event organized to increase public understanding of robotics.

Lab Visits, 2010-Present
The HCI Lab regularly hosts student groups, including boy scouts, girl scouts, summer camp programs, K-12 classes, and members of the industry, interested in learning about robots a several times a year. We have developed educational and engaging demos that illustrates the state of the technology and research for members of the public.