BILGE MUTLU, *PhD*

CURRICULUM VITAE — *OCTOBER 2021*

University of Wisconsin–Madison, Department of Computer Sciences
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RESEARCH MISSION

To develop human-centered principles that inform the design of robotic technologies, to empower designers with computational tools that support the authoring of human-robot interactions, and to enable the seamless integration of robotic technologies into human environments.

EMPLOYMENT

Sheldon B. and Marianne S. Lubar Professor, 2021–Present

Associate Professor, 2015–2021

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

2020

1. **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

2. **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*
3. **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

4. **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*
5. **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

6. **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*
7. **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

8. **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

9. **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*
10. **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*
11. **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*

2014

12. **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

13. **Best Paper Award** (Top 5 in 392), *ACM Pervasive and Ubiquitous Computing (UbiComp 2013)*
    Hoque, Courgeon, Martin, Mutlu, & Picard: *MACH: My Automated Conversation coacH*
14. **Highly Commended Paper** (Top 3 in 61), *Intelligent Virtual Agents (IVA 2013)*
    Andrist, Mutlu, & Gleicher: *Conversational Gaze Aversion for Virtual Agents*
15. **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

16. **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

17. **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*

2008

18. **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

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

Sheldon B. and Marianne S. Lubar Professorship, Department of Computer Sciences, University of Wisconsin–Madison, 2021

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

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."

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

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[1]

Laura Stegner, *NSF Graduate Research Fellowship*, 2020

Glenn Palmer, *LUCID Fellowship*, 2019

Laura Stegner, *LUCID Fellowship*, 2019

David Porfirio, *Heidelberg Laureate Forum*, 2019

David Porfirio, *HRI Pioneers Workshop*, 2019

Daniel Rakita, *Microsoft Research PhD Fellowship*, 2018

David Porfirio, *NSF Graduate Research Fellowship*, 2017

David Porfirio, *UIST School*, 2018

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

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

Steven Johnson, *NASA Space Technology Research Fellowship*, 2014 – 2015

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, *Heidelberg Laureate Forum*, 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

[1] National or international highly selective awards and recognitions

PUBLICATIONS

Also see my Google Scholar, Scopus, ResearchGate, DLPB, ACM profiles.

EDITED BOOKS & PROCEEDINGS

1. **Mutlu, B.**, Tscheligi, W., Weiss, A., & Young, J. (2017). *Proceedings of the 2017 ACM/IEEE International Conference on Human-Robot Interaction*. ACM.
2. Broz, F., Lehmann, H., **Mutlu, B.**, & Nakano, Y. (2015). *Gaze In Human-Robot Communication*. John Benjamins.
3. Adams, J., Smart, W., **Mutlu, B.**, & Takayama, L. (2015). *Proceedings of the Tenth Annual ACM/IEEE International Conference on Human-Robot Interaction*. ACM.
4. **Mutlu, B.**, Bartneck, C., Ham, J., Evers, V., & Kanda, T. (2011). *Social Robotics: Proceedings of the Third International Conference on Social Robotics*. Springer.

BOOK CHAPTERS

1. Mc Donnell , R., & **Mutlu, B.** (2021). Appearance and Embodiment. In C. Pelachaud, B. Lugrin, & D. Traum (Eds.) *Handbook on Socially Interactive Agents*. ACM.
2. **Mutlu, B.**, Roy, N., & Šabanović, S. (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
3. Duff, M., **Mutlu, B.**, Byom, L., & Turkstra, L. (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.
4. **Mutlu, B.**, Andrist, S., & Sauppé, A. (2014). Enabling Human-Robot Dialogue. In J. Markowitz (Ed.) *Robots that Talk and Listen*. De Gruyter.

JOURNAL ARTICLES

2021

1. Kornfield, R., Rae, I., & **Mutlu, B.** (In press). So close and yet so far: How embodiment shapes the effects of distance in remote collaboration. *Communication Studies*.
2. Zhao, O., Wood, A., **Mutlu, B.**, & Niedenthal, P. (In Press). Faces Synchronize When Communication Through Spoken Language is Prevented. *Emotion*.
3. Bhat, P., Senft, E., Zinn, M., Gleicher, M., **Mutlu, B.**, Cook, R., & Radwin, R. G. (2021). Assessing limited visibility feedback for overhead manufacturing assembly tasks. *Applied Ergonomics*, 97, 103531.
4. Hagenow, M., Senft, E., Radwin, R., Gleicher, M., **Mutlu, B.,** & Zinn, M. (2021). Informing Real-time Corrections in Corrective Shared Autonomy Through Expert Demonstrations. *IEEE Robotics and Automation Letters*, 6(4), 6442-6449.
5. Senft, E., Hagenow, M., Radwin, R., Zinn, M., Gleicher, M., & **Mutlu, B.** (2021). Situated Live Programming for Human-Robot Collaboration. *Frontiers in Robotics & AI*.
6. Morrow, E. L., Zhao, F., Turkstra, L., Toma, C., **Mutlu, B.**, & Duff, M. C. (2021). 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.
7. Rakita, D., **Mutlu, B.**, & Gleicher, M. (2021). Single-query Path Planning Using Sample-efficient Probability Informed Trees. *IEEE Robotics and Automation Letters*, 6(3), 4624-4631.
8. Hagenow, M., Senft, E., Radwin, R., Gleicher, M., **Mutlu, B.**, & Zinn, M. (2021). Corrective Shared Autonomy for Addressing Task Variability. *IEEE Robotics and Automation Letters*, 6(2), 3720-3727.

2020

9. **Mutlu, B.** (2021). Virtual and Physical: Two Frames of Mind. *iScience,* 24(2), 101965.
10. Rakita, D., **Mutlu, B.**, Gleicher, M. (2020). An Analysis of RelaxedIK: An Optimization-based Framework for Generating Accurate and Feasible Robot Arm Motions. *Autonomous Robots,* 44 (7), 1341-1358.
11. Turkstra, L. S., **Mutlu, B.**, Ryan, C. W., Despins-Stafslien, E. E., Richmond, E. K., Hosokawa, E., & Duff, M. (2020). 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

12. Rakita, D., **Mutlu, B.**, Gleicher, M., & Hiatt, L. M. (2019). Shared control–based bimanual robot manipulation. *Science Robotics*, 4(30), eaaw0955.
13. Flynn, M. A., Rigon, A., Kornfield, R., **Mutlu, B.**, Duff, M. C., & Turkstra, L. S. (2019). Characterizing computer-mediated communication, friendship, and social participation in adults with traumatic brain injury. *Brain Injury*, 1-8.
14. Rigon, A., Voss, M. W., Turkstra, L. S., **Mutlu, B.**, & Duff, M. C. (2019). Functional neural correlates of facial affect recognition impairment following TBI. *Brain imaging and behavior*, 13(2), 526-540.
15. Byom, L., Duff, M., **Mutlu, B.**, & Turkstra, L. (2019). Facial emotion recognition of older adults with traumatic brain injury. *Brain injury*, 33(3), 322–332.
16. Deng, E., **Mutlu, B.**, & Mataric, M. J. (2019). Embodiment in Socially Interactive Robots. *Foundations and Trends® in Robotics*, 7(4), 251–356.

2018

17. Bodden, C., Rakita, D., **Mutlu, B.**, & Gleicher, M. (2018). A flexible optimization-based method for synthesizing intent-expressive robot arm motion. *The International Journal of Robotics Research,* 37(11), 1376-1394.
18. **Mutlu, B.**, Duff, M. C., & Turkstra, L. S. (2018). Social-Cue Perception and Mentalizing Ability Following Traumatic Brain Injury: A Human-Robot Interaction Study. *Brain Injury*, 1-9.
19. Flynn, M. A., **Mutlu, B.**, Duff, M. C., & Turkstra, L. S. (2018). Friendship quality, friendship quantity, and social participation in adults with traumatic brain injury. In *Seminars in speech and language*. Thieme Medical Publishers.
20. Politis, A., **Mutlu, B.**, Turkstra, L., & Duff, M. (2018). Psychological Distress and Communication Challenges in Adults With TBI. *Archives of Physical Medicine and Rehabilitation*, 99(11), e146.
21. Michaelis, J. & **Mutlu, B.** (2018). Reading Socially: Transforming the In-Home Reading Experience with a Learning-Companion Robot. *Science Robotics,* 3(21), eaat5999.
22. Rigon, A., Voss, M. W., Turkstra, L. S., **Mutlu, B.**, & Duff, M. C. (2018). White matter correlates of different aspects of facial affect recognition impairment following traumatic brain injury. *Social neuroscience*, 1–15.
23. Rigon, A., Turkstra, L. S., **Mutlu, B.**, & Duff, M. C. (2018). Facial-Affect Recognition Deficit as a Predictor of Different Aspects of Social-Communication Impairment in Traumatic Brain Injury. *Neuropsychology*, 32(4), 476.
24. Rigon, A., Voss, M., Turkstra, L. S., **Mutlu, B.**, & Duff, M. C. (2018). Functional Neural Correlates of Facial Affect Recognition Impairment Following TBI. *Brain Imaging and Behavior*, 1-15.
25. Pearce, M., **Mutlu, B.**, Shah, J., & Radwin, R. (2018). Optimizing Makespan and Ergonomics in Integrating Collaborative Robots Into Manufacturing Processes. *IEEE Transactions on Automation Science and Engineering*, 1–13. **First Runner-Up, Googol Best New Application Paper Award of 2019**
26. Turkstra, L., Norman, R.S., **Mutlu, B.**, & Duff, M.C. (2018). Impaired theory of mind in adults with traumatic brain injury: A replication and extension of findings. *Neuropsychologia*, 111, 117-122.
27. Rigon, A., Voss, M.W., Turkstra, L., **Mutlu, B.**, & Duff, M.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.

2017

28. Turkstra, L., Kraning, S.G., Riedeman, S.K., **Mutlu, B.**, Duff, M., & VanDenHeuvel, S. (2017). Labelling Facial Affect in Context in Adults with and without TBI. *Brain Impairment*, 18(1), 49-61.
29. Turkstra, L., Duff, M., Politis, A., & **Mutlu, B.** (2017). Detection of text-based social cues in adults with traumatic brain injury. *Neuropsychological Rehabilitation, 1–15.*
30. Szafir, D., **Mutlu, B.**, & Fong, T. (2017). Designing Planning and Control Interfaces to Support User Collaboration with Flying Robots. *International Journal of Robotics Research*.
31. Rigon, A., Voss, M., Turkstra, L., **Mutlu, B.**, & Duff, M. (2017). Relationship between individual differences in functional connectivity and facial-emotion recognition abilities in adults with traumatic brain injury. *NeuroImage: Clinical*, 13, 370-377.
32. Andrist, S., Bohus, D., **Mutlu, B.**, & Schlangen, D. (2017). Turn-Taking and Coordination in Human-Machine Interaction. *AI Magazine*, 37(4), 5-6.

2016

33. Turkstra, L., Kraning, S., Riedeman, S., **Mutlu, B.**, Duff, M., & VanDenHeuvel, S.(2016). Labelling Facial Affect in Context in Adults with and without TBI. *Brain Impairment*, 1-13.

34. 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.
35. Rigon, A., Turkstra, L., **Mutlu, B.**, & Duff, M.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.
36. Rigon, A., Voss, M., Turkstra, L., **Mutlu, B.**, & Duff, M.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.
37. Gibson, M., Lee, J., Venkatraman, V., Price, M., Lewis, J., Montgomery, O., **Mutlu, B.,** Domeyer, J., & Foley, J. (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.
38. Price, M. A., Venkatraman, V., Gibson, M., Lee, J., & **Mutlu, B.** (2016). Psychophysics of Trust in Vehicle Control Algorithms (No. 2016-01-0144). *SAE Technical Paper*.

2015

39. Andrist, S., Collier, W., Gleicher, M., **Mutlu, B.**, & Shaffer, D. (2015). Look Together: Analyzing Gaze Coordination with Epistemic Network Analysis. *Frontiers in Psychology*, 6 (1016).
40. Huang, C.-M., Andrist, S., Sauppé, A. & **Mutlu, B.** (2015). Using Gaze Patterns to Predict Task Intent in Collaboration. *Frontiers in Psychology*, 6 (1049).
41. Sauppé, A. & **Mutlu, B.** (2015). Effective Task Training Strategies for Human and Robot Instructors. *Autonomous Robots*, 1–17.
42. Ruhland, K., Peters, C. E., Andrist, S., Badler, J. B., Badler, N. I., Gleicher, M., **Mutlu, B.** & McDonnell, R. (2015). A Review of Eye Gaze in Virtual Agents, Social Robotics and HCI: Behaviour Generation, User Interaction and Perception. In *Computer Graphics Forum*.
43. Pejsa, T., Andrist, S., **Mutlu, B.** & Gleicher, M., (2015). Gaze and Attention Management for Embodied Conversational Agents. *ACM Transactions on Interactive and Intelligent Systems (TiiS),* 5 (1), Article 3, 34 pages.

2014

44. Huang, C.-M. & **Mutlu, B.** (2014). Multivariate Evaluation of Interactive Robot Systems. *Autonomous Robots*, 1–15.
45. Kim, Y. & **Mutlu, B.** (2014). How social distance shapes human–robot interaction. *International Journal of Human-Computer Studies*, 72 (12), 783–795.

2013

46. Broz, F., Lehmann, H., & **Mutlu, B.**, & Nakano, Y. (2013). Introduction to the Special Issue on Gaze in Human-Robot Communication. *Interaction Studies,* 14:3 (2013), VII–XVI.
47. Byom, L. & **Mutlu, B.** (2013). Theory of Mind: Mechanisms, Methods, and New Directions. *Frontiers in Human Neuroscience*, 7(413).
48. Huang, C.-M. & **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.
49. Pejsa, T., **Mutlu, B.**, & Gleicher, M. (2013). Stylized and Performative Gaze for Character Animation. *Computer Graphics Forum* 32(2), 143–152.

2012

50. De Simone, J.J., Kuo, L.-H., Verbruggen, T., & **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.
51. **Mutlu, B.**, Kanda, T., Forlizzi, J., Hodgins, J., & Ishiguro, H. (2012). Conversational Gaze Mechanisms for Humanlike Robots. *ACM Transactions on Interactive Intelligent Systems*, 1(2), 33 pages.
52. Duff, M., **Mutlu, B.**, Byom, L., & Turkstra, L. (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.

2011

53. **Mutlu, B.** (2011). Designing Embodied Cues for Dialog with Robots. *AI Magazine*, 32(4), 17–30.
54. Bohus, D., Horvitz, E., Kanda, T., **Mutlu, B.**, and Raux, A. (2011). Introduction to the Special Issue on Dialog with Robots. *AI Magazine*, 32(4), 15–16.

55. Mumm, J. & **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.

REFEREED FULL CONFERENCE PAPERS

2021

1. Senft, E., Hagenow, M., Welsh, K., Radwin, R., Zinn, M., Gleicher, M., & **Mutlu, B.** (2021). Task-Level Authoring for Remote Robot Teleoperation. In *ACM Symposium for User Interfaces and Software Technology (UIST 2021)*.
2. Hu, Y., Feng, L., **Mutlu, B.**, & Admoni, H. (2021, June). Exploring the Role of Social Robot Behaviors in a Creative Activity. In Designing Interactive Systems Conference 2021 (pp. 1380-1389).
3. White, N. T., Cagiltay, B., Michaelis, J. E., & **Mutlu, B.** (2021, June). Designing Emotionally Expressive Social Commentary to Facilitate Child-Robot Interaction. In Interaction Design and Children (pp. 314-325).
4. Ho, H. R., Cagiltay, B., White, N. T., Hubbard, E. M., & **Mutlu, B.** (2021, June). RoboMath: Designing a Learning Companion Robot to Support Children's Numerical Skills. In Interaction Design and Children (pp. 283-293).
5. Rakita, D., **Mutlu, B.**, & Gleicher, M. (2021). Strobe: An Acceleration Meta-algorithm for Optimizing Robot Paths using Concurrent Interleaved Sub-Epoch Pods. In *IEEE International Conference on Robotics and Automation (ICRA)*. IEEE.
6. Chandrasekaran, V., Banerjee, S., **Mutlu, B.**, & Fawaz, K. (2021, August). PowerCut and Obfuscator: An Exploration of the Design Space for Privacy-Preserving Interventions for Smart Speakers. In Seventeenth Symposium on Usable Privacy and Security ({SOUPS} 2021) (pp. 535-552).
7. Henrichs, C., Zhao, F., & **Mutlu, B.** (2021, August). Designing Interface Aids to Assist Collaborative Robot Operators in Attention Management. In 2021 30th IEEE International Conference on Robot & Human Interactive Communication (RO-MAN) (pp. 264-271). IEEE.
8. Hagenow, M., Zhang, B., **Mutlu, B.**, Gleicher, M., & Zinn, M. (2021). Recognizing Orientation Slip in Human Demonstrations. In *IEEE International Conference on Robotics and Automation (ICRA)*. IEEE.
9. Rakita, D., Shi, H., **Mutlu, B.**, & Gleicher, M. (2021) CollisionIK: A Per-Instant Pose Optimization Method for Generating Robot Motions with Environment Collision Avoidance. *Submitted to ICRA 2021.*
10. Kang., D., Ho, T., Marquardt, N., **Mutlu, B.**, & Bianchi, A. (2021) ToonNote: Improving Communication in Computational Notebooks UsingInteractive Data Comics. *To appear at CHI 2021.*
11. Porforio, D., Stegner, L., Cakmak, M., Sauppe, A., Albarghouthi, A., & **Mutlu, B.** (2021) Figaro: A Tabletop Authoring Environment for Human-Robot Interaction. *To appear at CHI 2021.*
12. Siebert-Evenstone, A., Michaelis, J. E., Shaffer, D. W., & **Mutlu, B.** (2021). Safety First: Developing a Model of Expertise in Collaborative Robotics. In *International Conference on Quantitative Ethnography* (pp. 304-318).

2020

13. Schoen, A., Henrichs, C., Strohkirch, M., & **Mutlu, B.** (2020). Authr: A Task Authoring Environment for Human-Robot Teams. In *ACM Symposium for User Interfaces and Software Technology (UIST 2020).*
14. Zhao, F., Henrichs, C., & **Mutlu, B.** (2020, August). Task Interdependence in Human-Robot Teaming. In *Proceedings of 29th IEEE International Conference on Robot and Human Interactive Communication (RO-MAN)* (pp. 1143-1149). IEEE.
15. Cagiltay, B., Ho, H. R., Michaelis, J. E., & **Mutlu, B.** (2020). Investigating family perceptions and design preferences for an in-home robot. In *Proceedings of the Interaction Design and Children Conference (IDC 2020)*.
16. Porfirio, D., Sauppé, A., Albarghouthi, A., & **Mutlu, B.** (2020). Transforming Robot Programs Based on Social Context. In *Proceedings of the 2020 ACM/SigCHI Conference on Human Factors in Computing (CHI 2020).*
17. Michaelis, J.E., Siebert-Evenstone, A., Shaffer, D., & **Mutlu, B.** (2020). Collaborative or Simply Uncaged? Understanding Human-Cobot Interactions in Automation. In *Proceedings of the 2020 ACM/SigCHI Conference on Human Factors in Computing (CHI 2020).*
18. Rakita, D., **Mutlu, B.**, & Gleicher, M. (2020). Effects of Onset Latency and Robot Speed Delays on Mimicry-Control Teleoperation. In *Proceedings of the 2020 ACM/IEEE International Conference on Human-Robot Interaction (HRI 2020).*
19. Terzioglu, Y., **Mutlu, B.**, & Sahin, E. (2020). Designing Social Cues for Collaborative Robots: The Role of Gaze and Breathing in Human-Robot Collaboration. In *Proceedings of the 2020 ACM/IEEE International Conference on Human-Robot Interaction (HRI 2020).*
20. Praveena, P., Rakita, D., **Mutlu, B.**, & Gleicher, M. (2020). Supporting Perception of Weight through Motion-induced Sensory Conflicts in Robot Teleoperation. In *Proceedings of the 2020 ACM/IEEE International Conference on Human-Robot Interaction (HRI 2020).* **Honorable Mention Award (Top 12 in 279)**

2019

21. Porfirio, D., Fisher, E., Sauppé, A., Albarghouthi, A., & **Mutlu, B.** (2019). Bodystorming Human-Robot Interactions. In *Proceedings of the 31st ACM User Interface Software and Technology Symposium (UIST 2019),* New Orleans, Louisiana.
22. Michaelis, J. E., & **Mutlu, B.** (2019, June). Supporting Interest in Science Learning with a Social Robot. In *Proceedings of the 18th ACM International Conference on Interaction Design and Children* (pp. 71-82). ACM. **Honorable Mention Award (Top 7 in 142)**
23. Rakita, D., **Mutlu, B.**, & Gleicher, M. (2019). Remote Telemanipulation with Adapting Viewpoints in Visually Complex Environments. *Robotics: Science and Systems (RSS 2019) XV*.
24. Praveena, P., Rakita, D., **Mutlu, B.**, & Gleicher, M. (2019). User-Guided Offline Synthesis of Robot Arm Motion from 6-DoF Paths. In *IEEE International Conference on Robotics and Automation (ICRA)*. IEEE.
25. Rakita, D., **Mutlu, B.**, & Gleicher, M. (2019). STAMPEDE: A Discrete-Optimization Method for Solving Pathwise-Inverse Kinematics. In *IEEE International Conference on Robotics and Automation (ICRA)*. IEEE.
26. Praveena, P., Subramani, G., **Mutlu, B.**, & Gleicher, M. (2019). Characterizing Input Methods for Human-to-robot Demonstrations. In *Proceedings of the ACM/IEEE International Conference on Human-Robot Interaction (HRI 2019)*.

2018

27. Porfirio, D., Sauppé, A., Albarghouthi, A., & **Mutlu, B.** (2018). Authoring and Verifying Human-Robot Interactions. In *Proceedings of the 31st ACM User Interface Software and Technology Symposium (UIST 2018),* Berlin, Germany
    Best Paper Award (Top 3 in 375 Submissions)
28. Paxton, C., Jonathan, F., Hundt, H., **Mutlu, B.**, & Hager, G.D. (2018). Evaluating Methods for End-User Creation of Robot Task Plans. In *Proceedings of the IEEE/RAS International Conference on Intelligent Robots (IROS 2018)*.
29. Rakita, D., **Mutlu, B.**, & Gleicher, M. (2018). RelaxedIK: Real-time Synthesis of Accurate and Feasible Robot Arm Motion. *Robotics: Science and Systems (RSS 2018)*.
30. Rakita, D., **Mutlu, B.**, & Gleicher, M. (2018). An Autonomous Dynamic Camera Method for Effective Remote Teleoperation. In *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)
31. Rakita, D., **Mutlu, B.**, & Gleicher, M. (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 (HRI 2018)*.

2017

32. Liu, O. D., Rakita, D., **Mutlu, B.**, & Gleicher, M. (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.
33. Pejsa, J., 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.
34. Michaelis, J. & **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.
35. Andrist, D., Gleicher, M., & **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.
    Honorable Mention (Top 97 in 2424 Submissions)
36. Choi, M., Kornfield, R., Takayama, L., & **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.
37. 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.

2016

38. Rakita, D., **Mutlu, B.**, & Gleicher, M. (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.
39. Bodden, C., Rakita, D., **Mutlu, B.**, & Gleicher, M. (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.

40. Huang, C.-M. & **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.

2015

41. Huang, C.-M., **Mutlu, B.**, & Cakmak, M. (2015). Adaptive Coordination Strategies for Human-Robot Handovers. In *Robotics: Science and Systems (RSS 2015).*
42. Sauppé, A. & **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.
Best Paper Award (Top 21 in 2150 submissions)
43. Johnson, S., Rae, I., **Mutlu, B.**, & Takayama, L. (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.
44. Andrist, S., **Mutlu, B.**, & Tapus, A. (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.
Honorable Mention (Top 119 in 2150 submissions)
45. Szafir, D., **Mutlu, B.**, & Fong, T. (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.
46. Andrist, S., Ziadee, M., Boukaram, H.-A., Sakr, M., & **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.
47. Sauppé, A., Szafir, D., Huang, C.-M. & **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.
48. Johnson, S., Gibson, M., & **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.

2014

49. Ruhland, K., Andrist, S., Peters, C., Badler, J., Badler, N., Gleicher, M., **Mutlu, B.**, & McDonnell, R. (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.
50. Sauppé, A. & **Mutlu, B.** (2014). Effective Task Training Strategies for Instructional Robots. In *Proceedings of Robotics: Science and Systems (RSS 2014).*
51. Sauppé, A. & **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.
52. Rae, I., **Mutlu, B.**, & Takayama, L. (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.
53. Andrist, S., Tan, X. Z., Gleicher, M., & **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.
Best Paper Award Nominee (Top 5 in 132 submissions)
54. Huang, C.-M. & **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.
55. Szafir, D., **Mutlu, B.**, & Fong, T. (2014). Communication of Intent in Assistive Free Flyers. In *Proceedings of the ACM/IEEE Interaction Conference on Human-Robot Interaction (HRI 2014),* Bielefeld, Germany.
56. Sauppé, A. & **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.
57. Sauppé, A. & **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.

2013

58. Miller, S., **Mutlu, B.**, & Lee, J.D. (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)*.
59. Hoque, E., Courgeon, M., Martin, J.-C., **Mutlu, B.**, & Picard, R. (2013). MACH: My Automated Conversation coacH. In *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)

60. Andrist, S., **Mutlu, B.**, & Gleicher, M. (2013). Conversational Gaze Aversion for Virtual Agents. In *Proceedings of Intelligent Virtual Agents (IVA 2013)*, Edinburgh, UK.
Highly Commended Paper Award (Top 3 in 61 submissions)
61. Huang, C.-M. & **Mutlu, B.** (2013). Modeling and Evaluating Narrative Gestures for Humanlike Robots. In *Proceedings of Robotics: Science and Systems Conference (RSS 2013)*, Berlin, Germany.
Best Paper Award Runner-Up (Top 5 in 183 submissions)
62. Szafir, D. & **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.
63. Rae, I., Takayama, L., & **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.
64. Andrist, S., Spannan, E., & **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.
65. Rae, I., Takayama, L., & **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.

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66. Terrell, A. & **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.
67. Szafir, D. & **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.
68. Rae, I., Takayama, L., & **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.
69. Andrist, S., Pejsa, T., **Mutlu, B.**, & Gleicher, M.. (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.
70. Huang, C.-M. & **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.
71. Chidambaram, V., Chiang, Y.-H., & **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.

2011

72. Khan, F., Zhu, J., & **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.
73. Mumm, J. & **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.
Best Paper Award (Top 3 in 149 submissions)

2009

74. **Mutlu, B.**, Shiwa, T., Kanda, T., Ishiguro, H., & Hagita, N. (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.
Best Paper Award (#1 in 120 submissions)
75. **Mutlu, B.**, Yamaoka, F., Kanda, T., Ishiguro, H., & Hagita, N. (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.

2008

76. **Mutlu, B.** & Forlizzi, J. (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. **Best Paper Award (#1 in 134 submissions)**

2007

77. **Mutlu, B.**, Krause, A., Forlizzi, J., Guestrin, C., & Hodgins, J. (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.

2006

78. **Mutlu, B.**, Forlizzi, J., Nourbakhsh, I., & Hodgins, J. (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.
79. **Mutlu, B.**, Forlizzi, J., & Hodgins, J. (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.
80. **Mutlu, B.**, Osman, S., Forlizzi, J., Hodgins, J., & Kiesler, S. (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

81. Forlizzi, J., DiSalvo, C., Zimmerman, J., **Mutlu, B.**, & Hurst, A. (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

82. Forlizzi, J., **Mutlu, B.**, & DiSalvo, C. (2004). A Study of How Products Contribute to the Emotional Aspects of Human Experience. In *Proceedings of the 2004 Design & Emotion Conference*. Ankara, Turkey.
83. **Mutlu, B.** & Forlizzi, J. (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

84. **Mutlu, B.** & Er, H.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/WORKS-IN-PROGRESS

2021

1. Porfirio, D., Sauppé, A., Cakmak, M., Albarghouthi, A., & **Mutlu, B.** (2021, November). Interaction Templates: A Data-Driven Approach for Authoring Robot Programs. *PLATEAU Workshop*.
2. Zhang, B., Hagenow, M., **Mutlu, B.**, Gleicher, M., & Zinn, M. (2021, July). Characterizing the Effects of Haptic Rendering Parameter Variations on Perceived Kinesthetic Rendering Accuracy. In 2021 IEEE World Haptics Conference (WHC) (pp. 868-868). IEEE.

2019

3. Porfirio, D., Sauppé, A., Albarghouthi, A., & **Mutlu, B.** (2019, March). Computational Tools for Human-Robot Interaction Design. In *2019 14th ACM/IEEE International Conference on Human-Robot Interaction (HRI)* (pp. 733-735). IEEE.

2015

4. Rakita, D., Pejsa, T., **Mutlu, B.**, & Gleicher, M. (2015). Inferring gaze shifts from captured body motion. In *ACM SIGGRAPH 2015 Posters* (p. 77).
5. Kanaoka, T. & **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.

2008

6. **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.

2006

7. **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.

8. **Mutlu, B.**, Osman, S., Forlizzi, J., Hodgins, J., & Kiesler, S. (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.

2005

9. Keyani, P., Hsieh, G., **Mutlu, B.**, Easterday, M., & Forlizzi, J. (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.

REFEREED WORKSHOP & SYMPOSIUM PAPERS/POSTERS

2019

1. **Mutlu, B.**, Duff, M., & Turkstra, L. (2019). The Regulation of Intimacy and Personal Space Following Traumatic Brain Injury: A Human-Robot Interaction Study. *Brain Injury,* 33, 72-73.
2. Edwards, M., Rigon, A., **Mutlu, B.**, Turkstra, L., Voss, M., & Duff, M. (2019). White Matter Correlates of Theory of Mind Impairment in TBI: Structural Integrity of the Uncinate Fasciculus is Related to performance on the Reading the Mind in the Eyes Task. *Brain Injury,* 33, 254-254.

2018

3. **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.
4. 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.

2017

5. 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
6. **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

7. Huang, C.-M. & **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.
8. **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

9. Rae, I., **Mutlu, B.**, Takayama, L., & McCune, S. (2013). The Effects of Dog Ownership on Social Cognition Skills. Paper presented at the *International Association of Human-Animal Interaction Organizations*, Chicago, Illinois.
10. **Mutlu, B.**, Terrell, A., & Huang, C.-M. (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

11. Andrist, S., Pejsa, T., **Mutlu, B.**, & Gleicher, M. (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

12. Khan, F., **Mutlu, B.**, & Zhu, J. (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

1. **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.
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.

3. **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

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

1. **Mutlu, B.** & Szafir, D. (2012). Teaching System for Improving Information Retention Based on Brain-State Monitoring. U.S. Patent Application 13/437,699.
2. Bukulmez, B., Tartan, A., Altun, U., Yalcin, M., Ulucay, Z., Buyukcan, E., **Mutlu, B.**, Ucku, E., & Menekse, O. (2003). Cooker. International Patent # WO/2003/005865.

RESEARCH GRANTS & GIFTS

FEDERAL GRANTS

1. NHLBI R61HL151870-01A1 — *Using Smart Displays to Implement an Evidence-Based eHealth System for Older Adults with Multiple Chronic Conditions*
   Investigators: David H. Gustafson (PI), Marie-Louise Mares (PI), Randy Brown, Jee-Seon Kim, Bilge Mutlu, Andrew Quanbeck, Dhavan Shah; **Period:** 2021–2026; **Amount:** $3,858,326
2. NSF CMMI-2026478 — *FW-HTF-RM: Human-Robot Collaboration for Manual Work*
   Investigators: Robert Radwin (PI), Bilge Mutlu, Jingshan Li, Timothy Smeeding, Lindsay Jacobs; **Period:** 2021–2024; **Amount:** $1,500,000
3. AHRQ R18HS026853 — *Using Smart Devices to Implement an Evidence-based eHealth System for Older Adults*
   Investigators: David Gustafson (PI), Marie-Louise Mares, Bilge Mutlu, Jane Mahoney; **Period:** 2020–2025; **Amount:** $1,987,467
4. NSF IIS-1925043 — *NRI: INT: COLLAB: Program Verification and Synthesis for Collaborative Robots*
   Investigators: Bilge Mutlu (PI), Aws Albarghouthi, Allison Sauppé; **Period:** 2019 – 2023; **Amount:** $958,887
5. NIH 2R01HD071089-06A1 — *Designing Computer-Mediated Communication Supports to Improve Social Participation After Traumatic Brain Injury*
   Investigators: Bilge Mutlu (PI), Melissa Duff, Lyn Turkstra; **Period:** 2019 – 2023; **Amount:** $948,801
6. NASA 80NSSC19M0124 P00001 — *Effective Human-Robot Teaming to Advance Aviation Manufacturing*
   Investigators: Bilge Mutlu (PI), Michael Gleicher, Michael Zinn, Robert Radwin, Richard Gardner (Boeing), Rebecca Cook (Boeing), Christopher Reid (Boeing); **Period:** 2019 – 2022; **Amount:** $2,997,761
7. NSF CMMI-1928425 — *FW-HTF-P: Human-Robot Collaboration for Enhancing Work Capabilities*
   Investigators: Robert Radwin (PI), Bilge Mutlu, Jingshan Li; **Period:** 2019 – 2020; **Amount:** $149,999
8. NSF DRL-1906854 — *STEMMates: Designing Companion Robots with Socially Situated Interest Scaffolds for Informal, In-home STEM Learning*
   Investigators: Bilge Mutlu (PI); **Period:** 2019 – 2020; **Amount:** $300,000
9. DOJ 2018-R2-CX-0025 — *Harnessing Existing Technologies to Mitigate Driving Distraction Among Law Enforcement Officers*
   Investigators: David Noyce, John Lee, Bilge Mutlu (Senior Personnel); **Period:** 2019 – 2020; **Amount:** $464,621
10. NSF IIS-1830242 — *NRI: FND: Communicating Physical Interactions*
    Investigators: Michael Gleicher (PI), Bilge Mutlu, Michael Zinn; **Period:** 2018 – present; **Amount:** $749,986
11. NSF IIS-1822872 — *ROBO-VI: A Virtual-Internship-Based Hybrid Learning Technology to Prepare Traditional and Non-Traditional Students to Work with Collaborative Robots*
    Investigators: Bilge Mutlu (PI), Andrew Ruis, David Shaffer; **Period:** 2018 – present; **Amount:** $499,123
12. NSF 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

13. DOT DTRT13-G-UTC47 — *Human Factors for Crash Imminent Safety in Intelligent Vehicles*
Investigators: John Lee (PI), Bilge Mutlu; **Period:** 2013 – 2017; **Amount:** $299,131

14. NSF CMMI-1426824 — *NRI: Models & Instruments for Integrating Effective Human-Robot Teams into Manufacturing*
Investigators: Bilge Mutlu (PI); **Period:** 2014 – 2017; **Amount:** $589,959

15. NASA 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

16. NSF 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

17. NIH 1R01HD071089-01A1 — *Social Perception & social communication in adults with traumatic brain injury*
Investigators: Lyn Turkstra (PI), Bilge Mutlu, Melissa Duff; **Period:** 2012 – 2017; **Amount:** $2,787,779

18. NASA 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

19. NSF 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

20. NSF CISE-IIS-1149970 — *CAREER: Designing Socially Adept Robots*
Investigator: Bilge Mutlu (PI); **Period:** 2012 – 2017; **Amount:** $498,245

21. NSF CISE-IIS-1117652 — *Embodied Mediated Communication in Collaborative Work*
Investigators: Bilge Mutlu (PI), Leila Takayama; **Period:** 2012 – 2015; **Amount:** $487,810

22. NSF 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/FOUNDATION GIFTS & GRANTS

1. McDonnell Foundation Award — *Faces in the Wild: Understanding Real-World Communication of Emotions*
Investigator: Paula Niedenthal (PI), Bilge Mutlu, Emily Ward, Yin Li; **Period:** 2021–Present; **Amount:** $250,000

2. 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

3. 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

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

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

6. UW–Madison Graduate School — *Designing Effective Computer-Based Protocols for Early Detection of Autism*
Investigator: Bilge Mutlu (PI); **Period:** 2012 – 2013; **Amount:** $39,729

7. UW–Madison Graduate School — *Educational Brain-Computer Interfaces*
Investigator: Bilge Mutlu (PI); **Period:** 2011 – 2012; **Amount:** $34,970

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

9. 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.

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

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

SELECTED PRESS COVERAGE

RoboHub (US), 2019
Interview for "On Design in Human-Robot Interaction"

Communications of the ACM (US), 2019
Opinion sought for "What makes a robot likable?"

Milwaukee Journal Sentinel (US), 2019
Research covered in "UW researchers make robot's hands work together, a breakthrough crucial to multiple tasks"

Popular Science (US), 2018
Research covered in "Kids aren't reading enough. One solution? Robots."

Discover Magazine (US), 2018
Research covered in "Want Your Kids to Read More? Get 'Em a Robot"

Inverse (US), 2018
Research covered in "With a Robot by Their Side, Kids Understand More of What They're Reading"

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

Department Colloquium Speaker, February 2020
George Washington University, Department of Biomedical Engineering, Washington, DC
"Designing Robots for Human Interaction"

Department Colloquium Speaker, November 2019
Marquette University, Department of Computer Science, Milwaukee, WI
"Designing Robots for Human Interaction"

Distinguished Lecture Series Speaker, November 2018
Northwestern University, Department of Computer Science, Evanston, IL
"Designing Robots for Human Interaction"

Seminar Speaker, October 2018
Koç University, Design Lab, Istanbul, Turkey
"Designing Whole Interactions for Robotic Products"

Workshop Invited Speaker, July 2018
University of Washington Summer Institute, Union, WA
"Materials and Tools for Designing Socially Adept Robots"

Human-Agent Collaboration Group Seminar Speaker, March 2017
IBM T.J. Watson Research Center, Yorktown Heights, NY
"Human-Centered Principles and Methods for Designing Robotic Technologies"

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

LEADERSHIP

HCIC Secretary-Treasurer, 2020–present
Serving as the secretary-treasurer of the HCIC Board of Governors

Member of HCIC Board of Governors, 2013–present
Serving as the UW-Madison representative of the HCIC Board of Governors

Elected Co-chair of HRI Steering Committee, 2018–present
Serving as co-chair the HRI Steering Committee for a three-year term

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

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*
Foundations and Trends in Human-Computer Interaction, 2020 – *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, 2017, 2018, 2019, 2020
National Aeronautics and Space Administration (NASA), 2012, 2018, 2019, 2020

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
ACM Transactions on Human-Robot Interaction
Science Robotics
Frontiers in Psychology
Frontiers in Robotics & AI
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)
ACM Conference on Interaction Design for Children (IDC)
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

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

Faculty Hiring Committee
Department of Computer Sciences, 2011 – 2012, 2013 – 2014, 2014 – 2015, 2017 – 2018, 2018 – 2019, 2019 – 2020, 2020 – 2021

New Building Committee
Department of Computer Sciences, 2021 – present

Publicity Committee
Department of Computer Sciences, 2009 – 2012; 2017 – present

Budget Committee
Department of Computer Sciences, 2019 – 2020

Chair's Advisory Committee
Department of Computer Sciences, 2020 – 2021

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

Faculty Advisor
Undergraduate Research Scholars, 2009 – 2010, 2018 – 2019

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

ADVISING

CURRENT ADVISEES

CURRENT POSTDOCTORAL ADVISEES

Hajin Lim, To start in January 2021
Department of Computer Sciences, University of Wisconsin–Madison

Sophie Wohltjen, 2021 – Present
Department of Psychology, University of Wisconsin–Madison
Co-advised with Paula Niedenthal

Emmanuel Senft, 2019 – Present
Department of Computer Sciences, University of Wisconsin–Madison
Co-advised with Michael Gleicher

CURRENT PHD ADVISEES

Amy Koike, 2021 – Present
Department of Computer Sciences, University of Wisconsin–Madison

Callie Kim, 2021 – Present
Department of Computer Sciences, University of Wisconsin–Madison
Co-advised with Yuhang Zhao (CS)

Christine Lee, 2021 – Present
Department of Computer Sciences, University of Wisconsin–Madison

Bengisu Çagiltay, 2020 – Present
Department of Computer Sciences, University of Wisconsin–Madison

Dakota Sullivan, 2020 – Present
Department of Computer Sciences, University of Wisconsin–Madison

Yaxin Hu, 2020 – Present
Department of Computer Sciences, University of Wisconsin–Madison

Laura Stegner, 2019 – Present
Department of Computer Sciences, University of Wisconsin–Madison
LUCID Fellow
NSF Graduate Research Fellow

Nathan White, 2019 – Present
Department of Computer Sciences, University of Wisconsin–Madison

Kevin Welsh, 2019 – Present
Department of Computer Sciences, University of Wisconsin–Madison
Co-advised with Michael Gleicher

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

David Porfirio, 2016 – Present
Department of Computer Sciences, University of Wisconsin–Madison
Co-advised with Aws Albarghouthi (CS)
NSF Graduate Research Fellow

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

Pragathi Praveena, 2017 – Present
Department of Computer Sciences, University of Wisconsin–Madison
Co-advised with Michael Gleicher (CS)

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

GRADUATED & PAST ADVISEES

PAST PHD ADVISEES

Joseph Michaelis, 2016 – 2019
Department of Educational Psychology, University of Wisconsin–Madison
Assistant Professor, Department of Computer Science, University of Chicago Illinois
Dissertation committee chair with Mitchell Nathan (EdPsych)

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

Tomislav Pejsa, 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, UNC-Chapel Hill

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

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

PAST MASTERS ADVISEES

Curt Henrichs, 2018 – 2021
Department of Computer Sciences, University of Wisconsin–Madison
Firmware Engineer at Integrated Dynamic Electron Solutions, Inc.

Timothy Lieb, 2019 – 2020
Department of Biomedical Engineering, University of Wisconsin–Madison
Biomedical Engineer, GE Health

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

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

Dongning Wang, 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.

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

PAST UNDERGRADUATE ADVISEES

John Balis, 2019 – 2020
BS in Computer Science, University of Wisconsin–Madison
PhD student in Computer Science, UW–Madison

Ali Zaidi, 2019 – 2020
BS in Computer Science, University of Wisconsin–Madison
PhD student in Computer Science, UIUC

Erica Lewis, 2016 – 2018
BS in Materials Engineering, University of Wisconsin–Madison
UX Designer, Intel Corporation

Zhi Tan, 2013 – 2015
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

VISITING STUDENTS & SCHOLARS

Dr. Jette Erns, 2021
Department of Social Sciences and Business, Roskilde University

Bengisu Çagiltay, 2019 – 2020
Cognitive Science, Middle East Technical University, Turkey

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

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

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

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

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

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

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

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

Joshua Hare; PhD Thesis; Advisor: Suman Banerjee; 2015–2016
Dissertation Title: *Towards Robust, Scalable Internet Connectivity For Public Transit Vehicles*
Department of Computer Sciences, University of Wisconsin–Madison

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

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

Vindhya Venkatraman; PhD Thesis; Advisor: John Lee; 2013–2017
Dissertation Title: *Driver-Vehicle Automation Behavior-Response Interaction*
Department of Industrial and Systems Engineering, University of Wisconsin–Madison

Rashmi Premnath; PhD Thesis; Advisor: John Lee; 2013–2018
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

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

Ja Young Lee; PhD Thesis; Advisor: John Lee; 2015–2019
Dissertation Title: *Modeling Microstructure of Drivers' Task Switching Behavior and Estimating Crash Risk*
Department of Industrial and Systems Engineering, University of Wisconsin–Madison

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

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

Adam Politis; PhD Thesis; Advisor: Lyn Turkstra; 2014–2019
Dissertation Title: *Conversational Dynamics in Traumatic Brain Injury*
Department of Communication Science and Disorders, University of Wisconsin–Madison

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

Rachel Kornfield; PhD Thesis; Advisor: Dhavan Shah; 2017–2018
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

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

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

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

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

Morgan Price; PhD Thesis; Advisor: John Lee; 2019
Dissertation Title: *Effect of Instructions & Vehicle Control Algorithms on Driver Behavior*
Department of Industrial and Systems Engineering, University of Wisconsin–Madison

Azadeh Dinparastdjadid; PhD Thesis; Advisor: John Lee; 2019–2020
Dissertation Title: *Modeling Drivers' Takeover from Conditional Automation*
Department of Industrial and Systems Engineering, University of Wisconsin–Madison

Joshua Domeyer; PhD Thesis; Advisor: John Lee; 2019–Present
Dissertation Title: *Toward Vehicle Automation That Communicates and Coordinates: Understanding Road User Behavior*
Department of Industrial and Systems Engineering, University of Wisconsin–Madison

Collin Engstrom; PhD Thesis; Advisor: David Page; 2019
Dissertation Title: *Adapting and Interpreting Machine Learning Techniques in the Biomedical and Clinical Domains*
Department of Computer Science, University of Wisconsin–Madison

Katherine Henry; PhD Thesis; Advisor: Suchi Saria; 2019
Dissertation Title: *Translating Machine Learning Into Clinical Practice: Lessons From Development to Deployment*
Department of Computer Science, Johns Hopkins University

Hooman Hedayati; PhD Thesis; Advisor: Daniel Szafir; 2021–Present
Dissertation Title: *Improving Human-Robot Conversational Groups*
Department of Computer Science, University of Colorado Boulder

THESIS COMMITTEE READER

AJung Moon; PhD Thesis; Advisor: Elizabeth Croft; 2017
Dissertation Title: *Negotiating With Robots: Meshing Plans and Resolving Conflicts in Human-Robot Collaboration*
University of British Columbia

Merel Keijsers; PhD Thesis; Advisor: Christoph Bartneck; 2020
Dissertation Title: *Robot Bullying*
University of Canterbury

TEACHING

COURSES TAUGHT

UNIVERSITY OF WISCONSIN–MADISON, AS *INSTRUCTOR*

Term	Course #	Course Title	Size*	Evaluation
Fall 2020	CS-571	Building User Interfaces	80	6.43/7.00

Term	Course #	Course Title	Size*	Evaluation
Spring 2020	CS/Psych/EdPsych-770	Human-Computer Interaction	44	6.34/7.00
Fall 2019	CS-571	Building User Interfaces	82	6.54/7.00
Spring 2019	CS-639	Undergraduate Research in Human-Computer Interaction	20	6.65/7.00
Fall 2018	CS-639	Undergraduate Research in Human-Computer Interaction	18	6.11/7.00
Fall 2018	CS/Psych/EdPsych-770	Human-Computer Interaction	40	5.20/7.00
Spring 2018	CS-639	Undergraduate Research in Human-Computer Interaction	6	6.17/7.00
Spring 2018	LIS/CS-612	User Experience Design II (taught online)	8	3.75/7.00
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

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

CARNEGIE MELLON UNIVERSITY, AS *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 three 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-571, Building User Interfaces: This new undergraduate course introduces undergraduate students in computer science to user experience (UX) development, combining design and development skills. It consists three modules, introducing students to designing and developing for the web, mobile, and voice user interface (VUI) platforms. Students learn state-of-the art front-end development libraries, frameworks, and tools. The course is offered as a CS-639 in Fall 2019 and will become a regular course, as CS-571, after the completion of the new course proposal process.

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 2019, Fall 2018, 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.

I 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 has been taken by 70 undergraduates in between Spring 2018 and Spring 2019.

OUTREACH

PUBLIC TALKS

Speaker, PLATO, Oakwood Village University Woods, Center for the Arts and Education, January 2020
Gave a lecture titled "Designing Robots for Human Interaction" to an audience of 50 members of the public

Speaker, Science on Tap Minoqua, December 2017
Held a discussion on the topic of "Robotics & Artificial Intelligence" with approximately 100 members of the public, streamed online

Speaker, 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

Speaker, 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

Speaker, 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, 2019
Outreach program targeted at senior UW–Madison alumni and their grandchildren. Each year, approximately 25 children aged 8-14 and their grandparents participate. 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.

"Open Lab" Event, National Robotics Week, 2010, 2013, 2014, 2015, 2016, 2017, 2018, 2019
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.

FIELD DEMONSTRATIONS

Robots & Unicorns, Madison Children's Museum, May 2019
Graduate students David Porfirio and Andrew Schoen demonstrated our robotic applications at a fundraising event for the Madison Children's Museum. Hundreds of members of the public (adults) participated in the event.

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.