

## RESEARCH AREAS

Psychology of Human-Computer Interaction (HCI) and Human-Robot Interaction (HRI)  
Mobile, Context-Aware, and Ubiquitous Media  
Laboratory and Field Experiments  
Re-embodied Cognition  
Applied Statistics

## EDUCATION

Stanford University, Ph.D. in Communication, 2008

Throwing Voices: Investigating the Psychological Effects of the Spatial Location of Projected Voices  
Committee: Clifford Nass, Herbert H. Clark, Frederick Turner, and Jeremy Bailenson

Stanford University, Ph.D. Minor in Psychology, 2008

M.A. in Communication

University of California, Berkeley, B.A. in Cognitive Science, 2003

B.A. in Psychology

## RESEARCH EXPERIENCE

2016 – CURRENT

Acting associate professor of Psychology, University of California, Santa Cruz

- Founding and leading a psychology lab that explores Re-embodied Cognition (ReCo Lab)
- Mentoring and teaching graduate and undergraduate students in HCI [C49]

2016 – CURRENT

Founder and human-robot interaction researcher, Hoku Labs, Santa Cruz

- Enabling data-driven decision making for robotic products through HRI research consulting
- Providing lit reviews, metrics, study protocols, empirical study results, and more [C47]

2013 – 2016

Senior user experience researcher, Google X, Mountain View

- Conducted social science research to inform and drive the design of special projects within X, primarily focusing upon Project Wing, a small unmanned aerial vehicle (UAV) delivery service [P1-4]
- Collaborated with engineering and cross-functional product teams to identify user experience goals, metrics of success, use cases, users/markets, competitive advantages, and partnerships
- Consulted for other Alphabet company projects that required effective human-robot interactions

2009 – 2013

Research scientist and manager for Human-Robot Interaction, Willow Garage, Inc., Menlo Park

- Led human-robot interaction research [J5, BC2-3, C32, 43-44, 46, W5], focusing on human responses to personal robots [C22-25, 30, 37, 41] and remote presence [BC4, C26-29, 31, 34, 38-40, 42, 45, 48]
- Informed the design of personal robot forms and behaviors (personal and remote presence robots)
- Brought user-centered design to personal robotics through need finding interviews, contextual

inquiry, heuristic analyses, user testing, and iterative design cycles [J7, C33, C35-36, W6]

- Served on company strategy team since January 2011 and management team since May 2012

2008 – 2009

Member of research staff, Nokia Research, Palo Alto, Innovate Design Experience Animate (IDEA) Team

- Collaborated on design exercises for the future of mobile computing user interfaces [W3-4]
- Generated research directions for future studies based upon the design exercises [C16-17]

2005 – 2008

Research assistant, Palo Alto Research Center (PARC), Human Information Interaction (HII) Lab

- Conducted task analysis of work practices of intelligence analysts for informing analyst tools
- Investigated issues of sensemaking and information gathering [W2]

2003 – 2008

Research assistant, Stanford, Communication between Humans & Interactive Media (CHIMe) Lab

- Designed, ran, analyzed, and published quantitative, experimental studies on vehicle and voice user interfaces [C6, C7, C16, C18, C21, J1, J2, J6], mobile phone communication [C8, C11], embodied interaction [J3, C9, C13, C20, W1], and human-robot interaction [C12, C14, C15, C17, C19]
- Mentored undergraduate and graduate research assistants in experimental methods and writing [J4]

2003

Research assistant, IBM Research, Almaden, User Sciences and Experiences Research (USER) Lab

- Conducted field studies and survey of system administrators; published in CHI [C10] and CSCW [C5]

2001 – 2003

Research assistant, UC Berkeley, Computer Science Group for User Interface Research (GUIR) Lab

- Experimentally compared low-fidelity vs. high-fidelity user interface prototypes [C1]
- Conducted contextual inquiries with fire fighters to inform context-aware applications [C2, C3, C4]

2001 – 2002

Research assistant, UC Berkeley, Psychology Department

- Conducted studies on implicit learning and flicker frequency effects upon visual grouping

## HONORS & AWARDS

IEEE Robotics and Automation Society, Early Career Award, 2015

World Economic Forum Young Global Leader, 2013

Technology Review 35 Innovators Under 35 (TR35), 2012

PopTech Science Fellowship, 2012

Fast Company 100 Most Creative People in Business, 2012

Silicon Valley 40 Under 40, 2011

Nathan Maccoby Outstanding Dissertation Award (granted only in years when justified), 2008

Phi Beta Kappa; Golden Key National Honour Society; Psi Chi, Psychology Honors Society

## RESEARCH GRANTS

- 2018-2021 Honda Research Institute: Research Grant for work on Formalizing Mathematical Models of Robot Curiosity. Subcontract with PI Siddhartha Srinivasa. \$377,377 over 3 years.
- 2018-2019 UCSC Committee on Research (COR): Faculty Research Grant (FRG) for Telepresence Robotics for Increasing Accessibility and Visitor Engagement at the Seymour Marine Discovery Center. \$1500. Sole PI: Leila Takayama.
- 2018 Koret Scholarship: Research Grant for supporting undergraduate research. \$500. Mentor for Natalie Friedman.
- 2017-2018 Accenture Technology Labs: Research Grant for work on Human-Robot Interaction. \$94,000. Sole PI: Leila Takayama.
- 2017 Hitachi America, Ltd.: Research Grant for work on Human-Robot Interaction with Personality. \$100,000. Co-PI with Marilyn Walker.
- 2012 National Science Foundation: National Robotics Initiative (NRI) collaborative grant. NRI-Small: Spatial Primitives for Enabling Situated Human-Robot Interaction (Senior Personnel with Maja Matarić, Donna Sprujit Metts, and Clifford Nass as PIs). Award #IIS-1208500. \$750,000 over 3 years.
- 2012 National Science Foundation: Expeditions, Collaborative Research. Socially Assistive Robots (Senior Personnel with Brian Scassellati, Maja Matarić, and Cynthia Breazeal as PIs). Award #1139078. \$10,000,000 over 5 years.
- 2011 National Science Foundation: Human Centered Computing. Embodied Mediated Communication in Collaborative Work (Co-PI with Bilge Mutlu). Award #1117652. \$487,810 over 3 years.

## NATIONAL AND INTERNATIONAL COMMITTEES

- World Economic Forum, Young Global Leader 2013-2017
- World Economic Forum, 2016-2018 Global Future Council on the Future of Computing
- World Economic Forum, 2014-2016 Global Agenda Meta-Council on Emerging Technologies member
- World Economic Forum, 2014-2016 Global Agenda Council on AI & Robotics member
- World Economic Forum, 2011-2014 Global Agenda Council on Robotics & Smart Devices member
- NASA review panel member 2016-2017
- NSERC Collaborative R&D 2012 review panel member
- NSF 2011, 2018 review panel member

## PROFESSIONAL TRAINING

- World Economic Forum, Young Global Leaders program
- Leading at the Edge, Oxford University 2016
- Leadership and Decision Making in the 21st Century, Yale University 2014

## BOARD MEMBERSHIP

Advisory Board for Companion.ai, 2017-current

Advisory Board for Cobalt Robotics, 2016-current

Technical Advisory Board for Suitable Technologies, a spin-off of Willow Garage, Inc. 2011-2014

## PATENTS

P4. Supervisory control of an unmanned aerial vehicle, US Patent #9817396B1, Issued Nov 14, 2017. Leila Takayama, Brandon Alexander, Roger William Graves, Justin Sadowski, and Abraham Bachrach.

P3. Interaction during delivery from aerial vehicle, US Patent #9630715B2, Issued Apr 25, 2017. Leila Takayama, Matthew Ball, Joanna Cohen, Roger William Graves, Mathias Samuel Fleck, Andrew Lambert, James Ryan Burgess, Paul Richard Komarek, Trevor Shannon.

P2. Bystander interaction during delivery from an aerial vehicle, US Patent #9321531, Issued Apr 26, 2016. Leila Takayama, Matthew Ball, Joanna Cohen, Roger William Graves, Mathias Samuel Fleck, Andrew Lambert, James Ryan Burgess, Paul Richard Komarek, Trevor Shannon.

P1. Ground-sensitive trajectory generation for UAVs, US Patent #9262929, Issued Feb 16, 2016. Nick Roy, Leila Takayama, Mathias Samuel Fleck, Roger William Graves.

## PUBLICATION HONORS

Best Full Paper Nomination, CHI 2011

Best Full Paper Nomination, HRI 2011

Best Note Nomination, CSCW 2010

Best Full Paper Nomination, HRI 2009

## EDITED BOOK

E1. Adams, J., Mutlu, B., Smart, W., & Takayama, L. (2015). HRI 2015: Proceedings of the ACM/IEEE International Conference on Human-Robot Interaction, ACM Press.

## JOURNAL ARTICLES

J8. Takayama, L. (2017). The motivations of ubiquitous computing: Revisiting the ideas behind and beyond the prototypes. *Journal of Personal and Ubiquitous Computing*, 21, 1-13.

J7. Chen, T., Ciocarlie, M., Cousins, S., Grice, P.M., Hawkins, K., Hsiao, K., Kemp, C., King, C.-H., Lazewatsky, D., Leeper, A.E., Nguyen, H., Paepcke, A., Pantofaru, C., Smart, W., & Takayama, L. (2013). Robots for humanity: A case study in assistive mobile manipulation. *IEEE Robotics and Automation Magazine*, 20 (1), 30-39.

J6. Jabon, M.E., Bailenson, J.N., Pontikakis, E., Takayama, L., & Nass, C. (2011). Facial expression analysis for predicting unsafe driving behavior. *IEEE Pervasive Computing* 10(4), 84-95.

- J5. Koenig, N., Takayama, L. & Matarić, M. (2010). Communication and knowledge sharing in human-robot interaction. *Neural Networks*, 23(8-9), 1104-1112.
- J4. Ochi, P., Rao, S., Takayama, L., & Nass, C. (2010). Predictors of user perceptions of web recommender systems: How the basis for generating experience and search product recommendations affects user responses. *International Journal of Human-Computer Studies*, 68(8), 472-482.
- J3. Ju, W. & Takayama, L. (2009). Approachability: How people interpret automatic door movement as gesture. *International Journal of Design*, 3(2).
- J2. Takayama, L., & Nass, C. (2008). Assessing the effectiveness of interactive media in improving drowsy driver safety. *Human Factors*, 50(5), 772-781.
- J1. Takayama, L., & Nass, C. (2008). Driver safety and information from afar: An experimental driver simulator study of wireless vs. in-car information services. *International Journal of Human-Computer Studies*, 66(3), 173-184.

## BOOK CHAPTERS

- BC4. Takayama, L. (2015). Telepresence and apparent agency in human-robot interaction. In Sundar, S. (Ed.), *Handbook on the Psychology of Communication Technology*. Malden, MA: Wiley Blackwell, 160-175.
- BC3. Takayama, L. (2012). Perspectives on agency: Interacting with and through personal robots. In Zacarias, M. & Oliveira, J. V. (Eds.), *Human-Computer Interaction: The Agency Perspective*. Springer, 195-214.
- BC2. Takayama, L. (2011). Toward making robots invisible-in-use: An exploration into invisible-in-use tools and agents. In Dautenhahn, K. (Ed.), *New Frontiers in Human-Robot Interaction*. Amsterdam, NL: John Benjamins, 111-132.
- BC1. Nass, C., Takayama, L., & Brave, S. (2006). Social consistency: From technical homogeneity to human epitome. In Zhang, P. & Galletta, D. (Eds.), *Human-computer Interaction in Management Information Systems: Foundations*. Armonk, NY, USA: M. E. Sharpe, 373-391.

## PEER-REVIEWED CONFERENCE PAPERS

- C49. Fitter, N., Chowdhury, Y., Cha, E., Takayama, L., & Matarić, M. (2018). Evaluating the Effects of Personalization on Telepresence Robots for Education. *Extended Abstracts of Human-Robot Interaction, HRI 2018*, Chicago, IL, 109-110.
- C48. Choi, M., Kornfield, R., Mutlu, B., & Takayama, L. (2017). Movement Matters: Effects of motion and mimicry on perception of similarity and closeness in robot-mediated communication. *Proceedings of Human Factors in Computing Systems: CHI 2017*, Denver, CO, 325-335. [25% acceptance rate]
- C47. Chung, M. J.-Y., Huang, J., Takayama, L., Lau, T. & Cakmak, M. (2016). Iterative design of a system for programming socially interactive service robots. *Proceedings of the International Conference on Social Robotics: ICSR 2016*.

- C46. Srinivasan, V. & Takayama, L. (2016). Help me please: Robot politeness strategies for soliciting help from humans. *Proceedings of Human Factors in Computing Systems: CHI 2016*, 4945-4955. [23% acceptance rate]
- C45. Johnson, S., Rae, I. Mutlu, B. & Takayama, L. (2015). Can you see me now? How field of view affects collaboration in robotic telepresence. *Proceedings of Human Factors in Computing Systems: CHI 2015*, Seoul, Republic of Korea, 2397-2406. [25% acceptance rate]
- C44. Fischer, K., Soto, B., Pantofaru, C., & Takayama, L. (2014). Initiating interactions in order to get help: Effects of social framing on people's responses to robots' requests for assistance. *Proceedings of Robot and Human Interactive Communication: RO-MAN 2014*, Edinburgh, UK, 999-1005.
- C43. Alexandrova, S., Cakmak, M., Hsiao, K., & Takayama, L. (2014). Robot programming by demonstration with interactive action visualizations. *Proceedings of Robotics Science and Systems: RSS 2014*, Berkeley, California.
- C42. Rae, I., Mutlu, B., & Takayama, L. (2014). Bodies in Motion: Mobility, presence, and task awareness in telepresence. *Proceedings of Human Factors in Computing Systems: CHI 2014*, Toronto, Canada, 2153-2162. [23% acceptance rate]
- C41. Cakmak, M. & Takayama, L. (2014). Teaching people how to teach robots: The effect of instructional materials and dialog design. *Proceedings of Human-Robot Interaction: HRI 2014*, Bielefeld, Germany, 431-438. [24% acceptance rate]
- C40. Rae, I., Takayama, L. & Mutlu, B. (2013). In-body experiences: Embodiment, control, and trust in robot-mediated communication. *Proceedings of Human Factors in Computing Systems: CHI 2013*, Paris, France, 1921-1930. [20% acceptance rate]
- C39. Takayama, L. & Harris, H. (2013). Presentation of (telepresent) self: On the double edged effects of mirrors. *Proceedings of Human-Robot Interaction: HRI 2013*, Tokyo, Japan, 381-388. [25% acceptance rate]
- C38. Rae, I., Takayama, L. & Mutlu, B. (2013). The influence of height in robot-mediated communication. *Proceedings of Human-Robot Interaction: HRI 2013*, Tokyo, Japan, 1-8. [25% acceptance rate]
- C37. Cakmak, M. & Takayama, L. (2013). Towards a comprehensive chore list for domestic robots. *Proceedings of Human-Robot Interaction: HRI 2013 (Late Breaking Report)*, Tokyo, Japan, 93-94.
- C36. Chen, T., Ciocarlie, M., Cousins, S., Grice, P., Hawkins, K., Hsiao, K., Kemp, C., King, C.-H., Lazewatsky, D., Leeper, A., Nguyen, H., Paepcke, A., Pantofaru, C., Smart, W., & Takayama, L. (2013). Robots for humanity: User-centered design for assistive mobile manipulation. *Proceedings of Intelligent Robots and Systems: IROS 2012*, Algarve, Portugal, 5434-5435.
- C35. Takayama, L., Pantofaru, C., Robson, D., Soto, B., & Barry, M. (2012). Making technology homey: Finding sources of satisfaction and meaning in home automation. *Proceedings of Ubiquitous Computing: Ubicomp 2012*, Pittsburgh, PA, 511-520. [19% acceptance rate]
- C34. Rae, I., Takayama, L., & Mutlu, B. (2012). One of the gang: Supporting in-group behavior for embodied mediated communication. *Proceedings of Human Factors in Computing Systems: CHI 2012*, Austin, TX, 3091-3100. [23% acceptance rate]

- C33. Pantofaru, C., Takayama, L., Foote, T., & Soto, B. (2012). Exploring the role of robots in home organization. *Proceedings of Human-Robot Interaction: HRI 2012, Boston, MA*, 327-334. [25% acceptance rate]
- C32. Leeper, A., Hsiao, K., Ciocarlie, M., Takayama, L., & Gossow, D. (2012). Strategies for human-in-the-loop robotic grasping. *Proceedings of Human-Robot Interaction: HRI 2012, Boston, MA*, 1-8. [25% acceptance rate]
- C31. Takayama, L. & Go, J. (2012). Mixing metaphors in mobile remote presence. *Proceedings of Computer Supported Cooperative Work: CSCW 2012, Seattle, WA*, 495-504.
- C30. Ju, W. & Takayama, L. (2011). Should robots or people do these jobs? A survey of robotics experts and non-experts about which jobs robots should do. *Proceedings of Intelligent Robotic Systems: IROS 2011, San Francisco, CA*, 1158-1166. [32% acceptance rate]
- C29. Paepcke, A., Soto, B., Takayama, L., Koenig, F., & Gassend, B. (2011). Yelling in the hall: Using sidetone to address a problem with mobile remote presence systems. *Proceedings of the Symposium on User Interface Software and Technology: UIST 2011, Santa Barbara, CA*, 107-116. [25% acceptance rate]
- C28. Takayama, L., Marder-Eppstein, E., Harris, H., & Beer, J. M. (2011). Assisted driving of a mobile remote presence system: System design and controlled user evaluation. *Proceedings of the International Conference on Robotics and Automation: ICRA 2011, Shanghai, CN*, 1883-1889.
- C27. Lee, M. K. & Takayama, L. (2011). "Now, I have a body": Uses and social norms of mobile remote presence in the workplace. *Proceedings of Human Factors in Computing Systems: CHI 2011, Vancouver, CA*, 33-42. [26% acceptance rate; nominated for best paper = top 5%]
- C26. Beer, J. M. & Takayama, L. (2011). Mobile remote presence systems for older adults: Acceptance, benefits, and concerns. *Proceedings of Human-Robot Interaction: HRI 2011, Lausanne, CH*, 19-26. [21% acceptance rate; nominated for best paper = top 6%]
- C25. Takayama, L., Dooley, D., & Ju, W. (2011). Expressing thought: Improving robot readability with animation principles. *Proceedings of Human-Robot Interaction: HRI 2011, Lausanne, CH*, 69-76. [21% acceptance rate]
- C24. Takayama, L. (2010). On making robots invisible-in-use. *Proceedings of International Symposium on New Frontiers in Human Robot Interaction: AISB 2010, Leicester, UK*.
- C23. Paepcke, S. & Takayama, L. (2010). Judging a bot by its cover: An experiment on expectation setting for personal robots. *Proceedings of Human-Robot Interaction: HRI 2010, Osaka, JP*, 45-52. [21% acceptance rate]
- C22. Goodfellow, I., Koenig, N., Muja, M., Pantofaru, C., & Takayama, L. (2010). Help me help you: Interfaces for personal robots. *Late breaking results of Human-Robot Interaction: HRI 2010, Osaka, JP*, 187-188.
- C21. Takayama, L. & Nass, C. (2010). Throwing voices: The psychological impact of the spatial height of projected voices. *Proceedings of Computer Supported Cooperative Work: CSCW 2010, Savannah, GA, USA*, 91-94. [20% acceptance rate; nominated for best note]
- C20. Takayama, L., Pantofaru, C. (2009). Influences on proxemic behaviors in human-robot interaction. *Proceedings of Intelligent Robotic Systems: IROS 2009, St. Louis, MO, USA*, 5495-5502.

- C19. Takayama, L., Groom, V., & Nass, C. (2009). I'm sorry, Dave: I'm afraid I won't do that: Social aspects of human-agent conflict. Proceedings of Human Factors in Computing Systems: CHI 2009, Boston, MA, USA, 2099-2108. [25% acceptance rate]
- C18. Takayama, L., Sison, J. G., Lathrop, B., Wolfe, N., Chiang, A., Nielsen, A., & Nass, C. (2009). Bringing design considerations to the mobile phone and driving debate. Proceedings of Human Factors in Computing Systems: CHI 2009, Boston, MA, USA, 1643-1646. [25% acceptance rate]
- C17. Sohn, T., Takayama, L., Eckles, D., & Ballagas, R. (2009). Auditory priming for upcoming events. Extended Abstracts of CHI 2009, Boston, MA, USA, 4225-4230. [34% acceptance rate]
- C16. Sohn, T., Ballagas, R., & Takayama, L. (2009). At your service: Using butlers as a model to overcome the mobile attention deficit. Extended Abstracts of CHI 2009, 4219-4224. [34% acceptance rate]
- C15. Takayama, L. (2009). Making sense of agentic objects and teleoperation: In-the-moment and reflective perspectives. Late breaking results of Human-Robot Interaction: HRI 2009, San Diego, CA, USA, 239-240.
- C14. Groom, V., Takayama, L., & Nass, C. (2009). I am my robot: The impact of robot-building and robot form on operators. Proceedings of the Human-Robot Interaction: HRI 2009, San Diego, CA, USA, 31-36. [19% acceptance rate; nominated for best paper]
- C13. Ju, W., Takayama, L., & Nass, C. (2008). Approachability: How people interpret automatic door movement as gesture. Proceedings of Design and Emotion, Hong Kong, CN.
- C12. Takayama, L., Ju, W., & Nass, C. (2008). Beyond Dirty, Dangerous and Dull: What everyday people think robots should do. Proceedings of the Human-Robot Interaction: HRI 2008, Amsterdam, NL, 25-32. [36% acceptance rate]
- C11. Danninger, M., Takayama, L., Wang, Q., Schultz, C., Beringer, J., James, F., Hofmann, P., & Nass, C. (2007). Can you talk or only Touch-Talk? A VoIP-based phone feature for quick, quiet, and private communication. Proceedings of the International Conference on Multimodal Interfaces: ICMI 2007, JP, 154-161.
- C10. Takayama, L., & Kandogan, E. (2006). Trust as an underlying factor of system administrator interface choice. Extended Abstracts of Human Factors in Computing Systems: CHI 2006, USA, 1391-1396. [23% acceptance rate]
- C9. Klemmer, S. R., Hartmann, B., & Takayama, L. (2006). How bodies matter: Five themes for interaction design. Proceedings of Designing Interactive Systems: DIS 2006, USA, 140-148. [22% acceptance rate]
- C8. Danninger, M., Kluge, T., Robles, E., Takayama, L., & Wang, Q. (2006). The Connector service: Predicting availability in mobile contexts. Proceedings of the Workshop on Multimodal Interaction and Related Machine Learning Algorithms: MLMI 2006, USA, 129-141.
- C7. Nass, C., Jonsson, I., Harris, H., Reaves, B., Endo, J., Brave, S., & Takayama, L. (2005). Improving automotive safety by pairing driver emotion and car voice emotion. Extended Abstracts of Human Factors in Computing Systems: CHI 2005, USA, 1973-1976. [25% acceptance rate]

- C6. Jonsson, I., Nass, C., Harris, H., & Takayama, L. (2005). Matching in-car voice with driver state: Impact on attitude and driving performance. Proceedings of the International Driving Symposium on Human Factors in Driver Assessment, Training and Vehicle Design, USA, 173-180.
- C5. Barrett, R., Kandogan, E., Maglio, P. P., Haber, E., Takayama, L., & Prabaker, M. (2004). Field studies of computer system administrators: Analysis of system management tools and practices. Proceedings of Computer Supported Cooperative Work: CSCW 2004, USA, 388-395. [30% acceptance rate]
- C4. Jiang, X., Hong, J. I., Takayama, L., & Landay, J. A. (2004). Ubiquitous computing for firefighters: Field studies and prototypes of large displays for incident command. Proceedings of Human Factors in Computing Systems: CHI 2004, Austria, 679-686. [16% acceptance rate]
- C3. Jiang, X., Chen, N. Y., Hong, J. I., Wang, K., Takayama, L., & Landay, J. A. (2004). Siren: Context-aware computing for firefighting. Proceedings of Pervasive 2004, Austria, 87-105. [13% acceptance rate]
- C2. Takayama, L., Leung, L., Jiang, X., & Hong, J. I. (2004). You're getting warmer! How proximity information affects search behavior in physical spaces. Extended Abstracts of Human Factors in Computing Systems: CHI 2004, USA, 1028-1029. [16% acceptance rate]
- C1. Walker, M., Takayama, L., & Landay, J. A. (2002). Low- or high-fidelity, paper or computer? Choosing attributes when testing web prototypes. Proceedings of the Human Factors and Ergonomics Society: HFES 2002, USA, 661-665.

## **WORKSHOP PAPERS**

- W6. Pantofaru, C. & Takayama, L. (2011). Need finding: A tool for directing robotics research and development. RSS 2011 workshop perspectives and contributions to robotics from the human sciences.
- W5. Takayama, L. (2009). Toward a science of robotics: Goals and standards for experimental research. RSS 2009 workshop on good experimental methodology in robotics.
- W4. Eckles, D., Ballagas, R., & Takayama, L. (2009). The design space of computer-mediated communication: Dimensional analysis and actively mediated communication. CHI 2009 workshop on social mediating technologies.
- W3. Ames, M., Go, J., Takayama, L., Raffle, H., Spasojevic, M., & Ballagas, R. (2008) Exploring family communication and technology use with an eye to design. CSCW 2009 workshop on family communication.
- W2. Takayama, L. & Card, S. K. (2008). Tracing the microstructure of sensemaking. CHI 2008 workshop on sensemaking.
- W1. Takayama, L. (2008). Human embodiment matters in human-robot interaction. HRI 2008 pioneers workshop.

## **HONORS FROM STUDENTS**

- UC Santa Cruz, Dept of Psychology, Engaging Research Lab (2017)  
UC Santa Cruz, Kresge College, Graduating Seniors' Favorite Faculty (2017)

**MENTORING**

## PhD and Postdoc Advisor

Nicholas Santer, University of California, Santa Cruz, Psychology, PhD student, 2017-current  
 Benjamin Hughes, University of California, Santa Cruz, Psychology, PhD student, 2017-current  
 Yasmin Chowdhury, University of California, Santa Cruz, Psychology, PhD student, 2016-current  
 Maya Cakmak, Willow Garage, post-doctoral scholar, 2013

## PhD Dissertation Committee Member

Victoria Hollis, UC Santa Cruz, Psychology PhD candidate, current  
 Laura Herlant, CMU Robotics Institute, Robotics PhD candidate, Spring 2018  
 Irene Rae, University of Wisconsin, Madison, Computer Science PhD candidate, Spring 2015  
 Julia Fink, EPFL, École Polytechnique Fédérale de Lausanne, Robotics, Summer 2014  
 Sigurður Örn Aðalgeirsson, MIT Media Lab, Media Arts & Sciences PhD candidate, Spring 2014  
 Jenay Beer, Willow Garage intern, Georgia Tech Engineering Psychology, PhD candidate, Fall 2013  
 Min Kyung Lee, CMU HCII, Computer Science PhD candidate, Fall 2013

## Research Mentor for Interns and Graduate Students

Vivian Chu, Google X intern, Georgia Tech Robotics PhD student, Summer 2015  
 Danae Holmes, Google X research assistant, 2015  
 Tiane Lee, Google X research assistant, 2014-2015  
 Bianca Soto, Google X research assistant, 2014  
 Andrew Lambert, Google X research assistant, 2013-2014  
 Maya Cakmak, Willow Garage intern, Georgia Tech Robotics PhD, Summer-Fall 2012  
 Vasant Srinivasan, Willow Garage intern, Texas A&M, CS PhD student, Fall 2011  
 Irene Rae, Willow Garage intern, University of Wisconsin, Madison, CS PhD student, Summer 2011& 2012  
 Min Kyung Lee, Willow Garage visiting scholar, CMU HCII PhD student, Spring-Summer 2010  
 Helen Harris, Willow Garage intern, Stanford Communication PhD student, Summer 2010  
 Jenay Beer, Willow Garage intern, Georgia Tech Engineering Psychology PhD student, Summer 2010  
 Laureen Lam, Stanford Comm 268, Stanford Computer Science Masters student, Winter-Spring 2010  
 Victoria Groom, Willow Garage intern, Stanford Communication PhD student, Summer 2009  
 Nathan Koenig, Willow Garage intern, USC Robotics PhD student, Summer 2009-Winter 2010  
 Steffi Paepcke, Willow Garage intern, Spring-Summer 2009

**TEACHING**

## Instructor: Psychology Research Methods

University of California, Santa Cruz, Spring 2018 (undergraduate)  
 Lecturing, hosting guest speakers, mentoring students through Psych research projects (190 students)

## Instructor: Psychology Research Methods

University of California, Santa Cruz, Spring 2017 (undergraduate)  
 Lecturing, hosting guest speakers, mentoring students through Psych research projects (210 students)

## Instructor: Human-Robot Interaction

University of California, Santa Cruz, Winter 2017 (undergraduate)  
 Lecturing, hosting guest speakers, mentoring students through HRI research projects (30 students)

## Instructor: Human Factors Designing Technology with People in Mind

University of California, Santa Cruz, Fall 2016 and 2017 (undergraduate)

Lecturing, hosting guest speakers, mentoring students through HCI projects (60 students)

Co-instructor: Experimental Research in Advanced User Interfaces

Stanford University, Winter 2007 (undergraduate and graduate)

Instructing and mentoring interdisciplinary teams (40 students total) to design and conduct experiments

Teaching Assistant: Computers and Interfaces: Psychological and Social Issues

Stanford University, Winter 2006 (undergraduate and graduate)

Taught two discussion sections each week (30 students total), guided project teams, led guest lectures

Project Team Lead: Experimental Research in Advanced User Interfaces

Stanford University, Winter and Spring 2004-2008 (undergraduate and graduate)

Guided four teams (14 students) to develop research questions, design, run, analyze, and publish studies

## **KEYNOTE TALKS**

Connecting via Robot, Fall 2018

Networked Society Symposium, University of Melbourne, Australia

What Is It Like To Be a Robot, Fall 2017

Tech Pulse Conference, Santa Clara, CA

Social Competence in Human-Robot Interaction, Winter 2017

IsraHCI Conference, Tel Aviv

Perceptions of Agency in Human-Robot Interaction, Fall 2016

Human-Agent Interaction (HAI) Conference, Singapore

## **GUEST LECTURES & INVITED TALKS**

Breaking the Wall Between People and Machines, Fall 2018

Falling Walls Conferences, Berlin, Germany

Communicating Science, Fall 2017

UCSC Cognitive Science Student Association (CSSA)

Wrangling Robots: Inventing a More Human-Centered Future, Fall 2017

UCSC Social Sciences Division, Museum of Art and History (MAH)

On Being Re-Embodied as a Robot, Fall 2017

UC Berkeley, CITRIS People and Robots Initiative

What Is It Like To Be a Robot, Summer 2017

Palo Alto Research Center (PARC)

- On Being Re-Embodied as a Robot, Summer 2017  
UC Santa Cruz, Information Technology Services (ITS)
- On Being Re-Embodied as a Robot, Spring 2017  
UC Santa Cruz, Jack Baskin School of Engineering, Computer Engineering Graduates (CEG) Seminar
- On Being Re-Embodied as a Robot, Spring 2017  
Stanford University, Computer Science Department, CS 547: People, Computers, and Design (PCD)
- What Is It Like To Be a Robot, Spring 2017  
TEDx Palo Alto, Palo Alto, California
- Robotics: Toward a More Human-Centered Future, Winter 2017  
American Association for the Advancement of Science (AAAS), Boston, Massachusetts
- A Human-Centered Robotic Future, Fall 2016  
PopTech 2016: Culture Clash, Camden, Maine
- People Interacting Thru and With Robots, Fall 2016  
Bay Area Robotics Symposium (BARS), Stanford
- Human-Centered Design Robots are All Around Us, Fall 2016  
Palo Alto Research Center (PARC) Forum
- Embodied Interactions with Robotic Agents, Winter 2016  
University of California, San Diego, Department of Cognitive Science
- What Is It Like To Be a Robot, Winter 2016  
California College of Arts, San Francisco
- Mixing People and Robots, Winter 2016  
UC Berkeley, CITRIS Foundry & University Relations, Alumni Relations, and Center for People and Robots
- What Is It Like To Be a Robot, Winter 2016  
Fuji Xerox Palo Alto Lab (Fxpal)
- Interacting Through Telepresence Robots, Winter 2016  
Stanford University, Computer Science Department, CS 247: HCI Design Studio
- Telepresence Robots: Using User Research to go from Prototype to Product, Winter 2016  
Designer Fund's Bridge Program, San Francisco
- Embodied Interactions with Robotic Agents, Winter 2016  
University of California, Santa Cruz, Department of Psychology
- Help Me Help You: Social Competence in Human-Robot Interactions, Winter 2016  
NASA Ames Intelligent Robotics Group (IRG)
- What's It Like To Be a Robot, Fall 2015  
Toronto User Experience (TUX) Sanders Series
- Human Machine System Integration, Summer 2015  
NASA Workshop for Intelligent Systems in Aerospace

- Towards Human Robot Symbiosis, Summer 2015  
Cognitive Science 2015 conference symposium
- Just a Few of the Many Flavors of Impact, Spring 2015  
IEEE/RAS ICRA 2015 conference plenary
- Telepresence Robotics for Supporting Remote Collaboration, Summer 2014  
École Polytechnique Fédérale de Lausanne (EPFL)
- Mixing People and Robots, Summer 2014  
RSS 2014 Workshop on Women in Robotics
- Mixing People and Robots, Spring 2014  
Designer Fund's Bridge Program, San Francisco
- Designing for the Seemingly Nonsensical Ways People See, Treat, and Use Robots, Spring 2014  
University of Pennsylvania, GRASP Lab
- Lessons from a Glimpse Into a Robotic Future, Winter 2013  
GigaOM, RoadMap Conference: The Intersection of Design and Experience
- Mixing Human and Robotic Agents, Spring 2013  
UC Berkeley, Electrical Engineering & Computer Science, Swarm Lab
- Mixing Human and Robotic Agents, Spring 2013  
Nissan Research Center – Silicon Valley
- Mixing Human and Robotic Agents, Spring 2013  
Carnegie Mellon University, School of Computer Science, HCI Institute
- Mixing Human and Robotic Agents, Spring 2013  
Disney Research, Pittsburgh
- HRI Pioneers Workshop Invited Speaker, Spring 2013  
ACM/IEEE HRI 2013 conference workshop
- HRI Workshop on Collaborative Manipulation Invited Speaker, Winter 2013  
ACM/IEEE HRI 2013 conference workshop
- Mixing Human and Robotic Agents, Winter 2013  
University of Washington Bothell, Computing & Software Systems, CSS 480: Human-Computer Interaction
- Mixing Human and Robotic Agents, Winter 2013  
Disney Animation Studios
- Mixing Human and Robotic Agents, Winter 2013  
Stanford University, Communication Department, Comm 169/269: Computers and Interfaces
- Mixing Human and Robotic Agents, Fall 2012  
Sennheiser Research USA
- Designing for In-the-Moment Interactions with Robotic Agents, Fall 2012  
UC Berkeley, School of Information

Personal and Open Source Robotics Research & Development, Fall 2012  
Creative Commons

Interacting With and Through Personal Robots, Summer 2012  
Workshop on the Integration of Robotics and Smart Devices, National University of Singapore

Embodied Virtuality: Making Sense of Agentic Objects, Spring 2012  
Yale University, Department of Computer Science

Embodied Virtuality: Interacting With and Through Agentic Objects, Spring 2012  
University of California, San Diego, Department of Cognitive Science

Embodied Virtuality: Interacting With and Through Agentic Objects, Spring 2012  
University of Michigan, School of Information

Interacting With and Through Agentic Objects, Winter 2012  
Washington University in St. Louis, Department of Computer Science & Engineering

Interacting With and Through Agentic Objects, Winter 2012  
University of Wisconsin – Madison, Human-Computer Interaction Laboratory

Social, Cognitive, and Technical Challenges in Mobile Remote Presence, Fall 2011  
NASA Ames Intelligent Robotics Group (IRG)

Personal Robotic Devices, Summer 2011  
Kicker Studio, Device Design Day

Interacting With and Through Personal Robots, Winter 2011  
University of Zurich, Informatics Department, People and Computing Lab

Interacting With and Through Personal Robots, Winter 2011  
UC Berkeley, Berkeley Institute of Design (BiD)

Interacting With and Through Personal Robots, Fall 2010  
Stanford University, Computer Science Department, CS 547: People, Computers, and Design (PCD)

Embodied Interactions With Personal Robots, Fall 2010  
UC Merced, Glushko-Samuels Foundation: Mind, Technology, and Society Lecture Series

Throwing Voices, Summer 2010  
SETI Institute, Leonardo Art/Science Evening (LASER)

Expectation Setting for Personal Robots, Spring 2010  
Texas A&M University, Parasol Seminar (AI and Robotics)

Voice User Interfaces, Spring 2009  
California College of Arts, Design 602 Studio: Interaction and Scripting

Voices and Sources, Winter 2009  
Stanford University, Communication Department, Communication 169/269: Computers and Interfaces

Voice Agents, Spring 2008  
Stanford University, Communication Department, Communication 166/266: Virtual People

Auditory User Interfaces, Spring 2008

UC Berkeley, Industrial Engineering and Operations Research 170: Industrial Design and Human Factors

Ubiquitous Computing, Spring 2007

UC Berkeley Information School, i213: User Interface Design and Development

## **INVITED PANELS**

TechCrunch 2018 Sessions on Robotics Panel: Making Robots Less Robotic, May 2018

ACM CHI 2018 Conference Panel: Human Robot Teaming, April 2018

PARC Forum on Making Robots Work to Help Us Work Remotely, October 2017

ACM Ubicomp 2017 Conference Panel: N2 Women, September 2017

UCSC Society of Women Engineers and Women in Science and Engineering (SWE & WISE), May 2017

Robo Madness 2016 Panel: AI and Human-Machine Interaction, June 2016

South by Southwest (SXSW) 2016 Panel: One Robot Doesn't Fit All, March 2016

CSCW 2016 Panel: Robots as Cooperative Partners... We Hope, February 2016

Life/Art/Science/Technology 2015 Panel: Homo Digitalis – Robots and People, October 2015

We Robot Conference 2013 Panel: Robotics Industry Round Table, April 2013

Bloomberg Businessweek Design Conference 2013 Panel: Imagination, January 2013

NASA Exploration Telerobotics Symposium Panel: Terrestrial Telerobotics, May 2012

ACM/IEEE HRI 2012 Conference Panel: Robot Telepresence, March 2012

ACM/IEEE HRI 2012 Workshop Invited Panel: HRI Pioneers March 2012

## **EXTERNAL PROFESSIONAL MEMBERSHIPS**

ACM SIG CHI (Association for Computing Machinery, Special Interest Group, Computer Human Interaction)

APA (American Psychological Association) Division 46: Society for Media Psychology & Technology

APS (Association for Psychological Science)

BayCHI (Bay Area Computer Human Interaction)

Cognitive Science Society

IEEE RAS (Institute of Electrical and Electronics Engineers, Robotics and Automation Society)

## **CONFERENCE ORGANIZER**

ACM Ubicomp 2017-2018 steering committee

ACM Ubicomp 2017 general co-chair

ACM/IEEE HRI 2015 program co-chair

Robotics and Law 2013-2014 organizing committee

ACM/IEEE HRI 2012-2016 steering committee

ACM/IEEE HRI 2012-2013 finance co-chair

## **EDITOR**

Editorial board member for HFES/Sage Reviews in Human Factors & Ergonomics 2013

Co-editor for the inaugural issue for the Journal of Human Robot Interaction 2012

**PROGRAM COMMITTEE MEMBER**

IEEE RSS, Robotics Science and Systems 2014 and 2017 associate chair for HRI  
Artificial Intelligence and Simulation of Behavior AISB 2014 program committee  
Robotics and Law 2013-2014 program committee  
ACM CHI 2012 program committee (subcommittee on understanding users)  
ACM/IEEE HRI 2012-2014 program committee  
ICSR 2012 program committee  
IEEE Pervasive 2011 program committee  
IEEE RSS, Robotics Science and Systems 2011 program committee  
ACM CHI 2011 videos program committee  
ACM UIST 2011 poster committee

**WORKSHOP ORGANIZER**

ACM/IEEE HRI 2016 conference workshop – Design skills for HRI  
(with David Sirkin, Guy Hoffman, Wendy Ju, & Bilge Mutlu)  
ACM SIG CHI 2015 conference workshop – Workshop on Everyday Telepresence  
(with Irene Rae, Bilge Mutlu, Gary Olson, Judith Olson, & Gina Venolia)  
RSS 2014 conference workshop – Workshop on women in robotics  
(with Joelle Pineau, Andrea Thomaz, & Maren Bennewitz)  
IEEE IROS 2012 conference workshop program committee - Human behavior understanding  
(with Javier Ruiz-del-Solar, Cetin Mericli, & Pierre-Yves Oudeyer)  
IEEE RO-MAN 2012 conference workshop program - Social robotic telepresence  
(with Silvia Coradeschi, Gabriella Cortellessa, Annica Kristoffersson, & Amy Loutfi)  
IEEE RSS 2011 conference workshop - Perspectives and contributions to robotics from the human sciences  
(with Maja Matarić, Odest Chadwicke Jenkins, Holly Yanco, & Brian Scassellati)  
ACM/IEEE HRI 2010 conference workshop - What do collaborations with the arts have to say about HRI?  
(with Bill Smart & Annamaria Pileggi)  
IEEE CVPR 2010 conference workshop - Computer vision for human robot interaction  
(with Caroline Pantofaru, Rainer Stiefelhagen, & Gary Bradski)  
NSF-JST workshop, HRI 2010 – Social remote presence robots  
(with Cynthia Breazeal, Fumihide Tanaka, & Brian Scassellati)

**REVIEWER**

## Journals:

ACM Transactions on Interactive Intelligent Systems, 2015  
APA Technology, Mind, and Society, 2018  
CYE, Children, Youth, and Environments 2008  
HCI, Human-Computer Interaction (Taylor & Francis) 2009, 2016  
HFES Journal of Cognitive Engineering 2010  
IEEE Transactions on Affective Computing 2011  
IEEE Transactions on Autonomous Mental Development 2011  
IJHCS, International Journal of Human-Computer Studies (Elsevier) 2006, 2015  
IJRR, International Journal of Robotics Research, 2016  
IPSI, Institute for Integrated Publication and Information Systems 2005  
JHRI, Journal of Human Robot Interaction 2012, 2015-2016  
MIT Press Presence 2009, 2012

## Conferences:

ACM CHI, Human Factors in Computing Systems 2004, 2006-18 (excellent reviewer 2017)  
ACM CSCW, Computer Supported Cooperative Work 2008, 2010-12, 2017, 2019  
ACM DIS, Designing Interactive Systems 2012, 2014  
ACM/IEEE HRI, Human Robot Interaction 2006-2018  
ACM TEI, Tangible and Embedded Interaction 2009  
ACM Ubicomp 2010, 2012, 2014  
ACM UIST, User Interface Software and Technology 2010-14  
HICSS, Hawaii International Conference on System Sciences 2007  
IEEE ICRA, International Conference on Robotics and Automation 2009-13, 2018  
IEEE/RSJ IROS, International Conference on Intelligent Robotics and Systems 2011-2012, 2015-2016  
IEEE Pervasive 2006, 2008-2009, 2012  
IEEE RO-MAN 2010-2011, 2016  
IEEE RSS, Robotics Science and Systems 2011-2012, 2015-2016

## Workshops:

ACM/IEEE CTS Workshop on Collaborative Robots and Human Robot Interaction 2012  
ACM/IEEE HRI Young Pioneers Workshop 2012-2013  
International Workshop on Collaborative Robots and Human Robot Interaction 2011  
RSS Pioneers Workshop 2018

**SELECTED MEDIA / PRESS**

- IEEE Spectrum – Wyrobek, K. (2017, October 31). The origin story of ROS the Linux of Robotics.
- UCSC – McNulty, J. (2017, September 12). Love 'em or hate 'em, robots are here to stay so let's make them better, says psychology prof.
- Bloomberg – Huet, E. (2017, May 17). The not-so-secret code that powers robots around the globe.
- Xprize – Somerset, D. (2017, March 31). Robot uprising? Not anytime soon!
- Xconomy – Tansey, B. (2016, June 29). The future of human-machine culture imagined at Robo Madness West.
- How Stuff Works Now – Strickland, J. (2016, March 13). Hanging out with robot experts at SXSW Interactive 2016.
- IEEE Robotics & Automation – Haidegger, T. (2015, December). Excellence in R&A: Interview with the Recent Recipients of the RAS Early Career Award.
- Re/code – Bracker, R. (2015, August 17). Google X Robotist Speaks Out on Tech's Gender Crisis (video).
- GigaOM – Darros, B. (2014, February 21). Say goodbye to Willow Garage.
- Fast Company – Zax, D. (2014, February 8). Google Glass's unexpected lessons in product launching.
- Smart Planet – Sherwood, C. (2013, May 20). Leila Takayama, Research Scientist on Human-Robot Interaction.
- Technology Review Notebook – Takayama, L. (2013, April 23). Friendly Robots.
- Huffington Post – Bosker, B. (2013, April 19). Robot-Human Interaction: Will We Bond with Bots in the Future?
- Bloomberg TV – Soren, T. (2013, February 6). Have No Fear, a Robot That Won't Scare You Is Here!
- Smithsonian Innovations – Rieland, R. (2012, December 27). Six Innovators to Watch in 2013.
- Avant Garde Diaries – Welch, B. (2012, December 12). Robot Factory.
- American Public Media, The Story – Gordon, D. (2012, October 30). A Robot Needs Hips.
- CBS – Jana, R. (2012, October 27). To Innovate, Scientists and Engineers Find Inspiration in the Arts.
- Technology Review – Knight, W. (2012, September 26). How You Could Help Your Future Robot Coworker.
- PopTech – Wilder, O. (2012, September 26). Introducing the Science Fellows Class of 2012.
- Technology Review – Simonite, T. (2012, September 25). Beam Yourself to Work in a Remote-Controlled Body.
- CBS News – Clemens, P. (2012, July 29). New Robots Giving the Disabled Independence.
- Financial Times – Clegg, A. (2012, June 29). Robots Take Lessons in Body Language.
- National Public Radio: All Things Considered – Block, M. (2012, June 18). You Know You Want One: Personal Robots Are Coming, But Not Ready For You Yet.
- Newsweek – Lyons, D. (2011, December 5). Studying Human-Robot Interactions.
- Silicon Valley / San Jose Business Journal – Lynch, S. (2011, December 1). 40 Under 40: Leila Takayama.
- Computerworld – Potter, V. (2011, August 8). Up Close and Personal With the Robot Petting Zoo.
- Core77 – Core Jr. (2011, July 22). Device Design Day 2011: Six Questions for Leila Takayama.
- Wired Magazine – Koerner, B. (2011, April). In Praise of Ugly Robots.
- New Scientist – Knight, H. (2011, March 28). How a Robot Can Replace You at Work – and How It Can't.
- KALW News – Short, S. (2011, February 15). Menlo Park Start-Up Looks to Bring Personal Robots to Market.
- New Scientist – Biever, C. (2010, December 30). Robot, Robot, Wherefore Art Thou Robot?
- Fast Company – Amit, G. (2009, October 1). In Defense of Slapping a Robot.
- Wired.Com – Ganapati, P. (2009, July 22). Robo-Ethicists Want to Revamp Asimov's 3 Laws.
- BBC – (2003, February 5). Tech Comes to the Rescue of Firefighters.
- Knight Ridder – Brodsky, A. (2003, January 13). UC Berkeley Teams Seek Way to Increase Safety in Battling Blazes.