

# CURRICULUM VITAE

MALTE F. JUNG

---

My work examines teamwork with robots. My multidisciplinary backgrounds in mechanical engineering design, organizational behavior, and psychology allow me not only to examine how teamwork is shaped by robots through careful empirical research, but also to improve it by designing ways for robots to improve teamwork. Findings from my research inform our conceptual understanding of interpersonal dynamics in teams as well as how we design robots that act on interpersonal dynamics to support teamwork across a wide range of settings.

## EMPLOYMENT

---

- 2013 to present    Cornell University, Ithaca, NY  
Assistant Professor in Information Science  
Nancy H. '62 and Philip M. '62 Young Sesquicentennial Faculty Fellow
- 2011 to 2013        Stanford University, Stanford, CA  
Postdoctoral Scholar, Center for Work, Technology, and Organization  
Advisor: Pamela J. Hinds

## EDUCATION

---

- 2011                 Stanford University, Stanford, CA  
Ph.D. in Mechanical Engineering, Design Group  
Ph.D. Minor in Psychology  
Committee: Larry J. Leifer (primary), Pamela J. Hinds, James J. Gross, Martin Steinert, Clifford I. Nass (chair)
- 2006                 Stanford University, Stanford, CA  
M.S. in Mechanical Engineering, Design Group  
Advisor: Larry J. Leifer
- 2004                 Technical University of Munich, Munich, Germany  
Diploma (Magna cum Laude) in Mechanical Engineering  
Advisor: Udo Lindemann

## WORKING PAPERS

---

**Jung, M. F.** Emotion Regulation in Intra Group Conflict.

## JOURNAL PUBLICATIONS

---

Barreiros, Jose, Houston Claire, Bryan Peele, Omer Shapira, Josef Spjut, David Luebke, **Malte Jung**, and Robert Shepherd. "Fluidic Elastomer Actuators for Haptic Interactions in Virtual Reality." *IEEE Robotics and Automation Letters* 4, no. 2 (2019): 277-284.

**Jung, M.**, & Hinds, P. (2018). Robots in the wild: A time for more robust theories of human-robot interaction. *ACM Transactions on Human-Robot Interaction (THRI)*, 7(1), 2.

Strait, M. K., Floerke, V. A., Ju, W., Maddox, K., Remedios, J. D., **Jung, M. F.**, & Urry, H. L. (2017). Understanding the Uncanny: Both Atypical Features and Category Ambiguity Provoke Aversion toward Humanlike Robots. *Frontiers in psychology*, 8, 1366.

**Jung, M. F.** (2016). Coupling Interactions and Performance: Predicting Team Performance from Thin Slices of Conflict. *ACM Transactions on Computer-Human Interaction (TOCHI)*.

Breazeal, C., DePalma, N., Orkin, J., Chernova, S., **Jung, M. F.** (2013) Crowdsourcing Human-Robot Interaction: New Methods and System Evaluation in a Public Environment. *International Journal of Human-Robot Interaction*.

## REFEREED CONFERENCE PUBLICATIONS

---

Tennent, H., Shen, S., & **Jung, M.** (2019) Micbot: A Peripheral Robotic Object to Shape Conversational Dynamics and Team Performance. Proceedings of the Fourteenth ACM/IEEE International Conference on Human Robot Interaction (HRI 2019). Daegu, South Korea, March 11-14.

Fischer, K., **Jung, M.**, Jensen, L.J., aus der Wieschen, M.V. (2019). Emotion Expression in HRI - When and Why. Proceedings of the Fourteenth ACM/IEEE International Conference on Human Robot Interaction (HRI 2019). Daegu, South Korea, March 11-14.

Sannon, S., Stoll, B., DiFranzo, D., **Jung, M.**, & Bazarova, N. N. (2018, October). How Personification and Interactivity Influence Stress-Related Disclosures to Conversational Agents. In Companion of the 2018 ACM Conference on Computer Supported Cooperative Work and Social Computing (pp. 285-288). ACM.

Tennent, H., Lee, W. Y., Hou, Y. T. Y., Mandel, I., & **Jung, M.** (2018, October). PAPERINO: Remote Wizard-Of-Oz Puppeteering For Social Robot Behaviour Design. In Companion of the 2018 ACM Conference on Computer Supported Cooperative Work and Social Computing (pp. 29-32). ACM.

Pelikan, H. R., Cheatle, A., **Jung, M. F.**, & Jackson, S. J. (2018). Operating at a Distance-How a Teleoperated Surgical Robot Reconfigures Teamwork in the Operating Room. Proceedings of the ACM on Human-Computer Interaction, 2(CSCW), 138.

Sebo, S. S., Traeger, M., **Jung, M. F.** Scassellati, B. (2018). The Ripple Effects of Vulnerability: The Effects of a Robot's Vulnerable Behavior on Trust in Human-Robot Teams. Proceedings of the Thirteenth ACM/IEEE International Conference on Human Robot Interaction (HRI 2018). Chicago, MI, USA, March 5-8.

Hohenstein, J., **Jung, M. F.** (2018) AI-Supported Messaging: An Investigation of Human-Human Text Conversation with AI Support. Companion Proceedings of The ACM CHI Conference on Human Factors in Computing Systems (CHI 2018). Montreal, Canada, April 21-26

Stoll, B., **Jung, M. F.**, Fussell, S., (2018) Keeping it Light: Perceptions of Humor Styles in Robot-Mediated Conflict. Companion Proceedings of the Thirteenth ACM/IEEE International Conference on Human Robot Interaction (HRI 2018). Chicago, MI, USA, March 5-8.

Shen, S., Slovak, P., & **Jung, M. F.** (2018). "Stop. I See a Conflict Happening." A Robot Mediator for Young Children's Interpersonal Conflict Resolution. Proceedings of the Thirteenth ACM/IEEE International Conference on Human Robot Interaction (HRI 2018). Chicago, MI, USA, March 5-8.

Stoll, B., Reig, S., He, L., Kaplan, I., **Jung, M. F.**, & Fussell, S. R. (2018). "Wait, Can You Move the Robot?": Examining Telepresence Robot Use in Collaborative Teams. Proceedings of the Thirteenth ACM/IEEE International Conference on Human Robot Interaction (HRI 2018). Chicago, MI, USA, March 5-8.

Shen, S., Tennent, H., Claire, H., & **Jung, M.** (2018). My Telepresence, My Culture? An Intercultural Investigation of Telepresence Robot Operators' Interpersonal Distance Behaviors. Proceedings of The ACM CHI Conference on Human Factors in Computing Systems (CHI 2018). Montreal, Canada, April 21-26

Costa, J., **Jung, M. F.**, Czerwinski, M., Guimbretiere, F., Le, T., Choudhury, T. (2018) Regulating Feelings During Interpersonal Conflicts by Changing Voice Self-perception. Proceedings of The ACM CHI Conference on Human Factors in Computing Systems (CHI 2018). Montreal, Canada, April 21-26

Zhang, E., Culbertson, G., Shen, S., **Jung, M. F.** (2018) Utilizing Narrative Grounding to Design Storytelling Games for Creative Foreign Language Learning Proceedings of The ACM CHI Conference on Human Factors in Computing Systems (CHI 2018). Montreal, Canada, April 21-26

Gao, G., Hwang S. Y., Culbertson, G., Fussell, S.R., & **Jung M.** (2018). Beyond Information Content: The Effects of Culture on Affective Grounding in Instant Messaging Conversations. CSCW 2018.

Kwon, M., **Jung, M. F.**, Knepper, R. (2016) Human Expectations of Social Robots. Extended Abstracts of HRI 2016. NY: ACM Press.

Culbertson, G., Wang, S., **Jung, M.**, & Andersen, E. (In Press). Social Situational Language Learning through an Online 3D Game. *Proceedings of CHI 2016*. NY: ACM Press

Culbertson, G., Andersen, E., White, W., Zhang, D., & **Jung, M.** Crystallize: An Immersive, Collaborative Game for Second Language Learning. *Proceedings of CSCW 2016*. NY: ACM Press

Adams, A. T., Costa, J., **Jung, M. F.**, & Choudhury, T. (2015). Mindless computing: designing technologies to subtly influence behavior. *Proceedings of UbiComp 2015* (pp. 719-730). ACM Press.

**Jung, M. F.**, Sirkin, D., Gür, T. M., Steinert, M. Displayed Uncertainty Improves Driving Experience and Behavior: The Case of Range Anxiety in an Electric Car. In Proc. CHI 2015, ACM Press (2015).

**Jung, M. F.**, Martelaro, N., Hinds, P. J., Using Robots to Moderate Team Conflict: The Case of Repairing Violations. In Proc. HRI 2015, ACM Press (2015).

Lasecki, W. S., Gordon, M., Koutra, D., **Jung, M. F.**, Dow, S. P., & Bigham, J. P. Glance: Rapidly coding behavioral video with the crowd. In Proc. UIST 2014, ACM Press (2014), 551-562.

**Jung, M.F.**, Martelaro, N., Hoster, H., Nass, C. (2014). Participatory Materials: Having a Reflective Conversation with an Artifact in the Making. *Proceedings of DIS 2014*. NY: ACM Press

**Jung, M. F.** Lee, J. DePalma, N. Hinds, P. J. & Breazeal, C. (2013). Engaging robots: Easing complex human-robot teamwork using backchanneling. *Proceedings of CSCW 2013*. NY: ACM Press

**Jung, M. F.** Chong, J. & Leifer, L. J. (2012). Group Hedonic Balance and Pair Programming Performance: Affective Interaction Dynamics as indicators of Performance. *Proceedings of CHI 2012*. NY: ACM Press

**Jung, M. F.** & Leifer, L. J. (2011). A Method to Study Affective Dynamics and Performance in Engineering Design Teams. *Proceedings of the 18th International Conference on Engineering Design (ICED11)*, Copenhagen, Denmark.

Sirkin, D. Sonalkar, N. **Jung, M.F.** & Leifer, L. (2009). Lowering Barriers to Distributed Design Research Collaboration. *Proceeding of the International Conference on Engineering Design (ICED09)*, Stanford, CA.

Edelman, J. Banerjee, B. **Jung, M.F.** Sonalkar, N. and Lande, M. (2009). Hidden in Plain Sight: Affordances of Shared Models in Team Based Design. *Proceedings of the International Conference on Engineering Design (ICED09)*, Stanford, CA.

Wodehouse, A. Breslin, C. Eris, O. Grierson, H. Ion, W., **Jung, M.F.** Leifer, L. Mabogunje, A. and Sonalkar, N. (2007). A Reflective Approach to Learning in a Global Design Project. *Proceedings of the 9th International Conference on Engineering and Product Design Education*, Newcastle, UK.

Sonalkar, N. Mabogunje, A. Leifer, L. Eris, O. and **Jung, M.F.** (2007). Powerbrowsing – a Method to Accelerate Designers' Familiarity with Video Information in Digital Libraries. *Proceedings of the International Conference on Engineering Design (ICED07)*, Paris, France.

**Jung, M.F.**, Mabogunje, A., Sonalkar, N., Eris, O., and Leifer, L. (2007). A Mediation Moderation Framework for Knowledge Coaching of Digital Libraries. *Proceedings of the International Conference on Engineering Design (ICED07)*, Paris, France.

Sonalkar, N., Mabogunje, A., **Jung, M.F.**, Eris, O., Wodehouse, A., Grierson, H., Leifer, L., Lynn, A., Juster, N., and Ion, W. (2006). A Conceptual Framework for Understanding the Impact of Digital Libraries on Engineering Design Learning. *ASME Conference Proceedings*.

Eris, O., Mabogunje, A., **Jung, M.F.**, Leifer, L., Khandelwal, S., Hutterer, P., Hessling, T., and Neeley, L. (2005). An Exploration of Design Information Capture and Reuse in Text and Video Media. *Proceedings of the International Conference on Engineering Design (ICED05)*. Melbourne, Australia.

Bergner, D., Eris, O., and **Jung, M.F.** (2005). Dialogue-Based Metrics of Design Team Learning and Discovery. *Proceedings of the 22nd International Conference on Machine Learning*. Bonn, Germany.

Hutterer, P., Eris, O., **Jung, M.F.**, Leifer, L., Lindemann, U., and Mabogunje, A. (2004) What Do Designers Really Need? An Explorative Experiment before Developing Teaching Tools and Methods. *Proceedings of Cognition and Exploratory Learning in Digital Age CELDA*.

## WORKSHOP PAPERS

---

**Jung, M. F.**, DiFranzo, D., Stoll, B., Shen, S., Lawrence, A., & Claire, H. (2019). Tower Construction - A Task to Evaluate Human Robot Collaborations that Involve Groups of People. Workshop on Test Methods and Metrics for Effective HRI in Collaborative Human-Robot Teams held as part of the the Fourteenth ACM/IEEE International Conference on Human Robot Interaction (HRI 2019). Daegu, South Korea, March 11-14.

Claire, H., **Jung, M. F.**, (2018) Effect of Close-Distance Human Robot Collaboration. Workshop on Longitudinal Human-Robot Teaming held as part of the of the thirteenth ACM/IEEE International Conference on Human Robot Interaction (HRI 2018). Chicago, MI, USA, March 5-8.

Hou, T, **Jung, M. F.**, (2018) Robots in Power. Workshop on Longitudinal Human-Robot Teaming held as part of the of the thirteenth ACM/IEEE International Conference on Human Robot Interaction (HRI 2018). Chicago, MI, USA, March 5-8.

Kwon, M., **Jung, M. F.**, Knepper, R. (2016) Human Expectations of Social Robots. Extended Abstracts of HRI 2016. NY: ACM Press. Workshop paper for the HRI 2016 Workshop on "The challenge (not) to go wild!"

**Jung, M. F.**, DePalma, N., Chernova, S., Hinds, P. J., & Breazeal, C. (2012). Human-Robot Collaboration: Bids and Bytes. *Paper presented at the 4th Annual Human-Agent-Robot Teamwork Workshop in conjunction with the 7th ACM/IEEE International Conference on Human-Robot Interaction (HRI'12)*, Boston, USA.

**Jung, M. F.**, & Leifer, L. J. (2012). A method to study affective dynamics and performance in engineering design teams. *Paper presented at the 2nd International PUBLISH-ED Workshop*, Grenoble Institute of Technology, Grenoble, France.

**Jung, M.F.**, and Dow, S. (2011). The Ethics of Online Video Analysis for Systematic Observation of Behavior. In *Workshop on "Ethics, Logs and Videotape: Ethics in Large Scale Trials & User Generated Content."* In *ACM CHI Conference on Human Factors in Computing Systems (CHI 2011)*, Vancouver, Canada.

**Jung, M.F.**, & Sirkin, D. (2011). How Telepresence Colors Emotion. *Paper presented at the Workshop on Human Robot Interaction: Perspectives and Contributions to Robotics from the Human Sciences, Robotics Science and Systems, RSS2011*. Los Angeles, USA.

**Jung, M.F.**, Sonalkar, N., Mabogunje, A., Banerjee, B., Lande, M., Han, C., and Leifer, L. (2010). Designing Perception-Action Theories – Theory-Building for Design Practice. *Proceedings of the Eighth Design Thinking Research Symposium (DTRS8)*, Sydney, Australia.

Han, C., Sonalkar, N., Lande, M., **Jung, M.F.**, and Leifer, L. (2010), Design Basis - Insights About Design Thinking from the Perspective of Decision Analysis. *Proceedings of the Eighth Design Thinking Research Symposium (DTRS8)*, Sydney, Australia.

Lande, M., Sonalkar, N., **Jung, M.F.**, and Han, C. (2010). Mapping Design Thinking: Studying Professional Software Design with Design Thinking Culture Metrics. In *Workshop on "Studying Professional Software Engineering"*. Irvine, CA.

## BOOK CHAPTERS

---

Martelaro, N., Ganguly, S., Steinert, M., & **Jung, M. F.** (2015). The Personal Trait Myth: A Comparative Analysis of the Innovation Impact of Design Thinking Tools and Personal Traits. In *Design Thinking Research* (pp. 41-57). Springer International Publishing.

Sonalkar, N., **Jung, M.F.**, Mabogunje, A., & Leifer, L.J. (2014). A Structure for Design Theory. In A. Chakrabarti & L. Blessing (Eds.), *Theories and Models of Design: A Summary of Findings*: Springer.

Lande, M., Sonalkar, N., **Jung, M.F.**, Han, C., & Banerjee, B. (2011). Monitoring Design Thinking Through In-Situ Interventions. In H. Plattner, C. Meinel & L. Leifer (Eds.), *Design Thinking: Understand - Improve - Apply* (Vol. 2): Springer.

Sonalkar, N., **Jung, M.F.**, & Mabogunje, A. (2010). Emotion in Engineering Design Teams. In S. Fukuda (Ed.), *Emotional Engineering: Service Development*. London, UK: Springer.

Mabogunje, A., Eris, O., Sonalkar, N., **Jung, M.F.**, & Leifer, L. (2009). Spider Webbing: A Paradigm for Engineering Design Conversations during Concept Generation. In J. McDonnell & P. Llyod (Eds.), *About: Designing; Analyzing Design Meetings* (pp. p.49-65, ). London, UK: CRC Press.

Eris, O., Bergner, D., **Jung, M.F.**, & Leifer, L. (2006). ConExSIR: A Dialogue-based Framework of Design Team Thinking and Discovery. In Y. Ohsawa & S. Tsumoto (Eds.), *Chance Discoveries in Real World Decision Making* (Vol. 30, pp. 329-344): Springer Berlin / Heidelberg.

## PATENT APPLICATIONS

---

Dos Reis, C. J. M., Adams, A. T., Choudhury, T., & Jung, M. F. (2018). U.S. Patent Application No. 15/698,564.

## AWARDS AND HONORS

---

- 2019 Army Research Lab: The Signatures of Success in Human-Agent Teams  
Investigators: Noshir Contractor (PI), Malte F Jung, Leslie DeChurch  
Period: 2018–2019  
Amount: \$100,000
- 2018 National Science Foundation: Subcontract to Stanford University: Facilitating Intra- and Inter-Personal Emotion Regulation Through Socially Assistive Robots.  
Investigators: Malte F Jung  
Period: 2018–2019  
Amount: \$100,000
- 2016 National Science Foundation IIS-1563705: CHS: Medium: Improving Distributed Teamwork Through Mobile Robotic Telepresence Systems.  
Investigators: Malte F Jung, Sue Fussell (PI), Drew Margolin, Francois Guimbretiere, Ross Knepper.  
Period: 2016–2019  
Amount: \$1,171,556
- 2016 Cornell Undergraduate Research Award. “Socially Assistive Robots for Children”.  
Awarded to Justina Chen  
Amount: \$1,380
- 2015 Institute of Social Science: Small Grant: Comparative Assessment of Intra-Personal and Inter-Personal Emotion Regulation in Robotic Versus Laparoscopic Surgery  
Investigators: Malte F. Jung (PI)  
Period: 2015–2016  
Amount: \$10,000
- 2015 National Science Foundation: Subcontract to Stanford University: Facilitating Intra- and Inter-Personal Emotion Regulation Through Socially Assistive Robots.  
Investigators: Malte F Jung  
Period: 2015–2017  
Amount: \$275,000
- 2014 National Science Foundation IIS-1421929: CHS: Small: Understanding and Supporting Affective Grounding in Intercultural Teamwork.  
Investigators: Malte F Jung (PI), Sue Fussell.  
Period: 2014–2017  
Amount: \$500,000
- 2012 **Lead author.** Proposal funded by the Stanford MediaX Program. “Physical media as active social learning agents.” PI: Clifford Nass. \$50,000
- 2012 **Lead author.** Proposal funded by the Hasso Plattner Design Thinking Research Program. “The personal trait myth - a comparative analysis of the innovation impact of design thinking tools and personal traits.” With Martin Steinert. PI: David Kelley. \$140,000

- 2009 **Lead author.** Proposal funded by the Hasso Plattner Design Thinking Research Program. “Design Thinking Culture Metrics.” With Neeraj Sonalkar and Christopher Han. PI: Banny Banerjee. \$90,000.
- 2009 **Co-author.** Proposal funded by the Kempe Foundation. “Instrumented Improvisation”. With Neeraj Sonalkar. PI: Larry Leifer. \$70,000.
- 2006 **Phil Barkan Award** for the best design for manufacturability team project in the ME317 course at Stanford University.

## RESEARCH EXPERIENCE

---

### ***Postdoctoral Research at Stanford University***

- October 2011     **Postdoctoral Scholar, Department of Management Science and Engineering  
Center for Work, Technology, and Organization**  
Research project (under a MURI grant by the Office of Naval Research) exploring the role of socio-emotional dynamics in mixed human-robot team work. PI: Pamela Hinds
- Led the design of a large scale mixed human-robot teamwork study
  - Designed a study that is currently being administered to test the impact of ambiguity of information display on cognitive load and stress.
  - Paper accepted for the conference of computer supported cooperative work (CSCW 2013)
  - Paper accepted for publication in the Journal of Human Robot Interaction (JHRI)
  - Authored two

### ***Graduate Research at the Center for Design Research, Stanford University***

- 2006-2011     **Emotional Interaction Dynamics as Predictors of Team Performance**  
Dissertation Research: Examined whether the performance of engineering teams can be predicted from emotional interaction dynamics during meetings.
- Conducted 3 studies with overall N=170 participants.
  - Developed a method to sample the behavior of real teams under laboratory conditions.
  - Developed the technical setup and a 4 week curriculum to train 10 students in systematic observation of emotionally expressive behavior.
  - Paper accepted at CHI, the premier human computer interaction conference.
  - Various workshop and conference papers presented
  - Paper in preparation for the Journal of Human Computer Interaction
- 2008-2010     **Instrumented Improvisation in Design Teams**  
Collaborated with researchers from Lulea University of Technology, Sweden on developing behavior-based interaction metrics that are predictive of team performance.
- Designed and conducted a one week international workshop on the development of video coding systems and on systematic observation of behavior in design.
- 2004-2006     **Accelerating Globally Distributed Team Innovation**  
NSF sponsored research project on the use of digital media in team-based engineering design education in Collaboration with Strathclyde University.
- Designed and developed several tools to support distributed team collaboration.
  - Designed experiments to study capture and reuse of design process information through various media.
  - Co-designed and taught a project based class on distributed design in teams.
  - Presented work at conferences.
- 2004-2005     **Effective Enquiry and Decision Making in Design Team Interactions**  
NASA sponsored research project that examined the relationship between question-asking and decision-making in engineering design teams.
- Co-developed a coding scheme to track framing and decision making behaviors in design team interactions.
  - Published book chapter.



## **Other Graduate Research at Stanford University**

- 2005-2011      **Research Assistant, Kozmetsky Global Collaboratory, Stanford**  
Research project examining how team characteristics affect longterm growth and success of technology ventures in developing economies. PI: Clifford Nass
- Co-developed and tested a process to design venture narratives in real time.
  - Conducted field work on entrepreneurship in rural India.
  - Co-developed a design-focused curriculum for a technology incubator in Lagos, Nigeria.
- 2009-2010      **Research Assistant, Real Time Design Thinking Interaction Metrics**  
Project investigating how design thinking methods can be introduced into corporate software development teams. PI: Banny Banerjee
- Developed and conducted a series of workshops with software engineers at SAP.
  - Developed a method to combine theory building and the design of interventions.
  - Presented findings at the Design Thinking Research Symposium (DTRS8).
- Summer 2006    **Independent Study, Spiegel Lab, Psychiatry Department, Stanford**  
Researching the role of emotions in breast cancer group therapy. PI: David Spiegel
- Underwent training in the Specific Affect Coding System (SPAFF).
  - Underwent training in the Facial Action Coding System (FACS).

## **Research at the Technical University of Munich**

- 2000-2003      **Research Assistant, Department for Information Technology in Engineering, TU-Munich**  
Research project examining the rope of product data management systems in engineering. PI: Klaus Bender
- Designed and implemented a methodology and web platform to map data models between different product data management systems.
  - Presented results to industry sponsors.
- 1999-2001      **Research Assistant, Department for Micro Technology, TU-Munich**  
Research project examining the use of laser edging in developing micro-mechanical devices. PI: Joachim Heinzl
- Supported the design of a micro piezo pump by laser edging piezo crystal wafers.

## **Industry Experience**

- Summer 2007    *Visiting Researcher, Daimler AG, Ulm, Germany*  
Project with the Psychology in Engineering Group to study the role of emotions in engineering management teams.
- Developed and tested a team conflict resolution workshop.
- 2003            *IT-Strategy Intern, BMW Group, Munich, Germany*  
Contributed to the development of a strategic IT-infrastructure map, the modeling, integration and implementation of various business processes, and the analysis and evaluation of software tools for strategic IT-management.
- 2002-2003      *Project Management Intern, Görtz & Schiele Corp., Detroit, MI*  
Supported the project management, design, and development of a high-volume manufacturing line for cylinder heads.
- Summer 1999    *Manufacturing Intern, Metal Forming and Assembly, Daimler AG, Stuttgart, Germany*

- Summer 1998     *Manufacturing Intern, Quality Assurance for high precision machining of automotive components, Görtz & Schiele, St. Ingbert, Germany*
- Summer 1998     *Manufacturing Intern, High Volume Casting, Halberg Guss, Saarbrücken, Germany*

## TEACHING EXPERIENCE

---

### ***Teaching at Cornell University***

- 2018                 Robots and Work
- 2015-2018         INFO 4430: Teams and Technology: This course is designed to provide students with an understanding of research, design, and management of teams whose work and interactions are influenced by technology. Key questions that are addressed include: How does technology influence teamwork? How do we design technology to support teamwork? How do we build effective teams and team interactions for teams that work face to face or online? To address these questions the course will draw primarily from literature in organizational behavior, social psychology, design and human computer interaction. Group exercises will be used to actively build teamwork and team-leadership skills. Topics will include group effectiveness, human robot teamwork, group composition, computer supported collaboration, conflict, group dynamics, temporal issues in groups, geographically distributed teams, and measurement issues of group dynamics and performance.
- 2016                 Honest Stats: A PhD Seminar to discuss current statistical practice in HCI and related areas.
- 2015,'16,'17,'19     INFO 4410/ CS 4754: Human Robot Interaction - Design and Research. This course provides an introduction into the design of and research on human robot interaction. Students will be working alone and in teams on designing and examining novel ways for robots to interact with people. In parallel to the design projects students will be introduced to current research on human-robot interaction. Topics include: Needfinding, interaction analysis, video prototyping, testing, and systematic evaluation
- 2014                 INFO 6310: Behavior and Information Technology. This course explores the behavioral foundations of communication technology and the information sciences, and the ways in which theories and methods from the behavioral sciences play a role in understanding people's use of, access to and interactions with information and communication technologies.

### ***Teaching at Stanford University***

- Fall 2011             Designing Emotion Reactive Car Interfaces (ME243)  
Co-developed and taught a graduate level engineering design course. Student teams were challenged to develop a system for an industry sponsor that takes real-time physiological data from a driver to infer his/her emotional state and to leverage these data to improve the driving experience. Topics included design methodology, psychology of emotions, and human machine interaction. With Martin Steinert.
- 2007 -2009         Design Theory and Methodology Seminar (ME397)  
Co-developed and taught three graduate level seminar classes. Format ranged from globally distributed design projects to research focused seminars. Topics included the role of emotion in design interactions, improvisation in design, and design research methods. With Larry Leifer
- Winter 2008         Video Interaction Methodology Workshop

Co-developed and conducted a five-day doctoral workshop on a video-based design interaction research methodology. The workshop included participants from University of Bath, UK, University of Technology Lulea, Sweden and National Polytechnic Institute of Grenoble, France. With Neeraj Sonalkar

### ***Teaching at the Technical University of Munich***

2002-2003 Teaching Assistant for a course on Product Data Management (1 semester).

1999-2001 Teaching Assistant for an introductory Software Engineering course (3 semesters).

## **MENTORING AND ADVISING**

---

### **PhD Students**

- Gabriel Culbertson, graduated 2018, now at Google
- Jessica Hohenstein
- Houston Claire
- Tsung Yu Hou
- Wen-Ying Lee
- Upol Ehsan

### **Postdocs**

- Solace Shen, now at Robinhood
- Hamish Tennent, now at Volkswagen
- Dominic DiFranzo (Co-advised with Natalie Bazarova)

## **THESES**

---

**Jung, M. F.** (2011). Engineering Team Performance and Emotion: Affective Interaction Dynamics as Indicators of Design Team Performance. *Unpublished Dissertation*, Stanford University, Stanford, CA, USA

**Jung, M. F.** (2004). Globally Distributed Team Innovation. *Unpublished Diploma Thesis*, TU-Munich, Germany

**Jung, M. F.** Schneider, J., (2003). Development of a hand-Immersive and haptic 3d sketching tool for early stage product design. *Unpublished Semester Thesis*, TU-Munich, Germany  
- Presented project at the 2003 International Hannover Trait Fair.

**Jung, M. F.** (2002). A method for mapping and transferring product data models. *Unpublished Semester Thesis*, TU-Munich, Germany

## **TECHNICAL REPORTS/POPULAR PRESS**

---

**Jung, M. F.** (2009), and Sonalkar, N., "Dancing with Ambiguity," *Funktioneering Magazine*.

**Jung, M.F.**, Kao, H., Tiruvury, R., and Vora, P., (2008), "Paper Collaborator: Physical Interaction with Digital Documents," *Technical Report*, Stanford

**Jung, M.F.**, and Wang, R., (2005) "Redstart Designs," *Ambidextrous Journal of Design: Issue #1*

## **PRESENTATIONS/INVITED TALKS**

---

November 2018 Invited Talk: Teamwork With Robots. UC-Santa Cruz, Santa Cruz, CA.

- October 2018 Invited Talk: Beyond Mere Human-Robot Interaction. IBEC Roundtable Series, Cornell University, Ithaca, NY.
- October 2018 Invited Conference Presentation: Teamwork With Robots. Psychology of Technology Conference. Stanford University, Stanford, CA.
- July 2018 Invited Talk: Teamwork With Robots. RWTH Aachen, Aachen, Germany.
- February 2018 Invited Talk: Robots and the Dynamics of Emotions in Teams. Northwestern University's Technology & Social Behavior speaker series. Northwestern University, Chicago, IL.
- November 2017 Invited Talk: Robots and the Dynamics of Emotions in Teams. University of Washington DUB seminar. Seattle, WA.
- November 2017 Invited Talk: Robots and the Dynamics of Emotions in Teams. MISC speaking series. University of Michigan. Ann Arbor, MI.
- May 2017 Invited Talk: Robots and the Dynamics of Emotions in Teams. Personal Robots Group. MIT Media Lab. Boston, MS.
- March 2017 Panelist at the HRI Pioneers Workshop 2017 held as part of the twelvth ACM/IEEE International Conference on Human Robot Interaction (HRI 2017)
- March 2017 Invited Talk, Robots and Interpersonal Conflict. HCI Group. TU-Wien, Vienna, Austria.
- February 2017 Invited Talk: Robots and the Dynamics of Emotions in Teams. Tepper Seminar on Organization Behavior. Tepper School of Business, Carnegie Mellon University, Pittsburgh, PA.
- July 2017 Zhao, X., Jung, M. F., Ong, D., Costa, J, FeldmanHall, O., & Malle, B.F. (2017) "A Heart for Cooperation: Feeling Another Human's Heartbeat Promotes Prosocial and Cooperative Behaviors" Presented at the 2017 Psychology of Technology Conference at UC Berkeley on Nov 4-5. (July 3, 2017)
- February 2016 Invited Talk: Robots and the Dynamics of Emotions in Work Teams. UCSD Design LAB. UC San Diego, San Diego, CA.
- October 2015 Invited Talk: Robots and the Dynamics of Emotions in Work Teams. Tufts Cognitive & Brain Science (CBS) Colloquium Series. Tufts University, Medford, MA.
- January 2015 Invited Talk: Affective Balance and Team Performance. Norwegian University of Science and Technology. January 12th, 2015, Trondheim, Norway.
- June 2014 Keynote Speaker: Affective Balance and Team Performance. Workshop on Emotion in Design Research. Center for Design Research at Stanford University. June 30th-July 3rd, 2014, Stanford, CA.
- July 2012 "Group Hedonic Balance as Predictor of Pair Programming Performance" HCI Lunch, HCI Group, Stanford University

- November 2010 Improvisation in medical device design. Workshop conducted with Medtronic product design engineers.
- April 2009 “What Happens When Designers Disagree?” BEST Lab, UC Berkeley
- June 2009 “What Happens When Designers Disagree?” TU-Munich, Institute for Product Development (Munich, Germany)
- October 2008 "Team behaviors for innovative collaboration" Lulea University of Technology, Sweden
- July 2008 “Emotion-dynamics in multi-disciplinary design teams” Symposium on cognitive, social and emotional processes in creative teams, International Congress of Psychology, Berlin, Germany

## ACADEMIC SERVICE

---

- Co-Chair HRI 2019 Program Committee  
CSCW 2018 Demonstrations  
HRI 2018 Student Design Competition  
alt.HRI 2016
- PC Member HRI 2015, 2016, 2017  
ROMAN 2016  
CHI 2015, 2018  
DIS 2014  
GROUP 2018
- Assoc. Editor ACM Transactions of Human Robot Interaction
- Co-Organizer Workshop on Groups in Human-Robot Interaction (IEEE RO-MAN 2017)  
  
Workshop on Human-Agent Groups: Studies, Algorithms, and Challenges. (AAAI 2017)  
  
HRI Workshop on Human-Robot Teaming. (HRI 2015)  
  
SIG Design Observatory Workshop (ICED 2009).
- Panel Chair HRI Pioneers Workshop (HRI 2014)
- Peer Reviewer HRI 2017, HRI 2016, HRI 2015  
Conference on Human Factors in Computing Systems (CHI)  
International Conference on Engineering Design (ICED)  
Journal of Organization Science  
Ubicomp 2017  
UIST 2017, 2018  
TOCHI  
IEEE Pervasive  
HRI Pioneers 2018, 2019  
RSS 2017  
RO-MAN 2017, 2018  
ICMI 2017  
ACM Transactions on Affective Computing  
INGroup 2018  
CSCW 2014, 2015, 2016, 2017, 2018
- Volunteer The 2011 ACM Conference on Computer Supported Cooperative Work, Hangzhou, China, March 19–23, 2011



## OTHER SERVICE

---

- 2007-2008      d.school Environments Collaborative, Stanford  
Contributed to the design and implementation of the space for the Stanford  
d.school.
- 2006-2007      Editorial Staff Member, Ambidextrous Stanford's Journal of Design, Stanford, CA
- 1999-2002      Co-organized events as a member of the Society for the Promotion of Cultural Life  
at the Studentenstadt Freimann, Munich, Germany
- 1998-2001      Staff member of the "TU-Film", a student-run movie theater at the Technical  
University of Munich, Germany