

Matthew L. Lee

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Curriculum Vitae

RESEARCH INTERESTS

My research interests lie at the intersection of human-computer interaction, ubiquitous computing, informatics, and applications in real-world problems of health and social connections. I am interested in bringing about the future of mobile and ubiquitous computing by tracking and making sense of the simple actions that people do in their everyday lives to reveal rich patterns about people's behaviors and help people achieve their goals.

I have designed, deployed, and evaluated systems that intelligently sense and record life logs of people's everyday behaviors for reflection and have investigated the processes people use to make sense of detailed, long-term sensor data about their everyday behaviors. My multi-disciplinary approach is grounded in extensive fieldwork for formative needs-gathering research as well as for summative field evaluations of built systems.

EDUCATION

- August 2012 **Ph.D. Candidate, Human-Computer Interaction**
Carnegie Mellon University, School of Computer Science
Committee: Anind K. Dey (chair), Scott Hudson, Sara Kiesler, Judith Matthews, Elizabeth Mynatt
- 2009 **M.S. Computer Science**
Carnegie Mellon University, School of Computer Science
- 2003 **B.A. Cognitive Science & Computer Science**
University of California, Berkeley
- 2002 **Visiting Scholar**
Oxford University, St. Catherine's College

HONORS + AWARDS

- 2011 Best Paper Honorable Mention, CHI 2011 Conference
- 2011 Intel PhD Fellowship Nomination by School of Computer Science
- 2010 \$480,000 ProjectHealth Design Grant, Robert Wood Johnson Foundation
- 2009 U.S. Patent (Provisional): Apparatuses and Methods for Lifelogging (MemExerciser project)
- 2008-09, 2011 Elevator Pitch Competition, First Place, Quality of Life Technology Center
- 2006-08 NSF Graduate Fellowship in Assistive Technology, IGERT program
- 2006 NSF Graduate Research Fellowship, Honorable Mention
- 2002 Phi Beta Kappa, UC Berkeley
- 1999-2003 National Merit Scholarship, Finalist and Scholar
- 2001 U.S. Patent: Multi-modal Interactive Television
- 1999-2001 Dean's List, UC Berkeley
- 1999 Leadership Scholarship, California Alumni Association

PUBLICATIONS

CONFERENCE PAPERS

Reflecting on Pills and Phone Use: Supporting Awareness of Functional Abilities for Older Adults.

Matthew L. Lee & Anind K. Dey

Conference on Human Factors in Computing Systems (CHI'11), Vancouver, BC, Canada, 2011.

Best Paper Honorable Mention

Embedded Assessment of Older Adults: A Concept Validation.

Matthew L. Lee & Anind K. Dey

Conference on Pervasive Computing Technologies for Healthcare (PervasiveHealth), Munich, Germany, 2010.

Lifelogging Memory Appliance for People with Episodic Memory Impairment.

Matthew L. Lee & Anind K. Dey

Conference on Ubiquitous Computing (Ubicomp'08), Seoul, Korea, 2008.

Providing Good Memory Cues for People with Episodic Memory Impairment

Matthew L. Lee & Anind K. Dey

Conference on Computers and Accessibility (ASSETS'07), Phoenix, AZ, USA, 2007.

Connected Giving: Ordinary People Coordinating Disaster Relief on the Internet.

Cristen Torrey, Matthew Lee, Moira Burke, Anind Dey, Susan Fussell, & Sara Kiesler

Hawaii International Conference on Science Systems (HICSS'07), Manoa, HI, USA, 2007.

MiTV: Rethinking Interactive TV.

Jehan Bing, Jérôme Dubreuil, Joanes Espanol, Luc Julia, Matthew Lee, Martin Loyer and Maklouf Serghine

Conference on Virtual Systems and Multimedia (VSMM'01), Berkeley, CA, 2001.

BOOK CHAPTERS

Smart Lifelogging Technology for Episodic Memory Support.

Matthew L. Lee & Anind K. Dey

Smart Healthcare Applications and Services: Developments and Practices, Röcker, C. & Ziefle, M. (Eds.) IGI Global, 2011.

Approaches to Authority in Online Disaster Relief Communities after Hurricane Katrina.

Cristen Torrey, Moira Burke, Matthew Lee, Anind Dey, Susan Fussell, & Sara Kiesler

Leadership at a Distance, L. and Weisband, S. (Eds.). Atwater, 2008.

SHORT PAPERS

Wearable Experience Capture for People with Episodic Memory Impairment.

Matthew L. Lee & Anind K. Dey

International Symposium on Wearable Computing (ISWC'08), Pittsburgh, PA, 2008

Capture and Access Lifelogging Assistive Technology for People with Episodic Memory Impairment.

Matthew L. Lee & Anind K. Dey

Workshop on Intelligent Systems for Assisted Cognition, Rochester, NY, 2007.

TrinetraOCR: Augmented camera phone for the visually-impaired.

Tudor Dumitras, Matthew L. Lee, & Pablo Quinones

International Symposium on Wearable Computing (ISWC'06), Montreux, Switzerland, 2006.

Capturing and Reviewing Context in Memory Aids.

Matthew L. Lee & Anind K. Dey

CHI Workshop on Designing Technology for People with Cognitive Impairments, Montreal, Canada, 2006.

DOCTORAL COLLOQUIA

Creating salient summaries of home activity lifelog data.

Matthew L. Lee

ACM Conference on Human Factors in Computing Systems (CHI '10), Atlanta, GA, USA, 2010.

Embedded Assessment of Wellness with Smart Home Sensors

Matthew L. Lee

ACM Conference on Ubiquitous Computing (Ubicomp'10), Copenhagen, Denmark, 2010.

Supporting Awareness of Functional Abilities for Older Adults, their Caregivers, and Clinicians

Matthew L. Lee

American Medical Informatics Association Annual Symposium (AMIA'10), Washington D.C., USA, 2010.

PROFESSIONAL EXPERIENCE

- 2012-present **Philips Research**, Clinical Decision Support Solutions, Briarcliff Manor, NY
Member of Research Staff
- 2005-2012 **Carnegie Mellon University**, Human-Computer Interaction Institute, Pittsburgh, PA
Graduate Research Assistant
- 2006 **Microsoft Research**, Computer-Mediated Living Group, Cambridge, United Kingdom
Research Intern
- 2004-2005 **Oracle Corporation**, ADF Faces Team, Redwood Shores, CA
Member of Technical Staff
- 2002-2003 **University of California, Berkeley**, EECS Department, Berkeley, CA
Teaching Assistant, CS160: User Interface Design
Lab Assistant, CS3: Introduction to Symbolic Programming
- 2003 **Lockheed Martin Corporation**, Advanced Technology Center, Sunnyvale, CA
Senior Specialist Intern
- 2002 **Group for User Interface Research**, UC Berkeley, Berkeley, CA
Undergraduate Researcher
- 2001 **BravoBrava!**, Play Team, Emeryville, CA
Research and Development Intern

INVITED TALKS

- 2012 **“dwellSense: Wellness Through Sensing and Reflection for Older Adults”**
Health 2.0 Conference, San Francisco, CA, October 2012
- 2012 **“Sensing and Sense-making of Everyday Actions”**
HCI Seminar, University of Wisconsin at Madison, April 2012
- 2011 **“Designing and Evaluating Technology for Older Adults”**
TAGLab, University of Toronto, Toronto, ON, Canada, 2011.
- 2011 **“Older Adults Reflecting on Home Sensor Data”**
International Symposium on Quality of Life Technology, Toronto, ON, Canada, 2011.
- 2010 **“The State of the Art in Computer Assisted Cognition”**
Wilksburg Rotary Club, Wilksburg, PA, 2010.
- 2009 **“Creating Salient Summaries for People with Episodic Memory Impairment”**
First Annual SenseCam Conference, Chicago, IL, 2009.
- 2007 **“Capture and Access Lifelogging Assistive Technology for Episodic Memory Impairment”**
Workshop on Intelligent Systems for Assisted Cognition, Rochester, NY, 2007.

PATENTS

- 2009 **Apparatuses and Methods for Lifelogging** (provisional patent filed, MemExerciser project)
Anind K. Dey & Matthew L. Lee
- 2001 **Multi-modal Interactive Television**
Jehan Bing, Jérôme Dubreuil, Joanes Espanol, Luc Julia, Matthew Lee, Martin Loyer and Maklouf Serghine

SELECTED MEDIA COVERAGE

- September 2010 **Technology Solutions for Age-Related Ills** [\[link\]](#)
AARP Bulletin

- March 2010 **A Little Black Box to Jog Failing Memory** [\[link\]](#)
New York Times
- March 2010 **CMU to research sensors to track elderly** [\[link\]](#)
Pittsburgh Post-Gazette
- March 2010 **Testing the Ability of Embedded Sensors to Detect Onset of Dementia, Infirmity** [\[link\]](#)
Medical News Today
- January 2010 **A Helping Hand from a Robot** [\[link\]](#)
IEEE Spectrum & National Public Radio & National Science Foundation

GRANTS

- 2009 **Embedded Assessment of Elder Activities for Augmenting Personal Health Records**
ProjectHealth Design Grant, Robert Wood Johnson Foundation
\$480,000 / 2yrs, Co-written with Anind K . Dey
- 2006 **Capturing and Reviewing Context for Memory Support**
Microsoft Research, Digital Memory (Memex) Award,
\$50,000 / 1yr, Co-written with Anind K. Dey

TEACHING

- 2009 **Human-Computer Interaction Methods** (05-610), 60 students
HCI Institute, Carnegie Mellon University
Teaching Assistant for Bonnie John & John Zimmerman
- 2008 **Software Architectures for User Interfaces** (05-613), 45 students
HCI Institute, Carnegie Mellon University
Teaching Assistant for Scott Hudson
- 2003 **User Interface Design** (CS 160), 40 students
EECS Department, University of California, Berkeley
Teaching Assistant for Jennifer Mankoff

STUDENTS MENTORED

- 2011 Faye Han, M.S. Human-Computer Interaction, CMU (class of 2012)
- 2011 Kelechi Anyadiegwu M.S. Human-Computer Interaction, CMU (class of 2013)
- 2011 Vinay Vemuri, B.S. Computer Science, CMU (class of 2013)
- 2010-11 Xiuyuan Zhang, B.S. Computer Science, CMU (class of 2014)
- 2010 William Livingston, B.S. Rehabilitation Science, University of Pittsburgh (class of 2011)
- 2009-10 Clive Myrie, B.S. Electrical Engineering, CMU (class of 2011)
- 2009 Jonpaul Zelik, B.S. Industrial Eng., Ohio State Univ. (c/o 2010), now pursuing PhD at Univ. of Texas, Austin
- 2009 Rohith Salim, B.S. Computer Science, CMU (class of 2012)
- 2009 Joyce Xu, B.S. Computer Science, CMU (class of 2011)
- 2008-09 Akshay Goel, B.S. Computer Science, Chemistry, CMU (class of 2009)
- 2007 Jose Ramon Torres, B.S. Computer Science, University of Puerto Rico (class of 2009)

PROFESSIONAL ACTIVITIES / SERVICE

- 2012 UbiComp 2012 Conference, Publications Chair
- 2011 CHI 2012 Workshops Committee/Jury Member
- 2011 Journal Reviewer, Journal of Pervasive and Mobile Computing
- 2009-10 CHI Works-in-Progress, Committee Member
- 2009 Journal Reviewer, Memory Journal
- 2007-11 Student Leadership Council, Quality of Life Technology Center, Research Chair and President
- 2006 Journal Reviewer, International Journal of Human-Computer Studies

REFERENCES

available upon request