

# Stanford

---



## James Landay

Anand Rajaraman and Venky Harinarayan Professor  
Computer Science

### CONTACT INFORMATION

- **Alternate Contact**

Angelica Teampa - Faculty Administrator

**Email** avteampa@stanford.edu

**Tel** 650-724-5040.

### Bio

---

#### BIO

James Landay is a Professor of Computer Science and the Anand Rajaraman and Venky Harinarayan Professor in the School of Engineering at Stanford University. He specializes in human-computer interaction. Landay is the co-founder and Vice-Director of the Stanford Institute for Human-centered Artificial Intelligence (HAI). Prior to joining Stanford, Landay was a Professor of Information Science at Cornell Tech in New York City for one year and a Professor of Computer Science & Engineering at the University of Washington for 10 years. From 2003-2006, he also served as the Director of Intel Labs Seattle, a leading research lab that explored various aspects of ubiquitous computing. Landay was also the chief scientist and co-founder of NetRaker, which was acquired by KeyNote Systems in 2004. Before that he was an Associate Professor of Computer Science at UC Berkeley. Landay received his BS in EECS from UC Berkeley in 1990, and MS and PhD in Computer Science from Carnegie Mellon University in 1993 and 1996, respectively. His PhD dissertation was the first to demonstrate the use of sketching in user interface design tools. He is a member of the ACM SIGCHI Academy and an ACM Fellow. He served for six years on the NSF CISE Advisory Committee.

#### ACADEMIC APPOINTMENTS

- Professor, Computer Science
- Member, Bio-X
- Associate Director, Institute for Human-Centered Artificial Intelligence (HAI)
- Member, Wu Tsai Human Performance Alliance
- Member, Wu Tsai Neurosciences Institute

#### ADMINISTRATIVE APPOINTMENTS

- Vice Director, Stanford Institute for Human-Centered AI, (2022- present)
- Associate Director, Stanford Institute for Human-Centered AI, (2018-2022)

#### HONORS AND AWARDS

- Fellow, ACM (2016)
- SIGCHI Academy Member, ACM SIGCHI (2011)

## **BOARDS, ADVISORY COMMITTEES, PROFESSIONAL ORGANIZATIONS**

- CISE Advisory Committee Member, National Science Foundation (2010 - 2016)

## **PROGRAM AFFILIATIONS**

- Symbolic Systems Program

## **PROFESSIONAL EDUCATION**

- BS, UC Berkeley , Electrical Engineering & Computer Science (1990)
- MS, Carnegie Mellon University , Computer Science (1993)
- PhD, Carnegie Mellon University , Computer Science (1996)

## **Research & Scholarship**

---

### **CURRENT RESEARCH AND SCHOLARLY INTERESTS**

Landay's current research interests include Technology to Support Behavior Change (especially for health and sustainability), Demonstrational User Interfaces, Mobile & Ubiquitous Computing, Cross-Cultural Interface Design, Human-Centered AI, and User Interface Design Tools. He has developed tools, techniques, and a top professional book on Web Interface Design.

## **Teaching**

---

### **COURSES**

#### **2022-23**

- Cross-Platform Mobile Development: CS 47 (Aut, Win)
- Designing Solutions to Global Grand Challenges: CS 377E (Spr)
- Introduction to Human-Computer Interaction Design: CS 147 (Aut)
- User Interface Design Project: CS 194H (Win)

#### **2021-22**

- Cross-Platform Mobile Development: CS 47 (Win)
- Introduction to Human-Computer Interaction Design: CS 147 (Win)
- User Interface Design Project: CS 194H (Spr)

#### **2020-21**

- Cross-Platform Mobile Development: CS 47 (Win)
- Designing Solutions to Global Grand Challenges: CS 377E (Aut)
- Introduction to Human-Computer Interaction Design: CS 147 (Win)

#### **2019-20**

- Cross-Platform Mobile Development: CS 47 (Aut)
- Fair, Accountable, and Transparent (FAT) Deep Learning: CS 335 (Spr)
- Introduction to Human-Computer Interaction Design: CS 147 (Aut)
- User Interface Design Project: CS 194H (Win)

### **STANFORD ADVISEES**

**Doctoral Dissertation Reader (AC)**

Basma Altaf, Jingyi Li, Sean Liu

**Postdoctoral Faculty Sponsor**

Andrea Cuadra

**Orals Evaluator**

Mitchell Gordon, Jingyi Li, Sean Liu, Mark Miller

**Master's Program Advisor**

Jack Clark, Blain Engeda, Charlotte Feng, Jin-Hee Lee, Nicole Lee, Leon MacAlister, Shina Penaranda, Alanna Sun, Yesenia Ulloa, Alissa Vuillier

**Doctoral Dissertation Co-Advisor (AC)**

Mitchell Gordon, Michelle Lam, Yikai Li, Mark Miller, Jacob Ritchie, Yujie Tao

**Doctoral (Program)**

Beleicia Bullock, Alan Cheng, Elizabeth Childs, Nava Haghighi, Matthew Joerke, Julia Markel, Parker Ruth, Jackie Yang

**Publications**

---

**PUBLICATIONS**

- **Leveraging Mobile Technology for Public Health Promotion: A Multidisciplinary Perspective.** *Annual review of public health*  
Hicks, J. L., Boswell, M. A., Althoff, T., Crum, A. J., Ku, J. P., Landay, J. A., Moya, P. M., Murnane, E. L., Snyder, M. P., King, A. C., Delp, S. L.  
2022
- **Physical workplaces and human well-being: A mixed-methods study to quantify the effects of materials, windows, and representation on biobehavioral outcomes** *BUILDING AND ENVIRONMENT*  
Douglas, I. P., Murnane, E. L., Bencharit, L., Altaf, B., Costa, J., Yang, J., Ackerson, M., Srivastava, C., Cooper, M., Douglas, K., King, J., Paredes, P. E., Camp, et al  
2022; 224
- **Use of Crowdsourced Online Surveys to Study the Impact of Architectural and Design Choices on Wellbeing** *Frontiers in Sustainable Cities*  
Altaf, B., Bianchi, E., Douglas, I. P., Douglas, K., Byers, B., Paredes, P. E., Ardoin, N. M., Markus, H. R., Murnane, E. L., Bencharit, L. Z., Landay, J. A., Billington, S. L.  
2022: 19
- **EnglishRot: An AI-Powered Conversational System for Second Language Learning**  
Ruan, S., Jiang, L., Xu, Q., Davis, G. M., Liu, Z., Brunskill, E., Landay, J. A., ASSOC COMP MACHINERY  
ASSOC COMPUTING MACHINERY.2021: 434-444
- **StoryCoder: Teaching Computational Thinking Concepts Through Storytelling in a Voice-Guided App for Children**  
Dietz, G., Le, J. K., Tamer, N., Han, J., Gweon, H., Murnane, E. L., Landay, J. A., ASSOC COMP MACHINERY  
ASSOC COMPUTING MACHINERY.2021
- **Variational Deep Knowledge Tracing for Language Learning**  
Ruan, S., Wei, W., Landay, J., Assoc Comp Machinery  
ASSOC COMPUTING MACHINERY.2021: 323-332
- **Personal identifiability of user tracking data during observation of 360-degree VR video.** *Scientific reports*  
Miller, M. R., Herrera, F., Jun, H., Landay, J. A., Bailenson, J. N.  
2020; 10 (1): 17404
- **Designing Ambient Narrative-Based Interfaces to Reflect and Motivate Physical Activity.** *Proceedings of the SIGCHI conference on human factors in computing systems. CHI Conference*  
Murnane, E. L., Jiang, X. n., Kong, A. n., Park, M. n., Shi, W. n., Soohoo, C. n., Vink, L. n., Xia, I. n., Xin, Y. n., Yang-Sammataro, J. n., Young, G. n., Zhi, J. n., Moya, et al  
2020; 2020

- **Adaptive Photographic Composition Guidance**  
Jane, L. E., Fried, O., Lu, J., Zhang, J., Mech, R., Echevarria, J., Hanrahan, P., Landay, J. A., ACM ASSOC COMPUTING MACHINERY.2020
- **Supporting Children's Math Learning with Feedback-Augmented Narrative Technology**  
Ruan, S., He, J., Ying, R., Burkle, J., Hakim, D., Wang, A., Yin, Y., Zhou, L., Xu, Q., AbuHashem, A., Dietz, G., Murnane, E. L., Brunskill, et al  
ASSOC COMPUTING MACHINERY.2020: 567-580
- **Soundr: Head Position and Orientation Prediction Using a Microphone Array**  
Yang, J., Banerjee, G., Gupta, V., Lam, M. S., Landay, J. A., ACM  
ASSOC COMPUTING MACHINERY.2020: 529-537
- **Beyond The Force: Using Quadcopters to Appropriate Objects and the Environment for Haptics in Virtual Reality**  
Abtahi, P., Landry, B., Yang, J., Pavone, M., Follmer, S., Landay, J. A., Assoc Comp Machinery  
ASSOC COMPUTING MACHINERY.2019
- **On-road Guided Slow Breathing Interventions for Car Commuters**  
Balters, S., Landay, J. A., Paredes, P. E., Assoc Comp Machinery  
ASSOC COMPUTING MACHINERY.2019
- **InfoLED: Augmenting LED Indicator Lights for Device Positioning and Communication**  
Yang, J., Landay, J. A., ACM  
ASSOC COMPUTING MACHINERY.2019: 175-87
- **drone.io: A Gestural and Visual Interface for Human-Drone Interaction**  
Cauchard, J. R., Tamkin, A., Wang, C., Vink, L., Park, M., Fang, T., Landay, J. A., IEEE  
IEEE.2019: 153-62
- **BookBuddy: Turning Digital Materials Into Interactive Foreign Language Lessons Through a Voice Chatbot**  
Ruan, S., Willis, A., Xu, Q., Davis, G. M., Jiang, L., Brunskill, E., Landay, J. A., Assoc Comp Machinery  
ASSOC COMPUTING MACHINERY.2019
- **Key Phrase Extraction for Generating Educational Question-Answer Pairs**  
Willis, A., Davis, G., Ruan, S., Manoharan, L., Landay, J., Brunskill, E., Assoc Comp Machinery  
ASSOC COMPUTING MACHINERY.2019
- **QuizBot: A Dialogue-based Adaptive Learning System for Factual Knowledge**  
Ruan, S., Jiang, L., Xu, J., Tham, B., Qiu, Z., Zhu, Y., Murnane, E. L., Brunskill, E., Landay, J. A., Assoc Comp Machinery  
ASSOC COMPUTING MACHINERY.2019
- **Poirot: A Web Inspector for Designers**  
Tanner, K., Johnson, N., Landay, J. A., Assoc Comp Machinery  
ASSOC COMPUTING MACHINERY.2019
- **Evaluating Speech-Based Smart Devices Using New Usability Heuristics** *IEEE PERSASIVE COMPUTING*  
Wei, Z., Landay, J. A.  
2018; 17 (2): 84-96
- **From on Body to Out of Body User Experience**  
Landay, J. A., Assoc Comp Machinery  
ASSOC COMPUTING MACHINERY.2018: 1-2
- **Breath Booster! Exploring In-Car, Fast-Paced Breathing Interventions to Enhance Driver Arousal State**  
Balters, S., Murnane, E. L., Landay, J. A., Paredes, P. E., ACM  
ASSOC COMPUTING MACHINERY.2018: 128-137
- **Fast & Furious: Detecting Stress with a Car Steering Wheel**  
Paredes, P. E., Ordonez, F., Ju, W., Landay, J. A., ACM  
ASSOC COMPUTING MACHINERY.2018

- **Gender-Inclusive Design: Sense of Belonging and Bias in Web Interfaces**  
Metaxa-Kakavouli, D., Wang, K., Landay, J. A., Hancock, J., ACM  
ASSOC COMPUTING MACHINERY.2018
- **FlyMap: Interacting with Maps Projected from a Drone**  
Brock, A. M., Chatain, J., Park, M., Fang, T., Hachet, M., Landay, J. A., Cauchard, J. R., Schmidt, A., Williamson, Elhart, Baldauf, M., Mikusz, M., Sorce, S., Kurdyukova, et al  
ASSOC COMPUTING MACHINERY.2018
- **Aeroquake: Drone Augmented Dance**  
Kim, H., Landay, J. A., Assoc Comp Machinery  
ASSOC COMPUTING MACHINERY.2018: 691–95
- **Evaluating In-Car Movements in the Design of Mindful Commute Interventions: Exploratory Study.** *Journal of medical Internet research*  
Paredes, P. E., Hamdan, N. A., Clark, D., Cai, C., Ju, W., Landay, J. A.  
2017; 19 (12): e372
- **BrushTouch: Exploring an Alternative Tactile Method for Wearable Haptics**  
Strasnick, E., Cauchard, J. R., Landay, J. A., ACM  
ASSOC COMPUTING MACHINERY.2017: 3120–25
- **INQUIRE Tool: Early Insight Discovery for Qualitative Research**  
Paredes, P., Landay, J., Oikonomou, V., Guerrero, R., Yang, T., Karashchuk, P., Jiang, B., Cheshire, C., Canny, J., Assoc Comp Machinery  
ASSOC COMPUTING MACHINERY.2017: 29-32
- **Evaluating In-Car Movements in the Design of Mindful Commute Interventions** *Journal of Medical Internet Research (JMIR)*  
Paredes, P. E., Hamdan, N. A., Cai, C., Clark, D., Ju, W., Landay, J.  
2017: e372
- **ActiVibe: Design and Evaluation of Vibrations for Progress Monitoring**  
Cauchard, J. R., Cheng, J. L., Pietrzak, T., Landay, J. A., ACM  
ASSOC COMPUTING MACHINERY.2016: 3261–71
- **Emotion Encoding in Human-Drone Interaction**  
Cauchard, J. R., Zhai, K. Y., Spadafora, M., Landay, J. A., ACM  
ASSOC COMPUTING MACHINERY.2016: 263–70
- **Drone & Me: An Exploration Into Natural Human-Drone Interaction**  
Cauchard, J. R., Jane, L. E., Zhai, K. Y., Landay, J. A., ACM  
ASSOC COMPUTING MACHINERY.2015: 361–65
- **Toolkit Support for Integrating Physical and Digital Interactions** *HUMAN-COMPUTER INTERACTION*  
Klemmer, S. R., Landay, J. A.  
2009; 24 (3): 315-366
- **Integrating physical and digital interactions on walls for fluid design collaboration** *HUMAN-COMPUTER INTERACTION*  
Klemmer, S. R., Everitt, K. M., Landay, J. A.  
2008; 23 (2): 138-213
- **The mobile sensing platform: An embedded activity recognition system** *IEEE PERSVASIVE COMPUTING*  
Choudhury, T., Consolvo, S., Harrison, B., LaMarca, A., LeGrand, L., Rahimi, A., Rea, A., Borriello, G., Hemingway, B., Klasnja, P. P., Koscher, K., Landay, J. A., Lester, et al  
2008; 7 (2): 32-41
- **Siren: Context-aware computing for firefighting** *2nd International Conference on Pervasive Computing*  
Jiang, X. D., Chen, N. Y., Hong, J. I., Wang, K., Takayama, L., Landay, J. A.  
SPRINGER-VERLAG BERLIN.2004: 87–105