Stanford

James Landay

Denning Director of Stanford Institute for Human-Centered AI, Anand Rajaraman and Venky Harinarayan Professor and Senior Fellow at the Stanford Institute for Human-Centered AI

Computer Science

CONTACT INFORMATION

- **Alternate Contact**

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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 Co-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 is an ACM SIGCHI Lifetime Research Award winner. He served for six years on the NSF CISE Advisory Committee.

ACADEMIC APPOINTMENTS

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

ADMINISTRATIVE APPOINTMENTS

- Co-Director, Stanford Institute for Human-Centered AI, (2024- present)
- Vice Director, Stanford Institute for Human-Centered AI, (2022-2024)
- 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

2026-27

- Cross-platform Mobile App Development: CS 147L (Aut)
- Introduction to Human-Computer Interaction Design: CS 147 (Aut)

2025-26

- Cross-platform Mobile App Development: CS 147L (Aut)
- Game Development: CS 146 (Win)
- Introduction to Human-Computer Interaction Design: CS 147 (Aut)

2024-25

- Cross-platform Mobile App Development: CS 147L (Aut)
- Digital Canvas: An Introduction to UI/UX Design: CS 91SI (Win)
- Introduction to Human-Computer Interaction Design: CS 147 (Aut)

2023-24

- Cross-platform Mobile App Development: CS 147L (Aut)
- Introduction to Human-Computer Interaction Design: CS 147 (Aut)
- User Interface Design Project: CS 194H (Win)

STANFORD ADVISEES

Doctoral Dissertation Reader (AC)

Cyan DeVeaux, Bethanie Drake-Maples

Postdoctoral Faculty Sponsor

Clayton Feustel, Tonya Nguyen

Doctoral Dissertation Advisor (AC)

Alan Cheng, Nava Haghighi, Matthew Joerke, Parker Ruth

Orals Evaluator

Alan Cheng, Nava Haghighi, Matthew Joerke, Michelle Lam

Master's Program Advisor

Christina Ba, Natalie Hampton, Katie Heffernan, Cannon Kissane, Sze Heng Douglas Kwok, Ava Lazar, Krystal Li, Irene Lin, Clara Lu, Saniya Mahate, Mai Mostafa, Gaurav Tyagi, Miguel Alfonso Villanueva, Shirley Zhang

Doctoral Dissertation Co-Advisor (AC)

Michelle Lam, Yikai Li, Yujie Tao

Doctoral (Program)

Beleicia Bullock, Alan Cheng, Elizabeth Childs, Nava Haghighi, Matthew Joerke, Zoe Kaputa, Julia Markel, Parker Ruth, Shardul Sapkota, Danilo Symonette, Grace Wang

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 PERVASIVE 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.
  edited by Schmidt, A., Williamson, Elhart, Baldauf, M., Mikusz, M., Sorce, S., Kurdyukova, K., ElAgroudy, P., Gentile
  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 PERVASIVE 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