GIERAD LAPUT

Apple Inc.
Senior Research and Engineering Manager
Sensing Technologies Group, AI and Machine Learning

Email: gierad@apple.com
Website: http://www.gierad.com

Overview: I lead the Sensing Technologies research and engineering Group at Apple AI/ML. Our mission is to imagine and build technologies that make a profound impact on millions of people through research and development in sensing and AI. Applications of our work currently include natural and assistive interactions, health technologies, and context-driven systems.

EDUCATION

Carnegie Mellon University, School of Computer Science   June 2019
Ph.D., Human-Computer Interaction
Future Interfaces Group. Advisor: *Chris Harrison*

University of Michigan   May 2013
B.S. Electrical Engineering
M.S.I. Human-Computer Interaction
Magna Cum Laude, 1st Place Senior Capstone Project

AWARDS AND HONORS

Google PhD Fellowship in Human-Computer Interaction   2018
Fast Company Innovation by Design Award   2017
Best Paper Award, ACM UIST 2016   2016
Best Paper Award, ACM CHI 2015   2015
Best Talk Award, ACM UIST 2016   2016
Best Talk Award, ACM UIST 2015   2015

PEER-REVIEWED PUBLICATIONS

I publish at premiere venues in Interactive Systems, Sensing, and Human-Computer Interaction.

[35]   Swaminathan, S., Fagert, J., Rivera, M., Cao, A., **Laput, G.,** Noh, H.Y., Hudson, S.E. 2020. OptiStructures: Fabrication of Room-Scale Interactive Structures with Embedded Fiber Bragg Grating Optical Sensors and Displays. In *Proc. of the ACM on IMWUT* (Cancun, Mexico June 16, 2020). CHI '20. ACM, New York, NY.

[34]   Wu, J., Harrison, C., Bigham, J.P., **Laput, G.** 2020. Listen Learner: Automated Class Discovery and One-Shot Interactions for Acoustic Activity Recognition. In *Proceedings of the ACM annual conference on Human Factors in Computing Systems* (Honolulu, Hawaii, USA April 25 - 30, 2020). CHI '20. ACM, New York, NY.

[33]   Meyer, S., **Laput, G.,** Harrison, C. 2020. Enhancing Mobile Voice Assistants with WorldGaze. In *Proceedings of the ACM annual conference on Human Factors in Computing Systems* (Honolulu, Hawaii, USA April 25 - 30, 2020). CHI '20. ACM, New York, NY.

[32]   Carter, E.J., Reig, S., Tan, X.Z., **Laput, G.**, Rosenthal, S., Steinfeld, A. 2020. Death of a Robot: Social Media Reactions and Language Usage in Response to Robot Retirement. In Proceedings of the ACM Conference on Human-Robot Interaction (HRI '20). March 23–26, 2020, Cambridge, UK. ACM, New York, NY.

[31]   Kang, R., Guo, A., **Laput, G.**, Li, Y., Chen, X.A. 2019. Minuet: A Design Space of Voice + Gesture Interaction with Spatially-Distributed IoT Devices. In Proceedings of the ACM Symposium on Spatial user Interfaces (SUI '19). October 19–20, 2019, New Orleans, LA, USA. ACM, New York, NY.

[30]   **Laput, G**., Harrison, C. 2019. Exploring the Efficacy of Sparse, General-Purpose Sensor Constellations for Wide-Area Ubiquitous Sensing. To appear in *Proceedings of the ACM annual conference on Interactive, Mobile, and Ubiquitous Technologies* (London, UK, September 11 - 13, 2019). IMWUT '19. ACM, New York, NY.

[29]   **Laput, G**., Harrison, C. 2019. SurfaceSight: A New Spin on Touch, User, and Object Sensing for IoT Experiences. To appear in *Proceedings of the ACM annual conference on Human Factors in Computing Systems* (Glasgow, Scotland, May 4 - 9, 2019). CHI '19. ACM, New York, NY.

[28]   **Laput, G**., Harrison, C. 2019. Investigating Fine-Grained Hand Activities Using Commodity Smartwatches. To appear in *Proceedings of the ACM annual conference on Human Factors in Computing Systems* (Glasgow, Scotland, May 4 - 9, 2019). CHI '19. ACM, New York, NY.

[27]   Markvicka, E., Wang, G., Lee, Y., **Laput, G.**, Majidi, C., Yao, L. 2019. ElectroDermis: Fully Untethered, Stretchable, and Highly-Customizable Electronic Bandages. To appear in *Proceedings of the ACM annual conference on Human Factors in Computing Systems* (Glasgow, Scotland, May 4 - 9, 2019). CHI '19. ACM, New York, NY.

[26]   Zhang, Y., Pahud, M., Holz, C., Xia, H., **Laput, G.**, McGuffin, M., Tu, X., Mittereder, A., Su, F., Buxton, W., Hinckley, K. 2019. Sensing Posture-Aware Pen+Touch Interaction on Tablets. To appear in *Proc. of the ACM annual conference on Human Factors in Computing Systems* (Glasgow, Scotland, May 4 - 9, 2019). CHI '19. ACM, New York, NY. **Best Paper Nomination**.

[25]   **Laput, G**., Ahuja, K., Goel, M., Harrison, C. 2018. Ubicoustics: Plug-and-Play Acoustic Activity Recognition. In *Proceedings of the 31st Annual ACM symposium on user interface software and technology* (Berlin, Germany, October 14 - 17, 2018). UIST '18. ACM, New York. 213 - 224.

[24]   Zhang, Y., **Laput, G**., Harrison, C. 2018. Vibrosight: Long-Range Vibrometry for Activity Detection. In *Proceedings of the 31st Annual ACM symposium on user interface software and technology* (Berlin, Germany, October 14 - 17, 2018). UIST '18. 225 - 236. **Best Paper Nomination**.

[23]   Carrington, P., **Laput, G**., Bigham, J.P. 2018. Exploring Data Tracking and Sharing Preferences of Wheelchair Athletes. In *Proceedings of the ACM annual conference on Computers and Accessibility* (Galway, Ireland, October 22 - 24, 2018). ASSETS '18. ACM, New York, NY. 242 - 248. **Best Paper Nomination**.

[22]   Guo, A., Jain, A., **Laput, G**., Harrison, C., Bigham, J.P. 2018. Crowd-AI Camera Sensing in the Real World. In *Proceedings of the ACM Journal on Interactive, Mobile, Wearable, and Ubiquitous Technologies* (Singapore, October 8 - 12, 2018). UbiComp '18. ACM, New York, NY

[21]   **Laput, G**., Zhang, Y., Harrison, C. 2017. Synthetic Sensors: Towards General-Purpose Sensing. In *Proceedings of the ACM annual conference on Human Factors in Computing Systems* (Denver, Colorado, May 6 - 11, 2017). CHI '17. ACM, New York, NY. 3986 - 3999. **Fast Company Innovation by Design Finalist.**

[20]   Das, S., **Laput, G**., Harrison, C., Hong, J. 2017. Thumprint: Socially-Inclusive Local Group Authentication Through Shared Secret Knocks. in *Proceedings of the ACM annual conference on Human Factors in Computing Systems* (Denver, Colorado, May 6 - 11, 2017). CHI '17. ACM, New York, NY. 3764 - 3774. **Best Paper Nomination**.

[19]   Xiao, R., **Laput, G**., Zhang, Y., Harrison, C. 2017. Deus EM Machina: On-Touch Contextual Functionality for Smart IoT Appliances. In *Proceedings of the ACM annual conference on Human Factors in Computing Systems* (Denver, Colorado, May 6 - 11, 2017). CHI '17. ACM, New York, NY. 4000 - 4008.

[18]   Zhang, Y., **Laput, G**., Harrison, C. 2017. Electrick: Low-Cost Touch Sensing for Large, Irregular and Rapidly-Prototyped Objects. To appear in *Proc. CHI '17* (Denver, Colorado, May 6 - 11, 2017). ACM, New York, NY. 1 - 14.

[17]   He, L., **Laput, G**., Brockmeyer, E., Froehlich, J., C. 2017. SqueezaPulse: Adding Interactive Input to Fabricated Objects Using Corrugated Tubes and Air Pulses. In *Proc. of the ACM TEI '18* (Yokohama, Japan, March 20-23, 2017). ACM, New York.

[16]   Gleason, C., Guo, A., **Laput, G.**, Kitani, K., Bigham, J.P.. 2016. VizMap: Accessible Visual Information Through Crowdsourced Map Reconstruction In Proceedings of the 18th ACM Conference on Computers and Accessibility. ASSETS '17.

[15] **Laput, G**., Xiao, R., Harrison, C. 2016. ViBand: High-Fidelity Bio-Acoustic Sensing Using Commodity Smartwatch Accelerometers. In *Proceedings of the ACM symposium on user interface software and technology* (Tokyo, Japan, October 16 - 19, 2016). UIST '16. ACM, New York. 321 - 333. **Best Paper Award. Best Talk Award.**

[14] Zhou, J., Zhang, Y., **Laput, G**., Harrison, C. 2016. AuraSense: Enabling Expressing Around-Smartwatch Interactions with Electric Field Sensing. In *Proceedings of the ACM symposium on User interface software and technology* (Tokyo, Japan, October 16 - 19, 2016). UIST '16. ACM, New York. 81 - 86.

[13] Zhang, Y., Zhou, J., **Laput, G**., Harrison, C. 2016. SkinTrack: Using the Body as an Electrical Waveguide for Continuous Finger Tracking on the Skin. In *Proceedings of the ACM annual conference on Human Factors in Computing Systems* (San Jose, California, May 7 - 12, 2016). CHI '16. ACM, New York, NY. 1491 - 1503. **Best Paper Nomination**.

[12] **Laput, G**., Chen, X.A., Harrison, C. 2016. SweepSense: Ad Hoc Configuration Sensing Using Reflected Swept-Frequency Ultrasonics. in *Proceedings of the ACM International Conference on Intelligent User Interfaces* (Sonoma, California March 7 - 10, 2016). IUI '16. ACM, New York, NY. 332 - 335.

[11] **Laput, G**., Yang, C., Xiao, R., Sample, A., Harrison, C. 2015. EM-Sense: Touch Recognition of Uninstrumented, Electrical and Electromechanical Objects. In *Proceedings of User Interface. and Soft. Techn.* (Charlotte, North Carolina, November 8 - 11, 2015). UIST '15. ACM, New York, NY. 157 - 166. **Best Talk Award**. **Fast Company Innovation by Design Award**.

[10] **Laput, G.**, Chen, X.A., Harrison, C. 2015. 3D Printed Hair: Fused Deposition Modeling of Soft Strands, Fibers, and Bristles. In *Proceedings of the annual ACM symposium on User interface software and technology* (Charlotte, North Carolina, November 8 - 11, 2015). UIST '15. ACM, New York, NY. 593 - 597.

[9] **Laput, G.**, Brockmeyer, E., Hudson, S.E., Harrison, C. 2015. Acoustruments: Passive, Acoustically-Driven, Interactive Controls for Handheld Devices. In *Proceedings of the ACM annual conference on Human Factors in Computing Systems* (Seoul, South Korea, April 18 - 23, 2015). CHI '15. ACM, New York, NY. 2161 - 2170. **Best Paper Award.**

[8] **Laput, G.**, Lasecki, W., Weise, J., Xiao, R., Bigham, J., Harrison, C. 2015. Zensors: Adaptive, Rapidly Deployable, Human-Intelligent Sensor Feeds. In *Proceedings of the ACM conference on Human Factors in Computing Systems* (Seoul, South Korea, April 18 - 23, 2015). CHI '15. ACM, New York, NY. 1935 - 1944.

[7] **Laput, G.**, Xiao, R., Chen, X.A., Hudson, S.E., Harrison, C. 2014. Skin Buttons: Cheap, Small, Low-Powered and Clickable Fixed-Icon Laser Projectors. *In Proceedings of the annual ACM symposium on User interface software and technology* (Honolulu, HI, October 5 - 8, 2014). UIST '14. ACM, New York, NY. 389 - 394.

[6] Adar, E., Dontcheva, M., **Laput, G.** 2014. CommandSpace: Modeling the Relationships Between Tasks, Descriptions and Features. In *Proceedings of the annual ACM symposium on User interface software and technology* (Honolulu, Hawaii, October 5 - 8, 2014). UIST '14. ACM, New York, NY. 167 - 176.

[5] Xiao, R., **Laput, G.**, Harrison, C. 2014. Expanding the Input Expressivity of Smartwatches with Physical Pan, Twist, Tilt, and Click. In *Proceedings of the annual ACM conference on Human Factors in Computing Systems* (Toronto, Canada, April 26 - May 1, 2014). CHI '14. ACM, New York, NY. 193 - 196.

[4] Dixon, M.E., **Laput, G.**, Fogarty, J. 2014. Pixel-Based Methods for Widget State and Style in a Runtime Implementation of Sliding Widgets. In *Proc. CHI '14* (Toronto, Canada, April 26 - May 1, 2014). ACM, New York, NY. 2231 - 2240.

[3] **Laput, G.**, Dontcheva, M., Wilensky, G., Chang, W., Agarwala, A., Linder, J., Adar, E. 2013. PixelTone: A Multimodal Interface for Image Editing. In *Proceedings of the annual ACM conference on Human Factors in Computing Systems* (Paris, France, April 27 - May 2, 2014). CHI '13. ACM, New York, NY. 2185 - 2194.

[2] **Laput, G.**, Lin, Y., Linnemeier, M., Vijjapurapu, R. 2012. StoryCubes: Connecting Elders in Independent Living Through Storytelling. In *Proceedings of the annual ACM conference on Human Factors in Computing Systems* (Austin, Texas, May 5 - 10, 2012). CHI '12. ACM, New York, NY. 1321 - 1326.

[1] **Laput, G.**, Adar, E., Dontcheva, M., Li, W. 2012. Tutorial-Based Interfaces for Cloud-Enabled Applications. In *Proceedings of the annual ACM Symposium on User interface software and technology* (Cambridge, Massachusetts, October 7 - 10, 2012). UIST '12. ACM, New York, NY. 113 - 122.

SELECTED INVITED PRESENTATIONS

University of Chicago CS (Chicago, IL) April 2019
Context-Driven Implicit Interactions

Microsoft Research (Redmond, WA) March 2019
Context-Driven Implicit Interactions

Cornell University CIS (Ithaca, NY) March 2019
Context-Driven Implicit Interactions

Massachussets Institute of Technology EECS (Cambridge, MA) Feb 2019
Context-Driven Implicit Interactions

University of California - Berkeley EECS (Berkeley, CA) Feb 2019
Context-Driven Implicit Interactions

Yale University CS (New Haven, CT) Feb 2019
Context-Driven Implicit Interactions

University of Wisconsin CS (Madison, WI) Feb 2019
Context-Driven Implicit Interactions

University of California - Los Angeles CS (Los Angeles, CA) Jan 2019
Context-Driven Implicit Interactions

University of Michigan EECS (Ann Arbor, MI) Jan 2019
Context-Driven Implicit Interactions

Apple AI and Machine Learning (Seattle, WA) Jan 2019
Context-Driven Implicit Interactions

Apple Hardware, Apple Core Audio (Cupertino, CA) Jan 2019
Making Ubiquitous Contextual Sensing More Practical

American Express User Experience and AI Group (New York, NY) Oct 2018
Making Ubiquitous Contextual Sensing More Practical

Adobe Research, Creative Technologies Group (Seattle, WA) Jun 2018
Making Ubiquitous Contextual Sensing More Practical

University of California - San Diego, HCI / Design Lab (San Diego, CA) May 2018
Practical Ubiquitous Contextual Sensing

Qualcomm, HCI Invited Speaker (San Diego, CA) May 2018
Practical Ubiquitous Contextual Sensing

Snap Research, Invited Speaker (Santa Monica, CA) May 2018
Practical Ubiquitous Contextual Sensing

TechConnect World Sensors Symposium, Keynote Panels (Anaheim, CA) May 2018
Practical Ubiquitous Contextual Sensing. w/ Joe Paradiso, MIT Media Lab

McGinnis Venture Capital Competition, Tepper School of Business (Pittsburgh, PA) Apr 2018
Zensors: Sensing Unleashed

University of Michigan, Interactive and Social Computing Seminar Series (Ann Arbor, MI) Mar 2018
Unleashing Ubiquitous, Unobtrusive, and More Practical Contextual Sensing

Pittsburgh City Council, PGH Labs 2.0 Invited Speaker (Pittsburgh, PA) Dec 2017
Zensors: Sensing Unleashed

ACM SIGGRAPH 2017, UIST Reprise Invited Speaker (Los Angeles, CA) Aug 2017
ViBand: High-Fidelity Bio-Acoustic Sensing Using Commodity Smartwatch Accelerometers

Magic Leap, Magic Leap Research, Invited Speaker (Seattle, WA) Jun 2017
Synthetic Sensors: Towards General-Purpose Sensing

EMPLOYMENT EXPERIENCE

Apple
Leading a Research Group on Interactive Sensing and Applied Machine Learning
AI and Machine Learning (AI/ML), Previous: Hardware Technologies, Exploratory Design Group (XDG)

July 2019 -
Present

Carnegie Mellon University, School of Computer Science
Graduate Student, Ph.D, – Human-Computer Interaction Institute
Faculty Collaborators: Chris Harrison, Scott Hudson, Jeff Bigham, and Anind Dey. Exploring novel sensing, display, and interaction techniques for smart environments and devices.

Aug 2013 to
June 2019

Microsoft Research
Research Intern. Natural Interactions Group. Supervisors: Ken Hinckley, Bill Buxton.
Project scope undisclosed at the moment.

Jun 2017

Google Research
Research Intern. Collaborators: Alex Kauffman (Advanced Interaction Research), Murphy Stein (Day-dream), Emre Karagozler (ATAP), Ivan Poupyrev (ATAP). Novel sensing and haptics.

Jun 2015

Disney Research / Walt Disney Imagineering
Research Associate. Collaborators: Alanson Sample, Eric Brockmeyer, Elizabeth Carter, Chris Harri-son, and Scott Hudson. Exploring novel sensing, hardware, and fabrication techniques for interactive systems and devices. Multiple publications.

Jun 2014

University of Washington, Computer Science and Engineering, DUB Group
Visiting Researcher – Computer Science and Engineering, Seattle, Washington
Mentors: James Fogarty and Morgan Dixon. Examined runtime enhancement and modeling of user interface widget state and style using pixel-based reverse engineering. Summer research work result-ed in a publication.

Jun 2013

Adobe Research
Research Intern – Adobe Research, San Francisco, CA
Mentors: Mira Dontcheva, Gregg Wilensky and Aseem Agarwala. Examined novel multimodal interac-tion techniques for Photoshop and other Creative Suite products. Summer work resulted in a publica-tion, and was demoed live at Adobe Tech Summit.

Jun 2012

Past Employment, Volunteer, and Internships
Ford Motor Company, *Mobile Computing, Researcher*, Dearborn, MI

Aug 2009

ACADEMIC SERVICE

Editor-in-Chief, ACM XRDS Magazine
Program Committee, Co-Chair, ACM UIST 2020 Demos
Program Committee, Associate Chair (AC), ACM CHI 2020 Papers and Notes
Program Committee, Co-Chair, ACM UIST 2019 Demos
Program Committee, Associate Chair (AC), ACM UIST 2019 Papers and Notes
Program Committee, Associate Chair (AC), ACM CHI 2019 Papers and Notes
Program Committee, Associate Chair (AC), ACM UIST 2018 Papers and Notes
Program Committee, Associate Chair (AC), ACM CHI 2018 Papers and Notes
Program Committee, Co-Chair, ACM UIST 2018 Student Innovation Contest (SIC)
Program Committee, Co-Chair, ACM UIST 2017 Student Innovation Contest (SIC)
Program Committee, Workshop Organizer, ACM MobileHCI 2017
Program Committee, Associate Chair (AC), ACM CHI 2017 Late Breaking Work
Program Committee, Associate Chair (AC), ACM CHI 2016 Late Breaking Work
Session Chair, ACM UIST 2018 Session on Sensing at the Small Scale
Session Chair, ACM CHI 2018 Session on Sensing and Tangibles
Session Chair, ACM CHI 2017 Session on Sensing and Input
Faculty Hiring Committee, 2017 Cycle, Carnegie Mellon University, Human-Computer Interaction Institute
Reviewer (100+ papers): ACM CHI '13 '14 '15 '16 '17 '18 '19, ACM UIST '14 '15 '16 '17 '18 '19, ACM UbiComp '15 '16 '17 '18 '19

TEACHING EXPERIENCE

Teaching Assistant, Carnegie Mellon University   Spring 2016
Designing Human-Centered Systems *(Undergraduate)*

Teaching Assistant, Carnegie Mellon University   Fall 2015
User-Centered Research and Evaluation *(Graduate)*

Teaching Assistant, University of Michigan   Fall 2012
Fundamentals of Human Behavior *(Graduate)*

Teaching Assistant, University of Michigan   Fall 2008
Introduction to Programming *(Undergraduate)*

Invited Guest Lectures
Pervasive and Ubiquitous Computing (invited by Mayank Goel)   Fall 2017
Software Systems for User Interfaces, "New Fabrication Technologies" (invited by Anind Dey)   Fall 2015
Designing Human-Centered Systems, "Low-fi Prototyping" (invited by Chris Harrison)   Fall 2015
Electronics Prototyping Workshop (invited by Chris Harrison)   Fall 2014

STUDENTS MENTORED

Evi Bernitsas, Undergraduate, CMU Computer Science (Now at Apple)   2018
Richard Kang, Masters, Computational Design (Currently at CMU)   2018
Jason Wu, Ph.D., Human-Computer Interaction (Currently at CMU)   2018
Karan Ahuja, Ph.D., Human-Computer Interaction (Currently at CMU)   2017
Saiganesh Swaminathan, Ph.D., Human-Computer Interaction (Currently at CMU)   2017
Liang He, Masters, Tangible Interaction (Currently Ph.D. at University of Washington)   2016
Yang Zhang, Masters, Tangible Interaction (Currently Ph.D. at CMU)   2015
Ishan Chatterjee, Undergraduate, Harvard Electrical Engineering (Now at Microsoft)   2014

SELECTED PRESS COVERAGE

WIRED, "Touchless Gesture Controls on Phones? Think Bigger"   08/2019
The Economist, "Household electronics are undergoing a sensory makeover"   05/2019
Fast Company, "Your smartwatches may soon know way, way more about what you're doing"   05/2019
Slashgear, "This LIDAR smart speaker imagines Alexa with eyes"   05/2019
Sydney Morning Herald, "Not all smart speakers pass the IQ test"   05/2019
Science Daily, "Show your hands: Smartwatches sense hand activity"   05/2019
Futurity, "With tweaks, smartwatches know what you do with your hands"   05/2019
Gulf News, "From the simple to the complex: A handy guide to movements"   05/2019
ZDNet, "Smartwatches may soon know exactly what you're doing all day"   05/2019
TechCrunch, This Robot Uses Lasers to 'Listen' to the Environment   10/2018
The Register (UK), Alexa heard what you did last summer– AI Recognizes Activities from Sound   10/2018
Science Daily, Sound, Vibration Recognition Boost Context-Aware Computing   10/2018
Futurity, Sound and Vibrations Let Smart Devices Know Where They Are   10/2018
R&D Magazine, New Techniques Help Smart Devices Detect What's Happening   10/2018
Google AI Blog, Announcing the 2018 Google PhD Fellows for North America, Europe and the Middle East   4/2018
Pittsburgh Business Times, AI Startup wins McGinnis Venture Competition   4/2018
Bloomberg: Innovator Profile, Gierad Laput: This Cracker-Size Sensor Can Tell You Which Oven Burner You Left On   9/2017
NPR All Tech Considered, Our Homes May Get Smarter, But Have We Thought It Through?   8/2017
NPR (WESA FM), CMU Grad Students' Universal Sensor Could Make The Internet Of Things Cost Less And Do More   7/2017
WIRED, Your Camera Wants to Kill the Keyboard   5/2017
MIT Technology Review, This Mega-Sensor Makes the Whole Room Smart   5/2017
The Wall Street Journal, How to turn anything into a touchpad   5/2017
TechCrunch, Google-funded 'super sensor' project brings IoT powers to dumb appliances   5/2017
Uproxx, A New Gadget Can Make Your Home 'Smart' Without Replacing Anything   5/2017
COMPUTERWORLD, Google, A.I. and the rise of the super-sensor   5/2017
Android Authority, This could turn your entire home into a smart home with a simple click   5/2017
Discovery Channel, Turn Anything into a Touchscreen With 'Electrick'   5/2017
Engadget, A smart home mega sensor can track what goes on in a room   5/2017

Digital Trends, Synthetic Sensors create a connected home without adding smart devices — 5/2017
Futurism, A New "Mega-Sensor" Could Make Your Entire Home Smart — 5/2017
The Verge, Electrick lets you spray touch controls onto any object or surface — 5/2017
NPR (WESA FM), CMU Researchers Find If You Can Paint It, You Can Make It A Touch Screen — 5/2017
Engadget, Get ready to 'spray' touch controls onto any surface — 5/2017
Popular Mechanics, High-Tech Spray Paint Can Make Anything Into a Touchscreen — 5/2017
TechCrunch, New technique turns anything into a touch sensor — 5/2017
Daily Mail, Graffiti goes hi-tech: Radical spray paint can turn ANYTHING into a touchpad — 5/2017
MIT Technology Review, A Cheap, Simple Way to Make Anything a Touch Pad — 5/2017
Gizmodo, Scientists Figure Out How to Turn Anything Into a Touchscreen Using Conductive Spray Paint — 5/2017
Newsweek, Conductive Spray Paint Can Turn Any Surface Into a Touchscreen — 5/2017
CNET, Turn Anything into a Touchscreen With 'Electrick' — 5/2017
New Scientist, Spray-on touch controls give an interactive twist to any surface — 5/2017
TechCrunch, How a tap could tame the smart home — 5/2017
The Verge, Someday we might be able to use smart gadgets through electromagnetic emissions — 5/2017
New Atlas, Single Synthetic Sensor keeps watch over entire room — 5/2017
MIT Technology Review, Home Assistants Like Amazon Echo Could Be a Boon for Assisted Living — 2/2017
Fast Company, A Smartwatch That Recognizes What You Touch — 11/2016
TechCrunch, Overclocked Smartwatch Sensor Uses Vibrations to Sense Gestures, Objects and Locations — 11/2016
Gizmodo, Brilliant Mod Makes Smartwatches Actually Useful — 11/2016
Yahoo! News, A hacked smartwatch can tell what your hands are doing, holding or touching — 11/2016
The Verge, Carnegie Mellon researchers hacked an LG smartwatch to turn it into a gesture device — 11/2016
Digital Trends, Ingenious accelerometer hack could allow existing smartwatches to identify any object that you grab — 11/2016
Fast Company, The Most Innovative Student Design of 2016 — 9/2016
Scientific American, Maker Movement Turns Scientists into Tinkerers — 8/2016
NPR Radio Broadcast (Via WESA 90.5FM), "CMU's SkinTrack Technology Turns Your Forearm Into Smartwatch Trackpad" — 6/2016
MIT Technology Review, "Use Your Arm as a Smart Watch Touch Pad" — 5/2016
The Verge, "New Tech Turns Your Skin into a Touchscreen for your Smartwatch" — 5/2016
Huffington Post, "New Tech Turns Your Arm Skin Into A 'Touchpad'" — 5/2016
CNN, "This Watch Turns Your Arm into a Touchscreen" — 5/2016
Newsweek, "Smart Ring Turns Your Skin into a Touchpad for your Smartwatch" — 5/2016
Yahoo! News, "SkinTrack Turns Your Whole forearm into a Smartwatch Interface" — 5/2016
WIRED, "SkinTrack Can Turn Your Skin into a Touchscreen" — 5/2016
TechCrunch, "Want More Screen Space on Your Smartwatch? Put a ring on it…" — 5/2016
The Daily Mail (UK), "Frustrated with Tiny Smartwatch screens? Gadget Turns the Skin into a Touchpad" — 5/2016
Popular Science, "This Smartwatch Turns Your Skin into a Touch Screen" — 5/2016
Inverse, "Carnegie Mellon Can Turn Your Beautiful Skin into a Vast Smartwatch Trackpad" — 5/2016
Gizmodo, "This New 'Skinterface' Could Make Smartwatches Suck Less" — 5/2016
Engadget ,"Navigate your Smartwatch by Touching Your Skin" — 5/2016
Mashable, "Researchers Create Wild Skin-Touch Interface for Tiny Smart Watches" — 5/2016
Maxim, "This Freakishly Futuristic Technology Lets You Use Your Skin as a Touchscreen" — 5/2016
Discovery Channel, "Your Arm Could be the Touchpad" — 5/2016
Phys.org ,"SkinTrack Technology Turns Arm into Smartwatch Touchpad" — 5/2016
Tech Times, "Fingertips Too Big For Your Tiny Smartwatch? SkinTrack Turns Your Forearm Into A Touchpad" — 5/2016
R&D Magazine, "Engineers Create Tool That Turns Skin into Touchpads" — 5/2016
PC Magazine, "'SkinTrack' Turns Your Arm Into a Touch Screen" — 5/2016
R&D Magazine, "SweepSense Pauses Your Music When Earphones are Removed" — 5/2016
MIT Technology Review, "Pause Your Tunes by Taking Out Your Earbuds" — 2/2016
NPR (WESA 90.5 FM, Radio Broadcast), "CMU Technology Syncs Smart Watch User's Actions With Helpful Apps" — 2/2016
BBC News, Click (TV Programme, Aired Live), "The Smartwatch Gets Serious" — 11/2015
NBC News, "Disney Smartwatch Knows What You're Touching and Tells You What to Do Next" — 11/2015
CBS (KDKA-FM 93.7 Pittsburgh Radio Interview), "A Smartwatch that Knows What You're Touching" — 11/2015
Discovery Channel (Canada) Live Broadcast, "Smartwatch Turns Your Body into an Antenna" — 11/2015
Ars Technica, "Disney's smartwatch prototype can identify and track everything you touch" — 11/2015
VICE Motherboard, "Disney Designed a Smartwatch that Knows What You're Touching" — 11/2015
WIRED, "EM-Sense Enabled Smartwatch Can Detect When You Touch a Doorknob" — 11/2015
Popular Mechanics, "Disney's Wild New EMSense Tech Can Identify Any Gadget You Touch" — 11/2015
Discovery News, "Smartwatch Turns Your Body into an Antenna" — 11/2015
Daily Mail (UK), "EM-Sense knows what you're touching and shows relevant information on its display" — 11/2015
WIRED (UK), "Disney's concept smartwatch knows what you're touching" — 11/2015
CNET (Japan), "EMSense identifies the type of electronic device you're touching" — 11/2015
Gizmodo, "Your Smartwatch Might Soon Know Exactly What You're Touching" — 11/2015
Fast Company, "This $10 Hack Could Let Your Apple Watch Sense Everything You Touch" — 11/2015
New Scientist, "No-touch smartwatch scans the skin to see the world around you" — 11/2015
Hacker News (Front Page), "Disney's EM-Sense Smartwatch, contextually determining what you're touching" — 11/2015
Digital Trends, "Armed with electromagnetic sensors, Disney's new wearable can tell what you're touching" — 11/2015

Tech Spot, "This smartwatch uses electromagnetic noise to identify what you're touching"
Hack A Day, "Disney's Designing a Smartwatch that Knows What You're Touching"
Tech Radar, "Disney made a smartwatch that tells you what you're touching"
Tech Times, "Recognition Software Could Let Smartwatches Enable Context-Aware Apps"
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MISCELLANEOUS

Drummer, Disney Research Band (From Ottis Redding to Johnny Cash, to Adele and the Foo Fighters) 2014 - 2018
Running (Logged on Nike+) — 1000+ miles of running (and counting)
Steps (Logged on FitBit and Apple Watch) — Average 15K steps per day. Logged 30,000+ Lifetime miles (and counting)
Swimming (Logged on Apple Watch) — 18,450+ Yards (and counting)
Languages — Cebuano (Fluent), Tagalog (Fluent), English (Fluent, 3rd Language)

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Mentors and collaborators who have written references for me:
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Anind Dey (Dean and Professor, School of Information, University of Washington)
Shwetak Patel (Professor, Electrical Engineering and Computer Science, University of Washington)