

# Josh Fromm

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CONTACT INFORMATION	2211 NE 50th Street Apt 8 Seattle, WA 98105	<i>Mobile:</i> +1-626-676-2684 <i>E-mail:</i> jwfromm@uw.edu <i>Website:</i> jwfromm.com
EDUCATION	<b>University of Washington</b> , Seattle, WA Pursuing a Ph.D in Electrical Engineering as part of the UbiComp Lab. <b>2014 - 2019</b> Focusing on developing novel hardware solutions to problems ranging from interaction to implanted health sensing. <b>California Institute of Technology</b> , Pasadena, CA Bachelor of Science with Honors in Electrical Engineering <b>June 2014</b> with a Minor in Computer Science. Emphasis on embedded system and low level software development along with VLSI and FPGA systems.	
EXPERIENCE	<b>Graduate Student</b> <b>2014 to present</b> UbiComp Lab <b>Research Assistant</b> <i>Researching novel ways to use sensing and embedded systems for medical purposes and human machine interaction. Specific current projects involve through body power transfer for battery-free onbody health sensors, enabling passive 3d interaction around smartphones through capacitive sensing driven by NFC, and screening for osteoporosis on a smartphone.</i> <b>Microsoft Research</b> <b>2013 and 2014</b> Sensors and Devices Team <b>Research Intern</b> <i>Worked as a member of the NEXT initiative developing novel interaction technology with a focus on producing high impact results in a real product. My contribution involved low level system development along with exploratory power harvesting research and design.</i> <b>Nvidia Corporation</b> <b>2013 and 2014</b> GPU Verification Division <b>ASIC Engineer</b> <i>Verified that streaming multiprocessor operation in RTL matched simulated outputs using a C++ model. Also developed a software framework that allows increased automation in bug detection and filing.</i> <b>NASA Jet Propulsion Laboratory</b> Chris Assad Lab, Robotics Division <b>SURF Fellow 2012</b> <i>Designed and developed the hardware and software of a system that uses an array of EMG electrodes to monitor muscle activity in a user's arm, classify the raw data using support vector algorithms, and control any of several robotic interfaces using simple trained gestures.</i> Continued Work in Robotics Division <b>Independent Researcher 2013</b> <i>Developed an embedded system device capable of mimicking the functionality of the original, much more cumbersome and power inefficient, BioSleeve.</i> <b>California Institute of Technology</b> Guillaume Blanquart Lab, Department of Mechanical Engineering <b>Richter Scholar 2011</b> <i>Studied the simulation of multiphase flow using distinct materials. Developed novel simulation methods and algorithms to obtain results that better agree with physical observations.</i>	
CONFERENCE PUBLICATIONS	Li H, Brockmeyer E, Carter E, Fromm J, Hudson S, Patel S, Sample A. PaperID: A Technique for Drawing Functional Battery-Free Wireless Interfaces on Paper. In: CHI, 2016.  Goel M, Saba E, Stiber M, Whitmire E, Fromm J, Larson E, Borriello G, Patel S. SpiroCall: Measuring Lung Function over a Phone Call. In: CHI, 2016.  Wolf M, Assad C, Vernacchia M, Fromm J, Jethani H. Gesture-Based Robot Control with Variable Autonomy from the JPL BioSleeve. In: IEEE Conference on Robotics and Automation (ICRA), 2013. Oral.	