

# **MICHAEL SHILOH - CURRICULUM VITAE**

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## **AREAS OF EXPERTISE, RESEARCH, AND TEACHING**

Technology - Electronics, software, microcontrollers, sensors, actuators, digital fabrication  
Hands-on Education - Maker movement, DIY, tinkering, disassembly, self reliance  
Maker Identification - Inclusiveness, exclusiveness, personal identification  
Open Source culture - History, ethos, motivation, idealism, legality, collaboration  
Maker Culture - Hacker spaces, fab labs, individual practice, online communities, place in popular culture  
Art Technology - Electronic music, media art, machine art, conceptual art

## **ACADEMIC APPOINTMENTS**

(For a complete list of courses taught refer to Teaching Experience)

### **University of California, Berkeley**

College of Engineering, Lecturer, 2015~

### **California College of the Arts**

Critical Studies, Associate Professor, 2014~; Senior Lecturer, 2006; 2011-2014

### **San Francisco Art Institute**

Design and Technology, Visiting Faculty, 2012-2014

### **San Francisco State University**

Fine Art: Conceptual and Information Art, Visiting Faculty, 2010-2011

### **Art Institute of California, San Francisco**

Audio Production, Part Time Faculty, 2010-2011

### **The Crucible, Oakland, CA**

Department Head, Kinetics and Electronics, 2008 - 2011

### **Maker Media, Sebastopol, CA**

Make Mobile Education Outreach, 2008

### **Linux Certified, Mountain View, CA**

Lecturer, 2002-2005

### **Laney College, Oakland, CA**

Lecturer, 1996-1997

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## PROFESSIONAL EXPERIENCE

### **Arduino LLC, USA and Italy**

Educator Liaison, Public Speaker, Workshop Presenter, 2012~

### **The Exploratorium, San Francisco**

Tinkerer in Residence, Consultant 2011~

### **Teach Me To Make, San Francisco**

Co-founder, 2005~

### **Survival Research Labs, San Francisco**

Engineer, crew, technical consultant, designer, fabricator, and performer, 1995~

### **OpenMoko, Taipei, Taiwan**

Developer Relations Head, University Program Manager, 2007 - 2008

### **Checkpoint Software, San Francisco**

Senior Software Engineer, 2006 - 2007

### **Cradle Technologies, Mountain View**

Senior Embedded Engineer, 2005 - 2006

### **MakingThings LLC, San Francisco**

Co-Founder and VP Engineering, 2002 - 2005

### **Mediabolic, Inc, San Francisco**

Senior Engineer and Hardware Architect, 2000 - 2002

### **Wind River Systems, Alameda**

Senior Development Engineer, 1996 - 2000

## EDUCATION

**M.F.A. in Fine Art** (coursework only), San Francisco State University, 2012 - 2013

Concentration in Conceptual and Information Art

**B.S. in Electrical Engineering and Computer Science**, University of California, Berkeley, 1982

Concentrations in Analog Electronics and Computer Architecture

Member, National Engineering Honor Society

Member, National Electrical Engineering Honor Society

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## PUBLICATIONS

### Books Co-authored

*Getting Started with Arduino, 3<sup>rd</sup> Edition*. Sebastopol, CA: Make:Books, 2014.

### Books co-edited

*Arduino Projects Book*. Torino, Italy: Arduino, 2012.

### Articles (as contributor)

"A RISCy Approach to VLSI" in VLSI Design, 1981, pgs. 14-20.

<http://ai.eecs.umich.edu/people/conway/VLSI/ClassicDesigns/RISC/RISC.VD4Q81.pdf>

### Articles (as subject)

Michael Molitch-Hou, 3D Printing Industry, "Geoweaver Roaming 3D Printer Walks the Walk and Caulks the Caulk", January 2014

<http://3dprintingindustry.com/2014/01/06/geoweaver-roaming-3d-printer-walks-walk-caulks-caulk/>

(with Creative Architecture Machines studio)

Aaron Betsky, Architect Magazine, "What 3D-Printing Robots Could Mean for the Future of Architecture", January 2014

[http://www.architectmagazine.com/d-technology/walking-3d-printers-and-other-creative-architecture-machines\\_o.aspx?dfpzone=culture](http://www.architectmagazine.com/d-technology/walking-3d-printers-and-other-creative-architecture-machines_o.aspx?dfpzone=culture)

(with Creative Architecture Machines studio)

Adam Fabio, Hack A Day, "Roving Hexapod Poops Out 3D Prints", December 2013

<http://hackaday.com/2013/12/30/geoweaver-rise-of-the-monster-3d-printing-hexapods/>

(with Creative Architecture Machines studio)

Laura Casey, Contra Costa Times, "Making movable art and robotics a little easier with Arduino", October 2011

Reprinted in San Jose Mercury News [http://www.mercurynews.com/ci\\_19056738](http://www.mercurynews.com/ci_19056738)

Scanned with picture

[http://teachmetomake.files.wordpress.com/2009/05/contracostatimes\\_2011\\_10\\_07\\_page1.pdf](http://teachmetomake.files.wordpress.com/2009/05/contracostatimes_2011_10_07_page1.pdf)

Mathilde Berchon, Making Society, "Michael Shiloh, DIY workshops and how to get adults involved", April 2011

<http://makingsociety.com/2011/04/michael-shiloh-diy-workshops-and-how-to-get-adults-involved/>

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Ulrich Bantle, Linux Magazin (Germany), "Web Wonder: Control a Linux robot from the Web", March 2006

<http://www.linux-magazin.de/Ausgaben/2006/03/Mr.-Roboto>

English translation

[http://nnc3.com/LinuxMag/Magazine/Archive/2006/65/094-095\\_robot/article.html](http://nnc3.com/LinuxMag/Magazine/Archive/2006/65/094-095_robot/article.html)

### **Interviews (as subject)**

Business With Passion, "Maker Faire", May 2009

<http://www.manygoodideas.com/2009/06/19/business-with-passion-maker-faire/>

(5:05 - 11:47)

Geek Entertainment TV, "Michael Shiloh and the land of Linux robots", 2008

<https://www.youtube.com/watch?v=4NsXOODSLGE>

Geek Entertainment TV, "A Day at the Maker Faire: Michael Shiloh", May 2007

<http://blip.tv/getv/maker-faire-michael-shiloh-full-interview-242910>

2008 Southern California Linux Expo, "Interview with Michael Shiloh of OpenMoko", 2008

<https://web.archive.org/web/20080723130933/http://www.socallinuxexpo.org/blog/2008/02/03/interview-with-michael-shiloh-of-openmoko/>

LunchMeet, "Could OpenMoko be the Open iPhone Killer?", LinuxWorld, San Francisco, 2007

<http://www.podtech.net/home/search/Michael+Shiloh>

Von ThomasS, Pro-Linux.de, "Interview with Michael Shiloh of Linux Robots", March 2006

<http://www.pro-linux.de/artikel/2/309/interview-with-michael-shiloh-of-linuxrobots.html>

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## WORKSHOPS

### Invited

“How to get people to try learning something at which they fear they may fail”  
Education Foo Camp, Google headquarters, Mountain View, California, February 19-21, 2016

“Arduino Hands-on Workshop”, Lawrence Berkeley National Laboratories, Berkeley, multiple introductory and advanced workshops, 2012, 2013, 2014, 2015  
Content: <http://teachmetomake.com/wordpress/arduino-at-lbl>

“Arduino Robotics” workshop for children, Imperial College London, London, UK, August 14, 2014

“Inventors Workshop” one of 3 co-teachers, Summer Arts program, Cal State Monterey Bay, June 30 to July 13, 2014  
<http://blogs.calstate.edu/summerarts/index.php/courses/inventors-workshop-sound-sculpture/>

“Hands-on Introduction to the Arduino Electronic Prototyping Platform” for Educause Learning Initiative annual meeting, New Orleans, February 4, 2014.

“Arduino Robotics Workshop”, Spokane Community College, Spokane, Washington, November 2013.

Various Arduino workshops for Workshop Weekend: Arduino at Tech Liminal, Oakland, July 2013 (part of a team of 5 teachers)

“Arduino Robotic Workshop” Jerusalem Mini Maker Faire, Jerusalem, Israel, March 2013.

“Robotic Prototypes Workshop” Acadia 2012, California College of the Arts, San Francisco, October 2012.  
Content: <http://teachmetomake.com/wordpress/arduino-for-robotic-prototypes-acadia-2012>

“Arduino Robotics Workshop” Lifelong Learning, The Exploratorium, San Francisco, September 2012 and April 2012.

“Introduction to Arduino + Electronics 101” Formations 2012, California College of the Arts, San Francisco, February 2012. (with Rip DeLeon and Jason Johnson)

“Sound Workshop for Tinkering Studio” Open Make, The Exploratorium, San Francisco, March 2011.

Series of 6 workshops on Arduino, The Exploratorium, San Francisco, 2010-2012. (multiple series)  
Content: <http://teachmetomake.com/wordpress/arduino-exploratorium>

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“ElectroMechanical Contraption Building Workshop” Lift 10 conference, Geneva, Switzerland, 2010.

“Make Play Day” tinkering workshop, Maker Faire San Mateo, San Mateo, multiple 2006 - 2010.

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## Accepted

“The Interaction Engine: Tools for Prototyping Connected Devices” The ACM (Association for Computing Machinery) International conference on Tangible, Embedded and Embodied Interaction (TEI), Eindhoven, The Netherlands, February 13, 2016

<http://www.tei-conf.org/16/SW2.html>

“Arduino Yun for Intermediate Arduino Users: Using the Onboard Linux Computer to Communicate with Other Computers and the Internet” O'Reilly Open Source Convention (OSCON), Portland, Oregon, July 20, 2014

<http://www.oscon.com/oscon2014/public/schedule/detail/34650>

“Arduino for Educators Hands-on Workshop” World Maker Faire, New York Hall of Science, New York City, September 19, 2013.

<https://www.eventbrite.com/e/world-maker-faire-ny-educator-meetup-and-arduino-workshops-tickets-8040769157>

“Arduino for Educators Hands-on Workshop” Maker Faire San Mateo, 2013, San Mateo.

“Tinkering and Chain Reaction” LIFT with FING conference, Marseille, France, 2009.

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## PRESENTATIONS

### Invited

“Arduino”, Indie Memphis Film Festival, Memphis, November 2013

Slides:

<http://www.slideshare.net/michaelshiloh/arduino-at-indie-memphis-2013>

Program:

[http://indiememphis.festivalgenius.com/2013/films/arduino\\_indiememphis2013\\_indiememphis2013](http://indiememphis.festivalgenius.com/2013/films/arduino_indiememphis2013_indiememphis2013)

“Further Explorations in Simplifying Electronics for Education”, Sketching in Hardware Conference, Portland, 2012

<http://www.slideshare.net/michaelshiloh/teach-me-to-make-sketching-2012>

“The Case for Open APIs” Sketching in Hardware conference, Los Angeles, 2011

<http://teachmetomake.wordpress.com/sketching-in-hardware-2011/>

“Highly Learnable Open Hardware” Open Hardware Summit 2010, New York Hall of Science, New York City, September 2010.

<http://www.slideshare.net/michaelshiloh/highly-learnable-open-hardware-open-hardware-summit-2010>

“Changing Things: Fab Labs, Decentralized Design, and Production of Material Products” Lift+ping conference, Marseille, France, 2009

<http://www.slideshare.net/michaelshiloh/lift-fing09-michaelshilohpresentation>

Video: [http://www.dailymotion.com/video/xbwgph\\_michael-shiloh-changing-things-lift\\_tech](http://www.dailymotion.com/video/xbwgph_michael-shiloh-changing-things-lift_tech)

Conference overview. I'm #25: <http://www.slideshare.net/slidesharefing/synthese-lift-with-fing-2009>

“Large Scale Art in the San Francisco Bay Area: Survival Research Labs and Flaming Lotus Girls” DLD (Digital-Life-Design) conference, Munich, Germany, 2009

Profile: <http://dld-conference.com/users/michael-shiloh>

Current conference: <http://dld-conference.com/>

Slides: <http://www.slideshare.net/michaelshiloh/dld2009-chairmans-dinnermichaelshilohpresentation>

“OpenMoko: Completely Open Mobile Computing Software Platform” Emerging Communication Conference, Mountain View, 2008

<http://www.slideshare.net/eComm2008/michael-shilohs-presentation-at-ecomm-2008>

Speakers: <http://america.ecomm.ec/2008/speakers/>

Session: <http://america.ecomm.ec/2008/openmoko-open-mobile-computing.php>



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“OpenMoko and Ubiquitous Computing” Emerging Technology Conference, San Diego, March 2008.

<http://cdn.oreillystatic.com/en/assets/1/event/8/OpenMoko%20and%20Ubiquitous%20Computing%20Presentation.pdf>

Program:

<http://en.oreilly.com/et2008/public/schedule/detail/3330>

“The OpenMoko Open Source Cellphone Project” Openmind conference, Tampere, Finland, 2007.

## Panels

“The Role of Technology in the Design School Curriculum”, Interaction15 Education Summit, San Francisco, February 2015

“Education: Making new Scientists” The Hackers Conference, California, November 2014

“Open Source Hardware and the Classroom” Electrical and Computer Engineering Department Heads Association (ECEDHA) annual conference, Napa, CA, March 2014  
<http://ecedha.org/conferences/2014-ecedha-annual-conference-and-ecexpo/2014-conference/2014-schedule/open-source>

“Teaching and Inspiring New Makers” Maker Faire San Mateo, San Mateo, CA, May 2012

“Opportunities Presented the OpenMoko Open Source Cellphone Project” for Future Trends Forum “Open Mobile Devices: New Opportunities from Outside Telecom” panel, Madrid, Spain, June 2008  
[http://www.fundacionbankinter.org/system/documents/5851/original/10\\_mobiletechnologies\\_EN.pdf](http://www.fundacionbankinter.org/system/documents/5851/original/10_mobiletechnologies_EN.pdf)

## Guest Lectures

“Teleo: Rapid Prototyping Toolkit”, Human-Computer Interaction program, Stanford University, 2004  
<http://hci.stanford.edu/courses/cs547/abstracts/04-05/041112-shiloh.html>

## Class Visits

“Hands-on Electronics”, Feedback Physics, CCA (Fall 2011; Fall 2012)

“Introduction to Arduino”, Introduction to Interaction Design, CCA (Spring 2011)  
“Arduino Workshop”, ME360, Stanford University (Fall 2010)  
(invited by Amy Franceschini)

“Basic Electronics”, Recombinant Media, CCA (Fall 2002)  
<http://www.ultrafuzz.net/MakingThings-Electronics.pdf>

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## EXHIBITIONS AND PERFORMANCES

### Exhibitions

#### Curated or Directed

"Interface Show" California College of the Arts, Oakland, 2011-2015. (with Barney Haynes and Don Day)

"End of Semester Show" Conceptual and Information Art, San Francisco State University, San Francisco, 2011.

"Dammit: A New Media Experience" Martin Wong Gallery, San Francisco State University, San Francisco, 2011. (with Matthew Dalton and Jake Rogers)

"Knowledge Hacking Art: Energy Harvesting as Public Art" Worth Ryder Gallery, University of California, Berkeley, September 2010. (with Stephen Wilson)"

#### Invited

"The Brain on Energy" by Judy Castro at TV Of Tomorrow, Yerba Buena Center for the Arts, San Francisco, 2011. (technical consultant)

"Automatic: Robotic Art", lowerdeck Gallery, San Francisco, November 2009. (group show)  
<http://www.robots-dreams.com/2009/11/automatic-robotic-art-show-coming-up-in-san-francisco.html>

"Frankenstein Theory and Robotics: A survey of Frankensteinian Robotics, Kinetic and New Media art", Boca gallery, San Francisco, 2006. (group show)  
[https://web.archive.org/web/20060713070158/http://www.sfboca.com/exh/frank\\_pr.html](https://web.archive.org/web/20060713070158/http://www.sfboca.com/exh/frank_pr.html)  
<http://sf.metblogs.com/2006/06/12/frankenstein-robotics-opening/>

"Caution -- broken glass", TRW NAS Division, Oakland, January 1993. (solo installation)

"I Guess A Blowtorch is Out of the Question", TRW, Berkeley November 1991. (solo installation)

"Office Extraterrestrial Bolted Insect Landscape", Teknekron Financial, Berkeley, January 1990. (solo installation)

"Ashes to Ashes; Rust to Rust " TFS, Berkeley, May 1991. (solo installation)

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## Accepted

“Writing Room Only” Levi Strauss & Co., San Francisco, June 1994. (group show)

“Reading Room Only”, San Francisco Fair, San Francisco, September 1992. (group show)

## Performances

“Survival Research Labs: A Complete Mastery of Sinister Forces: Employed with Callous Disregard to Produce Catastrophic Changes in the Natural Order of Events” Robodock Art Festival, Amsterdam, September 2007. (with SRL crew)

[https://www.youtube.com/watch?v=nnSewOFNjf4&list=UUu\\_DWeoc3nzLecCgfr6sXOA](https://www.youtube.com/watch?v=nnSewOFNjf4&list=UUu_DWeoc3nzLecCgfr6sXOA)

“Survival Research Labs: GHOSTLY SCENES of INFERNAL DESECRATION: An SRL End of Days Production” In conjunction with ZeroOne/ISEA’s Global Festival of Art on the Edge & the 13th International Symposium of Electronic Art, San Jose, August 2006. (with SRL crew)

“Survival Research Labs: The Fish Boy’s Dream” at Fringe Exhibitions, Los Angeles, January 2006. (with SRL crew)

“Survival Research Labs: Berkeley Art Museum Show” UC Berkeley Art Museum, Berkeley, November 2003. (with SRL crew)

“Survival Research Labs: Benefit for Tim North”, SOMARTS gallery, San Francisco, March 2003. (with SRL crew)

“Survival Research Labs: The Amy Show” SOMARTS gallery, San Francisco, January 2002. (with SRL crew)

“Survival Research Labs: Live at the Webby Awards” The Sound Factory, San Francisco, 2002. (with SRL crew)

[https://www.youtube.com/watch?v=3ZRz8QCmvmk0&list=PLbd3\\_B4vejVJhxsZX0xd\\_UnKpjQ-EzHDJ](https://www.youtube.com/watch?v=3ZRz8QCmvmk0&list=PLbd3_B4vejVJhxsZX0xd_UnKpjQ-EzHDJ)

“Survival Research Labs: Berkeley Show”, The Shipyard, Berkeley, December 2001. (with SRL crew)

[https://www.youtube.com/watch?v=U6IXU-nGtPI&list=PLbd3\\_B4vejVJhxsZX0xd\\_UnKpjQ-EzHDJ](https://www.youtube.com/watch?v=U6IXU-nGtPI&list=PLbd3_B4vejVJhxsZX0xd_UnKpjQ-EzHDJ)  
[https://www.youtube.com/watch?v=gE8LxPqvnhU&list=PLbd3\\_B4vejVJhxsZX0xd\\_UnKpjQ-EzHDJ](https://www.youtube.com/watch?v=gE8LxPqvnhU&list=PLbd3_B4vejVJhxsZX0xd_UnKpjQ-EzHDJ)

“Survival Research Labs: Hovercraft Debut Run “, undisclosed location, Oakland, April 2001. (with SRL crew)

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“Survival Research Labs: SRL Thoughtfully Regards: The Arbitrary Calculation of Pathological Amusements” NTT-ICC sponsored event, Tokyo, Japan, December 1999. (with SRL crew)

<http://www.srl.org/shows/ntt/>

“Survival Research Labs: What Is Real” undisclosed location, San Francisco, June 1998. (with SRL crew)

“Survival Research Labs: The Unexpected Destruction of Elaborately Engineered Artifacts: A Misguided Adventure in Risk Eradication, Happening Without Known Cause, in Connection with Events that are Not Necessarily Related”, Longhorn Speedway, Austin, Texas March, 1997. (with SRL crew)

[https://www.youtube.com/watch?](https://www.youtube.com/watch?v=WUslrdEn2cg&list=PLbd3_B4vejVLe5mpFpcWE4MSrEZf1aYTQ)

[v=WUslrdEn2cg&list=PLbd3\\_B4vejVLe5mpFpcWE4MSrEZf1aYTQ](https://www.youtube.com/watch?v=WUslrdEn2cg&list=PLbd3_B4vejVLe5mpFpcWE4MSrEZf1aYTQ)

“Survival Research Labs: Wired 1996 Macworld party”, undisclosed location, San Francisco, 1995. (with SRL crew)

[https://www.youtube.com/watch?v=XjRq9-](https://www.youtube.com/watch?v=XjRq9-oQKmc&list=PLbd3_B4vejVLe5mpFpcWE4MSrEZf1aYTQ)

[oQKmc&list=PLbd3\\_B4vejVLe5mpFpcWE4MSrEZf1aYTQ](https://www.youtube.com/watch?v=XjRq9-oQKmc&list=PLbd3_B4vejVLe5mpFpcWE4MSrEZf1aYTQ)

“Survival Research Labs: Crimewave”, undisclosed location, San Francisco, 1995. (with SRL crew)

[https://www.youtube.com/watch?](https://www.youtube.com/watch?v=PpPggo4eWxk&list=PLbd3_B4vejVLe5mpFpcWE4MSrEZf1aYTQ)

[v=PpPggo4eWxk&list=PLbd3\\_B4vejVLe5mpFpcWE4MSrEZf1aYTQ](https://www.youtube.com/watch?v=PpPggo4eWxk&list=PLbd3_B4vejVLe5mpFpcWE4MSrEZf1aYTQ)

“Survival Research Labs: A Calculated Forecast of Ultimate Doom: Sickening Episodes of Widespread Devastation Accompanied by Sensations of Pleasurable Excitement”, undisclosed location, San Francisco, May 1994. (with SRL crew)