

David A. Mellis • mellis@berkeley.edu • <http://web.media.mit.edu/~mellis/>  
Berkeley Institute of Design • 354 Hearst Memorial Mining Building  
University of California, Berkeley • Berkeley, CA 94720

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## Education

**Massachusetts Institute of Technology** *Fall 2011 – Summer 2015*  
*Ph.D. in Media Arts and Sciences*

Dissertation: "Do-It-Yourself Devices: Personal Fabrication of Custom Electronic Products". Advisor: Mitchel Resnick, Lifelong Kindergarten group, MIT Media Lab.

**Massachusetts Institute of Technology** *Fall 2009 – Summer 2011*  
*S.M. in Media Arts and Sciences*

Thesis: "Case Studies in the Digital Fabrication of Open-Source Consumer Electronic Products". Advisor: Leah Buechley, High-Low Tech group, MIT Media Lab.

**Interaction Design Institute Ivrea (Italy)** *Fall 2004 – Summer 2006*  
*Masters in Interaction Design*

Thesis: "Tangible Code". Advisors: Neil Churcher and Yaniv Steiner.

**Massachusetts Institute of Technology** *Fall 1998 – Spring 2003*  
*S.B. in Mathematics*

## Work Experience

**UC-Berkeley, Electrical Engineering and Computer Sciences** *Fall 2015 – Present*  
*Postdoc.* Research directions include: tools for scaffolding novice use of machine learning in physical computing. Supervisor: Björn Hartmann.

**Arduino Electronics Prototyping Platform** *January 2005 – Present*  
*Co-Founder.* Lead software developer through 2012. (The Arduino software has been downloaded millions of times and hundreds of thousands of Arduino boards have been sold.)

**Copenhagen Institute of Interaction Design** *Fall 2008 – Summer 2009*  
*Faculty.* Responsible for course instruction, curriculum planning, recruitment of visiting faculty, student advising, and prototyping assistance.

**Synthesis Studios. Programmer & Designer.** *Spring 2007 – Summer 2008*

**Copenhagen Institute of Interaction Design.** *Summer 2006 – Spring 2007*  
*Co-Founder.* Part of initial team planning this international master's program. Researched and co-wrote feasibility study and participated in interaction design consulting projects.

**Chicago Trading Company. Programmer.** *Spring – Summer 2004*

## Teaching

### Semester Courses

*Design for DIY Manufacturing (MIT)*. Lead Instructor. Spring 2012  
*How to Make (Almost) Anything (MIT)*. Teaching Assistant. Fall 2010

### Selected Workshops

*Fabricating Electronic Circuits and Products (FabLearn)*. Three-hour workshop. 2015  
*Scratch and Arduino (Computer Clubhouse Training)*. 90-minute workshop. 2014  
*Introduction to Arduino (Computer Clubhouse Teen Summit)*. Two-hour workshop. 2014  
*Introduction to Arduino (Computer Clubhouse Training)*. 90-minute workshop. 2014  
*The Material of Electronics (CIID)*. Co-Instructor. One-week graduate course. 2014  
*Human + Computer (MIT & RISD)*. Co-Instructor. Four-week workshop. 2014  
*e(text)iles (Columbia College, Chicago)*. Co-Instructor. Three-day workshop. 2013  
*Introduction to Physical Computing (CIID)*. Co-Instructor. One-week workshop. 2012  
*Physical Computing (CIID)*. Co-Instructor. Two-week graduate course. 2011  
*Physical Computing (Royal Danish Academy of Fine Arts)*. Instructor. One-week. 2009  
*Tangible User Interfaces (CIID)*. Teaching Assistant. Four-week graduate course. 2008  
*Interactive Data Visualization (CIID)*. Teaching Assistant. Two-week course. 2008  
*Physical Computing (CIID)*. Co-Instructor. Two-week graduate course. 2008  
*Computational Design (CIID)*. Teaching Assistant. One-week graduate course. 2008  
*Museum Exhibition Design (Designskolen Kolding, Denmark)*. Prototyping Assistant. Multi-week course. 2007  
*Physical Computing (Hochschule für Gestaltung, Schwäbisch Gmünd, Germany)*. Co-Instructor. One-week course. 2006  
*Mobile Prototyping (IUAV Venice)*. Prototyping Assistant. One-week course. 2006  
*Introduction to Arduino (Media Lab Madrid)*. Co-Instructor. One-week course. 2005

## Advising

*Alice Pintus*, Masters, Copenhagen Institute of Interaction Design 2009  
*Jacob Sikker Remin*, Masters, Copenhagen Institute of Interaction Design 2009  
*Ujjval Panchal*, Masters, Copenhagen Institute of Interaction Design 2009

## Other Experience

*Open-Source Hardware Association*. Board Member. 2013 – 2015  
*Open Hardware Summit*. Review Chair. 2011 & 2012

*Tangible and Embedded Interaction Conference*. Reviewer. 2012, 2014, 2015  
*CHI Conference on Human Factors in Computer Systems*. Reviewer. 2014, 2015  
*Computer-Supported Cooperative Work Conference*. Reviewer. 2015  
*Designing Interactive Systems Conference*. Reviewer. 2014  
*User Interface Software and Technology Symposium*. Reviewer. 2014

## Publications

### Book Chapter

Mellis, D. A. 2014. "Personal Manufacturing in the Digital Age." In *Building Open-Source Hardware* (ed. Alicia Gibb). Addison Wesley.

## Article

Mellis, D. A. 2014. "Do-It-Yourself Fabrication of Electronic Devices." *Pervasive Computing, IEEE*, 13(3), 22-29.

## Conference Papers

Mellis, D. A., Buechley, L., Resnick, M., and Hartmann, B. 2016. "Engaging Amateurs in the Design, Fabrication, and Assembly of Electronic Devices." In *Proceedings of the Designing Interactive Systems Conference* (Brisbane, Australia, June 04 - 08, 2016). DIS '16. ACM. (forthcoming)

Mellis, D. A. and Buechley, L. 2014. "Do-it-yourself cellphones: an investigation into the possibilities and limits of high-tech DIY." In *Proceedings of the SIGCHI Conference on Human Factors in Computing Systems* (Toronto, Ontario, Canada, April 26 - May 01, 2014). CHI '14. ACM.

Mellis, D. A., Jacoby, S., Buechley, L., Perner-Wilson, H., and Qi, J. 2013. "Microcontrollers as material: crafting circuits with paper, conductive ink, electronic components, and an 'untookit'." In *Proceedings of the 7th international Conference on Tangible, Embedded and Embodied Interaction* (Barcelona, Spain, February 10 - 13, 2013). TEI '13. ACM.

Mellis, D. A. and Buechley, L. 2012. "Case studies in the personal fabrication of electronic products." In *Proceedings of the Designing Interactive Systems Conference* (Newcastle Upon Tyne, United Kingdom, June 11 - 15, 2012). DIS '12. ACM.

Mellis, D. and Buechley, L. 2012. "Collaboration in open-source hardware: third-party variations on the Arduino Duemilanove." In *Proceedings of the ACM 2012 Conference on Computer Supported Cooperative Work* (Seattle, Washington, USA, February 11 - 15, 2012). CSCW '12. ACM.

Mellis, D. A., Gordon, D., and Buechley, L. 2011. "Fab FM: the design, making, and modification of an open-source electronic product." In *Proceedings of the Fifth International Conference on Tangible, Embedded, and Embodied interaction* (Funchal, Portugal, January 22 - 26, 2011). TEI '11. ACM.

## Workshops, Panels, Posters

Jacobs, J., Mellis, D., Zoran, A., Torres, C., Brandt, J., and Tanenbaum, J. 2016. "Digital Craftsmanship: HCI Takes on Technology as an Expressive Medium." In *DIS '16*. ACM. (workshop, forthcoming)

Ames, M. G., Bardzell, J., Bardzell, S., Lindtner, S., Mellis, D. A., and Rosner, D. K. 2014. "Making cultures: empowerment, participation, and democracy - or not?." In *CHI '14 Extended Abstracts on Human Factors in Computing Systems* (Toronto, Ontario, Canada, April 26 - May 01, 2014). CHI EA '14. ACM. (panel)

**Mellis, D.**, Follmer, S., Hartmann, B., Buechley, L., and Gross, M. D. 2013. "FAB at CHI: digital fabrication tools, design, and community." In *CHI '13 Extended Abstracts on Human Factors in Computing Systems* (Paris, France, April 27 - May 02, 2013). CHI EA '13. ACM. (workshop)

**Mellis, D. A.** 2013. "Do-it-yourself electronic products and the people who make them." In *Proceedings of the 7th International Conference on Tangible, Embedded and Embodied Interaction* (Barcelona, Spain, February 10 - 13, 2013). TEI '13. ACM. (graduate student consortium)

**Mellis, D. A.** and Buechley, L. 2011. "Scaffolding creativity with open-source hardware." In *Proceedings of the 8th ACM Conference on Creativity and Cognition* (Atlanta, Georgia, USA, November 03 - 06, 2011). C&C '11. ACM. (poster)

Buechley, L., **Mellis, D.**, Perner-Wilson, H., Lovell, E., and Kaufmann, B. 2010. "Living wall: programmable wallpaper for interactive spaces." In *Proceedings of the International Conference on Multimedia* (Firenze, Italy, October 25 - 29, 2010). MM '10. ACM.

Rosenbaum, E., Eastmond, E., and **Mellis, D.** 2010. "Empowering programmability for tangibles." In *Proceedings of the Fourth International Conference on Tangible, Embedded, and Embodied Interaction* (Cambridge, Massachusetts, USA, January 24 - 27, 2010). TEI '10. ACM. (studio)

Cassell, J., Ananny, M., Basu, A., Bickmore, T., Chong, P., **Mellis, D.**, Ryokai, K., Smith, J., Vilhjmsson, H., and Yan, H. 2000. "Shared reality: physical collaboration with a virtual peer." In *CHI '00 Extended Abstracts on Human Factors in Computing Systems* (The Hague, The Netherlands, April 01 - 06, 2000). CHI EA '00. ACM.

#### Selected Talks

- "Open-Source Hardware and the Digital Fabrication of Electronic Devices", O'Reilly Solid. (Juried talk) 2014
- "Electronics as Digital Media", Digital Media and Learning. (Juried talk) 2014
- "Four Principles for an Ecosystem of Open-Source Everyday Devices", Open Hardware Summit. (Juried talk) 2013
- "Sketching and Use", Sketching and Hardware. 2013
- "Artisanal Electronics: Alternatives to Mass Production in the Digital Age", Nokia Invited Lecture Series, Georgia Tech. (Invited talk) 2013
- "Do-It-Yourself Electronics: Arduino to Cellphones". Boston Regional Youth Media Arts Educator Consortium. (Invited talk) 2012
- "Arduino and the Promise of Open-Source Hardware", Harvard Graduate School of Design FWD Talk. (Invited talk) 2012
- "Digital Fabrication and Consumer Electronic Products", Sketching in Hardware. 2011
- "Open-Source in the Physical World". MIT Media Lab Sponsor Event. (Invited talk) 2009

#### Exhibitions

- Museum Angewandte Kunst (Frankfurt). *Hamster Hipster Handy*. DIY Cellphone. 2015
- Museum of Modern Art (New York). *Permanent Collection*. Arduino Diecimila. 2014
- Museum für Angewandte Kunst (Vienna). *MAK Design Lab*. DIY Cellphone. 2014
- UMass Lowell Art Department (Massachusetts). *High-Low Tech*. DIY Cellphone. 2014