

# EMILY MARIE LOVELL

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## EDUCATION

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- Doctor of Philosophy in Media Arts & Sciences** *September 2011 – Present*  
Massachusetts Institute of Technology
- Master of Science in Media Arts & Sciences** *September 2009 – May 2011*  
Massachusetts Institute of Technology
- Certificate in Graphic Design** *September 2008 – January 2009*  
Center for Digital Imaging Arts at Boston University
- Bachelor of Arts in Computer Science, Minor in Electronic Music** *September 2003 – March 2008*  
University of California at Santa Cruz
- Study Abroad with Semester at Sea, European Voyage** *Summer 2005*  
Institute for Shipboard Education and University of Pittsburgh

## EXPERIENCE

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- Technology, Design & Usability Consultant**, ImPACT Applications (Pittsburgh, PA) *July 2012 – present*
- Evaluated design and usability of iOS applications used to assess concussions
  - Interfaced with developers to ensure implementation of proposed changes
  - Researched candidate technologies and advised on their selection and appropriation
- Research Assistant**, MIT Media Lab (Cambridge, MA) *September 2009 – May 2012*
- Contributed to various research projects within the High-Low Tech group, led by Leah Buechley
  - Supervised two undergraduate research assistants contributing to development of an e-textile web community
  - Co-facilitated several workshops on physical computing and computational craft at venues such as: the MIT Museum, the Fuller Craft Museum, the Open University, and Indiana University
- Research Assistant**, UCSC Human-Computer Interaction Lab (Santa Cruz, CA) *May 2008 – January 2009*
- Coordinated a user study which evaluated the usability of screen magnification software
  - Configured server logging and screen capture to record user interaction with websites
- Research/Admin Assistant**, UCSC Motion Capture Lab (Santa Cruz, CA) *March 2007 – March 2008*
- Managed numerous funding accounts and supervised lab equipment purchases
  - Coordinated travel and lodging arrangements for graduate students attending research conferences
  - Provided generalized computer graphics research assistance as needed

## PROJECTS

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- Getting Hands-On with Soft Circuits**, Master's Thesis Research (MIT Media Lab) *Spring 2010 - Spring 2012*
- Authored a workshop facilitation guide that uses e-textiles as a vehicle to promote technological self-efficacy
  - Curated an accompanying kit of inexpensive, easily accessible craft and electronic components
  - Designed a low-cost sewable microcontroller (*LilyTiny*), now widely available through SparkFun Electronics
  - Piloted student activities and educator resources through MIT's Edgerton Center Outreach Program
- LilyPond**, Graduate Research (MIT Media Lab) *Fall 2009 - Spring 2011*
- Acted as lead designer and developer for a budding electronic textile web community
  - Collaborated with education faculty in considering how to best support and study such a community
- The Living Wall**, Graduate Research (MIT Media Lab) *Fall 2009 - Fall 2010*
- Contributed to a group project using conductive ink to investigate the possibilities of programmable wallpaper
  - Assisted in the painting and programming of circuitry to accommodate a number of interactive scenarios
- MyUCSC Interface Redesign**, Human-Computer Interaction (UC Santa Cruz) *Winter 2008*
- Produced an intuitive new interface for UCSC's student web-portal, MyUCSC, in a team of three students
  - Developed personas, scenarios, questionnaires, and storyboards as part of the user-centered design process
  - Iteratively evaluated interface revisions using heuristic methods

## PUBLICATIONS

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- LilyPond: An Online Community for Sharing E-Textile Projects.** Lovell, E., Buechley, L. (2011). In Proceedings of C&C, pp. 365-366.
- Living Wall: Programmable Wallpaper for Interactive Spaces.** Buechley, L., Mellis, D., Perner-Wilson, H., Lovell, E., and Kaufmann, B. (2010). In Proceedings of MM, pp. 1401-1402.
- CopyCAD: Remixing Physical Objects with Copy and Paste from the Real World.** Follmer, S., Carr, D., Lovell, E., Ishii, H. (2010). In Proceedings of UIST, pp. 381-382.
- An E-Sewing Tutorial for DIY Learning.** Lovell, E. and Buechley, L. (2010). In Proceedings of IDC, pp. 230-233.

## INVITED PARTICIPATION

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- International Computer Clubhouse Conference,** Introductory E-Textiles Workshop Facilitator *2012*
- GUTS y Girls Program,** Guest Presenter and E-Textile Workshop Facilitator *2011*
- SIGGRAPH,** Wearables Area Team Member in The Studio *2010*
- International Computer Clubhouse Conference,** Electronic Quilting Workshop Facilitator *2010*

## TEACHING

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- Teaching Assistant,** New Textiles (MIT Media Lab) *Spring 2012*
- Contributed to refining the pace and flow of course subject matter
  - Piloted and revised student assignments in advance of associated lab meetings
  - Met with students individually, as needed, to provide support on lab assignments and final projects
- Course Assistant,** Introduction to Computer Graphics (UC Santa Cruz) *Fall 2007*
- Redesigned course curriculum for an assistant professor of computer science
  - Led a group of five students by conducting weekly meetings and delegating responsibilities
  - Set a timeline for completion and assessed project progress through maintenance of wiki webpage
  - Co-authored an educational grant, securing \$2,000 in funding for continued curriculum improvement
- Course Assistant,** Technology Targeted at Social Issues (UC Santa Cruz) *Spring 2007*
- Collaborated on curriculum development and promoted innovative new course to undergraduates
  - Wrote and graded student quizzes, tracked grades, and moderated discussion forum
- Teaching Aid,** Radcliff Elementary School (Watsonville, CA) *Summer 2004*
- Provided teaching support for a fourth grade classroom in a bilingual (Spanish-English) school
  - Supported students in need of one-on-one attention

## ACTIVITIES & OUTREACH

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- Presenter,** Grace Hopper Celebration of Women in Computing *November 2011*
- Presented master's thesis research on e-textiles and self-efficacy in the ACM Student Research Competition
  - Co-facilitated an introductory e-textile workshop entitled "Expressive Electronics for Computer Scientists"
  - Co-organized and hosted a MIT Media Lab booth with the goal of attracting more qualified female applicants
- Co-President,** UCSC Society of Women Engineers Collegiate Section *April 2006 – May 2007*
- Conducted weekly meetings, volunteered at conferences, redesigned and managed website
  - Collaborated with other engineering organizations to plan fundraiser, recruiting, and outreach events
  - Developed and secured a \$3,000 grant for a networking event attended by 150 students, alumni, and faculty
- Student Volunteer**
- SIGGRAPH *2007*
- SWE Region A Conference *2007*
- Grace Hopper Celebration of Women in Computing *2006*
- Alternative Spring Break: Valle de las Palmas, Mexico *2006*
- Select Additional Outreach**
- Microsoft DigiGirlz: Presented craft technology research and curated an e-fashion show. *2010, 2011*
- WGBH's Dot Diva Initiative: Profiled as a role model for young women in STEM fields. *2010*
- BU Summer Pathways: Facilitated an e-textile bracelet workshop for young women in high school. *2010*
- Women in Technology Program: Led several groups of pre-college students on research lab tours. *2010*

## SCHOLARSHIPS, FELLOWSHIPS & AWARDS

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<b>Fellowship Recipient</b> , NSF Graduate Research Fellowship Program	2011
<b>Scholarship Finalist</b> , Google Anita Borg Memorial Scholarship Program	2011
<b>Honorable Mention</b> , NSF Graduate Research Fellowship Program	2010
<b>International and Global Perspectives Leadership Certificate</b> , UC Santa Cruz (College Nine)	2007
<b>College Distinction: Language and Culture Pathway</b> , UC Santa Cruz (College Nine)	2007
<b>Community Service Award</b> , UC Santa Cruz (College Nine)	2007
<b>Student Employee Recognition Award</b> , Instructional Computing	2005
<b>Merit Scholarship</b> , UC Santa Cruz	2003-2004
<b>Dean's List</b> , UC Santa Cruz	2003-2004

## GRANTS

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<b>Instructional Improvement Mini-Grant</b> , UCSC Committee on Teaching	2007
<b>Dean's Student Organization Grant</b> , UCSC School of Engineering	2007

## TECHNICAL SKILLS

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**Operating Systems:** Mac OS, Windows, UNIX

**Languages/Libraries:** C, C++, Java, LISP, MIPS, OpenGL, HTML, CSS, JavaScript, PHP, SQL, FLTK, VTK, Make, TeX, Ruby, Objective-C

**Software:** Photoshop, Illustrator, InDesign, Flash, Matlab, Paraview, POV-Ray, ProTools, Peak, Logic, Max/MSP, Processing, Arduino, Eagle