EMILY MARIE LOVELL

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EDUCATION

Doctoral Student in Computer Science   *September 2013 – Present*
University of California at Santa Cruz

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

Technology, Design & Usability Consultant, ImPACT Applications (Pittsburgh, PA)*July 2012 – December 2013*
- 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

Museum Educator Intern, The Exploratorium (San Francisco, CA)   *June 2013 – August 2013*
- Supported informal learning experiences, visiting artists, and special events in The Tinkering Studio
- Researched and prototyped new activities for museum visitors, related to electricity and circuits
- Facilitated activities on a drop-in basis with kids, families, and adults on the museum floor

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

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

PUBLICATIONS

QuickResponseHost: Enabling Crowdsourced Disaster Response Stations. Agrawal, R., Springer, A., Lovell, E. (2015). In Proceedings of Global Humanitarian Technology Conference (GHTC), pp. 233-239.

Promoting Constructive Mindsets for Overcoming Failure in Computer Science Education. Lovell, E. (2014). In Proceedings of International Computing Education Research Conference (ICER), pp. 159-160.

LilyPond: An Online Community for Sharing E-Textile Projects. Lovell, E., Buechley, L. (2011). In Proceedings of Creativity *&* Cognition (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 Multimedia (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 User Interface Software and Technology (UIST), pp. 381-382.

An E-Sewing Tutorial for DIY Learning. Lovell, E. and Buechley, L. (2010). In Proceedings of Interaction Design and Children (IDC), pp. 230-233.

TEACHING

Co-Instructor, Computing Education Research Seminar (UC Santa Cruz)   *Fall 2015*
- Collaborated with a faculty sponsor to schedule and teach a new graduate-level seminar
- Curated an extensive reading list on topics in computer science, education, and psychology

Instructor, Introduction to Computer Science (UC Santa Cruz)   *Summer 2014, 2015*
- Developed an accelerated summer curriculum, based on prior academic year offerings of the same course
- Lectured, moderated discussions, and facilitated activities on privacy, programming, efficiency, and more
- Held regular office hours/lab sections and graded (or supervised grading of) all student work

Teaching Assistant, Introduction to Computer Science (UC Santa Cruz)   *Fall 2014, Winter 2015*
- Developed detailed grading rubrics and tested all student assignments ahead of schedule
- Coordinated and supervised a team of four undergraduate graders, manually adjusting scores as needed
- Prepared material for and taught weekly lab sections, as well as end-of-term review sessions

Teaching Assistant, New Textiles (MIT Media Lab)   *Spring 2012*
- Contributed to refining the pace and flow of graduate 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

Undergraduate Teaching 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

Undergraduate Teaching 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

ACTIVITIES *&* OUTREACH

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*

Select Additional Outreach

OpenHatch: Volunteered as a mentor at an *Open Source Comes to Campus* event. 2014
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*

INVITED PARTICIPATION

Professor's Open Source Software Experience, Workshop Participant *2015*
Santa Cruz Museum of Art & History Mobile Hackathon, Judge *2014*
Curiosity Camp, Electronic Felting Workshop Facilitator *2014*
International Computer Clubhouse Conference, Introductory E-Textiles Workshop Facilitator *2012*
GUTS y Girls Program, Guest Presenter and E-Textile Workshop Facilitator *2011*
NCWIT Summit on Women and IT, *K-12 Share-a-Thon* Exhibitor *2011*
SIGGRAPH, Wearables Team Member in *The Studio* *2010*
International Computer Clubhouse Conference, Electronic Quilting Workshop Facilitator *2010*

SCHOLARSHIPS, FELLOWSHIPS & AWARDS

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

PEER REVIEW

ACM Conference on Tangible, Embedded and Embodied Interaction (TEI) *2012, 2014*
ACM Symposium on User Interface Software and Technology (UIST) *2012*
ACM Conference on Designing Interactive Systems (DIS) *2012*
ACM Joint Conference on Pervasive and Ubiquitous Computing (UbiComp) *2011*
ACM Conference on Human Factors in Computing Systems (CHI) *2010*

GRANTS

Instructional Improvement Mini-Grant, UCSC Committee on Teaching *2007*
Dean's Student Organization Grant, UCSC School of Engineering *2007*

TECHNICAL SKILLS

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