

EMILY MARIE LOVELL

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EDUCATION

- 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

- Research Assistant, MIT Media Lab (Cambridge, MA)** *September 2009 – Present*
- 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, 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
- Program Consultant, ImPACT Applications (Pittsburgh, PA)** *July 2006 – September 2006*
- Outlined requirements and goals for neurocognitive project partnered with national health products retailer
 - Designed short computerized memory exercises based on neuropsychological research
- International Peer Advisor, International Living Center (Santa Cruz, CA)** *September 2005 – June 2006*
- Mentored international and domestic students in regard to cultural, academic, and social issues
 - Planned and implemented events within a multicultural residential university community

PROJECTS

- LilyPond, Graduate Research (MIT Media Lab)** *Fall 2009 - Present*
- 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
- 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
- Virtual Kaleidoscopes, Scientific Visualization and Computer Animation (UC Santa Cruz)** *Winter 2008*
- Programmed POV-Ray to generate 2D and 3D kaleidoscopic images based on various mirror configurations
 - Compiled hundreds of high-resolution images to create short animations, simulating rotating kaleidoscopes
 - Project was voted second best in the class
- Duet in Syncopation, Advanced Electronic Sound Synthesis (UC Santa Cruz)** *Winter 2006*
- Arranged performance duet in which dancers generated audio composition through rhythmic foot movement
 - Programmed Max/MSP to covert piezo feedback into realtime array of triggered sound samples
 - Designed custom wiring arrangement and adapted dance shoes for performers

PUBLICATIONS

- 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

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

TEACHING

- 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

ACTIVITIES & OUTREACH

- 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

AWARDS

- Scholarship Finalist**, Google Anita Borg Memorial Scholarship Program 2011
- Fellowship Recipient**, NSF Graduate Research Fellowship 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

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

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