

# Science & Art

## Meet the Scientist-Artists Leah Buechley — Electric Threads



Leah Buechley blends her knowledge of electronics, programming and sewing to create e-textiles that blink, flash and buzz.

Buechley's research explores the intersection of computational and physical media, focusing on computational

textiles or electronic textiles (e-textiles) — soft, flexible, fabric-based computers. Her work includes developing a method for creating cloth printed circuit boards (fabric PCBs) and designing the commercially-available lilypad arduino system, which enables

novices to build soft wearable computers.

Her undergraduate degree in physics is from Skidmore College where she also studied theater, dance and photography. She holds a ph.D. in computer science from the University of Colorado, Boulder and, as of January 2009, Buechley is an assistant professor in the Media Lab at Massachusetts Institute of Technology (MIT).

Buechley became fascinated with the technical and artistic potential of conductive threads fabric. She thought it was magical that it was possible to combine the hard, square universe of electronics and computers with the soft, colorful universe of textiles and fashion. Buechley has been inspired by Maggie Orth, whose works include musical instruments made from soft embroidered pillows, textile wall-hangings that change color in response to different stimuli, and some of the first beautiful and truly wearable computers.



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*"Artistic and scientific engineering concerns have never seemed that far apart to me. It takes similar creativity to innovate in design and technology. All of this leads to the greater personalization that people are so hungry for."*

—Leah Buechley

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In this exhibit, Buechley's collaborative spirit comes through, as does her commitment to demystifying the tools of programming so that others may also create computational textile projects. You will see a display of some of her work and the materials and

equipment needed, including sketches, samples of her programming language, sewing machine, conductive thread, soldering iron, soldering flux and lilypad arduino components.

More info: [web.media.mit.edu/~leah/](http://web.media.mit.edu/~leah/)