

# M. Six Silberman

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## Education

### Formal

Ph.D. coursework, Informatics, University of California, Irvine, 2009-2010.

Research: Labor relations in crowdsourcing; information technology and environmental sustainability.

M.S. Engineering, Arts Computation Engineering, University of California, Irvine, Sept. 2009.

Thesis: *Experiments in critical mathematical modelling*.

Topics: Epistemological problems in economics; reflective strategies in mathematical modelling.

B.S. Applied Mathematics, Columbia University in the City of New York, May 2007.

### Informal

Hacker School batch[3], New York, New York. Jun-Aug 2012. See [hackerschool.com](http://hackerschool.com).

## Research

### In preparation

L. Irani and M. S. Silberman. Turkopticon: Making human computational workers visible. In preparation for submission to CHI 2013.

### In review

B. Tomlinson, M. S. Silberman, E. Blevis, Y. Pan, D. Patterson, and B. Nardi. Collapse informatics and everyday sustainable practices. Submitted to *ACM Transactions on Computer-Human Interaction*.

### Peer-reviewed publications and workshop proceedings

M. S. Silberman. Norms, infrastructures, goals, and needs. Presented at *Simple, Sustainable Living*, workshop at CHI 2012.

B. Tomlinson, M. S. Silberman, E. Blevis, Y. Pan, and D. Patterson. Collapse informatics: augmenting the sustainability & ICT4D discourse in HCI. *Proc. CHI 2012*: 655-664. Awarded CRA-CCC sustainability community award for best sustainability paper at CHI 2012. Included in Bonnie Nardi's Spring 2012 Collapse Computing syllabus at UC Irvine.

B. Tomlinson, J. Ross, P. André, E. P. S. Baumer, D. Patterson, J. Cornell, M. Mahaux, S. Nobarany, N. Sambasivan, M. Lazzari, B. Penzenstadler, A. W. Torrance, D. J. Callele, G. M. Olson, M. S. Silberman, M. Ständer, F. R. Palamedi, A. A. Salah, E. P. Morrill, X. Franch, F. Mueller, J. J. Kaye, R. W. Black, M. L. Cohn, P. C. Shih, J. Brewer, N. Goyal, P. Näkki, J. Huang, N. Baghaei, and C. Saper. Massively distributed authorship of academic papers. *Proc. CHI EA 2012* (alt.chi): 11-20.

Kaufman, S. J. and M. S. Silberman. Rebound effects in sustainable HCI. Presented at *Everyday Practice and Sustainable HCI*, workshop at CHI 2011.

Baumer, E. P. S. and M. S. Silberman. When the implication is not to design (technology). *Proc. CHI 2011*: 2271-2274. Awarded “Honorable Mention” (best 5% of accepted papers). Included in Don Patterson’s Winter 2011 User Interaction Software syllabus at UC Irvine.

Silberman, M. S., J. Ross, L. Irani, and B. Tomlinson. Sellers’ problems in human computation markets. *Proc. HCOMP 2010*: 18-21. Included in Hartmann, Franklin, and Parikh’s Spring 2011 Crowdsourcing Seminar syllabus at UC Berkeley.

Silberman, M. S. and B. Tomlinson. Toward an ecological sensibility: tools for evaluating sustainable HCI. *Proc. CHI 2010*: 3469-3474 (works-in-progress).

Ross, J., L. Irani, M. S. Silberman, A. Zaldivar, and B. Tomlinson. Who are the crowdworkers? Shifting demographics in Mechanical Turk. *Proc. CHI 2010*: 2863-2872 (alt.chi). Included in Hartmann, Franklin, and Parikh’s Spring 2011 Crowdsourcing Seminar syllabus at UC Berkeley (and other syllabi).

J. Huh, L. P. Nathan, [M.] S. Silberman, E. Bleviss, B. Tomlinson, P. Sengers, and D. Busse. Examining appropriation, re-use, and maintenance for sustainability. *Proc. CHI 2010*: 4457-4460 (workshop).

Silberman, M. S. and B. Tomlinson. Precarious infrastructure and postapocalyptic computing. Presented at *Examining appropriation, re-use, and maintenance for sustainability*, workshop at CHI 2010. Included in Bonnie Nardi’s Spring 2012 Collapse Computing syllabus at UC Irvine.

Silberman, M. S. *Experiments in critical mathematical modelling*. UC Irvine M.S. thesis, 2009.

Silberman, M. S. Designing economic interactions. Presented at *Defining the role of HCI in the challenges of sustainability*, workshop at CHI 2009.

## Peer-reviewed publications with acknowledgments

Raha, S. A critique of statistical hypothesis testing in clinical research. *Journal of Ayurveda and Integrative Medicine* **2**(3): 105-114, 2011.

Hayes, G. R. The relationship of action research to human-computer interaction. *ACM Transactions on Computer-Human Interaction* **18**(3), 2011.

Tomlinson, B. *Greening Through IT: Information Technology for Environmental Sustainability*. MIT Press, 2010.

Dhadialla, P. S. Computing for community based health systems. *Proceedings of the Computing Community Consortium Workshop on Computer Science and Global Development*: 38-40, 2009.

## **Publications in professional magazines**

Tomlinson, B., M. S. Silberman, and J. White. Can more efficient IT be worse for the environment? *IEEE Computer* **44**(1): 87-89, 2011.

Silberman, M. S., L. Irani, and J. Ross. Ethics and tactics of professional crowdwork. *XRDS* **17**(2): 39-43, 2010.

## **Technical memoranda**

Silberman, M. S. Efficiency and sustainability. UC Irvine Social Code Group Tech. Memo., 2010. In conversation with James White, Bill Tomlinson, and Nadine Amsel.

Silberman, M. S. and B. Tomlinson. Representing the search spaces of everyday human sustainability problems. Extended abstract accepted to CompSust 2010.

Silberman, M. S. What's fair? Rational action and its residuals in an electronic market. Unpublished manuscript, 2010.

Choontanom, T. and M. S. Silberman. Edge effects: complex practices between open source and proprietary software development. UC Irvine Lab. for Ubiquitous Computing and Interaction Tech. Rep. LUCI-2010-001, 2010.

Silberman, M. S. and B. Tomlinson. Design as reconfiguration. Extended abstract accepted to DRS 2010 as "Design as situated reconfiguration: toward a transdisciplinary framework between ecology and design."

Silberman, M. S. and [B.] Tomlinson. Practical cartographies in material-semiotic assemblages. Unpublished manuscript, 2009.

Silberman, M. S., S. Kaufman, and [B.] Tomlinson. Notes toward an experimental political ecology/nomy. Unpublished manuscript, 2009.

Silberman, M. S. Protocological experiments toward a critical gaming: further notes on distributed communications and weaponized theory. Unpublished manuscript, 2009.

Silberman, M. S. "We, in some strange power's employ, move on a rigorous line." Extended abstract accepted to DAC 2009.

Silberman, M. S. Modelling transportation networks with Octave. Unpublished manuscript, 2008.

Silberman, M. S. and T. Heikkilä. Information architecture and sustainable development. Discussion paper, 2007.

## **Other presentations**

25 Jun 2010. Sellers' problems in human computation markets. Human Computation Workshop at ACM-KDD, Arlington, VA.

12 – 14 Nov 2009. With Lilly Irani: Agency and exploitation in Mechanical Turk. The Internet as Playground and Factory, Eugene Lang College, New School for Liberal Arts, New York, NY.

10 Jun 2009. With Lilly Irani: The ‘sourced’ crowd is made of people: what that means for *what* and *how* we build. Mechanical Turk Meetup, Dolores Labs, San Francisco, CA.

7 – 9 Mar 2008. Technology for organizing: some information architectures for student activists. IM-PACT: National Conference on Service, Advocacy, and Social Action, Northwestern University, Boston, MA.

## Research software

*Turkopticon*. [turkopticon.differenceengines.com](http://turkopticon.differenceengines.com), [turkopticon-devel.differenceengines.com](http://turkopticon-devel.differenceengines.com). Launched October 2008, active with approximately 120,000 page views per month. Chrome and Firefox add-ons and web database application to allow workers on Amazon’s Mechanical Turk to rate employer quality. With L. Irani, UC Irvine Department of Informatics.

*flock.rb*. Software package for modelling flocking behavior in Ruby. August 2012.

*caniborrowyourgoat.com*. Launched April 2010, active. Web database application to facilitate sharing among university housing residents. With B. Tomlinson, UC Irvine Department of Informatics.

*Augh*. Launched March 2010, defunct. Firefox add-on and web database application to avoid unnecessary recall of checked-out library books.

Software package for modelling transportation networks in Octave. May 2008.

*klhx*. May 2007. A generalized, extensible, discrete-time water balance model in MATLAB. With G. D. Kelly, Columbia University Department of Civil Engineering and Engineering Mechanics.

A discrete-time extensible integrated simulation of global water demand and food trade in MATLAB. May 2007. With D. Pontoriero, Columbia University Department of Applied Mathematics, and T. Siegfried, Columbia University Earth Institute.

Software (in MATLAB) for analyzing effects of windspeed parametrization on gas exchange at the sea-air interface in general circulation models. With C. Zappa and S. Khatiwala, Lamont-Doherty Earth Observatory, Columbia University.

## Teaching experience

**Reader**, ICS 5: Environmental Issues in Information Technology, UC Irvine  
March – June 2009

Worked with another reader to grade assignments, give feedback, and support student projects.

**Instructor**, Physics and Astronomy, UC Irvine Gifted Students Academy  
May – August 2006

Designed and taught a series of five weeklong courses in physics and astronomy to middle-school-aged students.

## Other work experience

**Yoga Instructor**, Square One Yoga Collective, Emeryville, CA  
January 2012

**Yoga Instructor**, Ayuh Yoga, Union City, CA  
July 2011 – January 2012

**Developer and Designer** (Freelance) Berkeley, CA  
November – December 2011  
Built simple, owner-editable websites ([pohmyoga.com](http://pohmyoga.com); [nature.berkeley.edu/~nomura](http://nature.berkeley.edu/~nomura)) in PHP.

**Developer and Designer**, Assetmap Strategies, San Francisco, USA  
January – June 2011  
Assetmap ([assetmap.com](http://assetmap.com)) is a web application that helps groups share resources. The developer/designer develops and designs the web application.

**Developer and Designer**, Humanity in Action, New York, USA  
December 2008 – April 2009  
Humanity in Action works to build global leadership, defend minorities, and improve human rights by inspiring, engaging, and empowering the human rights leaders of the future. The developer/designer develops, designs, deploys, and maintains the online application system.

**Information Architect**, StartingBloc NFP, New York, USA  
July 2007 – March 2009  
StartingBloc is a not-for-profit that hosts educational conferences and events to empower, educate, and connect emerging leaders to drive social innovation across sectors. Its full-time staff of two manages a rapidly growing global network of over 1000 fellows, alumni, supporters, and other stakeholders who collaborate on projects relevant to StartingBloc's mission. The information architect develops and maintains custom and off-the-shelf internal and public-facing software to facilitate this communication and collaboration.

**Editorial Webmaster**, *New University*, Irvine, USA  
September 2007 – March 2009  
The *New University* is the student-run weekly newspaper of the University of California, Irvine. The editorial webmaster builds, maintains, and populates the custom-built web database application that makes the newspaper's content available online.

**Information Architect**, Center for Climate Systems Research, Columbia University and NASA Goddard Institute for Space Studies, New York, USA  
June – August 2007  
Interviewed stakeholders and developed a web database application for internal and public-facing use to store publications and other information pertaining to the ongoing research work of the scientific staff.

**Developer and Designer** (Volunteer)  
June 2007  
Built and deployed, in 96 hours, a web-based auction site to manage an internal auction at JPMorgan to raise funds for the Fresh Air Fund, a nonprofit that organizes summer vacations to the country for children from disadvantaged urban communities.

**Founding Editor and Designer** (Volunteer)

February – April 2007

Worked with co-editors, contributors, and researchers to name, develop, organize, design, and produce *Consilience: The Journal of Sustainable Development* ([consiliencejournal.org](http://consiliencejournal.org)).

**Print Designer** (Volunteer)

February 2007

Designed print layout for Issue 2 of *Outlet*, a student-run sex magazine at Columbia University. Featured in “Campus Exposure,” *New York Times Magazine*, 4 Mar 2007.

## Publications in popular press

Silberman, [M.] S. Don’t text message breakup, bitch. *New University* **43**(13), 11 Feb 2008.

Analysis of the technocultural orientation and implications of Liam Kyle Sullivan’s video “Text Message Breakup.”

Silberman, M. S. Un/sustainable futures. Column, *Columbia Daily Spectator*:

Future-forward. 23 Jan 2007.

Infra-everything. 6 Feb 2007.

Infrastructural adjustments. 20 Feb 2007.

Externalize this. 27 Mar 2007.

Transparency and its discontents. 10 Apr 2007.

The end of the beginning. 24 Apr 2007.

N. Morgante and M. S. Silberman. Ruckus tries hard, but misses its aim. *Columbia Daily Spectator*, 19 Mar 2007.

## Skills

### *Programming and web development*

Extensive experience with Rails, Sinatra, Ruby, MySQL, Facebook Graph API, HTML, and CSS for web database application development. Some experience with JavaScript (including the jQuery library), Common Lisp, PHP, Java, C++, C, and Processing.

Extensive experience with MATLAB and Octave for mathematical modelling.

Extensive user-level command-line experience with Linux systems (mainly the Arch and Ubuntu distributions). Some administrative experience.

Some experience with Amazon Web Services for web database application development.

### *Standard software*

Extensive experience with Adobe Photoshop and InDesign/PageMaker for web and print design.

Extensive experience with Microsoft Office suite, including mathematical modelling with Excel.

Extensive experience typesetting documents in  $\text{\LaTeX}$ .

*Miscellaneous*

Some experience with basic circuit design and construction with microprocessors (Arduino).

Some experience with basic mechanical design and construction.

Proficient in written and spoken Spanish.

This document updated 16 September 2012.