

DANIEL STEINBOCK

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RESEARCH INTERESTS

human-centered design methods, innovation & collaboration, creative agency, design education, research-based design, social software

EDUCATION

- 2011 Stanford University, Stanford, CA
Ph.D. Learning Sciences & Technology Design (in progress)
Advisors: Roy Pea, Brigid Barron, Ray McDermott
Dissertation title (working): Agency and Innovation in Two Silicon Valley Communities of Practice: Product Designers and Quakers
- 2008 Stanford University School of Engineering, Stanford, CA
M.S. Design Methodology (individually-designed M.S.)
Advisors: David Kelley, Bernard Roth
- 2003 Santa Fe Institute for Complexity Science, Santa Fe, NM
Certificate of Study in the Science of Complexity
- 2002 University of California, Santa Cruz, CA
B.S. Computer Science, Highest Honors

AWARDS, HONORS & DISTINCTIONS

- 2005 Quillen Graduate Fellowship, Stanford University School of Education
- 2002 Valedictorian, University of California at Santa Cruz
Highest Honors in Computer Science, Highest Scoring Exit Exam
Benjamin F. Porter College Honors
Dean's Award for Outstanding Undergraduate Research
- 1997–2002 Regents Scholar, University of California full-ride merit scholarship

TEACHING

- WINTER 2010 Lecturer in the Stanford Product Design program. Taught “needfinding” design research methods to undergraduate and graduate design students.
 - Assistant teacher in the Stanford School of Education on an overview of 20th century theories of learning. Lecturer on learning by conflict and counterculture.
- FALL 2009 Extended teaching team member and coach for design-thinking “bootcamp” students at Stanford University’s Hasso Plattner Institute for Design.
- WINTER 2008 Co-taught a course on K-12 design curriculum at the Hasso Plattner Institute for Design at Stanford. *w/ Rich Crandall, Ugochi Acholann.*
 - Co-designed and taught new curricula to teach 7th graders at East Palo Alto Academy creative confidence and the human-centered design process used at Stanford University’s Hasso Plattner Institute for Design. *w/ Shelley Goldman*

- SPRING 2007–FALL 2007 Founding team member for the K-12 Lab at the Hasso Plattner Institute for Design at Stanford. Designed and taught curricula for 1st, 4th, and 7th graders learning creative confidence and the human-centered design process at Nueva School in Hillsborough, CA. *w/ David Kelley*
- SPRING 2007 Served as teaching assistant for Online Learning Communities in the Stanford School of Education. *w/ Roy Pea*

SELECTED RESEARCH & DESIGN PROJECTS

- FALL 2009 Led new ethnographic research project to study learning among design-thinking students at Stanford University's Hasso Plattner Institute for Design.
- SPRING 2007–FALL 2007 Co-designed a 3500 sq. ft. **innovation lab** for kindergarten–8th graders to learn collaboration and creative thinking at Nueva School in Hillsborough, CA. *w/ David Kelley*
- FALL 2006–SUMMER 2007 Co-designed and engineered an **artificial sense of direction** for pedestrian navigation. Developed wearable hardware & software for body-area-network connectivity and vibrotactile guidance. *w/ Larry Leifer & Panasonic*
- SUMMER 2006–PRESENT Programmed a web application for word cloud visualizations of free-form texts. Invented **Wearable Tag Clouds** to facilitate collaborative interactions. *w/ Roy Pea & Byron Reeves* <http://www.tagcrowd.com>
- WINTER 2007 Developed new product concepts and corporate partnership strategies to **fund the fight against AIDS in Africa**. *w/ Product (RED) & David Kelley*
- Authored design guidelines for the development of a **participatory journalism online community** at Stanford University. *w/ Howard Rheingold*

SELECTED PROFESSIONAL EXPERIENCE

- 06/2010–PRESENT **Fletcher Research**, Palo Alto, CA
Research & Design Consultant, Human Factors, User-Centered Fieldwork.
- 09/2005–PRESENT **Stanford University**, Stanford, CA
Graduate Student Researcher & Teaching Assistant
- 06/2007–03/2008 **Hasso Plattner Institute of Design at Stanford**, Stanford, CA
Curriculum & Technology Design Consultant, Instructor, Team Coach
- 06/2006–PRESENT **Human Sciences & Technologies Advanced Research**, Stanford, CA
Data Visualization Software Developer, Researcher, Web Technologist
- 12/2005–01/2006 **Stanford Institute for Economic Policy Research**, Stanford, CA
Social Networks Analyst, Researcher
- 04/2006–06/2007 **Stanford ResComp**, Stanford, CA
Residential Computing Coordinator, Web Developer
- 03/2006–09/2007 **Synergy Cooperative**, Stanford, CA
Community Facilitator, Technology and Computing Director
- 10/2004–07/2005 **Lunar Logic**, Eugene, OR
Educational Software Developer
- 06/2002–09/2004 **Confluent Designs**, San Francisco Bay Area, CA

- Freelance Social Software Consultant
- 01/2003–09/2004 **The Moment Presents**, Santa Cruz, CA
Producer, Audio Engineer, Graphic Designer
- 06/2002–10/2002 **iQ Company**, Santa Cruz, CA
Web Technologist for finance prediction market
- 09/2001–09/2004 **University of California**, Santa Cruz, CA
Undergraduate & Postgraduate Computer Science Researcher
- 06/2000–09/2000 **Agilent Technologies**, Santa Rosa, CA
Web Developer, Technical Writer
- 10/1998–03/1999 **University of California**, Santa Cruz, CA
University Computer & Network User Support Specialist
- 06/1998–09/1999 **Nokia Inc.**, Petaluma, CA
Web Developer. Graphic Designer, Information Services Technician
- 06/1994–06/2004 **Whiz Kid Co.**, San Francisco Bay Area, CA
Freelance Web Developer, Graphic Designer, Mobile Computing Consultant

SELECTED PUBLICATIONS

Repertoires of Collaborative Practice, Barron, B., Martin, C. K., Mercier, E., Pea, R. D., Steinbock, D., Walter, S., Mertl, V.. *Proceedings of the NSF Science of Learning Centers Annual Meeting 2009*, Washington, D.C.

Repertoires of Collaborative Practice: Theoretical introduction and background, Barron, B., Martin, C. K., Mercier, E., Pea, R. D., Steinbock, D., Walter, S., Mertl, V.. *CSCL 2009: Proceedings of the Conference on Computer Supported Collaborative Learning*, Rhodes, Greece.

Mindful of Process: Scaffolds for Collaboration Discourse in Design Education, Daniel Steinbock. *ICLS 2008: Proceedings of the International Conference for the Learning Sciences*, Utrecht, Netherlands.

Visualizing Identity to Facilitate Learning in Collaboration, Daniel Steinbock, Joey J. Lee, Roy Pea. *ISLC 2008: Proceedings of the Conference for NSF's Science of Learning Centers*, Pittsburgh, PA.

Wearable Tag Clouds: Visualizations to Support New Collaborations, Daniel Steinbock, Roy Pea, Byron Reeves. *CSCL 2007: Proceedings of the Conference on Computer Supported Collaborative Learning*, New Brunswick, NJ.

Smartocracy: Social Networks for Collective Decision Making, Marko Rodriguez, Daniel Steinbock, Jennifer Watkins, Carlos Gershenson, Johan Bollen, Victor Grey, Brad deGraf. *HICSS 2007: IEEE Hawaii International Conference on Systems Science*, Waikoloa, Big Island, HI.

Snurf: Social Networks for News Media Distribution, Marko Rodriguez, Jennifer Watkins, Daniel Steinbock, Carlos Gershenson. Los Alamos National Lab Technical Report LA-UR-06-2244, March 2006.

The Anatomy of a Large Scale Collective Decision Making System, Marko Rodriguez, Daniel Steinbock. Los Alamos National Lab Technical Report LA-UR-06-2139, March 2006.

Societal-Scale Decision Making Using Social Networks, Marko Rodriguez, Daniel Steinbock. NAACSOS 2004: *North American Association for Computational Social and Organizational Science Conference Proceedings*. Pittsburgh, PA. [featured in Complexity Digest 2004.51, World Changing June 26, 2005, Nanotechnology Now July 1, 2005]

Group Holographic Modeling for Societal-Scale Decision-Making Systems, Marko Rodriguez, Daniel Steinbock. NAACSOS 2004: *North American Association for Computational Social and Organizational Science Conference Proceedings*, Pittsburgh, PA.

When Dissent Is Good: The Interplay Between Reputation and Social Networks in an Artificial Society, Daniel Steinbock, Elena Zinchenko, Joshua Miller, R. Jack Thomas. CSSS 2003: *Santa Fe Institute Complex Systems Summer School Proceedings*, Santa Fe, NM.

Collective Intelligence Quantified for Computer-Mediated Group Problem Solving, Daniel Steinbock, Craig Kaplan, Marko Rodriguez, Juana Diaz, Newton Der, Suzanne Garcia. University of California, Santa Cruz Technical Report UCSC-CRL-02-28, July 2002. [featured in Complexity Digest 2004.52]

PATENTS & DISCLOSURES

Deferred Advertising Network, Daniel Steinbock, Philip Narodick. Stanford University Office of Technology Licensing. Disclosure, June 2007.

Artificial Sense of Direction for Personal Navigation, Daniel Steinbock, Benjamin Jackson, Jon Berkowitz. Stanford University and Panasonic Inc., Patent Pending, June 2007.

Social Semantic Networks for Distributing Contextualized Information, Marko Rodriguez, Daniel Steinbock, Jennifer Watkins. Stanford University and Los Alamos National Laboratory, Patent Pending, December 2006.

SELECTED PRESENTATIONS

- MAY 2010 **Collaborative practices of human-centered product designers**, Stanford School of Education, *Stanford, California*.
- **The Dirty Dish Dilemma and other simulation-based inquiries for research or the classroom**, Inter-Science of Learning Center Conference, *Boston, Massachusetts*.
 - **The Dirty Dish Dilemma and other agent-based models of ‘the social,’** LIFE Leadership Group, NSF Science of Learning Center, *Seattle, Washington and Stanford, California*.
- APRIL 2009 **The Dirty Dish Dilemma**, LIFE Center Collaboration Group, Stanford School of Education, *Stanford, California*.
- MARCH 2009 **Computer Modeling of Complex Social Systems**, Foothill College, *Los Altos Hills, California*.
- FEBRUARY 2009 **Computational Modeling Methodologies for Social Behavior**, Stanford School of Education, *Stanford, California*.

- JUNE 2008 **Two Complementary Ways Artifacts Are Used to Describe Experiences**, Stanford School of Education, *Stanford, California*.
- MAY 2008 **Tag Self: Visualizations of Personal Identity**, LIFE Media Group, NSF Science of Learning Center, *Seattle, Washington and Stanford, California*.
- MARCH 2008 **Mindful of Process: Learning to Collaborate in Communities of Practice**, Qualifier Review, Stanford School of Education, *Stanford, California*.
- **Circle of Friends: Quaker Communities of Practice**, Stanford School of Education, *Stanford, California*.
- MARCH 2008 **Coworking Ecologies in the Future Workplace**, Stanford School of Engineering, *Stanford, California*.
- JULY 2007 **Geotagging and Participatory Media Inside and Outside the Classroom**, Stanford Center for Innovations in Learning, *Stanford, California*.
- JANUARY 2007 **An Artificial Sense of Direction for Personal Navigation**, EXPE 2007 Design Fair, *Stanford, California*.
- **How to Overcome Distraction and Device-Dependence for Mobile Communication & Navigation Products**, Panasonic Advanced Technology Research Lab, *Kyoto, Japan*; University of Tokyo, *Tokyo, Japan*.
- MARCH 2007 **Three-Tiered Participatory Journalism**, Stanford University Dept. of Communication, *Stanford, California*.
- AUGUST 2006 **Tag Clouds for Research Communities**, Stanford University Center for Teaching and Learning, *Stanford, California*..
- JUNE 2006 **The Audience Effect in Online Communities**, Topics in Technology & Learning, Stanford University School of Education, *Stanford, California*..
- APRIL 2005 **Revealing Invisible Landscapes**, Free University Center for Evolution, Complexity and Cognition, *Brussels, Belgium*.
- JUNE 2004 **Particle-Swarms for an Emergent Democracy**, PlaNetwork Conference, *San Francisco, California*.
- **Using Social Networks for Societal-Scale Decision Making**, North American Association for Computational Social and Organizational Science Conference, *Pittsburg, Pennsylvania*.
- MAY 2004 **Self-Modeling Dynamical Systems & Social Networks**, International Conference on Complex Systems, *Boston, Massachusetts*.
- JULY 2003 **Gossip, Reputation and the Emergence of Social Networks**, Santa Fe Institute Complex Systems Summer School, *Santa Fe, New Mexico*.
- MAY 2002 **Software Designs for Human Collective Intelligence**, UC Santa Cruz School of Engineering Research Colloquium, *Santa Cruz, California*.
- AUGUST 2000 **Regular Expression Pattern Matching for Large-Scale Document Reformatting**, Agilent Technologies, *Santa Rosa, California*.

ACKNOWLEDGEMENTS

Social Decision Making with Multi-Relational Networks and Grammar-Based Particle Swarms, Marko Rodriguez. HICSS 2007: IEEE *Hawaii International Conference on Systems Science*. [featured in Complexity Digest 2006.38]

Simulating Network Influence Algorithms Using Particle-Swarms: PageRank and PageRank-Priors, Marko Rodriguez, Johan Bollen. Los Alamos National Lab Technical Report LA-UR-05-6469, August 2005.

REFERENCES

Available on request.