

DANIEL JOSHUA STEINBOCK

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RESEARCH INTERESTS

learning through social interaction, learning in communities of practice,
online communities, collaborative human-centered design

EDUCATION

PRESENT **Stanford University**, Stanford, CA
Ph.D. in Learning Sciences & Technology Design (in progress)
Advisors: Roy Pea, Brigid Barron

2008 **Stanford University**
M.S. in Design Process Engineering
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. in 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 scholarship

RECENT DESIGN PROJECTS

WINTER 2008 Co-designed and co-taught a new **curriculum** to teach 7th graders in East Palo Alto, CA, the **human-centered design process** used at Stanford University's Hasso Plattner Institute for Design. *w/ Shelley Goldman*

SPRING 2007–FALL 2007 Co-designed and constructed 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 Engineered an **artificial sense of direction** for pedestrian navigation. Developed wearable hardware & software for body-area-network connectivity and vibrotactile guidance. *w/ Panasonic & Larry Leifer*

SUMMER 2006–PRESENT Programmed a web application for Tag Cloud visualization of free-form texts. Invented **Wearable Tag Clouds** to facilitate collaborative relations. *w/ Roy Pea & Byron Reeves* [<http://www.tagcrowd.com>]

- WINTER 2007 Developed new product concepts and partnerships strategies for iTunes Store users to **help 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*

EMPLOYMENT

- 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
Designer, Curriculum & Technology Consultant, Engineer, Teacher
- 06/2006–PRESENT **Human Sciences & Technologies Advanced Research**, Stanford, CA
Researcher, Web Technologist, Data Visualization Software Developer
- 12/2005–01/2006 **Stanford Institute for Economic Policy Research**, Stanford, CA
Researcher, Database Software Developer, Social Networks Analyst
- 04/2006–06/2007 **Stanford ResComp**, Stanford, CA
Residential Computing Coordinator, Web Developer
- 03/2006–09/2007 **Synergy Cooperative**, Stanford, CA
Computing Manager, Communities Facilitator
- 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 Artist
- 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

PUBLICATIONS

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

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*, to appear.

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*.

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*.

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*. [featured in Complexity Digest 2004.51, World Changing June 26, 2005, Nanotechnology Now July 1, 2005; implemented by Smartocracy.com]

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*.

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*.

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

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.

PRESENTATIONS

- MARCH 2008 **Mindful of Process: Learning to Collaborate in Communities of Practice**, Qualifier Review, Stanford School of Education, *Stanford, California*.
- MARCH 2008 **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*.
- JANUARY 2007 **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*.
- JUNE 2004 **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.