

Mark W. Newman

Assistant Professor
School of Information
2222 School of Information North
1075 Beal Avenue
Ann Arbor, Michigan 48109

Tel. +1 734 764 0020
Fax. +1 734 764 0020
mwnewman@umich.edu
<http://si.umich.edu/mwnewman>

EDUCATION

- 1997-2007 University of California, Berkeley, CA
Ph.D. in Computer Science, 2007
Dissertation: Supporting End-User Composition in Ubiquitous Computing Environments
Advisors: James Landay and John Canny
M.S., 1992
- 1994-1997 University of Minnesota, Minneapolis, MN
Computer Science Coursework, GPA: 4.0/4.0
- 1990-1992 Macalester College, St Paul, MN
B.A. in Philosophy
- 1988-1990 Bryn Mawr College, Bryn Mawr, PA

PROFESSIONAL EXPERIENCE

- 2007-Present School of Information, University of Michigan
Assistant Professor
- 2000-2007 Palo Alto Research Center, Palo Alto, CA (formerly Xerox PARC)
Member of Research Staff II in the Computer Science Laboratory
Research in the Distributed Systems Area and Ubiquitous Computing Area
- 1999-2000 Netraker Corporation, Sunnyvale, CA
User Experience Designer
- 1997-2000 University of California, EECS Department, Berkeley, CA
Graduate Student Researcher & Instructor
Research with Professor James Landay in the Group for User Interface Research
Teaching assistant for CS 162: Operating Systems and System Programming,
Teaching Assistant for CS 61B: Data Structures
- 1998 DEC/Compaq Western Research Laboratory
Research Intern
Research with Norm Jouppi on Mutual Immersive Telepresence project
- 1996-1997 Honeywell Technology Center, Minneapolis, MN
Software Developer
Developer on Honeywell Home Control product

TEACHING EXPERIENCE

- University of Michigan, SI 622: Evaluation of Systems and Services, Winter 2008, Winter 2009.
- University of Michigan, Human Factors Engineering Short Course, Cost Benefit Analysis for HCI, Summer 2008.
- University of California at Berkeley. Graduate Student Instructor. *CS 162: Operating Systems and System Programming*, Spring 1998. **Received Outstanding Graduate Student Instructor Award.**
- University of California at Berkeley. Graduate Student Instructor. *CS 61B: Data Structures*, Fall 1997.
- Macalester College, Teaching Assistant. *PHIL 120: Introduction to Symbolic Logic*, Fall 1991.

REFEREED PUBLICATIONS

Journal Articles

Experiences with recombinant computing: Exploring ad hoc interoperability in evolving digital networks. W. Keith Edwards, Mark W. Newman, Jana Z. Sedivy, and Trevor F. Smith. *ACM Trans. Comput.-Hum. Interact.* **16**(1), 2009.

Supporting the Unremarkable: Experiences with the Obje Display Mirror. Mark W. Newman, Nicolas Ducheneaut, W. Keith Edwards, Jana Z. Sedivy, and Trevor F. Smith. *Personal and Ubiquitous Computing.* **11**(7), 2007.

An Extensible Set-Top Box Platform for Home Media Applications, W. Keith Edwards, Mark W. Newman, Trevor F. Smith, Jana Z. Sedivy, Shahram Izadi. *IEEE Transactions on Consumer Electronics* **51**(4), 2005.

Supporting Serendipitous Integration in Mobile Computing Environments, W. Keith Edwards, Mark W. Newman, Jana Z. Sedivy, Trevor F. Smith. *International Journal of Human Computer Studies* **60**(5/6), 2004.

DENIM: An Informal Web Site Design Tool Inspired by Observations of Practice, Mark W. Newman, James Lin, Jason I. Hong, and James A. Landay. *Human Computer Interaction* **18**(3), 2003.

Invited Journal Articles

Recipes for Digital Living. Mark W. Newman, Bill Schilit, Trevor F. Smith. *IEEE Computer* **39**(2), Feb. 2006.

Bringing Network Effects to Pervasive Spaces. W. Keith Edwards, Mark W. Newman, Jana Z. Sedivy, and Trevor F. Smith. *IEEE Pervasive Computing*, **4**(3), July-September 2005.

Refereed Conference Papers

Multi-Format Notifications for Multi-Tasking. Julie S. Weber, Mark W. Newman, and Martha E. Pollack, To appear in *Proceedings of the 12th IFIP Conference on Human-Computer Interaction: INTERACT-2009*, Aug. 2009.

Sharing Map Annotations in Small Groups: X Marks the Spot. Ben Congleton, Jaqueline Cerretani, Mark W. Newman, M. W., and Mark S. Ackerman. To appear in *Proceedings of the 12th IFIP Conference on Human-Computer Interaction: INTERACT-2009*, Aug. 2009.

The ProD Framework for Proactive Displays. Ben Congleton, Mark S. Ackerman, and Mark W. Newman. In *Proceedings of the 21st annual ACM symposium on User interface software and technology (UIST '08)*, Monterrey, CA, USA, 2008.

Accessible Contextual Information for Urban Orientation (Note). Jason Stewart, Sara Bauman, Michelle Escobar, Jakob Hilden, Kumud Bihani, and Mark W. Newman. In *Proceedings of the 10th international conference on Ubiquitous computing (UbiComp 2008)*, Seoul, Korea, 2008.

Providing an Integrated User Experience of Networked Media, Devices, and Services Through End-User Composition. Mark W. Newman, Ame Elliott, and Trevor F. Smith. In *Proceedings of the International Conference on Pervasive Computing (PERVASIVE '08)*. Sydney, Australia, 2008.

Escape: A Target Selection Technique Using Visually-cued Gestures. Koji Yatani, Kurt Partridge, Marshall Bern, and Mark W. Newman. In *Proceedings of ACM Conference on Human Factors in Computing Systems (CHI 2008)*, CHI Letters, 2008. **10**(1). Florence, Italy, 2008.

Activity-Based Serendipitous Recommendations with the Magitti Mobile Leisure Guide. Victoria Bellotti, Bo Begole, Ed H. Chi, Nicolas Ducheneaut, Ji Fang, Ellen Isaacs, Tracy King, Mark W. Newman, Kurt Partridge, Bob Price, Paul Rasmussen, Michael Roberts, Diane J. Schiano, Alan Walendowski. In *Proceedings of ACM Conference on Human Factors in Computing Systems (CHI 2008)*, CHI Letters, 2008. **10**(1). Florence, Italy, 2008.

Share and share alike: exploring the user interface affordances of file sharing. Stephen Vaida, W. Keith Edwards, Mark W. Newman, Rebecca E. Grinter, and Nicolas Ducheneaut. In *Proceedings of ACM Conference on Human Factors in Computing Systems (CHI 2006)*, CHI Letters, 2006. **8**(1). Montreal, Canada. 2006.

The Work to Make a Home Network Work. Rebecca E. Grinter, W. Keith Edwards, Mark W. Newman, Nicolas Ducheneaut. In *Proceedings of the Ninth European Conference on Computer-Supported Cooperative Work (ECSCW'05)*. Paris, France. 2005.

Listening In: Practices Surrounding iTunes Music Sharing. Amy Volda, Rebecca E. Grinter, Nicolas Ducheneaut, W. Keith Edwards, and Mark W. Newman. In Proceedings of *ACM Conference on Human Factors in Computing Systems (CHI 2005)*. CHI Letters **7**(1). Portland, OR. 2005. **Best Paper Award**.

Stuck in the Middle: The Challenges of User-Centered Design and Evaluation of Infrastructure, W. Keith Edwards, Victoria Bellotti, Anind K. Dey, and Mark W. Newman. In Proceedings of *ACM Conference on Human Factors in Computing Systems (CHI 2003)*. CHI Letters, 2003. **5**(1). Fort Lauderdale, FL. 2003

Challenge: Recombinant Computing and the Speakeasy Approach, W. Keith Edwards, Mark W. Newman, Jana Z. Sedivy, Trevor F Smith, and Shahram Izadi. In *Proceedings of the Eighth ACM International Conference on Mobile Computing and Networking (MobiCom 2002)*. Atlanta, GA. 2002.

Using Speakeasy for Ad Hoc Peer-to-Peer Collaboration, W. Keith Edwards, Mark W. Newman, Jana Z. Sedivy, Trevor F Smith, Dirk Balfanz, and D.K. Smetters. In *Proceedings of the ACM Conference on Computer-Supported Cooperative Work (CSCW 2002)*. New Orleans, LA. 2002.

User Interfaces When and Where They are Needed: An Infrastructure For Recombinant Computing, Mark W. Newman, Shahram Izadi, W. Keith Edwards, Jana Z. Sedivy, and Trevor F Smith. In Proceedings of *ACM Symposium on User Interface Software and Technology (UIST 2002)*. CHI Letters, 2002. **4**(2). Paris, France. 2002.

Designing for Serendipity: Supporting End-User Configurations of Ubiquitous Computing Environments, Mark W. Newman, Jana Z. Sedivy, W. Keith Edwards, Trevor F Smith, Karen Marcelo, Christine M. Neuwirth, Jason I. Hong, and Shahram Izadi. In Proceedings of *ACM Conference on Designing Interactive Systems (DIS 2002)*. London, UK. 2002.

The Designers' Outpost: A Tangible Interface for Collaborative Web Site Design, Scott R. Klemmer, Mark W. Newman, Ryan Farrell, Mark Bilezikjian, James A. Landay. In Proceedings of *ACM Symposium on User Interface Software and Technology (UIST 2001)*. CHI Letters, 2001. **3**(2). Orlando, FL. 2001.

Sitemaps, Storyboards, and Specifications: A Sketch of Web Site Design Practice as Manifested Through Artifacts, Mark W. Newman and James A. Landay. Proceedings of *ACM Conference on Designing Interactive Systems (DIS 2000)*, New York, New York. 2000.

DENIM: Finding a Tighter Fit with Web Design Practice. James Lin, Mark W. Newman, Jason I. Hong, and James A. Landay. In Proceedings of *ACM Conference on Human Factors in Computing Systems (CHI 2000)*. CHI Letters, 2000. **2**(1). The Hague, The Netherlands. 2000.

Shared Remote Control of a Videoconferencing Application: Motivation, Design, and Implementation. Todd Hodes, Mark Newman, Steven McCanne, Randy Katz, and James Landay. In Proceedings of *SPIE Multimedia Computing and Networking (MMCN 1999)*, San Jose, California. 1999.

Book Chapters

Supporting Extensible Public Display Systems with Speakeasy, Julie A. Black, W. Keith Edwards, Mark W. Newman, Jana Z. Sedivy, Trevor F Smith, in *Public and Situated Displays: Social and Interactional Aspects of Shared Display Technologies*, Kenton O'Hara, Mark Perry, Elizabeth Churchill, and Daniel Russel eds. Kluwer Academic Publishers. 2003.

Short Papers, Videos, Demos, and Posters

The orbital browser: composing ubicomp services using only rotation and selection. Nicolas Ducheneaut, Trevor F Smith, James "Bo" Begole, Mark W. Newman, and Chris Beckmann. In Extended Abstracts of *ACM Conference on Human Factors in Computing Systems (CHI 2006)* (alt.chi Short Paper). Montreal, Canada. 2006.

The sharing palette: a user interface for file and service sharing, Stephen Volda, W. Keith Edwards, and Mark W. Newman, In Extended Abstracts of *ACM Symposium on User Interface Software and Technology (UIST 2004)* (Poster), Santa Fe, NM. 2004.

DENIM: An Informal Tool for Early Stage Web Site Design, James Lin, Mark W. Newman, Jason I. Hong, James A. Landay, In Extended Abstracts of *ACM Conference Human Factors in Computing Systems (CHI 2001)* (Video). Seattle, WA. 2001.

Informal PUIs: No Recognition Required, James A. Landay, Jason I. Hong, Scott R. Klemmer, James Lin, and Mark W. Newman. In Proceedings of *AAAI 2002 Spring Symposium: Sketch Understanding Workshop* (Short Paper). Stanford, CA. 2002.

DENIM: An Informal Sketch-based Tool for Early Stage Web Design. In *AAAI 2002 Spring Symposium: Sketch Understanding Workshop*. (Demo). Stanford, CA. 2002.

SWAMI: A Framework for Collaborative Filtering Algorithm Development and Evaluation. Danyel Fisher, Kris Hildrum, Jason Hong, Mark Newman, Megan Thomas, and Richard Vuduc. In *Proceedings of ACM SIGIR Conference on Research and Development in Information Retrieval (SIGIR 2000)* (Poster). Athens Greece. 2000.

The Designer's Outpost: A Task-Centered Tangible Interface for Web Site Information Design. Scott R. Klemmer, Mark W. Newman, and Raecine Sapien. In *Extended Abstracts of ACM Conference on Human Factors in Computing Systems (CHI 2000)* (Poster). The Hague, The Netherlands. 2000.

Workshop and Conferences without Proceedings

Reflecting on Mood and Movement. Brett Clippingdale, Mark W. Newman, Martha E. Pollack, and Michael A. Fauman. *ACM Conference on Human Factors in Computing Systems (CHI 2009) Workshop: Designing for Reflection*. Boston, MA, Apr. 2009.

Object-Use Activity Monitoring: Feasibility for People with Cognitive Impairments. Mark R. Hodges, Mark W. Newman, and Martha E. Pollack. *AAAI 2009 Spring Symposium on Human Behavior Modeling*, Stanford, CA, Mar. 2009

Talking-Points: A Mobile, Context-based Information System for Urban Orientation of Sighted and Visually-Impaired Users. Michelle Escobar, Mark W. Newman, Jason Stewart, Jakob Hilden, Kumud Bihani, and Sara Bauman. *Accessible Design for the Digital World (ADDW 2008)*, York, UK, 2008.

Pervasive Help @ Home: Connecting People Who Connect Devices. Mark W. Newman and Mark S. Ackerman. *International Conference on Pervasive Computing (PERVASIVE '08) Workshop: Pervasive Computing @ Home*. Sydney, Australia, 2008.

Paradiddle: An Exploration of a One-Handed Tap-Based Text Entry Technique. Seungyon “Claire” Lee, Mark W. Newman, and Kurt E. Partridge. *International Conference on Pervasive Computing (PERVASIVE '08) Workshop: Pervasive Mobile Interaction Devices (PERMID 2007)*. Toronto, Canada, 2007.

Now We're Cooking: Recipes for Digital Living. Mark W. Newman. *ACM Conference on Human Factors in Computing Systems (CHI 2006) Workshop: IT@Home*. Montreal, Canada. 2006.

Support for End-User Composition in Ubiquitous Computing Environments. Mark W. Newman. *International Conference for Ubiquitous Computing (Ubicomp 2004) Doctoral Colloquium*. Nottingham, UK. 2004.

Speakeasy: A Platform for Interactive Public Displays, Julie A. Black, Jason I. Hong, Mark W. Newman, W. Keith Edwards, Shahram Izadi, Jana Z. Sedivy, Trevor F Smith. *ACM Conference on Computer-Supported Cooperative Work (CSCW 2002) Workshop on Public, Community, and Situated Displays: Design, Use, and Interaction Around Shared Information*. New Orleans, LA. 2002.

Towards a Unified Interaction Framework for Ubicomp User Interfaces. Jason I. Hong, Scott Lederer, and Mark W. Newman. *International Conference on Ubiquitous Computing (Ubicomp 2002) Workshop: Models for Ubiquitous Computing*. Goteberg, Sweden. 2002.

Recombinant Network Components, Mark W. Newman, Jana Z. Sedivy, and W. Keith Edwards. *ACM Conference on Computer-Supported Cooperative Work (CSCW 2000) Workshop: Technologies That Cross Boundaries: Exploring the Gap Between Wireless Networks, Bits, Interfaces, and Mobile Work Practices*. Philadelphia, PA. 2000.

Fluid Representations of Context for Recombinant Network Components, W. Keith Edwards, Mark W. Newman, and Jana Z. Sedivy. *ACM Conference on Computer-Supported Cooperative Work (CSCW 2000) Workshop: Exploring the Framework of Context Awareness in Cooperative Systems*. Philadelphia, PA. 2000.

A Tangible Difference: Participatory Design Studies Informing a Designers' Outpost, Scott Klemmer, Mark Newman, Ryan Farrell, Raecine Meza, and James A. Landay. *ACM Conference on Computer-Supported Cooperative Work (CSCW 2000) Workshop: Shared Environments to Support Face-to-Face Collaboration*, Philadelphia, PA. 2000.

The Shadow: A Personal Experience Capture System. James A. Landay, Mark Newman, and Jason Hong. In *Proceedings of 1998 DARPA/NIST Smart Spaces Workshop*. 1998.

UNREFEREED PUBLICATIONS

Theses and Technical Reports

End-User Service Composition in Ubiquitous Computing Environments, Mark W. Newman, Ph. D. Dissertation University of California, Berkeley Department of Electrical Engineering and Computer Sciences. Technical Report UCB/EECS-2007-138, Nov. 2007.

Paradiddle: minimizing input latency in mobile text entry. Seungyon “Claire” Lee, Mark W. Newman, Kurt E. Partridge. Palo Alto Research Center Technical Report TR-07-3. July 2007.

The Case for Recombinant Computing, W. Keith Edwards, Mark W. Newman, and Jana Z. Sedivy. *Xerox Palo Alto Research Center Technical Report CSL-01-1*. April 20, 2001.

A Tangible Evolution: System Architecture and Participatory Design Studies of the Designers’ Outpost, Scott R. Klemmer, Mark W. Newman, Ryan Farrell, Raecine Meza, and James A. Landay, *UC Berkeley Computer Science Division Technical Report, UCB//CSD-00-1117*. November 2000.

INVITED TALKS

End User Composition in Ubiquitous Computing Environments. University of Illinois. Champaign, IL. April, 2007.

End User Composition in Ubiquitous Computing Environments. Drexel University. Philadelphia, PA. March, 2007.

End User Composition in Ubiquitous Computing Environments. University of Michigan. Ann Arbor, MI. March, 2007.

End User Composition in Ubiquitous Computing Environments. IBM Almaden. San Jose, CA. February, 2005.

End User Composition in Ubiquitous Computing Environments. Berkeley Institute of Design. Berkeley, CA. December, 2005.

End User Composition in Ubiquitous Computing Environments. Sun Microsystems. Menlo Park, CA. May, 2005.

End User Composition in Ubiquitous Computing Environments. Stanford University Seminar on People, Computers, and Design. Palo Alto, CA. November, 2004.

The Speakeasy Recombinant Computing Project. Intel Research Seattle. Seattle, WA. June, 2003.

Informal User Interfaces for Design and Communication. (with James A. Landay and James Lin) BayCHI: The San Francisco Bay Area Chapter of ACM SIGCHI. Palo Alto, CA, September, 1999.

An Investigation into Web Site Design Practice. Mark W. Newman. UC Berkeley Multimedia, Interfaces, and Graphics Seminar. Berkeley, CA, March, 1999.

PROFESSIONAL ACTIVITIES

Committee Chairs

Computer Supported Cooperative Work, Demos Co-Chair, 2008.

Program Committees

Computer Supported Cooperative Work, Papers and Notes Program Committee, 2008, 2010.

Ubicomp: International Conference on Ubiquitous Computing, Demonstrations Program Committee (2003)

Workshop Organizer

Ubiquitous computing in next generation conference rooms: interweaving rich media, mobile devices, and smart environments, at Ubicomp 2005 (with Maribeth Back, Patrick Chiu, Jun Miyazaki, Kazunori Horikiri, Okude Naohito, and Jeffrey Huang).

Building the Ubiquitous Computing User Experience, at CHI 2001 (with W. Keith Edwards and Jana Z. Sedivy).

Journal Referee

ACM Transactions on Computer-Human Interaction (2008)
IEEE Pervasive Computing: Mobile and Ubiquitous Systems (2003, 2004, 2008)
International Journal of Human-Computer Studies (2008)
Theory of Computing Systems (2006)
IEEE Internet Computing (2001)

Conference Referee

CHI: Human Factors in Computing Systems (2000, 2002-2009). *Received special recognitions for exceptional reviews in 2003, 2004, and 2005.*
UIST: ACM Symposium on User Interface Software and Technology (1999-2008).
CSCW: Computer Supported Cooperative Work (2002, 2004).
Ubicomp: International Conference on Ubiquitous Computing (2001, 2003-2007, 2009).
Pervasive: International Conference on Pervasive Computing (2009).
IUI: Intelligent User Interfaces (2009).

Memberships

Member of Association for Computing Machinery (ACM)
Member of ACM Special Interest Group on Computer-Human Interaction (SIGCHI)

Student Volunteer

CHI 1999, UIST 1999, CHI 1998, UIST 1998, HCI International 1997.

ACADEMIC HONORS

Outstanding Graduate Student Instructor Award, U. C. Berkeley (1999)
Achievement Reward for College Scientists Fellowship (1998)
NSF Graduate Fellowship Honorable Mention (1998)
Phi Kappa Phi Academic Honor Society, University of Minnesota (1997)
Cum Laude, Macalester College (1992)

ADVISING

Ph.D Advisees

Brett Clippingdale, U Michigan School of Information (Co-advised by Martha Pollack), Fall 2008-present
Ben Congleton, U of Michigan School of Information (Co-advised by Mark Ackerman), Fall 2007-present

Ph. D. Thesis Committee

Yong-Mi Kim, U Michigan School of Information
Julie Weber, U Michigan Computer Science and Engineering
Mark Hodges, U Michigan Computer Science and Engineering
Magesh Jayapandian, U Michigan Computer Science and Engineering. Defended Dec. 2008
Dan Peek, U Michigan Computer Science and Engineering. Defended Dec. 2008

Ph. D. Field Prelim Committee

Kevin Nam, U Michigan School of Information, passed Dec. 2008
David Lee, U Michigan School of Information

Masters Research

Maureen Hanratty (MSI), Sept. 2008-present
Pratiba Bhaskaran (MSI), Sept. 2008-present
Jared Bauer (MSI), May 2008-present
Jungwoo Kim (CSE MS), Jan. 2009-present
Tammy Greene (MSI), Jan. 2009-present
Taeho Ko (MSI), Jan. 2009-present
Jakob Hilden (MSI), Jan. 2008-present
Sang Koh (MSI), Jan. 2009-present
Rayoung Yang (MSI), Jan. 2009-present
Eunice Shin (MSI), Jan. 2009-present
Ashutosh Kaushik (MSI), Jan. 2009-present

Undergraduate Research

Michael Shin (CSE undergrad), Sept. 2008-present
Travis Yoo (CSE undergrad), Mar. 2008-present

Interns

Seungyon “Claire” Lee. (Georgia Tech Ph. D. Student) PARC Summer Intern 2006. Paradiddle One-Handed Text Entry. Primary supervisor with assistance from Kurt Partridge. Led to CHI 2007 CHI Note submission.

Chris Beckmann. (UC Berkeley Ph. D. Student). PARC Summer Intern, 2004. User Interfaces for Object Service Composition. Primary supervisor with assistance from Keith Edwards. Led to CHI 2006 alt.chi publication.

Julie Black (Stanford Undergrad, now at Google). PARC Summer Intern, 2002. Using Speakeasy for Public Displays. Primary supervisor with assistance from Keith Edwards and Jana Sedivy. Led to chapter in book *Public and Situated Displays* and CSCW 2002 Workshop paper.

Jason Hong (UC Berkeley Ph. D. Student, now Asst. Prof. at CMU). PARC Summer Intern, 2002. Context-Awareness for Speakeasy Applications. Primary supervisor with assistance from Keith Edwards and Jana Sedivy. Led to DIS 2002 publication.

Stephen Volda (Georgia Tech Ph. D. Student). PARC Summer Intern, 2004. Interfaces for Sharing Object Services. Assisted primary supervisor Keith Edwards. Led to CHI 2006 publication.

Amy Volda (Georgia Tech Ph. D. Student). PARC Summer Intern, 2004. Study of iTunes Music Sharing Practices. Assisted primary supervisor Beki Grinter. Led to CHI 2005 Best Paper.

Shahram Izadi (University of Nottingham Ph. D. Student, now at Microsoft Research). PARC Summer Intern, 2002 and 2003. Speakeasy Infrastructure and Applications. Assisted primary supervisor Keith Edwards. Led to DIS 2002, UIST 2002, Mobicomp 2002 papers and IEEE Transactions on Consumer Electronics article.