

Sean M. White

Curriculum Vitae

Department of Computer Science
Columbia University
1214 Amsterdam Ave., 450 CS Bldg
New York, NY 10027

<http://www.cs.columbia.edu/~swhite>
swhite@cs.columbia.edu
917-449-3221

EDUCATION

- 2005– Columbia University, New York, NY
 PhD candidate in Computer Science
 Topic: Interaction and Presentation Techniques for Situated Visualization
 Advisor: Steven Feiner
- 2004 Columbia University, New York, NY
 MS in Mechanical Engineering
 Topic: Ohmic Carbon Nanotube Fabrication for Fuel Cells and Solar Cell
 Advisor: James Hone
- 1993 Stanford University, Stanford, CA
 MS in Computer Science
 HCI Focus (additional coursework in design division)
 Advisor: Terry Winograd
- 1992 Stanford University, Stanford, CA
 BS in Computer Science

PROFESSIONAL EXPERIENCE

- 2005– Columbia University, New York, NY
 Graduate Research Assistant
 Advisor: Professor Steven Feiner
- 2003-2004 Columbia University, New York, NY
 Graduate Research Assistant
 Research with Professors Jim Hone, Vijay Modi, and Klaus Lackner
- 2000-2002 NeoCarta Ventures, New York, NY
 Chief Technology Officer
- 2000 Herman Miller Red, New York, NY
 Acting Chief Technology Officer
- 1998-2000 Lycos, Inc., Waltham, MA
 Vice-President of Technology
- 1997-1998 WhoWhere?, Inc., Mountain View, CA
 Chief Technology Officer
- 1993-1997 Interval Research, Palo Alto, CA
 Member of the Research Staff
 Project Coordinator for Online Communities Research
- 1991-1993 Stanford University, Stanford, CA
 Research Assistant for Terry Winograd in the program for People, Computers, and Design

COMPUTER SCIENCE PUBLICATIONS

White, S. **Interaction and Presentation Techniques for Situated Visualization**. UIST 2008 Doctoral Symposium, UIST 2008 Adjunct Proceedings, October 20-22, 2008, pp. 19-22.

Belhumeur, P., Chen, D., Feiner, S., Jacobs, D., Kress, W. J., Ling, H., Lopez, I., Ramamoorthi, R., Shirdhonkar, S., White, S., and Zhang, L., **Searching the World's Herbaria: A System of Visual Identification of Plant Species**, Proc. European Conference on Computer Vision, Part IV, Marseille, France, 2008, pp. 116-129.

Oda, O., Lister, L., White, S., and Feiner S. **Developing an Augmented Reality Racing Game**. Proc. INTETAIN 2008 (Second Int. Conf. on Intelligent Technologies for Interactive Entertainment), Playa del Carmen, Mexico, January 8-10, 2008.

White, S., Lister, L., and Feiner, S. **Visual Hints for Tangible Gestures**. Proc. ISMAR 2007 (IEEE and ACM International Symposium on Mixed and Augmented Reality), Nara, Japan, November 13-16, 2007, pp. 47-50.

White, S., Morozov, P., and Feiner, S., **Site Visit by Situated Visualization** in Calabrese, F. et al. "Urban Computing and Mobile Devices," Pervasive Computing, IEEE, vol.6, no.3, pp.52-57, July-Sept. 2007

White, S., **Augmented Reality: Using mobile visualization to persuade**, in Mobile Persuasion, Fogg, B.J., Eckles, D. Ed., Stanford University, 2007, pp.55-62.

White, S., Marino, D., Feiner, S., **Designing a Mobile User Interface for Automated Species Identification**, Proc. ACM CHI 2007, Apr 2007, pp. 291-294. *Sole Recipient of Best of CHI Notes 2007*

White, S., Marino, D., Feiner S. **LeafView: A User Interface for Automated Botanical Species Identification and Data Collection**. ACM UIST 2006 Adjunct Proceedings, Montreux, Switzerland, October 15-18, 2006, pp. 101-102.

Agarwal, G., Belhumeur, P., Feiner, S., Jacobs, D., Kress, W.J., Ramamoorthi, R., Bourg, N., Dixit, N., Ling, H., Mahajan, D., Russell, R., Shirdhonkar, S., Sunkavalli, K., and White, S. **First steps toward an electronic field guide for plants**. Taxon, Journal of the International Association for Plant Taxonomy, 55(3), August 2006, pp. 597-610.

White, S., Feiner, S., Kopylec, J. **Virtual Vouchers: Prototyping a mobile augmented reality user interface for botanical species identification**. Proc. IEEE Symp. on 3D User Interfaces 2006, Alexandria, VA, March 25-26, 2006, pp. 119-126.

Livingston, M., Lederer, A., Ellis, S., White, S., and Feiner, S., **Vertical Vergence Calibration for Augmented Reality Displays**. Proc. IEEE Virtual Reality 2006, March 2006, pp. 293-294.

Singer, A., Hindus, D., Stifelman, L., and White, S. 1999. **Tangible progress: Less is more in Somewire audio spaces**. Proc. ACM CHI 1999, May 15 - 20, 1999, pp. 104-111.

Schiano, D. J. and White, S. 1998. **The first noble truth of cyberspace: People are people (even when they MOO)**. Proc. ACM CHI 1998, April 18 - 23, 1998, pp. 352-359.

White, S. **Net Surf**, Wired Magazine 2.04, April 1994.

White, S. **Net Surf**, Wired Magazine 2.01, January 1994.

NANOSCIENCE AND ENERGY PUBLICATIONS

Barton, S., Sun, Y., Chandra, B., White, S., Hone, J. **Mediated Enzyme Electrodes with Combined Micro- and Nanoscale Supports**, Electrochemical and Solid-State Letters, Volume 10, Issue 5, pp. B96-B100, June 2007.

Barton, S., Sun, Y., Chandra, B., White, S., Hone, J. **Mediated Enzyme Electrodes with Combined Micro- and Nanoscale Supports**, Virtual Journal of Nanoscale Science & Technology, March 19, 2007.

Barton, S., White, S., Sun, Y., Chandra, B., Hone, J. **Multiscale Materials for High-Power Biocatalytic Electrodes**. Proc. AIChE Annual Meeting, 2005.

White, S. **Biological Metaphors in Alternative Energy**. Ambidextrous Magazine. Summer 2005.

WORKSHOPS AND DEMOS

Mobile Augmented Reality Games and Visualization, Microsoft Faculty Summit, 2008.

White, S., Morozov, P., Feiner, S. **Progress Towards Site Visit by Situated Visualization** in CHI 2008 Workshop on Urban Mixed Reality, April 2008.

User Interfaces for Electronic Field Guides, Columbia STV, March 2008.

Electronic Field Guide: Plant Exploration in the 21st Century. Smithsonian Institution Congressional Night 2008, Washington, D.C.

Electronic Field Guide: Plant Exploration in the 21st Century. National Geographic Rock Creek BioBlitz, Washington, D.C., May 18-19, 2007.

Electronic Field Guide: Plant Exploration in the 21st Century. International Conservation Caucus Foundation, Rayburn Building, Washington, D.C., May 2007.

White, S., Morozov, P., Feiner, S., **Imaging for Insight: Site Visit by Situated Visualization**, Proceedings of ACM CHI 2007 Workshop: Imaging the City, April 2007.

Lopez, I., White, S., Farr, E., Kress, J., Jacobs, D., Feiner, S. **Demo: Instant Identification System—Plant Exploration & Discovery in the 21st Century**. Smithsonian Institution Digitization Fair, October 30, 2006.

White, S., Feiner, S. **Demo: Augmented Reality User Interfaces to an Electronic Field Guide**. IEEE and ACM ISMAR 2006 CD ROM, Santa Barbara, CA, October 22-25, 2006.

White, S., Lopez, I., Farr, E., Jacobs, D., Feiner, S. **Demo: Electronic Field Guide: Plant Exploration in the 21st Century**. Smithsonian Exhibit, Science Pavilion. July 2006.

Eaddy, M., Peterson, E., Waugh, J., Benko, H., White, S., Feiner, S.. **Goblin**. Microsoft Research University Relations Symposium, 2005.

INVITED TALKS

- **Nature in Environment Seminar**. Parsons, New York, NY. March 28, 2008.
- **Interacting with the Environment**. California College of Arts, San Francisco, CA. March 11, 2008.
- **Place, Space, and Site**. Maine College of Art. Seafarers International, New York, NY, January 10, 2008.
- **Panel on Sustainable Design**, IxDA, New York, NY, January 24, 2008.
- **Ambient Interfaces: Interaction in (and with) the Environment**. International Young Researcher Workshop on Ambient Interfaces. Osaka Univ., Nov. 11-12, 2007.
- **Electronic Field Guides: Interaction with the Environment**. Mobile Persuasion, 2007. Stanford, CA, Feb 2, 2007.
- **Mobile Visualization**. Y!RB Brain Jam, Berkeley, CA, April 27, 2007.
- **Visualization in Mobile Environments**, IBM 2007 Graphics and Visualization Student Symposium. New York, 2007.
- **Electronic Field Guides: Plant Exploration in a Mobile Environment**. Urban Mobility 2005. New York, NY, November 2005.
- **Interaction and Interface Research at Columbia University**. Pratt Institute. NY, NY, Oct. 2005.

- **CO2 Mass Transfer for Air Extraction and Carbon Sequestration.** First Workshop on Air Extraction of Carbon Dioxide, CMU, 2003.
- **Next Wave Panel.** Comdex, Las Vega, NV, 1995.
- **Applications: Entertainment and Electronic Communities,** CompCon 94, San Francisco, CA, 1994.
- **Online Communities on the WWW,** Stanford Computer Forum, Stanford, CA, September 1994.
- **Internet Communities,** Workshop on Online Communities, Palo Alto, CA, 1993.

GRANTS AND AWARDS

- Boston Society of Architecture Research Grant, "Site Visit by Situated Visualization", CO-PIs Sean White, Petia Morozov, Sarah Williams, 2008: \$30,000.
- Columbia University, Dept. of Computer Science Service Award, 2008.
- Best Note, ACM CHI 2007
- Columbia University, SEAS Excellence in Teaching: TA, Thermodynamics, 2003.

U.S. PATENTS

- 6,956,497 B1 Method and apparatus for sending presence messages
- 6,282,206 Variable bandwidth communication systems and methods
- 5,889,843 Methods and systems for creating a spatial auditory environment in an audio conference system
- 5,638,832 Programmable subcutaneous visible implant
- 5,600,777 Method and system for spatial accessing of time-based information
- 5,461,711 Method and system for spatial accessing of time-based information

ADVISORY BOARDS

2005-present	New York Sun Works, Advisory Committee
2001-2005	Environmental Defense, Technical Advisory Board
1998-1999	Evite, Inc., Advisory Board
1998-2000	Gravity International, Advisory Board
1997-1999	OpenVoice, Advisory Board
1996	WhoWhere?, Inc., Advisory Board

TEACHING

Teaching Staff CS001: Intro to Computers, Stanford University, 1989, 1990.

Teaching Assistant COMS 4170: User Interface Design, Columbia University, Spring 2006
 COMS 4170: User Interface Design, Columbia University, Fall 2006.
 MECE 3301: Thermodynamics, Columbia University, Spring 2003
 MECE 4211: Energy Sources and Conversions, Columbia University, Fall 2003

Teaching Assistant CS547: HCI Seminar, Stanford University, 1993.
 CS247B: Human Computer Interaction II, Stanford University, 1992.
 CS247A: Human Computer Interaction I, Stanford University, 1992.
 CS106A: Programming Methodology, Stanford University, 1990.

Course Lectures various in User Interface Design, taught by Steven Feiner, 2006, 2007.
 various in 3D User interfaces, taught by Steven Feiner, 2007, 2008.
 Photovoltaics, in Energy Sources and Conversions, taught by Vijay Modi, 2004.
 Photovoltaics, in Alternative Energy Sources, taught by Klaus Lackner, David Walker, 2003.
 Improv for Design, in Human-Computer Interaction, taught by Terry Winograd, 1994.

Instructor Computer Science Summer Camp, Stanford University, 1990.

Advising and Supervision

Masters Anette von Kapri, April 30, 2008 Thesis, User Interface Techniques for Annotating 2D Objects in Augmented Reality

Project Students David Feng. Tangible Augmented Reality User Interface
 Himanshu Kumar. Mobile Phone Interface to Electronic Field Guide.
 Levi Lister. Gesture Recognition
 Charles Macanka. Mobile phone and web interaction with plant identification.
 Michael Wasserman. Source SDK head tracking integration.
 Dominic Marino. Zoomable User Interfaces.
 Randall Li. Gesture recognition.
 Jason Kopylec. Tangible Augmented Reality.
 Engineers without Borders: Lakota Reservation Wind Energy Assessment Project
 Adam Hurst. Dye sensitized solar cells.

PROFESSIONAL SERVICE

Advisory Boards

2005-present New York Sun Works, Advisory Committee
 2001-2005 Environmental Defense, Technical Advisory Board
 1998-1999 Evite, Inc., Advisory Board
 1998-2000 Gravity International, Advisory Board
 1997-1999 OpenVoice, Advisory Board
 1996 WhoWhere?, Inc., Advisory Board

Peer Reviewing

- ACM CHI: 2009, 2008, 2007, 2006
- ACM CSCW: 2008
- IEEE ISMAR: 2008, 2007, 2006
- IEEE VR: 2008, 2007
- IEEE 3DUI: 2009
- IEEE TableTop: 2006
- IEEE ISWC: 2006
- Graphic Interface: 2007
- International Journal of Human-Computer Studies: 2007, 2008
- Computer Animation and Virtual Worlds 2007
- ACM Transactions on Modeling and Computer Simulation 2007

Membership

- IEEE - since 2005
- Association for Computing Machinery – since 1996
- Voting Member of the National Academy of Recording Arts and Sciences – since 1995

Committees

- CHI 2008, Works-In-Progress, Program Committee, 2009
- Sensys 2008, Urban Sensing Workshop, Program Committee, 2008
- UIST 2008, Publicity Chair
- INTETAIN 2008, Publicity Chair
- SPIE Conference on Multimedia Computing and Networking, San Jose, CA, 1/29-31,1996.
- Online Communities Conference, Interval Research Corp., Co-Organizer, Palo Alto, CA, May 17-18, 1993.

Community Service

- Student Representative, PhD Committee, Columbia University, Dept. of Computer Science, 2006-present
- Roving Reporter, Columbia University, Dept. of Computer Science, 2006-2008.
- President of the Association for Software Design – 1994-1996
- Table Facilitator, Clinton Global Initiative Summit, 2007. Climate and Energy Track.

ART AND DESIGN INSTALLATIONS

- Ingenuity Festival, 2008, Crooked River First and Third Person, with spurse and David Jensenius
- Grand Arts, 2007, Installation for "Fat of the Land" Exhibit with spurse (artist collective)
- Metropolis, 2007 International Contemporary Furniture Fair Exhibit Booth (Finalist)
- Queens Botanical Garden, 2006, Interactive Interpretive Information System (Finalist)
- Candle Altar, Interval Research, Palo Alto, CA, 1997.
- Video Graffiti, Electronic Cafe, Palo Alto, CA, 1996.
- Net Graffiti, Lollapalooza, Several Venues, 1995.