Sean White

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EDUCATION

2009	Columbia University, New York, NY PhD in Computer Science Topic: Interaction and Presentation Techniques for Situated Visualization Advisor: Professor Steven Feiner
2004	Columbia University, New York, NY MS in Mechanical Engineering Topic: Ohmic Carbon Nanotube Fabrication for Fuel Cells and Solar Cell Advisor: Professor James Hone
1993	Stanford University, Stanford, CA MS in Computer Science, HCI Focus (additional coursework in design division) Advisor: Professor Terry Winograd
1992	Stanford University, Stanford, CA BS in Computer Science Advisor: Professor Terry Winograd

PROFESSIONAL EXPERIENCE

2009–	Smithsonian Institution, Washington, D.C. Visiting Scientist Host: W. John Kress
2009–	Columbia University, New York, NY Postdoctoral Research Scientist
2005–2009	Columbia University, New York, NY Graduate Research Assistant, Computer Science Advisor: Professor Steven Feiner
2003–2004	Columbia University, New York, NY Graduate Research Assistant, Mechanical Engineering Advisors: 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 Director of Online Communities Research
1991–1993	Stanford University, Stanford, CA Research Assistant, Computer Science Advisor: Professor Terry Winograd

DISSERTATION

White, S., Interaction and Presentation Techniques for Situated Visualization**,** PhD Thesis, Columbia University, New York, NY, 2009.

REFEREED JOURNAL ARTICLES

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

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.

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.

REFEREED CONFERENCE PAPERS

White, S., Feng, D., Feiner, S. Interaction and Presentation Techniques for Shake Menus in Tangible Augmented Reality, Proc. ISMAR 2009, Orlando, FL, October 19–23, 2009, pp. 39–48.

White, S., Feiner, S., SiteLens: Situated Visualization Techniques for Urban Site Visits, Proc. ACM CHI 2009, Boston, MA, April 4–9, 2009, pp. 1117–1120.

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 for Visual Identification of Plant Species, Proc. European Conference on Computer Vision, Part IV, Marseille, France, October 12–18, 2008, pp. 116–129.

Oda, O., Lister, L., **White, S.**, and Feiner S. Developing an Augmented Reality Racing Game. Proc. INTETAIN 2008 (Second Int'l. 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 Int'l. Symp. on Mixed and Augmented Reality), Nara, Japan, November 13–16, 2007, pp. 47–50.

White, S., Marino, D., and Feiner, S., Designing a Mobile User Interface for Automated Species Identification, Proc. ACM CHI 2007, April 28–May 3, 2007, pp. 291–294. ***CHI 2007 Best Note Award***

White, S., Feiner, S., and 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.

Barton, S., **White, S.**, Sun, Y., Chandra, B., Hone, J. Multiscale Materials for High-Power Biocatalytic Electrode**s**. Proc. AIChE Annual Meeting, 273e, 2005.

Singer, A., Hindus, D., Stifelman, L., and **White, S.**, 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.**, The First Noble Truth of Cyberspace: People are People (Even When They MOO). Proc. ACM CHI 1998, April 18-23, 1998, pp. 352–359.

BOOK CHAPTERS

White, S., Augmented Reality: Using Mobile Visualization to Persuade, in Fogg, B.J. and Eckles, D. (eds.), *Mobile Persuasion*, Stanford University, 2007, pp. 55–62.

REFEREED WORKSHOP PAPERS

Thau, D., Morris, R., **White, S.**, Contemporary Challenges in Ambient Data Integration for Biodiversity Informatics, 2nd International Workshop on Ambient Data Integration, Algarve, Portugal, November 1-6, 2009.

White, S. Interaction with the Environment: Sensor Data Visualization in Outdoor Augmented Reality. ISMAR 2009 Workshop, Lets Go Out: Research in Outdoor Mixed and Augmented Reality, Orlando, FL, October 19, 2009.

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

White, S., Morozov, P., Feiner, S. Progress Towards Site Visit by Situated Visualization, Proceedings of ACM CHI 2008 Workshop: Urban Mixed Reality, April 5–April 10, 2008.

White, S., Morozov, P., Feiner, S., Imaging for Insight: Site Visit by Situated Visualization, Proceedings of ACM CHI 2007 Workshop: Imaging the City, April 28–May 3, 2007.

REFEREED POSTERS

White, S., Feng, D., Feiner, S., ShakeMenus: Towards Activation and Placement Techniques for Prop-Based 3D Graphical Menus, IEEE VR 2009, Lafayette, LA, March 14–15, 2009, pp. 129-130.

White, S., Marino, D., and 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.

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.

Eaddy, M., Peterson, E., Waugh, J., Benko, H., **White, S.**, Feiner, S., Goblin: A Platform for 3D, Virtual Reality, and Augmented Reality Applications and Games. Microsoft Faculty Summit, Redmond, WA, June 18-19, 2005.

PANELS

2009 Tech Awards Laureate Panel. Change that Counts Conference, Santa Clara, CA, November 20, 2009.

Art Beyond Sight: Technology and the Senses. Metropolitan Museum of Art, New York, NY, October 16-17, 2009.

Building a Career in VR. IEEE VR 2009, Lafayette, LA, October 14-18, 2009.

Sustainable Design, Interaction Design Association (IxDA), New York, NY, Jan. 24, 2008.

Next Wave Panel. Comdex, Las Vegas, NV, 1995.

DEMONSTRATIONS

White, S., Oda, O., Feiner, S., Mobile Augmented Reality Games and Visualization, Microsoft Faculty Summit, Redmond, WA, July 27–29, 2008.

White, S. User Interfaces for Electronic Field Guides, Columbia Science and Technology Ventures, New York, NY, April 2, 2008.

White, S., Shirdhonkar, S., Lopez, I. Kress, J., Belhumeur, P., Jacobs, D., Feiner, S. Electronic Field Guide: Plant Exploration in the 21st Century. Smithsonian Institution Congressional Night 2008, Washington, D.C., March 1, 2008.

White, S., Shirdhonkar, S., Lopez, I. Jacobs, D., Feiner, S. Electronic Field Guide: Plant Exploration in the 21st Century. National Geographic Rock Creek BioBlitz, Washington, D.C., May 18–19, 2007.

White, S., Shirdhonkar, S., Lopez, I. Kress, J., Belhumeur, P., Jacobs, D., Feiner, S. Electronic Field Guide: Plant Exploration in the 21st Century. International Conservation Caucus Foundation, Rayburn Building, Washington, D.C., May 17, 2007.

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

White, S., Feiner, S. 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. Washington, D.C., July 2006.

GRANTS AND AWARDS

- 2009 Tech Award Laureate, 2009.
- Ph.D. Convocation Speaker, Columbia University, 2009.
- Boston Society of Architecture Research Grant, "Site Visit by Situated Visualization", CO-PIs Sean White, Petia Morozov, Sarah Williams, 2008: $30,000.
- Columbia University, Department of Computer Science Service Award, 2008.
- ACM CHI 2007, Best Note Award
- Columbia University, SEAS Excellence in Teaching: TA, Thermodynamics, 2003: $500

U.S. PATENTS

- 6,956,497 B1 Method and apparatus for sending presence messages, October 18, 2005.
- 6,282,206 Variable bandwidth communication systems and methods, August 28, 2001.
- 5,889,843 Methods and systems for creating a spatial auditory environment in an audio conference system, March 30, 1999.
- 5,638,832 Programmable subcutaneous visible implant, June 17, 1997.
- 5,600,777 Method and system for spatial accessing of time-based information, February 4, 1997.
- 5,461,711 Method and system for spatial accessing of time-based information, October 24, 1995.

POPULAR PRESS

- **White, S.** Biological Metaphors in Alternative Energy. *Ambidextrous Magazine*. Summer 2005, pp. 16-17.

- **White, S.** Net Surf, *Wired Magazine* 2.04, April 1994.
- **White, S.** Net Surf, *Wired Magazine* 2.01, January 1994.

INVITED TALKS

- **Computational Interfaces to Plant Identification.** Smithsonian Institution, December 10, 2009.
- **Situated Visualization.** NYU CS Colloquium, New York, NY, November 6, 2009.
- **Nature in Environment Seminar**. Parsons, New York, NY, March 28, 2008.
- **Interacting with the Environment**. California College of the Arts, San Francisco, CA. March 11, 2008.
- **Place, Space, and Site**. Maine College of Art, New York, NY, January 10, 2008.
- **Ambient Interfaces: Interaction in (and with) the Environment.** *International Young Researcher Workshop on Ambient Interfaces*. Osaka Univ., Osaka, Japan, November 11-12, 2007.
- **Electronic Field Guides: Interaction with the Environment**. *Mobile Persuasion 2007*. Stanford, CA, February 2, 2007.
- **Mobile Visualization.** *Y!RB Brain Jam,* Berkeley, CA, April 27, 2007.
- **Visualization in Mobile Environments**, *IBM 2007 Graphics and Visualization Student Symposium.* Hawthorne, NY, April 26-27, 2007.
- **Electronic Field Guides: Plant Exploration in a Mobile Environment.** *Urban Mobility 2005*. New York, NY, November 2, 2005.
- **Interaction and Interface Research at Columbia University**. Pratt Institute. New York, NY, September 20, 2005.
- **CO2 Mass Transfer for Air Extraction and Carbon Sequestration**. *First Workshop on Air Extraction of Carbon Dioxide*, CMU, Pittsburgh, PA, May 21–22, 2003.
- **Applications: Entertainment and Electronic Communities**, *CompCon 94*, San Francisco, CA, 1994.
- **Online Communities on the WWW**, *Stanford Computer Forum*, Stanford, CA, Sept. 20, 1994.
- **Internet Communities**, *Interval Research Online Communities Conference*, Palo Alto, CA, May 17–18, 1993.

TEACHING

Teaching Staff	CS001: Intro to Computers, Stanford University, 1990.
Teaching Asst.	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 Asst.	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, 2006–2009. various in 3D User interfaces, taught by Steven Feiner, 2007–2009. Photovoltaics, in Energy Sources and Conversions, taught by Vijay Modi, 2004. Photovoltaics, in Alt. 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, Mentoring, and Supervision

Masters	Anette von Kapri, Thesis, "User Interface Techniques for Annotating 2D Objects in Augmented Reality." April 30, 2008.
Project Students	Ivy Deliz. Multitouch Authoring on mobile handhelds, Fall 2009. Joseph Lin. iPhone UI for Electronic Field Guide, Fall 2009. Jacky Jacob. Improving implicit triggers on MS Surface Interaction, Fall 2009. Sean Hernandez. Analysis of optical features for space management in AR, Fall 2009. David Feng. Tangible augmented reality user interfaces, Summer/Fall 2008. Michael Cole. Integrating Goblin XNA with LeafView, Spring 2008. Himanshu Kumar. Mobile phone interface to Electronic Field Guide, Spring 2008. Levi Lister. Representations for visual hints, Spring 2007. Charles Macanka. Web interaction with plant identification, Fall 2007. Dominic Marino. Zoomable user interfaces, Fall 2006 Randall Li. Gesture recognition, Spring 2006. Jason Kopylec. Tangible augmented reality, Summer 2005. Adam Hurst. Dye sensitized solar cells, Spring/Fall 2004. Engineers without Borders: Lakota reservation wind energy assessment, Fall 2004.

PROFESSIONAL SERVICE

Committees

- Demo/Poster Chair, IEEE and ISMAR 2010.
- Demo/Showcase Chair, IEEE and ACM ISMAR 2009.
- Mobile Committee, IEEE and ACM ISMAR 2009.
- Program Committee, INTETAIN 2009.
- Program Committee, ACM CHI Works-In-Progress, 2009.
- Program Committee, ACM International Workshop on Urban, Community, and Social Applications of Networked Sensing Systems—UrbanSense08, Urban Sensing Workshop, 2008.
- Publicity Chair, ACM UIST, 2008.
- Publicity Chair, INTETAIN, 2008.
- Program Committee, SPIE Conference on Multimedia Computing and Networking, San Jose, CA, January 29-31,1996.
- Session Chair, Applications : entertainment and the electronic communities, COMPCON 94, San Francisco, CA, February 28–March 4, 1994.
- Co-organizer, Online Communities Conference, Interval Research Corp., Palo Alto, CA, May 17–18, 1993.

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: 2006–2010
- ACM CSCW: 2008
- ACM Ubicomp: 2009
- ACM UIST: 2009
- ACM SIGGRAPH: 2008–2009
- IEEE ISMAR: 2006–2009

- IEEE VR: 2007–2008
- IEEE 3DUI: 2009
- IEEE TableTop: 2006
- IEEE ISWC: 2006, 2009
- Graphics Interface: 2007
- INTETAIN: 2009
- International Journal of Human-Computer Studies: 2007–2008
- Computer Animation and Virtual Worlds: 2007
- ACM Transactions on Modeling and Computer Simulation: 2007
- Springer Virtual Reality Journal: 2010

Membership

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

Community Service

- Student Representative, PhD Committee, Columbia University, Dept. of Computer Science, 2006–2009
- Roving Reporter, *CS@CU Newsletter*, Dept. of Computer Science, Columbia University, 2006–2008.
- Table Facilitator, Clinton Global Initiative Summit, Climate and Energy Track, Sept. 26, 2007.
- President of the Association for Software Design, 1994–1996.

ART AND DESIGN INSTALLATIONS

- Ingenuity Festival, Crooked River First and Third Person, with spurse (artist collective) and David Jensenius, 2008.
- Grand Arts, Installation for "Fat of the Land" Exhibit with spurse, 2007.
- Metropolis, International Contemporary Furniture Fair Exhibit Booth (Finalist), with MADLab, 2007.
- Queens Botanical Garden, Interactive Interpretive Information System (Finalist) with MADLab, 2006.
- Candle Altar installation, with Oliver Bayley, Interval Research, Palo Alto, CA, 1997.
- Video Graffiti installation, Electronic Cafe, Palo Alto, CA, 1996–1997.
- Net Graffiti installation, Lollapalooza: Electric Carnival, 33 Venues across the USA (http://www.art.net/~hopkins/Don/don/electric-carnival.html), 1994.