

**NITIN SAWHNEY, PH.D.**  
**RESEARCHER IN HUMAN-CENTERED DESIGN & MULTI-MODAL INTERACTION**

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## EDUCATION

**MASSACHUSETTS INSTITUTE OF TECHNOLOGY**, Cambridge, MA

**Ph.D., MIT Program in Media Arts and Sciences, MIT Media Laboratory**, May 2003

Dissertation: *Cooperative Innovation in the Commons: Rethinking Distributed Collaboration and Intellectual Property for Sustainable Design Innovation.*

Advisors: Alex (Sandy) Pentland, Bish Sanyal, Mitchel Resnick, and Mark S. Ackerman

**MASSACHUSETTS INSTITUTE OF TECHNOLOGY**, Cambridge, MA

**M.S., MIT Program in Media Arts and Sciences, MIT Media Laboratory**, May 1998

Thesis: *Contextual Awareness, Messaging and Communication in Nomadic Audio Environments.*

Advisors: Chris Schmandt, Alex (Sandy) Pentland, Pattie Maes, and Hiroshi Ishii

**GEORGIA INSTITUTE OF TECHNOLOGY**, Atlanta, GA

**M.S., Information Design and Technology with Certificate in Management of Technology**, May 1996

Thesis: *Authoring and Navigating Video in Space and Time: An Approach Towards Hypervideo.*

Advisors: Jay David Bolter, Terry Harpold, and Stuart Moulthrop

**GEORGIA INSTITUTE OF TECHNOLOGY**, Atlanta, GA

Bachelor of Industrial Engineering, School of Industrial and Systems Engineering, May 1993

## PROFESSIONAL EXPERIENCE

**DATAMINR, INC.**, NEW YORK, NY, JULY – NOVEMBER 2019

Principal Research Scientist, AI Group

- Leading efforts at the intersection of AI & Human Computer Interaction (HCI) at Dataminr, which discovers high-impact events and critical breaking information across news, public sector and commercial clients. Dataminr is pioneering groundbreaking technology for detecting, classifying, and determining the significance of public information in real time.

**CYTEL, INC.**, Cambridge, MA, 2005 – 2009

Director, Commercialization of Research

- Managed product R&D for clinical informatics platforms to support randomization, statistical analysis and modeling of Phase II adaptive dose-finding clinical trials conducted by biopharmas, including HCI design/evaluation, agile software development practices, and regulatory compliance.

**AKAZA RESEARCH, INC.**, Cambridge, MA, 2003 – 2005

Co-founder and Chief Scientific Officer

- Managed product R&D for genetic data repositories and *OpenClinica*, an open source software platform for biomedical research, funded by SBIR grants from the National Institutes of Health (NIH).

**MIT MEDIA LABORATORY**, Cambridge, MA, 2001 – 2003

Graduate Research Assistant with Prof. Alex (Sandy) Pentland, Human Dynamics

- Research on an open collaborative design platform for distributed product innovation.

**MITSUBISHI ELECTRIC RESEARCH LABORATORY**, Cambridge, MA, June – August 1999

Research Internship with Dr. Michael Casey, Cambridge Research Lab

- Research on machine learning and auditory analysis for mapping and synthesis of human voices, using LPC analysis, vocal tract modeling, and harmonic + noise coding techniques.

**STARLAB**, Brussels, Belgium, June – August 1998

Research Internship with Dr. Walter Van de Velde, Agents and Wearable Computing

- HCI research for simulation and mobile tools using speech-based UI and Intelligent Agents.

**MIT MEDIA LABORATORY**, Cambridge, MA, 1996 – 1998

Graduate Research Assistant with Dr. Chris Schmandt, Speech Interface

- HCI research and development of wearable audio computing device with speech-based UI.

**FUJI-XEROX PALO-ALTO RESEARCH LABORATORIES**, Palo-Alto, California, June – August 1996

Research Internship with Dr. Lynn Wilcox and Dr. Bill Schilit, Mobile Computing Research

- Design and HCI research for mobile audio capture, handwriting and gesture-recognition (patented).

**GRAPHICS, VISUALIZATION AND USABILITY CENTER, GEORGIA TECH**, Atlanta, Georgia, 1995 – 1996

Graduate Research Assistant with Prof. Gregory Abowd, Future Computing Environments

- Design and HCI research for mobile classroom tools for distributed multimedia learning.

**MICHAEL C. CARLOS MUSEUM, EMORY UNIVERSITY**, Atlanta, Georgia, 1993 – 1994

Research Consultant, Dept. of Education

- Design of image-based digital archiving tools and educational applications for schools.

**MELITA INTERNATIONAL CORPORATION**, Norcross, Georgia, 1992 – 1995

Software Developer, Advanced Product Development

- UX Design and prototyping for collaborative telephony and visual customer care software.

**PATENTS:** Wilcox, L.D., Schilit, W.N., Sawhney, N., Sullivan, J.W. and Bickmore, T.W., Xerox Corporation and Fuji Xerox Co., Ltd., 1999. *System for capturing and retrieving audio data and corresponding hand-written notes*. U.S. Patent 5,970,455.

**PROGRAMMING LANGUAGES:** Perl, Tcl/Tk, C, Visual C++, Java, Javascript, Matlab, SQL, XML, Python, Processing

## ACADEMIC APPOINTMENTS

**THE NEW SCHOOL, School of Media Studies**, New York, NY

Faculty Fellow, Graduate Institute for Design, Ethnography and Social Thought (GIDEST), 2018 – 2019

Assistant Professor of Media Studies, 2011 – 2019

- Led numerous human-centered design and participatory action research projects in New York City, Moscow, Jerusalem, Guatemala and Nepal for civic engagement using qualitative research, co-design workshops, hackathons, sensory ethnography, participatory media, analysis and advocacy.
- Taught courses on qualitative and participatory research, human computer interaction, digital DIY learning, conflict and civic agency, urban tactics and design, participatory cultures, and media ethics.

**MIT CENTER FOR CIVIC MEDIA, THE MEDIA LABORATORY**, Cambridge, MA

Research Affiliate, 2011 – 2013

- Designed digital tools for aerial cartography and mobile storytelling among marginalized youth.

**MIT PROGRAM IN ART, CULTURE AND TECHNOLOGY**, Cambridge, MA

Lecturer and Research Fellow, 2009 – 2011

- Taught courses on Networked Cultures, Participatory Media & Tactical Design for Civic Agency.

MIT DEPT. OF URBAN STUDIES AND PLANNING AND THE CENTER FOR INTERNATIONAL STUDIES, Cambridge, MA  
Visionary Fellow for the MIT Jerusalem 2050 Project, 2008 – 2009

## SELECTED PUBLICATIONS

Sawhney, N., 2019. Cooperative Crisis Response among Emergency Responders & AI Systems. Position paper for workshop on better supporting workers in ML workplaces, *the 22nd ACM Conference on Computer-Supported Cooperative Work and Social Computing*, November 9-13, 2019, Austin, TX, USA.

Sawhney, N., Graver, C., and Breitkopf, E., 2018. Audio Journaling for Self-Reflection and Assessment among Teens in Participatory Media Programs. In *Proceedings of the 17<sup>th</sup> Interaction Design and Children Conference (IDC '18)*, Trondheim, Norway. ACM.

Sawhney, N., de Klerk, C. and Malhotra, S., 2015. Civic Engagement through DIY Urbanism and Collective Networked Action. *Journal of Planning Practice & Research*, 30(3), *Special Issue: Using Social Media and Mobile Technologies to Foster Engagement and Self-Organization in Participatory Urban Planning and Neighbourhood Governance*, Taylor & Francis, pp.337-354.

Malhotra, S., de Klerk, C., and Sawhney, N. 2015. Mobilizing Collective Urban Actions through MicroActs. In *Civic Media Project*, MIT Press.

Sawhney, N., Dougherty, A., Shim, L., and Lopez, R. 2013. Aago for Mobile Media Narratives Created by Teens: Lessons from Co-Design, Prototyping and Evaluation. Workshop on Enhancing Children's Voices with Media and Technology, *International Conference on Interaction Design and Children (IDC '13)*. New York, NY.

Sawhney, N. 2012. Making Sense of Participatory Video: Approaches for Participatory Content Analysis. (Chapter 11). *The Handbook of Participatory Video*, Edited by E-J Milne; Claudia Mitchell and Naydene de Lange, AltaMira Press.

Sawhney, N., Yacoub, R. and Norman, J., 2009. Jerusalem and Belfast: Envisioning Media Arts for Cultural Identity and Urban Renewal in Divided Cities. *Jerusalem Quarterly Journal, Institute for Jerusalem Studies*, 39, pp.62-80.

Sawhney, N., 2009, June. Voices Beyond Walls: The Role of Digital Storytelling for Empowering Marginalized Youth in Refugee Camps. In *Proceedings of the 8th International Conference on Interaction Design and Children* (pp. 302-305). ACM.

Sawhney, N., Griffith, S., Maguire, Y. and Prestero, T., 2002. ThinkCycle: Sharing Distributed Design Knowledge for Open Collaborative Design. *International Journal of Technologies for the Advancement of Knowledge and Learning (TechKnowLogia)*, 4(1), pp.49-53.

Sawhney, N., Wheeler, S. and Schmandt, C., 2001. Aware Community Portals: Shared Information Appliances for Transitional Spaces. *Journal of Personal and Ubiquitous Computing*, 5(1), pp.66-70.

Schmandt, C., Marmasse, N., Marti, S., Sawhney, N. and Wheeler, S., 2000. Everywhere Messaging. *IBM Systems Journal*, 39(3.4), pp.660-677.

Sawhney, N. and Schmandt, C., 2000. Nomadic Radio: Speech and Audio Interaction for Contextual Messaging in Nomadic Environments. *ACM Transactions on Computer-Human interaction (TOCHI)*, 7(3), pp.353-383.

Sawhney, N., Balcom, D. and Smith, I., 1997. Authoring and Navigating Video in Space and Time. *IEEE Multimedia Journal*, 4(4), pp.30-39.

Wilcox, L.D., Schilit, B.N. and Sawhney, N., 1997, March. Dynamite: A Dynamically Organized Ink and Audio Notebook. In *Proceedings of the ACM SIGCHI Conference on Human Factors in Computing Systems* (pp. 186-193). ACM.

Abowd, G.D., Atkeson, C.G., Feinstein, A., Hmelo, C., Kooper, R., Long, S., Sawhney, N. and Tani, M., 1997, February. Teaching and Learning as Multimedia Authoring: The Classroom 2000 Project. In *Proceedings of the fourth ACM international conference on Multimedia* (pp. 187-198). ACM.

Sawhney, N., Balcom, D. and Smith, I., 1996. HyperCafe: Narrative and Aesthetic Properties of Hypervideo. *Proceedings of the Seventh ACM Conference on Hypertext* (pp. 1-10). ACM. **Recipient of Best Paper Award.**

## SELECTED EXHIBITIONS AND CREATIVE MEDIA WORKS

[Soundscapes of Kora](#). Sound installation based on soundwalks in Mt. Kailash, Tibet and Kathmandu, Nepal, supported by the India China Institute (ICI). *Kailash Cartographies Exhibition* curated by Sreshta Rit Premnath, Arnold and Sheila Aronson Gallery, Sheila C. Johnson Design Center, The New School, March 9 – April 3, 2017.

[Guatemala Después](#). Mixed-media exhibition and digital archive co-curated with Anabella Acevedo and Pablo José Ramirez, showcasing works by over 40 Guatemalan artists, scholars, and indigenous practitioners. Exhibitions and public programming hosted at The New School (April 9-29, 2015), Ciudad de la Imaginación, Quetzaltenango (June 6 – July 3, 2015), and the Spanish Cultural Center, Guatemala City (September 2015).

[Zona Intervenida](#) (Guatemala/USA), July 2015. Director (with Bonifaz Díaz), feature-length documentary film in Spanish with English subtitles, duration 60 minutes. Premiered at Ciudad de la Imaginación, Quetzaltenango, Guatemala and screened at the NYU Hemispheric Institute, NY.

[#SEARCHUNDEROCCUPY](#). Mixed-media exhibition co-curated with New School faculty, including public performances, teach-ins and hackathons, Arnold and Sheila Aronson Gallery, Sheila C. Johnson Design Center, The New School, March 1 – April 1, 2012.

[Flying Paper](#) (Palestine/USA), May 2013. Director (with Roger Hill), award-winning feature-length documentary film in Arabic, subtitled in English, Spanish and French, duration 71 minutes (Director's Cut) and 52 minutes (Broadcast Cut). Distributed by Journeyman Pictures, U.K.

## SELECTED GRANTS AWARDED

*Revitalizing NYC Neighborhoods through Public Innovation Places: Participatory Urban Investigations, Cooperative Design and Policy Alternatives* with Parsons faculty in partnership with *No Longer Empty*. Fund for Collaborative Innovation, The New School Collaboratory, September 2013 – 2015, \$20,000 awarded.

*Mobile Storytelling for Youth Media Makers*, Link Grant from the New York Community Trust and Hive NYC Learning Network, Partners: People's Production House and Eyebeam Center for Art and Technology, New York, NY, October 2011 – September 2012, \$50,000 awarded.

*OpenClinica: Open Source Platform for Clinical Data Management and Research*, Small Business Innovation and Research (SBIR) Phase I Research Grant, National Institutes of Health (NIH), January 2004 - February 2006, \$200,000 awarded. Grant subsequently extended for Phase II Commercialization (3-years \$1.5 Million) from 2006 – 2009. Funds awarded to Akaza Research, Cambridge, MA.

## PROFESSIONAL AFFILIATIONS

- Associate Editor, International Journal of Child Computer Interaction (IJCCI), 2014 – 2020.
- Member, Association for Computing Machinery (ACM), 2011 – 2013 and 2018 – 2020.
- Member, International Sociological Association (ISA), 2011 – 2013.