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## Artistic and research interests

**Prof. Nitin Sawhney** leads the *CRAI-CIS* (CRITICAL AI and Crisis Interrogatives) research group in the Department of Computer Science at Aalto University. Working at the intersection of Human Computer Interaction (HCI), responsible AI, and participatory design research, he examines the critical role of technology, civic agency, and social justice in society and crisis contexts. Prof. Sawhney has previously conducted research in speech/audio interaction, wearable computing, distributed open source collaboration, civic/participatory media at the MIT Media Lab and The New School.

At Aalto University, he is the principal investigator for a 3-year Research Council of Finland project on *Reconstructing Crisis Narratives for Trustworthy Communication and Cooperative Agency*, jointly conducted with the Finnish Institute for Health and Welfare (THL). It aims to analyze crisis narratives using mixed-methods, combining qualitative research with computational data analytics of crisis discourses in news, health communications, and social media. In December 2021, he received an award from the Kone Foundation for a 4-year research project *Civic Agency in AI? Democratizing Algorithmic Services in the City (CAAI)*, which was subsequently awarded an additional 4-years of funding from the Research Council of Finland in June 2023. In September 2022, he was awarded a Strategic Research Council grant for the project *Designing Inclusive & Trustworthy Digital Public Services for Migrants in Finland (Trust-M)*.

Prof. Sawhney is a member of the research program on AI and Society at the Finnish Center for Artificial Intelligence (FAI). At Aalto University he helped establish the research areas on *Digital Ethics, Society and Policy* (Digital ESP) and *Human-Computer Interaction and Design* (HCID). His work has been published in journals including *IEEE Multimedia*, *ACM Transactions on Computer-Human Interaction*, *Personal and Ubiquitous Computing*, *Planning Practice & Research*, *AI & Society: Knowledge, Culture and Communication*, and *Digital Creativity*. He is an associate editor for the *International Journal of Child Computer Interaction*.

He is co-organizing *Contestations.AI*, a *Transdisciplinary Symposium on AI, Human Rights and Warfare* at The Train Factory, Helsinki on October 23, 2024 with over 35 international speakers.

He has previously been involved in several tech startups in clinical data platforms and real-time news and social media analysis in Cambridge and New York, and co-directed two feature-length documentary films in Gaza and Guatemala.

CRAI-CIS Research Group: <https://crai-cis.aalto.fi/>  
Personal Website: <http://www.NitinSawhney.org>

## Projects

### **CAAI: Citizen Agency in AI: Democratizing Algorithmic Services in the City**

Sawhney, N. (Principal investigator), Drobotowicz, K. (Project Member) & Kajava, K. (Project Member)  
01/01/2022 → 31/12/2025

### **CAAI-AoF: Civic Agency in AI? Democratizing Algorithmic Services in the Public Sector**

Sawhney, N. (Principal investigator), Drobotowicz, K. (Project Member), Rannisto, A. (Project Member), Kajava, K. (Project Member), Gonzalez Torres, A. P. (Project Member), Lee, S. (Project Member) & Varanasi, U. (Project Member)  
01/09/2023 → 31/08/2027

### **Co-Creative Artificial Intelligence of Music**

Tahiroglu, K. (Principal investigator), Sawhney, N. (Principal investigator), Baffy, B. (Project Member) & Murhu, M. (Project Member)  
01/01/2022 → ...

### **STN / Trust-M / Sawhney: Designing Inclusive & Trustworthy Digital Public Services for Migrants in Finland**

Sawhney, N. (Principal investigator), Eskelinen, V. (Project Member), Serpytyte, R. (Project Member), Vitiugin, F. (Project Member) & Truong, L. (Project Member)  
01/10/2022 → 30/09/2025

### **Liquid Forms of AI-infused Disinformation: Improving Information Resilience in the Finnish News Ecosystem**

Tikka, M. (Principal investigator), Sawhney, N. (Principal investigator) & Paakki, H. (Project Member)

01/07/2023 → 30/04/2025

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Naukkarinen, O. (Principal investigator) & Sawhney, N. (Project Member)

01/01/2021 → 31/12/2026

**Reconstructing Crisis Narratives for Trustworthy Communication and Cooperative Agency**

Sawhney, N. (Principal investigator), Leinonen, T. (Principal investigator), Paakki, H. (Project Member), Nelimarkka, M. (Project Member), Villaman, N. (Project Member), Hyökki, S. (Project Member), Viitanen, J. (Project Member), Aledavood, T. (Project Member), Kajava, K. (Project Member), Tikka, M. (Project Member), Kajava, K. (Project Member), Tikka, M. (Project Member), Varanasi, U. (Project Member), Paakki, H. (Project Member), Nariman Zadeh, H. (Project Member) & Alanya, L. (Project Member)

21/08/2020 → 30/11/2023

**-: THL Sawhney 2023**

Sawhney, N. (Principal investigator)

01/01/2023 → 01/05/2024

## Research outputs

**From prejudice to marginalization : Tracing the forms of online hate speech targeting LGBTQ plus and Muslim communities**

Unlu, A., Truong, S., Sawhney, N., Tammi, T. & Kotonen, T., 16 Jan 2025, (E-pub ahead of print) In: NEW MEDIA AND SOCIETY. 32 p.

**Enhancing Conversations in Migrant Counseling Services: Designing for Trustworthy Human-AI Collaboration**

Truong, L., Lee, S. & Sawhney, N., 9 Nov 2024, *Enhancing Conversations in Migrant Counseling Services: Designing for Trustworthy Human-AI Collaboration*. CSCW2 ed. ACM, Vol. 8. 25 p. 495. (Proceedings of the ACM on human-computer interaction).

**Unveiling the Veiled Threat : The Impact of Bots on COVID-19 Health Communication**

Unlu, A., Truong, S., Sawhney, N. & Tammi, T., 8 Sept 2024, (E-pub ahead of print) In: Social Science Computer Review. 30 p.

**Invisible Lives, Visible Determination: Creative Agency as Resilience among Palestinian Children under Siege in Gaza**

Sawhney, N., 1 Aug 2024, *Lived Resistance against the War on Palestinian Children*. Morrison, H. (ed.). University of Georgia Press, 20 p. (Children, Youth, and War Series).

**Unraveling Code-Mixing Patterns in Migration Discourse: Automated Detection and Analysis of Online Conversations on Reddit**

Vitiugin, F., Lee, S., Paakki, H., Chizhikova, A. & Sawhney, N., 1 Jun 2024, *Workshop Proceedings of the 18th International AAAI Conference on Web and Social Media*. AAAI Press, 10 p.

**Long-term assessment of social amplification of risk during COVID-19 : challenges to public health agencies amid misinformation and vaccine stance**

Unlu, A., Truong, S., Sawhney, N., Sivelä, J. & Tammi, T., Apr 2024, In: Journal of Computational Social Science. 7, 1, p. 809-836 28 p.

**Tracing the dynamics of misinformation and vaccine stance in Finland amid COVID-19**

Unlu, A., Truong, S., Sawhney, N., Tammi, T. & Sivelä, J., 27 Mar 2024, (E-pub ahead of print) In: INFORMATION COMMUNICATION AND SOCIETY. 25 p.

**Setting the misinformation agenda : Modeling COVID-19 narratives in Twitter communities**

Unlu, A., Truong, S., Sawhney, N. & Tammi, T., 23 Feb 2024, (E-pub ahead of print) In: NEW MEDIA AND SOCIETY. 25 p.

### **Construction of Hyper-Relational Knowledge Graphs Using Pre-Trained Large Language Models**

Datta, P., Vitiugin, F., Chizhikova, A. & Sawhney, N., 2024, 7 p.

### **Language of Algorithms: Agency, Metaphors, and Deliberations in AI Discourses**

Kajava, K. & Sawhney, N., Nov 2023, *Handbook of Critical Studies of Artificial Intelligence*. Lindgren, S. (ed.). Edward Elgar, 15 p.

### **Participatory Design for Whom? Designing Conversational User Interfaces for Sensitive Settings and Vulnerable Populations**

Houben, M., Van As, N., Sawhney, N., Unbehaun, D. & Lee, M., 19 Jul 2023, p. 1-4. 4 p.

### **Collaborative Sensemaking in Crisis : Designing Practices and Platforms for Resilience**

Varanasi, U. S., Leinonen, T., Sawhney, N., Tikka, M. & Ahsanullah, R., 10 Jul 2023, *DIS '23 : Proceedings of the 2023 ACM Designing Interactive Systems Conference*. ACM, p. 2537–2550

### **A User-Centered Lens into Digital Excess : Exploring the Superfluity and Environmental Burden of the Digital World**

Olsson, T., Pyyhtinen, O., Rantasila, A., Laaksonen, S.-M., Vigren, M., Ylipulli, J. & Sawhney, N., 14 Jun 2023, *LIMITS'23, June 2023, Everywhere All at Once*. ACM, p. 1-4 4 p. 91

### **Practitioners' Perspectives on Inclusion and Civic Empowerment in Finnish Public Sector AI**

Drobotowicz, K., Truong, N. L., Ylipulli, J., Gonzalez Torres, A. P. & Sawhney, N., 29 May 2023, *Proceedings of the 11th International Conference on Communities and Technologies - Humanization of Digital Technologies 2023, C&T 2023*. ACM, p. 108-118 11 p.

### **Re-evaluating Evaluation : Looking for Value-based Metrics in Public Service Design**

Varanasi, U., Serpytyte, R. & Sawhney, N., 29 May 2023. 3 p.

### **Contextual Inquiry of Affordances for Collaboration in Crisis : Lessons from the Finnish Context**

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### **Emerging AI Discourses and Policies in the EU: Implications for Evolving AI Governance**

Gonzalez Torres, A. P., Kajava, K. & Sawhney, N., 2023, (Unpublished).

### **Emerging AI Discourses and Policies in the EU: Implications for Evolving AI Governance**

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### **Role of AI Regulatory Sandboxes and MLOps for Finnish Public Sector Services**

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### **Devising Regulatory Sandboxes and Responsible Practices for Designing AI-based Services in the Finnish Public Sector**

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### **Age Against the Machine: A Call for Designing Ethical AI for and with Children**

Sharma, S., Kinnula, M., Iivari, N., Ventä-Olkkonen, L., Hartikainen, H., Durall, E., Molin-Juustila, T., Okkonen, J., Kotilainen, S., Sawhney, N., Eden, G. & Monga, C., 8 Oct 2022. 6 p.

### **Studying the potentials and pitfalls of ICT tools designed for crisis communication & management**

Tikka, M., Ahsanullah, R., Sawhney, N., Leinonen, T. & Varanasi, U., Oct 2022.

**An Approach to Computational Crisis Narrative Analysis: A Case-study of Social Media Narratives Around the COVID-19 Crisis in India**

Paakki, H., Sawhney, N. & Ghorbanpour, F., 14 Sept 2022, p. 263-266.

**Contestations in urban mobility: rights, risks & responsibilities for Urban AI**

Sawhney, N., 4 Jul 2022, In: AI and Society. 16 p.

**Language of Algorithms: Agency, Metaphors and Deliberations in AI Discourses**

Kajava, K. & Sawhney, N., 2022, (Unpublished).

**Re-thinking Pedagogy and Dis-embodied Interaction for Online Learning and Co-Design**

Ylirisku, S., Jang, G. & Sawhney, N., 15 Aug 2021, *Proceedings of Nordes 2021: Matters of Scale*. Design School Kolding, Vol. 9. 10 p. (Nordic Design Research Conference).

**Augmented reality sandboxes: children's play and storytelling with mirror worlds**

Leinonen, T., Brinck, J., Vartiainen, H. & Sawhney, N., 8 Jan 2021, In: Digital Creativity. 32, 1, p. 38-55 18 p.

**Te Awa Tupua: Sacred Rivers and Cooperative Urban AI Ecosystems**

Sawhney, N., 6 Jul 2020, (Unpublished) *Conference on Designing Interactive Systems (DIS 2020): Workshop on Urban AI: Formulating an Agenda for the Interdisciplinary Research of Artificial Intelligence in Cities*. Eindhoven, Netherlands: ACM, 9 p.

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**Cooperative Crisis Response among Emergency Responders & AI Systems**

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**Zona Intervenida: Performance as Memory, Transforming Contested Spaces**

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**Audio Journaling for Self-Reflection and Assessment among Teens in Participatory Media Programs**

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**Civic Engagement through DIY Urbanism and Collective Networked Action**

Sawhney, N., de Klerk, C. & Malhotra, S., 2015, In: Planning Practice and Research. 30, 3, p. 337-354

**Guatemala Después: Rethinking the Past, Reimagining the Future**

Acevedo, A. & Sawhney, N., 2015, *Asociacion Ciudad De La Imagination*.

**Mobilizing Collective Urban Actions through MicroActs**

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**Aago for Mobile Media Narratives Created by Teens: Lessons from Co-Design, Prototyping and Evaluation**

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Coover, R., Pat Badani, R. C., Caviezel, F., Marino, M., Sawhney, N. & Uricchio, W., 2012, *Advances in Visual Methodology*. Sage Publishing

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**New Directions in Participatory Video: Emerging Digital Technologies and Practices**

Dougherty, A. & Sawhney, N., 2012, *The Handbook of Participatory Video*. AltaMira Press

**Jerusalem and Belfast: Envisioning Media Arts for Cultural Identity and Urban Renewal in Divided Cities**

Sawhney, N., Yacoub, R. & Norman, J., 2009, In: *Jerusalem Quarterly*. 39

**Voices Beyond Walls: The Role of Digital Storytelling for Empowering Marginalized Youth in Refugee Camps**

Sawhney, N., 2009, *IDC '09: Proceedings of the 8th International Conference on Interaction Design and Children*. ACM, p. 302-305

**ThinkCycle: Supporting Open Source Collaboration and Sustainable Engineering Design in Education**

Sawhney, N., Presterio, T., Maguire, Y. & Griffith, S., 2008, *Engineering Education in Sustainable Development (EESD)*.

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

Sawhney, N., 2003, Massachusetts Institute of Technology. 130 p.

**ThinkCycle: Sharing Distributed Design Knowledge for Open Collaborative Design**

Sawhney, N., Griffith, S., Maguire, Y. & Presterio, T., 2002, In: *International Journal of Technologies for the Advancement of Knowledge and Learning*.

**Aware Community Portals: Shared Information Appliances for Transitional Spaces**

Sawhney, N., Wheeler, S. & Schmandt, C., 2001, In: *Personal and Ubiquitous Computing*. 5, 1, p. 66-70

**Everywhere Messaging**

Schmandt, C., Marmasse, N., Marti, S., Sawhney, N. & Wheeler, S., 2000, In: *IBM Systems Journal*.

**Nomadic Radio: Speech and Audio Interaction for Contextual Messaging in Nomadic Environments**

Sawhney, N. & Schmandt, C., 2000, In: *ACM Transactions on Computer-Human interaction (TOCHI)*. 7, 3

**Nomadic Radio: Scaleable and Contextual Notification for Wearable Audio Messaging**

Sawhney, N. & Schmandt, C., 1999, *CHI '99: Proceedings of the SIGCHI Conference on Human Factors in Computing Systems*. ACM, p. 96-103

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**Speaking and Listening on the Run: Design for Wearable Audio Computing**

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**Authoring and Navigating Video in Space and Time**

Sawhney, N., Balcom, D. & Smith, I., 1997, In: *IEEE Multimedia*. 4, 4, p. 30-39

**Dynomite: A Dynamically Organized Ink and Audio Notebook**

Wilcox, L. D., Schilit, B. N. & Sawhney, N., 1997, *Proceedings of the ACM SIGCHI Conference on Human Factors in Computing Systems*. ACM, p. 186–193

**Merging the Benefits of Paper Notebooks with the Power of Computers in Dynomite**

Schilit, B. N., Wilcox, L. D. & Sawhney, N., 1997, p. 22–23.

**Nomadic Radio: A Spatialized Audio Environment for Wearable Computing**

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**Teaching and Learning as Multimedia Authoring: The Classroom 2000 Project**

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**Espace 2: an experimental hyperaudio environment**

Sawhney, N. & Murphy, A., 1996, p. 105-106. 2 p.

**HyperCafe and the "Hypervideo Engine": A Generalized Approach for Hypervideo Authoring and Navigation**

Sawhney, N. & Balcom, D., 1996, In: SIGWEB Newsletter.

**HyperCafe: Narrative and Aesthetic Properties of Hypervideo**

Sawhney, N., Balcom, D. & Smith, I., 1996, *Proceedings of the Seventh ACM Conference on Hypertext*. ACM SIGCHI