

Paul Haimes

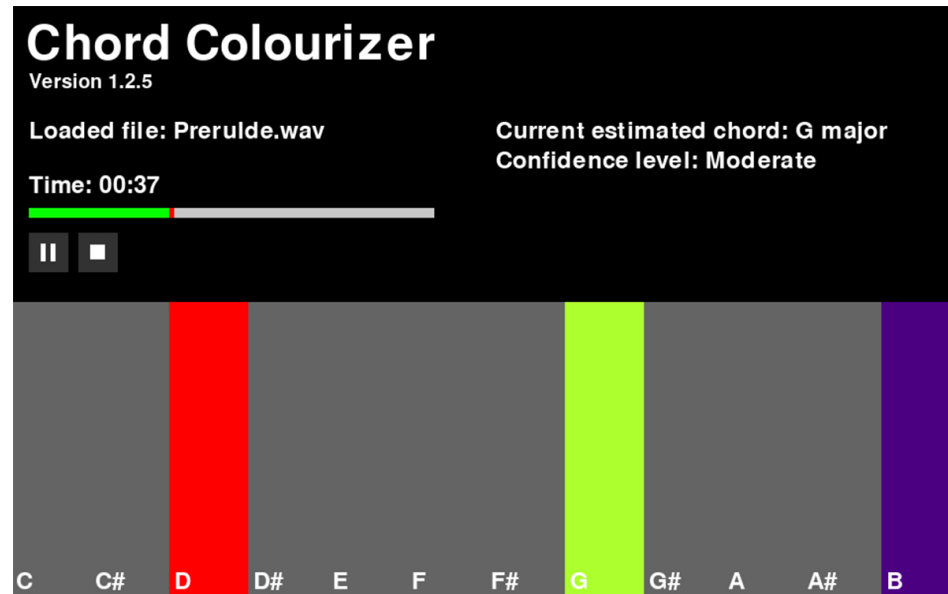
Professor (Design)

PhD, Digital + Interaction Design

Selected Works

An overview of various research and creative projects.

The Colour of Music / The Music of Colour



MIR · INTERFACE · COLOUR THEORY · NIME · AUDIO ANALYSIS

Explores the visualisation of musical signals based on colour theory and generative music systems based on colour input.

RESEARCH PAPERS

1. Haimes, P. (2025). Chord Colourizer: A Near Real-Time System for Visualizing Musical Key. In *Proceedings of the 23rd International Conference of Asia Digital Art and Design Association*, Tokyo, Japan.
(This research received a “Best paper” award at the ADADA 2025 conference!)
2. Haimes, P. (2025). Colour Chordifier: Interactive Colour-Driven Music Generation. In *Proceedings of the 23rd International Conference of the Asia Digital Art and Design Association*, Tokyo, Japan.

Aesthetics in HCI



HCI THEORY · AESTHETICS · PHILOSOPHY OF DESIGN

This research advocates for a deeper philosophical engagement with aesthetics in HCI (Human-Computer Interaction) discourse. Interactive display by Moment Factory.

RESEARCH PAPER

1. Haimes, P. (2021). Beyond beauty: Towards a deeper understanding of aesthetics in HCI. In *Extended abstracts of the 2021 CHI conference on human factors in computing systems* (pp. 1–8). ACM.

Fuji-chan



INTERFACE · AESTHETICS · DIGITAL FABRICATION · AMBIENT MEDIA

An ambient media system for the presentation of volcanic eruption data and weather information for Mount Fuji.

RESEARCH PAPERS AND EXHIBITION

1. Haimes, P., & Kushiyama, K. (2025). *Fuji-chan* [Multimedia installation]. In *Works of Kumiko Kushiyama (1984–2024)* [Exhibition]. Tokyo Metropolitan University, Department of Industrial Art Gallery, Tokyo, Japan.
2. Medley, S., Zaman, B., & Haimes, P. (2020). The role of cuteness aesthetics in interaction. In R. Rousi, J. Leikas, & P. Saariluoma (Eds.), *Emotions in technology design: From experience to ethics* (pp. 125–138). Springer.
3. Haimes, P., Baba, T., Suda, H., & Kushiyama, K. (2017). *Fuji-chan: A unique IoT ambient display for monitoring Mount Fuji's conditions*. In *Proceedings of the 8th ACM on Multimedia Systems Conference (MMSys '17)* (pp. 246–249). Association for Computing Machinery.

Suikinkutsu Studies



ACOUSTICS · AESTHETICS · AUDIO ANALYSIS · PHILOSOPHY OF DESIGN · MIR

An ongoing project examining the *suikinkutsu* (water harp cave), a traditional Japanese garden feature in which water dripping into a buried ceramic chamber produces a subtle resonance. The project approaches the audio and other aesthetic qualities of *suikinkutsu* from multiple perspectives, including computational audio analysis and aesthetics studies.

RESEARCH PAPERS

1. Haimes, P. (2026). From Edo-Period Gardens to Kankyō Ongaku (Environmental Music): Appreciation of Environmental Sound in Japan. *Contemporary Aesthetics*, 24.
2. Haimes, P., Uhde, A., & Marutschke, D. M. (2026). A Computational Framework for the Acoustic Characterization of Suikinkutsu (Water Harp Cave). *International Journal of Asia Digital Art and Design* [conditionally accepted].

Japanese Design Aesthetics



AESTHETICS · PHILOSOPHY OF DESIGN · DESIGN HISTORY

This work explores how Japanese aesthetic principles inform both individual creative expression and the collaborative construction and maintenance of lived environments.

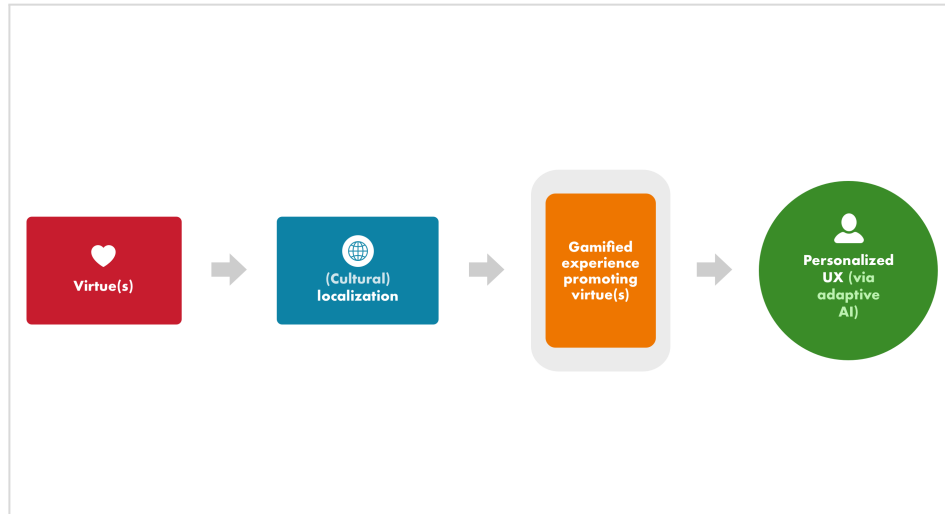
RESEARCH PAPERS

1. Haimes, P. (2025). Museums, memory, and the Korean legacy in Japanese porcelain pottery. *Conflict and Empire in East Asia to 1945 in Heritage, Memory, and Museums*, Kyoto, Japan.
2. Haimes, P. (2022). Machizukuri (neighborhood making): Collective world-making in traditional Japanese neighborhoods. *Contemporary Aesthetics*, 20.
3. Haimes, P. (2020). On Japanese minimalism. *Contemporary Aesthetics*, 18.
4. Haimes, P. (2015). *Zen and the art of website maintenance*. *Interactions*, 23(1), 20–21. Association for Computing Machinery.

BOOK

1. Haimes, P. (2026). *Exploring Japanese Design*.
(Self-published open-source textbook)

Ethical Issues in Interaction Design



ETHICS · VIRTUE · LANGUAGE · ACCESSIBILITY · HCI THEORY

Broader work on the ethical dimensions of interaction design, spanning how virtues can be embedded in adaptive, cross-cultural systems and how the language we use to describe design qualities shapes the values built into them.

RESEARCH PAPERS

1. Uhde, A., & Haimes, P. (2026). {Access|Use|Sustain|_}-ability: Exploration and Quantification of a Linguistic Structure and Its Use in Design. *International Journal of Asia Digital Art and Design* [conditionally accepted].
2. Haimes, P., & Uhde, A. (2025). Virtues in Gamified Systems: Exploring Virtue Ethics in Cross-Cultural Adaptive Gamification. In *Proceedings of the 23rd International Conference of Asia Digital Art and Design Association*, Tokyo, Japan.

NAKANISYNTH: Waveform Synthesis



NIME · INTERFACE · USER TESTING

A synthesiser application that enables sound creation through freehand drawing of waveforms, linking visual form and auditory output.

RESEARCH PAPER

1. Nakanishi, K., Haimes, P., Baba, T., & Kushiyaama, K. (2016). *NAKANISYNTH: An intuitive freehand drawing waveform synthesiser application for iOS devices*. In *Proceedings of the 16th International Conference on New Interfaces for Musical Expression (NIME 2016)* (pp. 143–145).

Taifūrin



INTERFACE · AESTHETICS · DIGITAL FABRICATION · AMBIENT MEDIA

An ambient media system, inspired by Japanese aesthetics, that uses a wind-chime installation to translate typhoon data into an intuitive, experiential form of risk communication. The name is a portmanteau of the Japanese words for “typhoon” and “wind chime”.

RESEARCH PAPER AND EXHIBITION

1. Haimes, P., Baba, T., & Kushiya, K. (2016). *Taifūrin: Wind-chime installation as a novel typhoon early warning system*. In *Proceedings of the 13th International Conference on Advances in Computer Entertainment Technology* (Article 24, pp. 1–6). Association for Computing Machinery.
2. Kosmala, K., Clifford, A., Truslove, G., Bell, A., Grace, A., McGeechan, P., Scott, D., Jamieson, G., Holmes, P., Baba, T., McMeekin, R., Sherlock, S., Haimes, P., Kushiya, K., Kanai, T., Kikukawa, Y., Kotegawa, T., Suda, H., Suzuki, T., . . . Kushiya, K. (2016). *Azimuth: Sound/Image: Scottish version*. Exhibition, CCA Glasgow.

Braille Pad Project



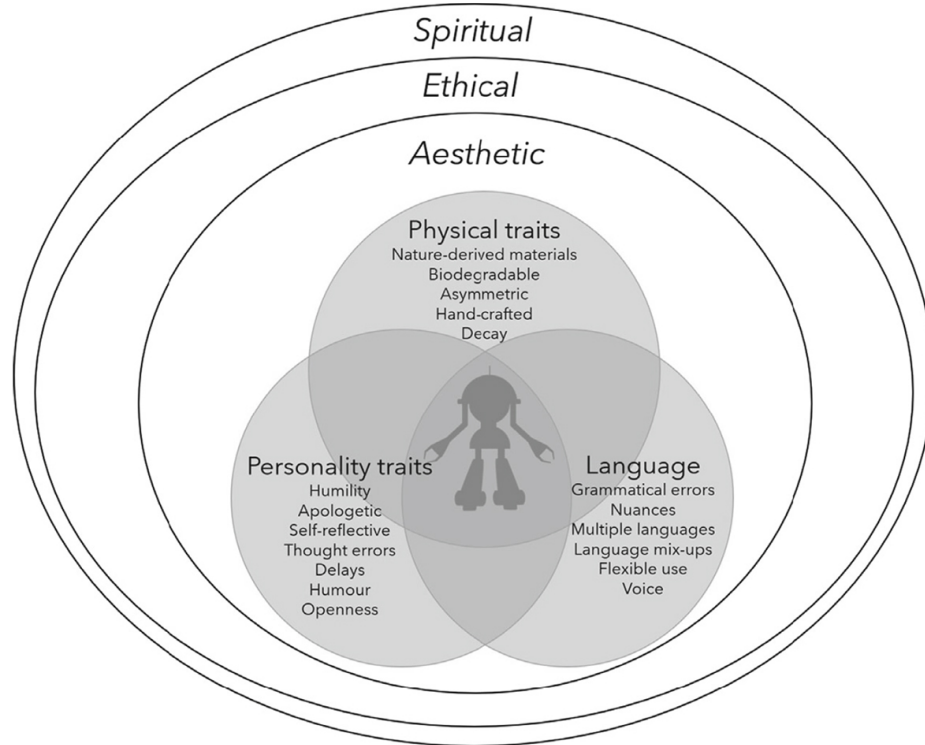
ACCESSIBILITY · INTERFACE · USER TESTING · HAPTIC DESIGN

A tablet-based Braille education support system that provides auditory and tactile feedback to help learners actively touch and trace Braille, linking finger movement with sound to enhance early Japanese Braille (*Tenji*) literacy.

RESEARCH PAPER

1. Watanabe, S., Haimes, P., Baba, T., & Kushiyaama, K. (2016). *Braille Pad Project: Proposal of a Braille education support system using a tablet device*. *International Journal of Asia Digital Art and Design Association*, 20(2), 35–40.

Social Robot Design



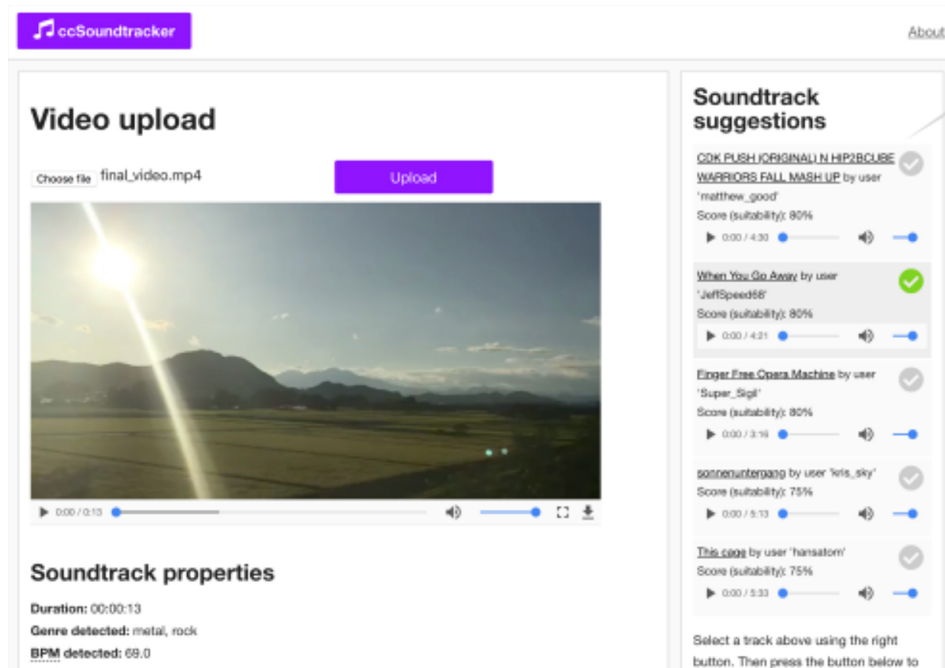
AESTHETICS · PHILOSOPHY OF DESIGN · ROBOTICS · HCI THEORY

This work argues that designing social robots with imperfection can promote deeper, more ethical, and more meaningful human-robot relationships by resonating with human vulnerability, spirituality, and lived experience rather than machine-like perfection.

RESEARCH PAPERS

1. Rousi, R., & Haimes, P. (2024). Social robot design and the aesthetics of imperfection. In R. Rousi, C. von Koskull, & V. Roto (Eds.), *Humane autonomous technology: Re-thinking experience with and in intelligent systems* (pp. 199–232). Springer.
2. Vakkuri, V., & Haimes, P. (2024). *Bringing human-machine play to the stage*. Creative Robotics Theatre Workshop, ACM Designing Interactive Systems Conference (DIS 2024), Copenhagen, Denmark.

CC SoundTracker



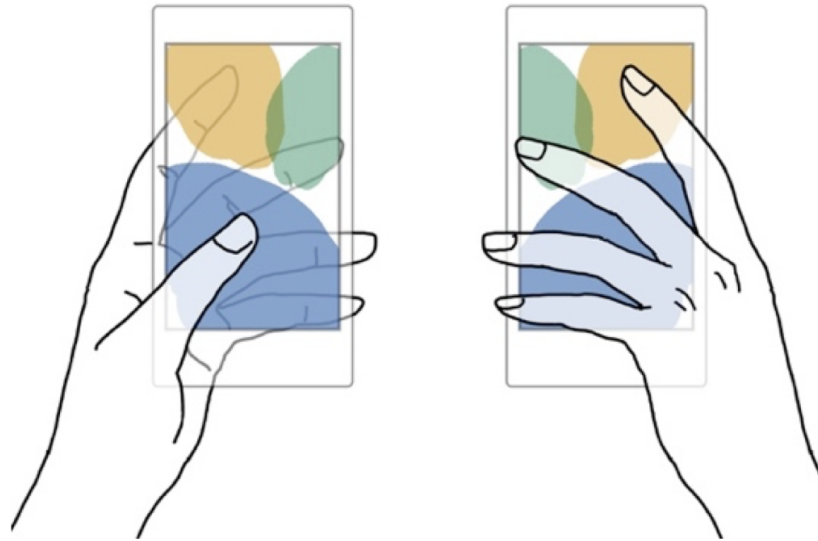
MIR · CREATIVE COMMONS (CC) · INTERFACE · AUDIO ANALYSIS

An application to replace a video's soundtrack with copyright-free Creative Commons (CC) music using machine learning techniques from Music Information Retrieval (MIR).

RESEARCH PAPER

1. Haimes, P., Hamasaki, M., & Goto, M. (2018). *ccSoundtracker: A system for replacing video soundtracks with creative-commons content*. 15th International Conference on Advances in Computer Entertainment Technology.
(What happened to this paper is a long and strange story...)

Various Interaction Design Collaborations



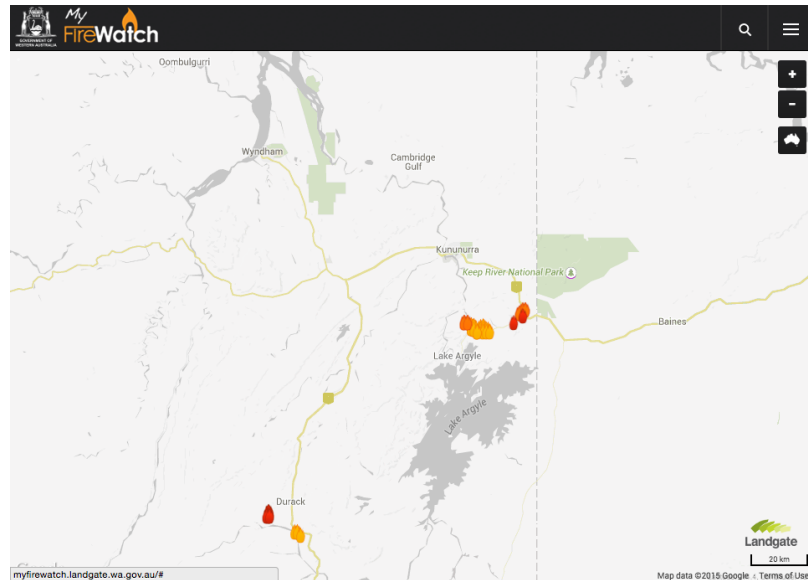
INTERFACE · HCI THEORY · USER TESTING

Projects that students developed which I assisted with, while at the IDEEA (Interactive, Design, Entertainment, Education and Art) Lab, Faculty of Systems Design, Tokyo Metropolitan University.

RESEARCH PAPERS

1. Ono, K., Iwamura, S., Ogie, A., Baba, T., & Haimes, P. (2017). *Textile++: Low cost textile interface using the principle of resistive touch sensing*. ACM SIGGRAPH 2017 Studio, 1–2.
2. Hidaka, S., Baba, T., & Haimes, P. (2016). *IndexAccess: A GUI movement system by back-of-device interaction for one-handed operation on a large screen smartphone*. International Journal of Asia Digital Art and Design, 20(2), 41–47.
3. Yokomizo, Y., Kotegawa, T., Haimes, P., & Baba, T. (2016). *Switch++: An output device of the switches by the finger gestures*. Adjunct Proceedings of the 29th Annual ACM Symposium on User Interface Software and Technology (UIST).
4. Kushiya, K., Kikukawa, Y., Baba, T., Haimes, P., & Sasada, S. (2014). *Mag-B: Tactile sand play using an interactive magnetic display*. ACM SIGGRAPH 2014 Studio.

Hazard Mapping



INTERFACE · ACCESSIBILITY · USER TESTING · HCI THEORY

Projects that aimed to increase the accessibility and visual appeal of hazard information in Australia and Japan.

RESEARCH PAPERS AND WEBSITES/APPS

1. Haimes, P. (2023–2024). *Nankai Special Earthquake Warning Information*. Public information website.
(Developed in collaboration with researchers at the Disaster Prevention Research Institute, Kyoto University, to help communicate their findings to the public.)
2. Haimes, P., Baba, T., & Kushiyaama, K. (2016). *Katsukazan: An intuitive iOS app for informing people about volcanic activity in Japan*. In *Proceedings of the 2016 Symposium on Spatial User Interaction* (p. 193). Association for Computing Machinery.
3. Haimes, P., Medley, S., & Baba, T. (2016). *A pattern language: designing a hazard information map interface for community-based users*. *International Journal of Asia Digital Art and Design* 20(1), 5–13.
4. Haimes, P., Medley, S., Brady, D., & Baba, T. (2016). *Exploring community attitudes towards sharing of bushfire information online*. *Journal of Disaster Research* 11(3), 552–558.

5. Haimes, P., & Baba, T. (2016). *Typhoon Soudelor: Comparing remotely-sensed data and Tweets*. Proceedings of the International Conference of the Asia Digital Art and Design Association (ADADA), Bali, Indonesia.
6. Haimes, P., Baba, T., & Medley, S. (2015). *Mobile map applications and the democratisation of hazard information*. In *Proceedings of SIGGRAPH Asia 2015 Mobile Graphics and Interactive Applications* (Article 7, pp. 1–4). Association for Computing Machinery.
7. Haimes, P., Medley, S., & Clarkson, B. (2014). *Geo spatial simplicity: Designing map interfaces for bushfire planning*. *The International Journal of Visual Design*, 37.
8. Holloway, D. J., Haimes, P., & Green, L. (2013). *Developing a user friendly firewatch site: debunking sociotechnological assumptions about internet users in remote communities*. Refereed Proceedings of the Australian & New Zealand Disaster and Emergency Management Conference.
9. Haimes, P., Brady, D., Clarkson, B., & Medley, S. (2013). *Engaging with communities as a design process: Redesigning the FireWatch interface*. Paper presented at the Australian & New Zealand Disaster and Emergency Management Conference, Brisbane.

Digital Song-bird



INTERFACE · AESTHETICS · DIGITAL FABRICATION · AMBIENT MEDIA

A simple device based on a motion sensor, designed to notify me via a digital tweet sound when someone approached my desk.

This one I just created for fun. No research paper from this project.

Sumi-e Painting



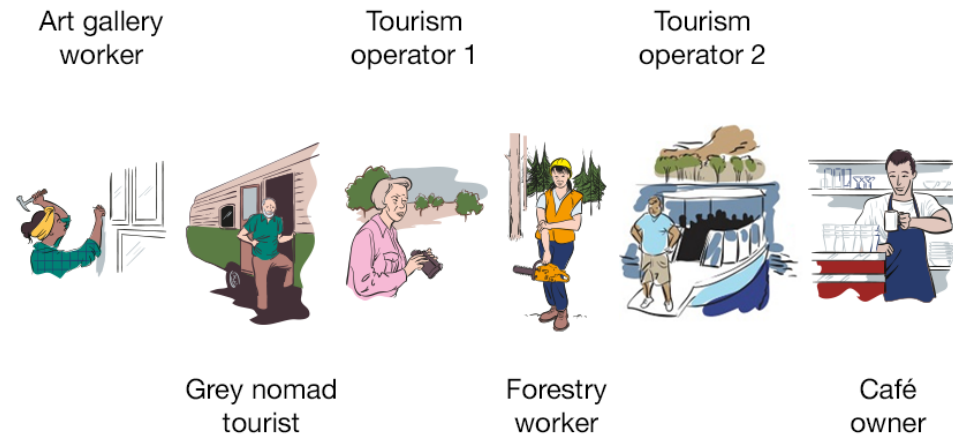
PAINTING · SUMI-E · JAPANESE INK · EXHIBITION

An ongoing creative practice in *sumi-e* (Japanese ink painting), using Japanese ink, mineral pigments, and Japanese *washi* paper. A member of the International Sumi-e Association, studying under the guidance of Kyoto artist Maki “Masui” Kono, exhibiting through juried and curated shows in Japan.

EXHIBITED WORKS

1. Haimes, P. (2026). *Moonlight hydrangea*. International Sumi-e Association Shikishi Exhibition. Exhibition, Online.
2. Haimes, P. (2025). *Flower study*. 24th Exhibition of the International Sumi-e Association. Exhibition, National Art Centre, Tokyo, Japan.
3. Haimes, P. (2024). *Dream orchid*. International Sumi-e Association Shikishi Exhibition. Exhibition, Online.
4. Haimes, P. (2024). *Radiance*. Masui Kono Studio Works. Exhibition, Wings Gallery, Kyoto, Japan.

Scenario-based Design



HCI THEORY · INTERFACE · USER TESTING · PERSONAS

This work shows how scenario-based design methodology can be used as a bridge to “fill the gap” when user input isn’t directly available, as a catalyst to “kick-start” a design project, and as a brainstorming/communication tool among designers to “tease out” and establish requirements. Visualisation by Stuart Medley.

RESEARCH PAPER

1. Haimes, P., Jung, J. H., & Medley, S. (2013). *Bridging the gap: scenario-based design as a solution for delayed access to users*. In *Proceedings of Australian Council of University Art and Design Schools (ACUADS)*.