

ARIC 2025: Abstracts and Speaker Biographies

Contents

Panel 1	3
Crafting CG Creatures: The Artist-Animal Bond in Creature Animation	3
Social Robotics Needs Animation Expertise	3
The Workmanship of Risk: mediating stop-motion animation through AI	4
Panel 2	5
Echoes of Eorzea: Preserving Player Experience as Digital Cultural Heritage	5
Grim's Viking Village - Using Unreal to develop a popup immersive heritage experience.....	5
Reframing Memory Through Participation: Digital Installations as Peacebuilding Tools in Post-Conflict Lebanon.....	6
Panel 3	7
Hayao Miyazaki: The Intersectionality of Anthropomorphism, Feminism and Pacifism in Studio Ghibli Films	7
Anxious to Entertain: When Vtubers Take the Stage in Anime	7
“Whoever wins this war becomes justice!” The Representation of Physical and Narrative Spaces from Spain in Japanese Anime: the Case of One Piece	8
Panel 4	9
Envisioning the Future of Queer Embodiment in VR	9
Mapping Urban Noise through Stereoscopy and Gaussian splats	9
Seeing Beyond the Prison: a transdisciplinary collaboration on a virtual reality prison cell	10
Panel 5	12
Memory Preservation and Brazilian Animation Narratives in Audiovisual Counter-History	12
Temporal Resonance: Vanishing Voices, Enduring Song	12
Practice-Led Research: Towards a renewed enchantment through material-based stop motion animation	13
Panel 6	15
About mathematics as a Cultural Co-Author: Rethinking Animation Analysis Through the Lens of Simulation.....	15
Embodiment, Representation and Narrative in Immersive Media	15
Posthuman Play: Rethinking Agency in Interactive Digital Environments	16
Panel 7	17
Playable Pasts: Teaching Game Studies Through Site-Specific Storytelling.....	17
Wandering the Screens: The Child Viewer as Digital Flâneur in Transmedia Animation	17
Delivering Complex Systems to Reluctant Learners: Embedding Virtual Production and Immersive Technologies in Undergraduate Pedagogy	18

Panel 8	20
Interactive Animation.....	20
From the Emotional Zone to the Disguised Gymnasium: Rotoscoping the Gamer in Jordan Mechner's "Karateka" and "Prince of Persia"	20
Correlating Facial Movements: Introducing a Novel Action Unit (AU) Co-occurrence Matrix.....	21

Panel 1

Crafting CG Creatures: The Artist-Animal Bond in Creature Animation

"This paper draws on insights from my interview with animators in the visual effects (VFX) industry, i.e., Laurent Benhamo and Elwaleed Suliman, to illustrate the craft of photo- and hyper-realistic computer-generated (CG) animals. As part of my film and animation studies, I explore the bond between artists and animals. I concentrate on the animators' traces, labour, and personal experiences, as well as their thoughts and feelings about animating CG animals for fiction films. I discuss their animation work by alluding to Rembrandt Bugatti (1884–1916), the Italian animal sculptor. Bugatti's deep connection with his animal subjects allowed him to capture their essence in a way that transcended mere representation. Similarly, contemporary animators draw upon their emotional engagement with animals, infusing their digital creations with a sense of life and authenticity that resonates with audiences. The allusion to this sculptor is fundamental to catalysing philosophical enquiries, conceptual arguments, and dialectical discussion about the relationship between artists and animals. It raises questions about the proximity between humans and animals and their technological effects. The animal sculptor and the animators illustrate the philosophical notion of "every separation is a link," a concept by the French philosopher Simone Weil.* The animation technology, which creates a separation between humans and animals, is precisely the link that could potentially reconcile the ontological divide between the two. This paper aims to provide a window through which we can look beyond human exceptionalism and embrace the triad of humans, animals, and technology.

*In *Gravity and Grace* (1952), 'Metaxu,' Weil illustrates that two prisoners are separated by the wall in their cells, yet knocking on the wall has become a means of communication. Therefore, 'the wall is the thing that separates them, but it is also their means of communication – every separation is a link' (p. 145)."

Dr Bin Yee Ang, Xiamen University (Malaysia Campus)

I am a senior lecturer in film and screen studies at Xiamen University (Malaysia campus). I recently completed my PhD in Film Studies at Queen Mary University of London with my thesis entitled "Every Separation is a Link: Photo/Hyper-realistic Computer-generated (CG) Animals in Film." My research focuses on the human-animal-technology relationships. My reading of animals in film (both real and CG) explores how these relationships shape our understanding of nature and the impact of technology on our perception of the nonhuman world. I was a visual effects (VFX) artist at Rhythm & Hues before embarking on the path to academia.

Social Robotics Needs Animation Expertise

"Social robotics is a branch of robotics specifically aimed at Human Robot Interaction (HRI). These robots are designed to share our social environments, communicate emotionally with humans and are promoted as friendly and socially intelligent machines. To animate, and the related words, animation and animator all derive from the Latin verb, *animare*, which means 'to give life to'. In the context of robotics, this involves the design and programming of attributes in order to create the illusion of life. This paper proposes that in fact, the performative manner in which social robots create an illusion of life makes them a new form of interactive animated media that takes many of its cues from animation media and provides an avenue for the application of animation expertise.

An animator's ability to utilise aspects of animation such as anthropomorphism, the suspension of disbelief, aesthetics, storytelling, performance, articulation of personality through movement and gesture, and the physiological and psychological nature of the character, in order to create the 'illusion of life' in inanimate objects, is key in developing engaging social robots. In turn, social robotics presents an evolutionary development in interactive animated media platforms for animation to engage with.

It argues that roboticists would benefit from working with animator's and their understanding of the principles of animation, aesthetics and embodied communication in order to maximize a robot's social presence, emotional and empathetic engagement as well as in the design of creative content that supports engagement and longitudinal human to robot interaction.

The paper highlights this new form of interactive animated media through a case study of a trans-disciplinary team of animators, designers and roboticists collaborating in the field of social robotics."

Ms Deborah Szapiro, University of Technology Sydney

Deborah Szapiro is an award winning creative producer, designer, curator and academic. Her animation and documentary work has been screened extensively by broadcasters and film festivals internationally. In her curatorial practice, Deborah founded the Japanime Film Festival, was co-director of the Sydney International Animation Festival and curates animation programs locally and internationally. Specialist areas include Indigenous animation, nationalities of animated cinema and the work of women animation directors. Deborah's research looks to animation's potential as an agent for cultural resilience, social change and innovation, and to the expanding production and viewing contexts that newer technologies provide for animation media. More recent work includes large scale architectural projection projects and working with design and animation principles to enhance social impact in robotics.

The Workmanship of Risk: mediating stop-motion animation through AI

Something in the irregularity of the handmade object speaks to our deeper selves, reviving for a moment a human urge to manufacture things with our hands. These signs awaken within us an empathy of the hand, acknowledging the tactile sense we all share. In our world of digital refinement there is still room for the wonder of imperfect objects because they remind us of the person behind the hand that made them. In David Pye's book, 'The Nature and Art of Workmanship' (1968), he divides workmanship into two streams: the 'workmanship of certainty' being the repetitive manufacture of mass-produced objects; and the 'workmanship of risk' being handmade objects where, at any moment in their creation, there is a great risk of failure; saved only by the maker's tacit knowledge and skill. Creating stop-motion animation with physical objects creates a sense of visual tactility that emerges from a direct memory of surfaces and textures from our own lives. Stop-motion films involve the 'workmanship of risk' because they are produced in an analogue space governed by the laws of physics where successful outcomes are not predetermined. In the digital space, animators are cradled by the algorithmic control of software in crafting impossibly perfect and repeatable moments — a 'workmanship of certainty'. With the arrival of AI as an intervention in animation workflows this certainty in digital post-production can now be challenged. Generative AI re-introduces elements of the unknown and creates a digital workflow with heightened risk. Can the emotional and textural affordances of the physical be maintained through these new hybrid AI workflows? This paper poses the question: is it possible to merge the physicality of stop-motion and harness the imperfections in AI to create animated objects that still maintain the 'workmanship of risk' and reveal the 'hand' of the animator?

Mr Simon von Wolkenstein, JMC Academy, Sydney

Simon von Wolkenstein is Head of Department for Animation, Games and Design (Visual Communication) at JMC College in Sydney. Previously he was a lecturer in Animation and Design at University Technology Sydney since 2011. He is an interdisciplinary designer and animator whose focus is on experimental story-telling and post-digital hybrid animation practice. Exploring architecture and stop-motion with digital and analogue making techniques, his practice interrogates ideas of the tactile and emotion through the mediation of cinematic and emerging technologies.

Panel 2

Echoes of Eorzea: Preserving Player Experience as Digital Cultural Heritage

"Players gathered together in MMOs forging a community, memories and identities in virtual worlds through a shared gameplay. Yet as these online games evolve, patch or inevitably shut down, question arises towards the preservation of the online world and its inhabitants. As these worlds are reduced down into codes and assets, the sociocultural aspect of MMOs are at a risk of being erased, leaving fragments of what once was in these online games. This highlights the need to preserve the intangible that gave life into MMOs.

This presentation will use Final Fantasy XIV as a case study to explore digital cultural heritage and the preservation of it within the virtual space. As MMOs live through an ephemeral state, this causes a challenge towards preservation methods such as emulation as it falls short in capturing the sociocultural aspects of these worlds. Drawing from my dissertation and video documentary, Echoes of Eorzea, the presentation will cover how these sociocultural aspects act as a born-digital artefact, the current state of preserving MMOs, methodologies such as autoethnography and cross-collaboration to archive the lived experiences of players. Conducted within FFXIV, conversations with players act as a form of artefact highlighting the experiences had within the virtual space highlighting FFXIV as a cultural site, the players' experience and the collective memories and narratives of FFXIV.

Echoes of Eorzea embraces a hybrid approach towards video game preservation complementing both cultural memory and its technicalities. It also considers both research-based and documentary practice to produce cross-collaboration between the communities and the industry to push the efforts of digital preservation.

Ultimately, this presentation offers a reflective discussion on the ethics, aesthetics and methodologies of participatory archival practice, inviting new ways of safeguarding the human experience found within online games."

Miss Cheyenne Ee, Lasalle College of the Arts

Cheyenne Ee is an Arts Management graduate from LASALLE College of the Arts, with a strong interest in video games, culture and digital preservation. Academic works explored the intersection of video games and cultural heritage, which concluded with her dissertation on the preservation of MMOs and documentary titled "Echoes of Eorzea". Passionate about challenging conventions and exploring how video games shape culture, she adopts a versatile and cross-disciplinary approach encouraging collaboration between academia, creative industries and communities.

Grim's Viking Village - Using Unreal to develop a popup immersive heritage experience

"The presentation will be a behind the scenes breakdown of the approaches and challenges of crafting a low budget 18 minute animated sequence using Unreal to explore the heritage of Grimsby's past using digital experiences. This was part of a immersive heritage project called Havelok's Kingdom, which was presented as a popup exhibition at Grimsby Minster in May 2025.

Part of the research of the project was experimenting with AI to help assist bringing non-traditional actors from the Viking Re-enactment community into the virtual world, exploring the 'legend' of Grimsby's settlement by the Vikings in the late 900's. "

Miss Annabeth Robinson, University of Salford

Annabeth Robinson is a Creative Technologist and Educator based in Leeds, working and exploring immersive technologies, AI, virtual worlds, and game platforms since 2005 to create multi-user interactive artworks and educational experiences. She is presently Course Leader for MA Animation at the University of Salford and has over 20 years' teaching experience, focusing on Creative Development, Industry Engagement, and Practice-

Based Research. She was awarded a Senior Fellow of the HEA (Higher Education Academy) Her research into serious games, in collaboration with the University of Leeds, won a Times Higher Education Award for Digital Innovation (2016) and was shortlisted for a Guardian HE Award (2017).

Reframing Memory Through Participation: Digital Installations as Peacebuilding Tools in Post-Conflict Lebanon

"This presentation discusses the use of participatory digital art and immersive media as sites for intercultural congruence and peace building and is contextualised within practice-based delivery in the post-conflict environment of Lebanon. My research and artistic practice focus on how young people and community members (especially those from and often neglected or silenced communities), engage with issues of memory, trauma, and identity using digital installations and short-form video works. When participants create visual narratives together, they can reclaim control over their own narrative and constitute an inherited silence into a public narrative of collective form.

Through case studies: my artworks *Deconstructing the Lebanese Imprint* and *Voices Beneath the Surface*; this presentation investigates how glitch aesthetics, ambient soundscapes, and multidimensional narrative arcs can articulate a sense of disrupted memory and how the immersive installations function both as art and an experiential archive in a participatory work. These works are underpinned by peace education literature, digital media studies, and intercultural communication and were manifested through women's, youth and civic organisations via workshops, research, and collaborative installations.

This approach moves away from notions of immersive tech as spectacle to emphasis on social cohesion and healing and be focused on processes, rather than products. The complexities of post-conflict contexts cause me to suggest that participatory installations as potentially effective interventions seeing they embrace participatory practice and are appropriate especially when memory and memory-active practices within institutions are contested or broken.

This tactic integrates the arts with civic practices, and even spawns new practices for digital, to engage in dialogue and cultivate possible empathy over generations and cultures.

In conclusion, this presentation frames immersive participatory practice as a form of active "digital peace building." In other words, immersive participatory practice allows members of communities to be both authors and spectators of their jointly coordinated futures."

Ambassador Yara El Turk , SDSN Youth

Yara El Turk is a peace ambassador, intercultural educator, multimedia artist based in Lebanon. With a dual MA in Intercultural Business Communication and Communication Arts, her work bridges artistic research with social impact. Yara's digital art installations and participatory projects explore themes of cultural memory, trauma, postcolonial identity. She has participated in programs and held ambassadorial and leadership roles with institutions such as the Council of Europe, SDSN Youth, and the University of Cambridge. She focuses on storytelling as a form of empowerment and healing in post-conflict communities and has exhibited work internationally, including at Galerie Janine Rubeiz and Aesthetica Magazine.

Panel 3

Hayao Miyazaki: The Intersectionality of Anthropomorphism, Feminism and Pacifism in Studio Ghibli Films

The purpose of this study is to investigate how feminism, pacifism, and anthropomorphism intersect in Hayao Miyazaki's works. Animation has been looked down upon as a medium for films, often thought of as a medium exclusive to kids. It can be used to convey ideas that cannot be done through live action, as it can exaggerate and bend reality. Though frequently labelled as children's films, Miyazaki's films are praised for their artistic value and their depiction of complex subjects such as pacifism, feminism and anthropomorphism. Even while the amount of study on his works is increasing, more can be learned about how these interrelated themes support one another to provide more profound philosophical and sociopolitical messages. To decode the visual and symbolic aspects, contextualise them within Japan, and examine their theme evolution, this study employs a qualitative methodology that combines semiotic, contextual, and narrative analysis. The study focuses on the five films *Spirited Away*, *Princess Mononoke*, *Nausicaä of the Valley of the Wind*, *Howl's Moving Castle*, and *My Neighbour Totoro* to examine how anthropomorphic characters, strong female protagonists, and pacifist ideals function within the narrative. Through an analysis of the interactions between these topics and their symbolism, this study aims to provide an extensive understanding of Miyazaki's works.

Ms Ameya Das, Nitte Institute of Communication

Ameya Das is a fourth-year student at Nitte Institute of Communication, where she is pursuing a research honours degree in Media and Communication. Her focus of studies is on films, animation, women and queerness in media, and dissecting niche internet topics. After the completion of her undergraduate programme, she wishes to study further as a graduate student and work towards advancing her career as a researcher.

Anxious to Entertain: When Vtubers Take the Stage in Anime

"As the profitability of media-mix imagination dictates, the 3D existence of Virtual Youtubers is imported across media, and not necessarily with a pre-established understanding of how they should adapt to foreign traditions of visual organization. Titles like *Virtual-san wa Miteiru* (2019), or earlier ones like *Minarai Diva* (2014), show how it has been a while since Vtubers started making appearances in anime without necessarily getting modified to fit in anime-esque ways of visual storytelling.

One of the most popular Vtubers in this practice's history, Kizuna AI, lends its name and an eclectic bent to the series *Kizuna no Allele* (2023) in the fashion of its own online presence. The Vtuber's existence as a result of the masterful orchestration of different and not always compatible technologies, which Stevie Suan (2021) explicates in detail, echoes in the series. The series attempts to bring together labor and automatization, production and consumption, as well as the fictional and virtual, in a fashion that may serve the Vtuber best.

In line with the story it tells, *Kizuna no Allele* maintains the 3D Vtuber representation and puts it to use in order to visually separate the fictional from the virtual realm. Specifically the 3D outcome of motion-captured acting stands in stark contrast to animetic vision. Anime heavily employs mimetic omission, and tends to let the audience imagine the particularities of how everything should look like in stasis and in motion. Contrastingly, as Ryouta Fujitsu (2019) states in relation to *Virtual-san wa Miteiru*, the Vtuber bodies in *Kizuna no Allele* fill the narration with their immediate presence. But amidst episodes of animetic omission, how else do we take the glaring surplus of movement that such characters display in their peculiar idle animation? While anime invites Vtubers to take the scene, does it also reveal that they are anxious to entertain?"

Dr Selen Calik Bedir, Bogazici University

Selen Çalık Bedir received her B.A. in English Language and Literature (2008), and her M.A. in Comparative Literature (2010) in Turkey. From 2012 to 2017 she studied in Japan on a MEXT grant. After spending one year

as a research student at Kyoto University (2012–2013), she entered the PhD program in Manga Studies at Kyoto Seika University (2013). She completed her PhD (2017) with a thesis entitled “Playing” Anime: A Comparative Media-Theoretical Approach to Anime as a Specific Medium. Since 2016 she has taught at various universities in Japan and Turkey. She is currently affiliated with the Film and Media Institute of Bogazici University as an assistant professor.

“Whoever wins this war becomes justice!” The Representation of Physical and Narrative Spaces from Spain in Japanese Anime: the Case of One Piece

"This presentation will examine how Japanese anime presents the country of Spain in its global narrative for an international audience, by analysing the anime One Piece, which has an international audience and appeal through a global narrative that has multiple portrayals of real-life countries.

The analysis will be done in terms of the physical space, whether it is one with references closer to tourism, or actual landscapes of Spain which take into account the history of the country and the sites referenced. There will also be an analysis in terms of narrative spaces, referring to the portrayal of certain institutions or figures relating to the history of Spain and the context of the country.

The results of the analysis presented in this presentation will relate to the portrayal of Barcelona, particularly Gaudí's architecture and how it complements the style of animation of the series; television as a tool for propaganda in the context of the Spanish nation, particularly during the Francoist dictatorship; and a comparison between the main villain of the arc, Donquixote Doflamingo, and Francisco Franco, in terms of how the series encodes aspects of the historical figure into the character in order to use the series to spread awareness of the situation in Spain, by incorporating it into the series.

Overall, the presentation will be an study case on how the portrayal of spaces in animation can be affected by the circumstances of both the author and the audience's expectation of a particular space, specifically when it comes to portraying a real and recognatiable site, and how that can be used to discuss the image of the country outside its borders.

"

Miss Sara Mai Ortiz, Universidad Carlos III de Madrid

My name is Sara Mai Ortiz de Manuel, and I am a Spanish student that aims at specialising in anime and videogames investigation. I graduate from University this year, and my goal is to begin to Doctorate right after finishing my Masters. This particular investigation was my final thesis for university.

Panel 4

Envisioning the Future of Queer Embodiment in VR

This paper engages in a queer and trans line of critique to examine the metaverse's capabilities for envisioning and prototyping new forms of embodiment through virtual reality (VR). As major corporations such as Meta envision the metaverse as the embodied Internet of the future, this paper examines to what extent metaverse VR holds the capacity to impart trans knowledge and experience of embodiment. I engage in a close reading of Meta's Horizon Worlds VR program for its affordances and limitations in terms of queer and trans theorizations of embodiment. I analyze how Horizon Worlds' avatar aesthetics, avatar design system, and its ability to facilitate connection curtail queer and trans epistemologies of the body. The paper then contrasts this with the VR project Virtual Queerality for how it embraces glitch and enmeshment, disrupting the binary systems of gender knowledge instead embody queer and trans embodiment. I end by proposing guidelines on avatar and UI design to best enable queer and trans expression in VR.

Dr Jacqueline Ristola, University of Bristol

Dr. Jacqueline Ristola is a Lecturer in the Department of Film and Television at the University of Bristol. She received her PhD in Film and Moving Image Studies from Concordia University, Montreal. Her research areas include animation/anime studies, media industry studies, and queer representation. Her current book project examines animation's transformation from cable television to streaming platforms. She is currently the co-chair for SCMS's Animated Media SIG. Her most recent work is published in *Digital Society and Television and New Media*.

Mapping Urban Noise through Stereoscopy and Gaussian splats

"The effect of noise on health is well documented and remains a key issue in urban areas. Studies have shown that noise impact on sleep patterns can occur at levels louder than 65dB in sensitive people, leading to anxiety, irritation and other symptoms of sleep deprivation (Lj 2017). The most frequent response to environmental noise is annoyance, mild anger and feelings of intrusion into privacy (Guski et al. 2017). Prolonged exposure to noise levels of 90dB and above, usually in occupational settings, can cause serious hearing damage and neurovegetative problems. Other effects of excessive noise exposure include headaches, memory impairment, undue fatigability, somnolence, sleep disturbances, emotional instability, hyperhidrosis and chest pain (ibid.) Road traffic and aircraft noise have shown to be related to increased blood pressure and a small increased risk of myocardial infarction in adults (Basner et al. 2014). While these issues are well documented, joint efforts to communicate these health concerns remain.

Together with students of the BA (Hons) Animation, the research team captured ambisonics' soundscapes within the Borough. Using NERFs and Gaussian splats, - AI-based image capture technology, 3D point cloud representations of the site of sound capture were generated. Working with a variety of approaches across 3D animation workflows (Touchdesigner, Unreal, Luma AI) , image capture stereoscopic image capture via a RED Raptor 8k camera, and spatial scanning, as well as different display media including Apple Vision Pro, Oculus Quest and a virtual production suite, the team is exploring the following research questions:

Can real-time animations of immersive noise help to raise awareness about the effect of urban noise on health?

What are effective mapping strategies for noise in the context of a convergence of ambisonic sound and 360 image representations of urban noise? "

Dr Oliver Gingrich, University of Greenwich

Dr Oliver M Gingrich is a researcher, artistic practitioner, and educator. Olive's research and practice centres around creative health, real-time animation, mixed reality and participatory art. Currently Olive is Principal Investigator on an AHRC funded research project on participatory online art and leads the BA (Hons) Animation programme. Olive is juror on the ACM Siggraph Arts Papers panel, Lumen Art Prize and committee member for

Electronic Visualisation in the Arts Conference. Past exhibitions with his art collective Analema Group include Tate Modern, The National Gallery and the Barbican.

Dr Julie Watkins

Julie is a researcher, animator and educator. Julie's practice is focused on mindful drawing, animation and photography. She worked as lead creative in prestigious Post-Production facilities in Soho and Manhattan. She designed concepts, led Technical Direction, Animation, Motion Graphic and Visual Effects Teams, for Commercials, Broadcast Graphics and Films. She taught at New York University before joining the University of Greenwich and initiating a Film and Television degree and partnership with the BBC. Supporting her animation practice she has exhibited her work widely and presented her practice at international conferences and published numerous papers.

Ryan Flynn

Ryan has been using game technologies for the purpose of health training for many years, building on not only his personal interest in games but also a teaching and learning research interest that has been developed over the past 20 years. He has run game development degrees as well as animation degrees and has recently been working on multiple mixed reality projects as well as investigating using game engines for animation rendering.

George Spencer

George is a visual effects artist, researcher and educator. He had a long career with the BBC and was an early adopter of CGI techniques. He has applied his skills in planning, on set VFX supervision and postproduction to the create complex visual sequences for many high-profile programmes. After leaving the BBC he taught at Kingston University and joined the University of Greenwich in 2022. His current research is centred on Virtual Production with a focus on how filmmakers can use the creative opportunities offered by the malleability of the virtual stage.

Samanta Vargas De La Llata Ibarra

Samanta is a design academic and PhD candidate at the University of Greenwich. Trained in Industrial Design and Material Science and Engineering, her work emphasizes critical thinking, user-centered product development, and creative sustainability. Her professional experience spans Mexico, Italy, USA, and the United Kingdom, shaping a multicultural and adaptable practice grounded in collaboration and inclusion. She has led interdisciplinary projects across education, craft, and technology, co-creating products, garments, and experiences that prioritize experiential learning and collective creativity. She also runs a slow-fashion startup focused on bespoke garments that promote body autonomy.

Seeing Beyond the Prison: a transdisciplinary collaboration on a virtual reality prison cell

"This paper will reflect on the collaborative development of a prototype for a simulated virtual reality prison space and soundscape. This was a collaborative research project between academics and undergraduate and postgraduate researchers and graduates, across criminology, animation, creative writing and screen studies. The research explores the potential for this virtual environment to enable VR participants to experience the felt realities of life in a women's prison.

This VR prototype forms part of a wider research project 'HMP Holloway: The anatomy of a women's prison', which aims to capture a living history of Holloway, using this notorious prison as a point of departure for informed dialogue and debate, aimed at challenging and changing policy decisions and public attitudes to the punishment of women, as well as pushing forward a more progressive and socially just agenda.

It raises questions about what we choose to value and preserve as cultural heritage and how different forms of tangible and intangible cultural heritage might inform public discourse.

We will discuss the initial development process of the prototype, which involved an exchange across subject specialisms, for example, criminology researchers sharing personal accounts of their own experience of the criminal justice system, as well as recorded interviews and first-person testimonies from women with lived experience of prison. This initial exchange of experience was important to provide other members of the

research team with a more complex understanding of the context in which women encounter the criminal justice system.

We will also discuss aspects of the technical development of the project, such as using Unreal Engine; working from archive photographs; scripting; interaction design; aesthetic interpretation; ambisonic recordings taken in a disused prison, and working with actors to interpret verbatim scripts from interviews with women with lived experience of Holloway prison."

Dr Rosamund Davies, University of Greenwich

Rosamund Davies has a background in professional practice in the film and television industries, in which she worked with both independent production companies and public funding bodies as script supervisor, script editor and story consultant. Rosamund is a member of the International Screenwriting Research Network and is Associate Professor Media and Creative Writing and Associate Head (Research and Knowledge Exchange) of the School of Design and Creative Industries, University of Greenwich. Rosamund's research encompasses both theory and practice and focuses on narrative design and writing practices within the media and publishing industries. Her current work concerns virtual and extended reality narratives and place.

Olive Mag Gingrich

Olive is a researcher, artistic practitioner, and educator. Olive's research and practice centres around creative health, real-time animation, mixed reality and participatory art. Currently Olive is Principal Investigator on an AHRC funded research project on participatory online art and leads the BA (Hons) Animation programme. Olive is juror on the ACM Siggraph Arts Papers panel, Lumen Art Prize and committee member for Electronic Visualisation in the Arts Conference. Past exhibitions with his art collective Analema Group include Tate Modern, The National Gallery and the Barbican.

Julie Watkins

Julie is a researcher, animator and educator. Julie's practice is focused on mindful drawing, animation and photography. She worked as lead creative in prestigious Post-Production facilities in Soho and Manhattan. She designed concepts, led Technical Direction, Animation, Motion Graphic and Visual Effects Teams, for Commercials, Broadcast Graphics and Films. She taught at New York University before joining the University of Greenwich and initiating a Film and Television degree and partnership with the BBC. Supporting her animation practice she has exhibited her work widely and presented her practice at international conferences and published numerous papers.

Ella Simpson

Dr Ella Simpson is a Senior Lecturer in Criminology at the University of Greenwich, London. Prior to returning to London, Ella taught at the University of Winchester and at Bath Spa University, where they also completed their PhD. Ella's research interests are focused on the role of the creative arts in the criminal justice system. Before joining academia, Ella worked for over a decade in the prison estate in England as a creative arts facilitator, English tutor and assistant librarian. They have learned as much from people in prison libraries as they have from all the books in university ones.

Ariadne Katsanakou Papamali

(Aria)dni Katsanakou Papamali is a Digital Artist and lecturer in VFX at the University of Greenwich. Aria's artistic practice combines animation with physical crafting to explore various themes related to inclusivity and identity, while also speaking on current events using sci-fi and internet aesthetics. In this project, Aria is focusing on the technical development of the VR experience in Unreal Engine and acts as a producer while also assisting with other parts like lighting and texturing.

Rob Parton

Rob Parton is an electronic musician and sound designer. He is currently completing an MA in Music and Sound Design at the University of Greenwich with a particular focus on spatial sound, sound design, synthesis, and live performance. Rob's practice spans ambient music, field recording and improvisation, releasing music under the name Arconic. He combines experimental techniques with a strong focus on live immersive experiences.

Panel 5

Memory Preservation and Brazilian Animation Narratives in Audiovisual Counter-History

"This study examines the preservation of Brazilian animation memory through the lens of audiovisual counter-history, a concept advanced by Ferro (1977) that foregrounds marginalized narratives. Accordingly, it offers a critical reflection on such narratives, foregrounding voices and subjects historically excluded from the national animation field. The research adopts a qualitative-interpretative methodology (Gil 2002), combining bibliographic review with the analysis of institutional archives and festival catalogues, and is theoretically anchored in Cultural Studies (Hall 2012; Martín-Barbero 2015) and an intersectional approach (Collins 2015). The analysis is organised around three axes: (1) preservation institutions and spaces, (2) devices of visibility and circulation, and (3) subjects, narratives, and identities.

The first axis maps digitisation efforts led by community and regional initiatives, revealing how fragmented archives challenge sustained memory policies (Wells 2002). The second shows that festivals operate as arenas that legitimise experimental and independent aesthetics, broadening their circulation. The third highlights works by women, Black, Indigenous, and LGBTQIA+ creators which, by contesting hegemonic paradigms of representation, expand the repertoire of belonging in Brazilian animated narratives (Ferro 1977; Furniss 2014). Triangulation draws on audiovisual records (1966-2024) and specialised scholarship (Prado & Savernini 2018), composing a corpus that illuminates continuities and ruptures.

Audiovisual counter-history thus emerges as an analytical opportunity essential to rethinking Brazilian animation historiography. By articulating preservation, production, and representation, the study demonstrates that regional funding models foster diverse storyworlds while underscoring the urgency of consistent cultural policies. It concludes that counter-history functions not only as a denunciation of exclusions but as a critical method that, by "rarefying" crystallised discourses (Deleuze 2005), projects plural futures for animated historiography in Brazil.

Within international animation studies, this work dialogues with efforts toward a plural history. Diverse practices contribute to a research agenda oriented to equity and to valuing the dynamics that shape Brazilian animation production."

Prof Tiago Lenartovicz, Universidade de São Paulo

PhD candidate in Communication Sciences at the School of Communications and Arts, University of São Paulo (ECA-USP); holds an MA in Literature from the State University of Maringá (UEM). Member of the Language and Discourse in the Media research group (GELiDis-ECA-USP) and an associate of the Brazilian Animation Cinema Association (ABCA). Teaches at both postgraduate and undergraduate levels, offering courses in audiovisual production and communication project development in the Communication and Multimedia program at UEM.

Temporal Resonance: Vanishing Voices, Enduring Song

"This presentation explores an innovative interdisciplinary project, funded by the University of the Arts London and the Longplayer Board of Trustees, that pushes the boundaries of animation practice through ethnographic methodology and experimental techniques.

Created in response to Jem Finer's 1000-year musical composition 'Longplayer' - which has been playing continuously in Trinity Buoy Wharf's lighthouse for 25 years - this project investigates how animation can engage audiences with complex concepts of time, sustainability, and long-term thinking as part of Longplayer's 25th anniversary.

The project employs two distinct approaches that challenge conventional screen-based practice. First, an ethnographic sound installation features interviews with Longplayer's stewards recorded on acetate discs that physically degrade through repeated looping as the surface is scratched off the disc by the record player,

creating a temporal experience of disappearing voices against the enduring backdrop of the 1000-year song. This process explores impermanence and auditory decay as the soundtrack for the immersive animation.

Second, experimental cyanotype animation are projected onto fabric scrims hung in the Lighthouse, created from 400 hand-processed frames, capturing light and shadow, shifting weather, and flows of water - natural processes that will extend 1000 years into the future regardless of the fate of humans. This analogue technique, using natural light exposure on light-sensitive paper, explores what the human present means in the context of deeper, vast flows of time.

The interactive installation aims to connect people with the present as part of a much longer flow of time, encouraging consideration of human temporalities compared to that of the environment. Visitors encounter an automated record player creating an immersive soundscape, while the projected cyanotype animation responds to their presence through cast shadows on the fabric as they move through the space.

This practice-based research contributes to animation studies by demonstrating how ethnographic methods can inform experimental animation techniques, expanding the medium's capacity for public engagement with challenging topics."

Ms Jess Mountfield, University of the Arts London

Jess Mountfield is an Associate Lecturer in Animation at University of the Arts London and a practicing animation director with extensive industry experience across feature films, TV series, and digital campaigns. Notable collaborations include projects with BBC, TED-Ed, MTV, and Emilia Clarke's charity SameYou. Currently pursuing an MA in Social Anthropology at Goldsmiths, Jess specializes in interdisciplinary approaches that combine animation with ethnographic research. Her work explores temporality, sustainability, and public engagement, with recent projects examining climate science communication in the Arctic and long-term thinking through experimental animation techniques.

Practice-Led Research: Towards a renewed enchantment through material-based stop motion animation

"The research aims to renew the 'haptic magic' inherent in historic handmade, material-based animation, currently diminished through homogenized digital workflows. It applies a New Materialist approach in mapping out a vibrant theory of material-based agency, drawing upon anthropomorphism and animism to create a series of experimental puppet animations. This aims to restore a more visceral audience connection with the animated puppets and world, and to examine how textural materials and substances influence audience interpretation.

Research Questions:

How can animation practice regain a sense of vibrancy and 'magic' through using alternative and discarded materials within animation workflows?

How can non-human material agency be mobilized to shape narrative and affect?

How can theories of the grotesque inform our visceral response to material transformation in stop motion?

Aim: Develop a hybrid animation methodology that explores the fusion of materially diverse, handmade elements, to function as assemblages of human, material and spiritual entanglements.

Objectives:

Fabricate a series of puppets following an assemblage approach of discordant materials.

Apply theories of the grotesque to puppet assemblages.

Produce a series of animations testing Julie McCown's theory of sutured hybridity within discordant material puppet assemblages.

Apply DeLanda's assemblage theory to materiality in analysing animations by the Quay Brothers using industrial and organic materials.

Draw upon Jane Bennett's *Vibrant Matter* (2010), which posits an ontological repositioning of objects as possessing agency beyond anthropocentric design. The research applies a theory of vibrant matter to

animation puppets in how they may acquire agency through material fabrication, in contrast with digital production.

Context:

Historic stop-motion animation, through handmade, material fabrication, exudes imbued vitality which is essential for emotional impact.

Contemporary stop motion technologies apply processes designed to imitate handmade, material-based authenticity. This trait reveals the prevailing view that handmade materiality acts as an index to embodied magic in the artwork.

"

Mr Joseph Norman, Arts University Bournemouth

I am a current PhD researcher at Arts University Bournemouth. The research is practice led and focuses on exploring workflows to renew a sense of magic in animation practice. I am an independent animation artist and lecturer in animation. I have worked across music videos, documentary, live events at festivals, serious games and short films. I have worked with a range of galleries and cultural organisations in running animation workshops. Since 2019, I have written regular articles for Zippy Frames Animation Journal:
<https://www.zippyframes.com/about/joseph-norman> My website is: [FURRYTREE.ORG](https://www.furrytree.org)

Panel 6

About mathematics as a Cultural Co-Author: Rethinking Animation Analysis Through the Lens of Simulation

"While many industry professionals are well aware of the mathematical foundations of CG animation, this presentation aims to bridge the gap between production knowledge and academic reflection. The talk is directed primarily at researchers, media scholars, educators, and students who analyze animation but may not be familiar with the technical tools used to create it. My goal is to demonstrate how mathematics not only supports but also shapes the aesthetics, structure, and meaning of mainstream computer-generated animation.

Through examples from films such as "Moana" (Disney), "Brave" (Pixar), and "Monsters Inc." (Pixar), I will illustrate how complex algorithms, differential equations, and physical simulations (e.g., hair, water, particle systems) are essential to the medium's visual storytelling. Rather than delving into advanced mathematical theory, the presentation offers accessible insight into how mathematical simulation translates physical reality into visual language, and how this transformation invites new ways of interpreting digital animation.

In doing so, I argue for mathematics not just as a production tool but as a co-author of cultural meaning – an invisible but crucial presence in the evolving language of animation. By making this visible, I hope to enhance the analytical vocabulary of those studying animation from the outside, and open up new avenues for interdisciplinary dialogue between practice and theory.

The presentation may also serve as a useful resource for those teaching animation history and theory, helping to contextualize contemporary animation aesthetics within a broader epistemological shift toward computational culture. By foregrounding the material processes behind the image, it encourages a more nuanced reading of the medium—one that recognizes simulation as both a technical process and a cultural signifier."

Ms Katarzyna Żmuda, SWPS University

Katarzyna Żmuda is a PhD student in the Science of Culture and Religion at SWPS University, Warsaw, Poland. She specializes in animation. Both of her previous theses, a bachelor's and master's degree, are related to animation: the absence of randomness in computer animation and the four elements depicted in animation. She has a strong focus on popularizing animation in general: she speaks at numerous cultural meetings introducing issues related to animated film; coordinates the animation block at the Copernicon Festival; works on bringing the currents of posthumanism closer through animation.

Embodiment, Representation and Narrative in Immersive Media

Abstract TBC

Miss Claire O'Brien, Teesside University

Claire O'Brien, FHEA, is a Senior Lecturer and course leader for MA Animation at Teesside University, she lectures on both the MA and BA. Claire is also the Coordinator of Animex Screen, the international student film festival that is part of the annual Animex animation and games festival. She regularly publishes and presents her animation studies research papers in journals and conferences such as the Society of Animation Studies Annual Conference 2025, AnimationStudies 2.0, the Animation (In) Flux Symposium, Edinburgh College of Art and Screens, 2024 and the Animex International Research Conference 2024. She is an experienced Project Investigator who has worked on funded projects for Innovate UK and XR Network+.

Posthuman Play: Rethinking Agency in Interactive Digital Environments

"This presentation explores the concept of ""posthuman play"" through examination of interactive works of practice-based research including the author's own projects: The First Lesson and Digital Body Culture as well as the work of other artists. The presentation will investigate how emerging forms of interaction can challenge human-centric design frameworks by shifting the user's role from controller to co-participant

Drawing on the theoretical framework of Critical Posthumanism, the presentation introduces the idea of the posthuman encounter: an interactive situation in which the audience engages not with passive or reactive systems, but with artefacts that assert (or seem to assert) a level of agency or autonomy. The experiences use a variety of different interfaces including movement, proximity and voice to create a felt sense of an embodied encounter, often resulting in emotional responses such as unease, empathy, or reflection. These affective reactions are not incidental but central to the way these works challenge traditional UX and game design models that are built around player mastery, reward, and control.

Instead of designing for input-output, the works aim to design for emergent dialogue between audience and artefact, creating opportunities for moments where the human participant feels watched, responded to, or implicated. This destabilises assumptions around the subject-object relationship in digital interaction and asks what it means to engage with technological systems, not as tools, but as others.

The presentation reflects on the creative and technical challenges of designing these encounters, and suggests a broader application of posthuman play principles in future participatory environments, particularly in XR, immersive and AI-integrated systems where co-agency, not control, might define a new form of interaction.

Posthuman play reframes digital interaction as an emotional, dialogic encounter rather than a system of user control, inviting a reconsideration of how agency, presence, and meaning are constructed in immersive environments. "

Mr Robin Fuller, Norwich University of the Arts

I am a creative director, interdisciplinary artist, and educator rooted in animation, interaction design and immersive technology. My practice-based research explores how emerging technologies can enable posthuman dialogues between audiences and digital artefacts. Through immersive storytelling and interactive media, I investigate the boundaries between physical and digital bodies, developing what I term "posthuman encounters", experiences that challenge traditional assumptions of control, agency, and consciousness in human-technology interaction. With a background in both commercial and cultural sectors, my work spans screen-based media, interactive installations, and experimental formats, and has been shown internationally in festivals, exhibitions, and industry showcases.

Panel 7

Playable Pasts: Teaching Game Studies Through Site-Specific Storytelling

"This presentation explores a new interdisciplinary study abroad course at the University of Missouri–St. Louis uses the historic city of Florence, Italy, as a field-based classroom for teaching game art and design. Blending art history, narrative theory, and interactive media, the course challenges students to develop original game concepts rooted in cultural research and site-specific storytelling. Students engage with Renaissance art and architecture not only as tourists but as narrative designers, translating physical space and historical narratives into playable experiences.

Drawing on frameworks from fine arts, game studies, place-based learning, and experiential education, this case study highlights how immersive, location-aware pedagogy can deepen student engagement and foster critical thinking in digital media disciplines. The course concludes in the creation of concept art and a playable, 8-bit pixel art game that reimagines iconic artworks, urban legends, and hidden histories through mechanics, worldbuilding, and player agency.

This talk will include examples of student work, curricular structure, and reflections on navigating the tensions between historical fidelity and creative freedom. It will also address the unique affordances and challenges of research, concepting, and creating a game in a short-term, 4-week study abroad context. By examining how students translate physical environments into interactive systems, this presentation contributes to ongoing conversations in game design education, cultural heritage storytelling, and practice-based research in immersive media."

Mrs Jodi Kolpakov, University of Missouri-St. Louis

Jodi Kolpakov is a visual communicator and Assistant Professor of Design & 3D Animation at the University of Missouri–St. Louis. Her teaching spans animation, web design, 3D modeling, and capstone courses, with an emphasis on games and sequential art. Her practice-based research investigates concepts of comfort in physical and digital environments, employing animation, 3D modeling, and extended reality to develop educational and narrative experiences. Drawing from rural Midwestern culture, her work integrates bold color, layered textures, and dark humor. Kolpakov's work has been exhibited nationally and recognized by AIGA St. Louis, 3x3 Magazine, ICON, and Communication Arts.

Wandering the Screens: The Child Viewer as Digital Flâneur in Transmedia Animation

"In an age defined by participatory media and ubiquitous screens, the child viewer of television animation is no longer a passive recipient of linear content but an active digital flâneur—a figure who navigates, explores, and reinterprets animated worlds across platforms. This conference presentation theorizes the child as a digital flâneur, adapting the Baudelairean concept as reformulated by Walter Benjamin to account for children's fragmented, exploratory, and affectively charged media experiences in the transmedia landscape. Through case studies of Bluey, Miraculous: Tales of Ladybug & Cat Noir, SpongeBob SquarePants, and Shin Chan—series that span cultures, generations, and aesthetic registers—this presentation examines how young audiences traverse digital environments (games, social media, YouTube, memes, merchandise) in ways that echo the observational and playful practice of urban flânerie.

Grounded in animation studies and media archaeology, the analysis highlights how digital mobility reshapes children's engagement with animation. It contends that the child-flâneur embodies a shift from spatial spectatorship to performative interactivity, where the screen becomes both window and interface. These series foster nonlinear, affective, and ludic explorations that extend beyond the televisual text—encouraging wandering, world-building, and participatory authorship through remix cultures and multimodal play.

Ultimately, the digital flâneur model offers a critical lens to rethink spectatorship in an era where the boundaries between animation, game, and interface increasingly dissolve. This figure allows us to reimagine

the child not as a passive viewer, but as an agile, perceptive navigator—one whose cultural and emotional investments reveal new dimensions of animation as a living, evolving transmedia organism."

Mr Raúl Jambrina Rojo, Universidad Carlos III de Madrid

Raúl Jambrina Rojo is a young graduate in Media Studies from the Carlos III University of Madrid, where he also completed a Master's Degree in Film and Television. After an Erasmus stay at Nottingham Trent University in the UK, and thanks to his final projects, Raúl has specialised in the development of animated television fiction products, acquiring experience in the creation, production and research in this field. Currently, he combines his professional career in the film industry while preparing for a PhD in animation, having participated in different national and international conferences as well as writing academic articles.

Delivering Complex Systems to Reluctant Learners: Embedding Virtual Production and Immersive Technologies in Undergraduate Pedagogy

"The increasing integration of virtual production, photogrammetry, volumetric capture, and motion capture (MoCap) into creative industries presents new opportunities—and challenges—for undergraduate education. While these technologies offer powerful tools for storytelling and innovation, they often appear intimidating or inaccessible to students with limited technical experience or confidence. At present few courses offer a interdisciplinary approach to teaching about these methods, and instead focus on training specific to the specialism or major.

This paper presents a pedagogical framework for introducing these complex systems within a second-year undergraduate context, specifically targeting two distinct student cohorts. The first consists of Post-Production and VFX students undertaking a 14-week mandatory module, which scaffolds the delivery of immersive media tools through structured workshops and project-based learning. The second group comprises students from a range of creative disciplines (including Acting, Creative Writing, Fashion, Animation, Games, and Film students), who voluntarily engage with the technologies through a weekly, extracurricular 'Wednesday Workshop' model running for the same duration. This hybrid approach enables comparative analysis of outcomes across formal and informal learning environments.

Using comparative case studies, this work explores how immersive technologies can be demystified through accessible workflows, peer collaboration, and emphasis on creative experimentation over technical perfection. Particular attention is paid to the experiences of so-called "reluctant learners"—students who initially display resistance or anxiety toward digital production pipelines. Data is drawn from interviews with students, reflective student feedback, tutor observation, and analysis of project outcomes.

The findings suggest that low-stakes, curiosity-led engagement—especially when framed within a collaborative and interdisciplinary setting—can significantly increase learner confidence, digital fluency, and creative ambition. The session contributes to wider discourse on inclusive and future-facing media education, offering practical strategies for embedding emerging technologies into curricula without alienating less technically oriented students.

Note. This research project is being undertaken with a bursary fund from the E3 programme."

Mr Julian Wright, Falmouth University

Julian Wright is Course Leader for Post-Production & VFX at Falmouth University's School of Film & Television. With a background in fine art and sculpture, he transitioned into animation and later into broadcast as a camera operator for BBC, Channel 4, and Sky. As digital technologies evolved, his focus shifted to VFX and post-production, leading to an MSc and a move into higher education. Over the past decade, he has held academic roles at several leading UK institutions. Julian continues to explore independent creative practice, including digital games and visual art, alongside his pedagogical and curriculum development work. Anthony Pellicone is a senior lecturer in game design at the Falmouth Games Academy, where he teaches group game development, theory, and design. His research investigates how methods of human computer interaction can be used to understand how people play, socialize, and learn within games in order to create more meaningful play experiences. He is also interested in the pedagogy and technologies of game creation. His previous work

has focused on game-based learning, methods of assessing player experience, informal learning in digital creativity, and how people learn socially in spaces devoted to game fandom.

Panel 8

Interactive Animation

"This presentation examines the cultural and technological forces that shape animation aesthetics and workflows in video game development broadly. While animation encompasses a wide range of practices—spanning analog and digital workflows, evolving platforms, and cinematic traditions—its use in games often aims for realism on one side of the spectrum, nostalgia on the other side. I argue that this spectrum, inherited from AAA game production, constrains the expressive potential of animation in games in experimental and fine arts contexts.

Drawing from my perspective as an animator, educator, and Associate Director of the UCLA Game Lab, this presentation explores how digital animation and video game graphics share roots but diverge in purpose. I propose that animation and games, when treated critically, can reveal metacontextual underlying structures—an argument for medium specificity and against platform code-switching. Rather than using animation as affectation or interface gloss, I advocate for animation as a meaningful, critical, and polemical practice within games and media art.

This perspective contributes to a growing dialogue between game studies and animation theory, but comes from an artist-practitioner. It is both a reflection on the look of experimental game art and a call to reframe animation not as a tool in service of game engines, but as an independent logic capable of challenging the conventions of interactivity, realism, and digital spectacle."

Ms Jenna Caravello, UCLA

Jenna Caravello is an artist working across animation and video game software, and an assistant professor at UCLA in the department of Design Media Arts. Her short films, mixed-reality performances, and interactive installations explore love, loss, online relationships, and the role of memory in personal and collective narratives. Caravello received a B.F.A. from the School of the Art Institute of Chicago and holds an M.F.A. from CalArts. Her work has been featured by NPR, Impose, The Fader, Magnet Magazine, Stereogum, Directors Notes, and Gorilla vs. Bear, and has appeared in venues and film festivals internationally.

From the Emotional Zone to the Disguised Gymnasium: Rotoscoping the Gamer in Jordan Mechner's "Karateka" and "Prince of Persia"

"This proposed paper examines the aesthetic of two digital games – ""Karateka"" (1984) and ""Prince of Persia"" (1989), and the influence they had on the aesthetic of digital gaming in general. The argues that this influence it is rooted in the silent film aesthetic adopted by their designer Jordan Mechner.

The games shared a similar plot: the unnamed male protagonist must fight and find his way to rescue a princess held captive. The two games drew significant attention for their use of rotoscoping – the tracing of live-action footage into illustrations – to animate their protagonists, allowing gamers to not only control these protagonists' movements and actions, but also their bodies, mass and muscles.

""Prince of Persia"" took this ability to what was, at the time of its release, new extremes. In an approach that echoes what Paula Marantz Cohen described as the ""disguised gymnasium"" – the use of set pieces to provide silent films stars to showcase their bodies - Mechner filled practically each screen of ""Prince of Persia"" with obstacles that required players to animate the body of the protagonist in a specific, and highly dynamic manner.

Mechner's earlier game, ""Karateka"", contained less interaction of the game's protagonist with the environment due to technical limitations and focused on fighting. However, ""Karateka"" did manage to make the gamers' control of the rotoscoped protagonist more nuanced than in the later game, through the ability to express emotions and intent through body gestures.

The paper poses the question of which approach – the expression of emotion through body gestures or the ""disguised gymnasium"" of showcasing the protagonist's body action through overcoming physical obstacles – is the stronger legacy of Mechner's games. "

Dr Raz Greenberg, Tel Aviv University

Raz Greenberg is an animation researcher. His interests include animation theory, animation and digital games, and animation and culture. His book on the early works of Hayao Miyazaki was published by Bloomsbury Academic.

Correlating Facial Movements: Introducing a Novel Action Unit (AU) Co-occurrence Matrix

"In facial animation, authenticity is paramount. The nuanced choreography of expressions determines whether a character feels emotionally resonant or subtly artificial. This study presents a novel Action Unit (AU) co-occurrence matrix, grounded in the Facial Action Coding System (FACS), to systematically identify and quantify relationships between facial muscle activations linked to core emotions, including happiness, sadness, surprise, disgust, fear, and anger.

Drawing on high-resolution 3D facial scans, a detailed Euclidean distance analysis was conducted to capture spatial shifts in facial anatomy during emotional expressions. The resulting matrix reveals the most frequently co-occurring AUs, offering animators a structured, data-informed reference for building complex and lifelike expressions.

To evaluate its practical utility, the AU matrix was embedded into animation workflows. Animators applied their findings to guide expression design, producing poses that displayed enhanced emotional range and realism, closely aligning with natural human behaviour.

Beyond production environments, the matrix also serves an instructional function. Grounding animation in measurable facial dynamics enhances training efforts and provides emerging artists with a more precise, anatomically accurate understanding of how expressions emerge and interact.

The implications extend into future-facing animation technology. By integrating empirical analysis with creative practice, the AU co-occurrence matrix lays the groundwork for more intelligent animation systems. These tools combine technical rigour with expressive nuance, aiming to elevate the emotional fidelity of digital characters."

Dr Amrinder Romana, BIMM University

Dr Amrinder Singh Romana is a creative technologist and academic with over two decades of experience in animation, immersive media, and digital storytelling. He currently leads MetStudios London at BIMM University and holds a PhD in Computer Animation. His research focuses on facial animation supported by industry collaborations and external funding. As a Head of School and PhD supervisor, he has played a key role in curriculum development and cross-disciplinary innovation. Dr Romana's practice-led work spans academia, applied research, and public engagement, advancing both technical expertise and expressive storytelling in digital media.