The Artist, The Ghost and The Machine

PROGRAM

18 & 19 MARCH | FJERDINGEN
Chr. Krohgs gate 32, Oslo
Artistic Research at Kristiania

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Chr. Krohgs gate 32, Oslo

Room locations
Ground floor F101 (auditorium), Skjenkestua Studentbar
First floor Mezzanine floor
Second floor F308, F310, F311
FUN209 + 6125
AR@K24: Art and Technology

Welcome to the sixth annual artistic research symposium at Kristiania. Welcome to AR@K #6! A special welcome is extended to The Artistic Research Spring Forum 2024. It forms a wonderful addition to the symposium, and we are thrilled and honoured hosting their forum.

Over the years the symposium has embraced a diversity of themes key to artistic research. Participants from near and far have transcended traditional disciplinary boundaries, blending artistic practice with scholarly investigation to generate new insights, perspectives, and modes of expression.

Again, this year we invite you to engage in a process of discovery through experimentation, exploration, reflexivity, discussions etc., a process that is as much about asking questions as it is about finding answers. Presentations, keynotes, performances, workshops, panel talks, exhibitions, and an interactive installation make up the program.

Art and technology are not separate domains screened off from each other. They are both “a soaring exercise of the human imagination” as Danel Bell noted in The Winding Passage (1980). The exchange between art and technology offers a vast potential for creativity and knowledge building but also holds ethical pitfalls.

Technology serves as a catalyst for creative exploration, providing us with new tools, techniques, and mediums for experimentation and expression. Technology enables us to engage with contemporary issues and concerns in innovative ways, from environmental sustainability and social justice to the ethical implications of emerging technologies. Concurrently the ethics of technology-generated content, and the impact of automation on creative labor must be continually considered.

Ole Egeberg
Symposium curator
Generative AI in the moving image arts: Collisions of ethics and creativity

Generative AI compels us to transform our understanding of existing moving image technologies and creative processes. Synthetic media test our assumptions about much of what we see on screens. Most importantly, audiences’ trust in the authenticity of recorded performance is shattered.

This talk will review my own creative work with deepfake technology, Virtual Maggie, an early experiment that attempted to resurrect the deceased UK Prime Minister, Margaret Thatcher, in a film drama. It will examine the ethical dilemmas and opportunities facing filmmakers and artists working with moving images in the AI age.
Intermediary Whisperings: Location-based Audio Storytelling as Locative Enchantment

Our locative narrative project, Fillebrook, maps the underground course of the culverted Fillebrook river in Leytonstone, East London, employing gps-enabled audio technology to chart the invisible subterranean realm beneath the feet of participants, leading them on an audio-spatial journey.

Our approach to storytelling takes inspiration from mythological knowledge production, through which humans have sought to understand the hidden logic and forces that animate the environment, materialising them into magical beings. The story is told through a narrating entity, the spirit of the Fillebrook, an AI generated voice, which, neither human nor animal, acts as a ‘ghost in the machine’ intermediating technical and ethereal. The aim is to immerse participants in a narrative experience that acts as a form of re-enchantment of place, implicating them in the act of story formation through prompts, which incorporate the reality of their real-time journey.

Fillebrook employs contemporary technologies to explore how we bind ourselves into the topology and geology of the world, through stories that engage with non-human entities and subjectivities to create an embodied relationship to our environment, a type of understanding less accessible through scientific forms of knowledge, but potentially vital to our successful curation of the planet and our own survival.

Rosamund Davies and Luke Clancy

Davies
Senior Lecturer in Screen and Media Writing
University of Greenwich

Clancy
Heads of award-winning audio production company, Soundsdoable

Category: Screenwriting

What, when & where:
Participants in the chaired session “Exploring Narratives” on 18 March 11h00–12h30 in room FAU – 308
Trygve Bjellvåg
Associate Professor
Westerdals Department of Film and Media
School of Arts, Design, and Media
Kristiania University College, Oslo (NOR)

Category: Animation

What, when & where:
Participant in the chaired session “Exploring Narratives” on 18 March 11h00–12h30 in room FAU – 308

Empowering Global Filmmakers through Real-Time Creation

Unreal Fellowship: Animation is a groundbreaking three-week virtual course that revolutionizes creation in the digital age. Bringing together around 110 experienced professionals from the animation and motion capture fields, this program fosters interdisciplinary collaboration between artists and technology. Participants gain expertise in constructing keyframe and motion capture data using Unreal Engine, understanding real-time animation fundamentals, and utilizing its extensive toolset. The course incorporates an exquisite corpse-style challenge, where teams create captivating, animated performances collaboratively.

Selected participants require a minimum of three years of experience in film, broadcast, or game construction, animation credits, a demo reel, and familiarity with digital content creation. In just three weeks, a diverse team of 14 fellows delivered a three-minute film, setting a milestone in real-time animation and content creation. This approach empowers filmmakers to utilize democratized tools, creating cinematic experiences from anywhere in the world.

Bjellvåg was selected for the role of mentorship and will present the process, reflections, and key outcomes from this experience.
TransVariations – Music beyond the limits of time and technology

Based on innovative technological approaches to problematize the relationship between artistic creation and interpretation in the context of Western-Art Music, TransVariations Project uses a well-known classical composition (Beethoven’s 32 Variations in C Minor) as research object in order to explore the following question: How would this piece sound if the composer had all modern tools of today at his disposal? Well aware that the question itself has a logical flaw (as the cultural implications would surely mean that the whole piece would be different), we investigate the relationship between score and sonic manipulation of the instrument. This again leads to distinctive changes in the performer’s phrasing and articulation, and as such can radically change the basis on which interpretation is made. Keeping in mind that the instrument for which the piece was composed was new technology at the time, it seems natural to make use of today’s technology in a contemporary interpretation. With the full freedom of modern sonic manipulation, adhering to the traditional score might seem limiting, as the affordances of the new instrumental sound also affect which notes to play. This can also be seen as a point of friction and dissonance, which demands and generates creative solutions.

The project is a collaboration between Alfonso Benetti (pianist), Øyvind Brandtsegg (live sound manipulation and programming), Trond Engum (live sound manipulation and recording), and Francisco Monteiro (external ear). Three academic institutions participate in the project: University of Aveiro (Benetti), Instituto Politécnico do Porto (Monteiro), and Norwegian University of Science and Technology (Brandtsegg and Engum).
The Artist, The Ghost and The Machine – Interplay and symbiosis of music and technology in the ensemble Lemur

Technology has become an integral part of the creation and production of Lemur’s many projects since starting out as an acoustic improvising quartet in 2006. The ongoing project Critical Band is a prime example of this, where various technologies have been utilized in both creating, realizing and performing the piece in its various configurations. Since the composition is based on the acoustics of its performance space, the appropriate technology for measuring and mapping out the acoustic properties of the space must be used in order to both inform and realize the score.

The piece has been performed as a nine-piece ensemble for the first concerts in Norway in 2012, with the Icelandic Symphony Orchestra at the Tectonics festival in Reykjavik in 2014, as an installation piece, Polytop, at the National Museum of Architecture in Oslo and as a recording, Critical Bands, in 2023. The most recent performance, Critical Bands IIb, was part of a release concert with Caput ensemble in Reykjavik in November 2023, as a piece for improvising quartet, sinfonietta and tape. This presentation will investigate and discuss the many different roles of technologies in the various configurations of Critical Band with audio examples of relevant recordings.
Program and flexibility: Wolff Olins’ visual identity for the Tate galleries reassessed

Wolff Olins’ visual identity for the Tate Galleries (1999) was an early, high-profile example of the ‘flexible identities’ which blossomed in the early 21st century.

The paper traces flexible identity’s roots, examining their relation to earlier iterations of programmatic design (Gerstner 1963, Henrion 1967), the older more informal notion of house style (Preston 2018), and Wally Olins’ own writings (1978, 2005). It also considers how the programmatic approach was informed by work in moving image and packaging design. Acknowledging Felsing (2010), van Nes (2014) and Lorenz’ (2021) work in presenting, defining and explain the workings of contemporary flexible identity systems to practitioners, the paper considers links made by authors like Maffei (2005), Betancourt (2013), Kopp (2015) and Coelho (2022) between flexible identities, notions of liquid modernity (Baumann 2000), hypermodernity (Lipovetsky 2005), Eco’s ideas on ‘the serial’ (1994), and anti-corporate sentiment (Klein 1999).

In conclusion, the paper draws upon the notion of assemblages, as well as Goeting’s work on the digital in design (2021), to look at tensions highlighted by the Tate identity and its 2016 North redesign between changeability and recognizability, man and machine, analogue and digital.
The Foundations of Virtual Space in Virtual Embodiment

Out-of-body illusions staged by neuroscientists in their laboratories, lead to conclusions concerning the relationship between the self and embodiment. In order to understand the malleability of the relationship, scientists create speculative body-images and integrate them in the subject’s experience using virtual reality. Within minutes, subjects disown their physical bodies and establish a feeling of ownership towards digitally mediated body-imagery.

Re-enactments of the experiments in artistic contexts reveal that perceived embodied presence in a virtual realm enables us to determine the virtual space’s scale or define spatial relations independently from the way they are coded. Thus, perceived ownership of a virtual body is endowed with the agency of informing virtual spaces. The artistic research thus offers a non-dystopian perspective on embodiment and virtuality. The body is not excluded from the virtual, nor is it submitted to it. The body conditions the very constitution of a virtual space. The reflection on the constitutive role of the body in the virtual will be paralleled with aesthetic theories having roots in late 19th century when aesthetics was undergoing major transformation under the impact of progress in neuroscience. The research will be presented through a speculative documentary film.
The Catalogue of Material Illusions for Fashion Spaces

In my presentation at the AR@K24 symposium, “The Artist, The Ghost and The Machine,” I will delve into the intriguing paradox of modern design: the creation of luxurious, coveted beauty from ephemeral, inexpensive materials.

This exploration draws from a question I posed to architect Rem Koolhaas in an interview for Wallpaper’s Style Issue1 about his collaboration with Prada on fashion show sets. My interest centered around his writing about modern architecture in ‘Delirious New York.’ Koolhaas described Luna Park- one of Coney Island’s first enclosed theme parks, as ‘the first manifestation of a curse that is to haunt the architectural profession for the rest of its life, i.e., the formula: Technology + cardboard (or any other flimsy material) = reality.’ which seems to resonate with his work for Prada.

The presentation will catalog various ‘flimsy materials’ used in these shows. A primary focus will be on iconic Prada shows, highlighting their innovative use of ordinary materials. For instance, the SS2024 show’s use of slime (Image courtesy of Prada, 2023) – a basic, viscous toy product – emerges as a new form of ‘liquid architecture,’ a term coined by Koolhaas. At the same time, the only way to make it work effectively is through modern technology. The goal is to challenge and inspire attendees to reconsider traditional views on value, durability, and material use in fashion and architecture.
In what ways does the use of AI-driven writing companions reshape the relationship between technology and the creative intuition of writers?

Exploring the intersection of art and technology, this talk presents ChatGPT’s potential role as a companion for writers and game designers. Using a practical example, we delve into brainstorming a new book idea from scratch and discover how ChatGPT can emerge as a dynamic ally, unlocking new possibilities, sparking inspiration, and – ultimately – transforming into a creative partner. The AI-driven tool serves not only as a writing aid but elevates creativity by contributing diverse perspectives. Engaging in a ‘conversation’ with ChatGPT allows us to navigate the complexities of crafting narratives, tapping into its vast knowledge.

This exploration goes beyond overcoming writer’s block to scrutinize the broader implications of AI in the creative process. We’ll unveil practical applications and touch on ethical considerations and artistic dilemmas arising from such collaboration. The dynamic intersection of art and technology, exemplified through ChatGPT’s role, opens new avenues for understanding the symbiotic relationship between human creativity and machine intelligence.
Virtual Reality as an In-Between-Space

Virtual reality is a growing medium to experience work, gaming and socialising in. Previous research shows that virtual experiences have an impact on our perception of ourselves and the world around us. VR is a unique way to experience alternative realities and embodiments which effects we are just starting to grasp at.

In today’s western world there’s a disappearance of rituals, community and things that connect us. In a dystopian future VR would be a contributing factor to this isolation and decrease in human community but it doesn’t have to. As we are moving towards an increasingly tech-oriented way of life, there’s a question of if we are designing these virtual experiences inclusively and in a way that everyone can partake and benefit from. Replacing the physical controllers with the use of hand tracking may enable less tech savvy people to engage in the experience in a more intuitive way and offer a new experience of touch.

In an artistic exploration of virtual embodiment this demo lecture is focusing on the experience and exploration of oneself in VR and how we perceive the in-between-space of our virtual and physical body with the use of hand tracking.

Marie Dahlén
Assistant Professor
Westerdals Department of Film and Media
School of Arts, Design, and Media
Kristiania University College, Oslo (NOR)

Category: Film

What, when & where:
Participant in the chaired session “VR and AI” on 18 March 13h30–14h45 in room FAU – 308
CONTRIBUTORS AR@K24

Technology now enables us to play music together from different locations. The technical requirements to do so are no longer exclusive to universities with high technological budgets. This can now be achieved from home or even in the woods, requiring only basic gear such as a smartphone.

CreaTeME (University of Agder’s “Center for Excellence in Music Education”) is collaborating with The Norwegian Academy of Music in Oslo (NMH), the Norwegian University of Science and Technology (NTNU), and Kilden teater & konserthus on a series of hybrid online/onsite performances in 2024 and 2025. Our performances will occur in parallel, simultaneously at different sites. Building on a long-standing tradition of telematic performance, we are experimenting with creating performance formats that exist somewhere between conventional onsite and online formats. Key questions for the project include: What might a future hybrid performance space look like? How can we “be” together in this environment? How can we better integrate the “other” location? What should we do with the feedback? We don’t hear the same music, what to do?
Exploring the Complex Relationship Between Art and Technology: Challenging Myths in Music Production

When recording music, the choice of microphones can significantly affect the artistic performance and the final result. Different microphone options are available, often with unique features and in different price ranges. Experts in audio engineering and music recording have long developed preferences and practices for which microphones and microphone types best suit different recording situations. In addition, a wealth of knowledge and insights is available on the optimal placement and handling of microphones in various manuals on audio engineering, sound recording, and music production. Therefore, many beliefs and potential misconceptions about the conditions required to create great recorded music exist.

While such ideas may come from experienced producers and sound engineers, they are rarely supported by evidence other than anecdotal stories. Consequently, what started as a well-informed observation can quickly turn into a widely accepted myth. Therefore, more research is needed. This study aims to test the validity of such perceptions or myths and examine the importance of different microphone choices for the artistic design of music recording and how listeners experience the music.

This paper presents experiences from completed studies, including examples of innovative use and misuse of technology in performing arts.
The Sounds of Ski Poles in hard Packed Snow in an Upper Manhattan Bedroom

How does technology allow for artistic collaboration across continents in a post-covid, climate crisis world? How can you translate the sounds of ski poles in hard packed snow to a cello? And how can you turn an Upper Manhattan bedroom with noisy neighbors into a music studio?

This presentation will try to address these questions through an account of the creation process of a piece that is the result of the joint efforts of two people living on each side of the Atlantic: Madeleine Shapiro, a professional cellist specializing in contemporary improvised music living and working in New York and Andreas Bergsland, a music technology professor from Trondheim, Norway.

The presentation deals with technical, practical, and aesthetical issues encountered in the process of making this piece. For example, how can we make art under sub-optimal conditions both regarding tools, communication and infrastructure? Moreover, it tries to relate these to ethical questions that we face when we are working artistically in a world with several converging crises.
The impact of AI – how will it affect the industry and the education of visual and 3D arts?

In the last couple of years, we have witnessed explosive developments in artificial intelligence (AI), which will also play a crucial role in visuals arts and 3D-graphics. Image generators like Midjourney, Dall-E, and Stable Diffusion create images based on textual descriptions (prompts). These tools have become popular for concept development and reference material in the visual art industry.

3D-graphics is a field that is central to industries such as video games, visualization, and visual effects. Within 3D, there are tools that use artificial intelligence to animate 3D-figures based on human movements, and tools that can generate 3D-models and textures from verbal descriptions. These tools are set to change the way 3D-graphic designers and animators work, simplifying many processes that are currently time-consuming and challenging. The tools can make 3D-design more accessible to a wider audience and may also lead to new forms of interactive storytelling and gaming.

At the same time, the use of AI-tools will bring about changes that may be perceived as competition-distorting for many established creative professionals. It is still debatable how creative skills can be combined with these new tools in what could be a paradigm shift. As AI-generated content is also trained on copyrighted material, ethical dilemmas may arise around its use.
In today’s increasingly digital world, and especially after the COVID crisis which started in 2020, cultural institutions worldwide, as well as independent curators have embraced online exhibitions to showcase their collections and art virtually and connect with worldwide audiences. However, the wide majority of these virtual exhibitions often represent a failed attempt to translate what usually occurs in a physical art space into a digital space. Regrettably, the emerging trend of displaying artworks online neglected to consider what the digital space allows, its unique possibilities, and the types of artworks that would be appropriate and meaningful to exhibit in such a distinct environment.

In “Making Sense of Online Exhibitions”, successful online exhibitions will be presented and analyzed. These examples have on the one hand, effectively acknowledged the digital realm as a distinct entity and skillfully utilized its distinct characteristics, and, on the other hand, have managed to exhibit artworks that, owing to their unconventional nature, have posed presentation challenges within the conventional physical walls of museum spaces, such as net.art or mail art.
Artificial Intelligens: Exploring more-than-human co-creations in a digital culture

Anneleen Swillen presents Artificial Intelligens, an interdisciplinary, fluid and collective platform founded within the context of her postdoctoral research in the arts. Since 2020, Artificial Intelligens has initiated speculative practices and participatory projects to explore the potential, roles, impact and challenges of machine learning in contemporary jewellery.

Artificial Intelligens’ artistic projects, such as ‘Ornamutations’, emerge from human-machine collaborations, engaging more than 100 artists and designers to co-create ever-evolving adornment with machine learning. These collective experiments cultivate an awareness of intra-relational entanglements and challenge notions of agency, otherness, unpredictability, elusiveness, and intelligence. They encourage an openness to new forms of interaction, emphasizing relationships and ecologies. Through envisioning futures adornment, Artificial Intelligens aim to spark imaginative concepts and methodologies for jewellery practices, questioning more-than-human-centered design, phygital embodiment, and virtual identity.

During this lecture, through a selection of projects, performances, and presentations, Swillen shares insights derived from her research in the arts, operating at the intersection of jewellery, visual culture, technology, and creative collaboration between humans and machines.

Dr. Anneleen Swillen
Researcher and Tutor
PXL-MAD School of Arts
Hasselt University (BE)

Category: AI. Exhibition

What, when & where:
Participants in the chaired session “Interactions” on 18 March
15h15–16h30 in room FAU – 310
Keynote II

Bull.Miletic is an acclaimed international media art duo composed of Synne Tollerud Bull and Dragan Miletic.

Known for their complex video installations, their work interrogates the relationship between the physical and digital realms. Drawing on histories of technology and media, Bull.Miletic challenge our perception of space, embodiment, and the transformative power of technology. Please see more here: https://www.bull.miletic.info

Category: Film

What, when & where:
Keynote talk on 18 March 17h00–18h00 in room FAU – 101

Proxistant Vision

For their keynote at AR@K 2024, Bull.Miletic will delve into their recently completed artistic research Ph.D. project entitled “Proxistant Vision”.

This project critically investigates how the recent surge in aerial and computer-generated imaging technologies transform our experience and understanding of distance and proximity.

The artists will draw on theoretical exploration and their own innovative artworks to question how these technologies shape our perception of the world and ourselves.
Monday March 18th at the bar Skjenkestua

Disobedient

Disobedient is a student-led event, where anyone is welcome to present or perform on stage their creative take on a given task.

At AR@K24 we will recreate an intense version of Disobedient, Monday March 18th at 6.30 pm. We want you to tell us: What happened to ...

The specific task will be given Monday morning at the opening of the conference. Willing participants can work on this at their leisure throughout the day. When the evening rolls on, we and the stage will be found at the bar (Skjenkestua) where you can talk to us if you would like to perform.
In a complex world, where new technologies and media habits are rapidly changing the industry, we need creative students who possess a critical, resilient, and reflective stance towards the impact of audiovisual media on society. PRISMA (Pedagogical Research on Interdisciplinary and Student-centered Media Art), a research group at Westerdals Department of Film and Media (WIFM), aims to create a new student-centered pedagogical platform anchored in the latest theories and research on innovation, creativity and pedagogy. Spearheaded by staff and students at the WIFM, PRISMA seeks to ensure students develop the skills that prepare them for the future and form the basis for contributing to change and innovation in their respective fields of study. Central to this work is the development of the interdisciplinary, collaborative 4th semester Media Art Innovation Lab (MAIL), launching in Spring 2025, which brings together students from all six study programmes at our department in interdisciplinary and innovative collaboration.

This presentation will give a status update on PRISMA research project and focus on the following:

- How can the PRISMA project contribute to developing students’ critical thinking and reflection skills in relation to audiovisual media?
- What are the most effective pedagogical strategies for promoting innovation and creativity among students in audiovisual media?
- How can the PRISMA project contribute to developing students’ skills in interdisciplinary collaboration and innovation?
Recent developments in generative technology have caused concerns regarding creating art (Sutherland, 2023). Will human expression end up being diluted? Will art become a recycling machine for plagiarism without genuine human intentionality? These worries have also reached the field of CG animation where an increasing number of tasks are being automated. Despite this, I believe seeing traces of artists’ will to reinstate human creativity, and even inadequacy. For example, CG features such as *Spider-Man: Into the Spider-Verse* (Persichetti et al., 2018), mimic traditional animation techniques to achieve a human-made aesthetic.

The term automatism describes how certain actions are performed without being consciously involved (Thomson & Robinson, 2010). But can the example above indicate a new trend, counteracting the generic perfection of computer graphics – something we can call post-automatism?

This presentation revolves around the CG animated short *PAM Inc.*, produced by Trollfilm, and directed by me (Trollfilm, n.d.). I will outline how automation is utilized in the creative process and how it is balanced with manual labor to regain human imperfection. Artistic choices include framerate manipulation, stylization, and virtual production, bringing human labor undisguised back to the computer generated.
Capturing Tap
- a project in progress

The Capturing Tap project is a cross disciplinary project that will try to find a new preproduction method for dance films based on new technology such as AI based motion capture and AR technologies. The idea is based on Dr. Karen Pearlman’s concept of “onscreen draft”. In her book ‘Cutting Rhythms, Intuitive Film Editing’, Pearlman describes a highly dynamic pre-production phase where testing with a camera and rough editing may lead to changes in the script or in our case the choreography in iterations.

In our case we will use motion capture technology to capture the dance performance and AR technology to let the DOP train on filming the choreography. This can be recorded, and test edited, and the result scrutinized to see if the choreography can be changed to maximize the impact on film.

The research questions are:
- Can we find adequate technologies that also are so cost efficient that they can be used in education?
- Will the new preproduction method add significantly to the perceived outcome of the production?
The Digital Accomplice: The Role of Technology in the Creation of Collaborative Multidisciplinary Works

‘Accomplices’ is an ongoing project creating music through a collaborative and iterative process: material recorded by a performer is used by another artist to produce pieces, which then act as departure points for subsequent performers, resulting in a series of related but separate works. The project is both made possible, and artistically formed by technology which allows for far reaching, immediate and effective collaboration, but is also a way of developing the art. Future development includes widening the project to include other art forms such as dance and film.

Our presentation will discuss how technology facilitates the widening of our pool of collaborators, as well as our ambition for the scope of the project, but also considers a critical view that the apparent ‘global’ nature of communications technology might disguise equally narrow ‘technological spaces’. Referencing Mark Butler’s (2014) notions of digital files as texts, and his distributed ontology of works, we will examine the status of pieces created during our process and the relationship between documentation and the work itself.

We will investigate possible future problems and solutions: how can we incorporate essentially non-technological art forms such as live dance?; how can our digitally created pieces translate into live performance?

Jamie Howell and Jerund Fluge Samuelsen

Howell
Multi-instrumentalist, composer and educator
University of Southampton (ENG)

Samuelsen
Associate Professor
Department of Music
School of Arts, Design and Media
Kristiania University College, Oslo (NOR)

Category: AI. AR. Dance

What, when & where:
Participant in the chaired session “Dance and Technology” on 19 March 10h45–12h30 in room FAU – 308
Remote Dance Improvisation Through Advanced Telematic Technologies

During the COVID-19 pandemic, performing art practitioners had to shift their works to an online platform. This led to discussions about the effectiveness of remote creation processes in comparison to physical interaction. In November 2023, we conducted a series of dance experiments in our motion capture labs to understand how dancers’ interactions change when they are physically together and when they are using telematic systems remotely. We asked two dancers to create an improvisational dance sequence over an hour in three different conditions. In the first condition, they created a short piece together in the same room. In the second condition, they were in different rooms and connected through Zoom. In the third condition, they were remotely improvising using Lola, a high-quality audio-video streaming system.

During each of these conditions, we monitored and collected the dancers’ physiological data, including motion capture, respiration, and heart rate. After each session, we conducted a one-to-one interview with the dancers. In my presentation, I will share the preliminary outcomes of the experiment based on the interviews and video recordings, focusing on the altered interaction dynamics during improvisation and discussing how advanced telematic systems intervene in the dancers’ creation process.
Expanding Co-Creative Spaces

Co-Creative Spaces is an artistic research project that started in 2021 as a collaboration between Bernt Isak Wærstad, Noto J. W. Thelle, Morten Qvenild, Labdi Ommes, and Gyrid Nordal Kaldestad. The project aims to shed light on issues and explore possibilities related to new forms of musical co-creation where artificial intelligence is part of the creative cycle. The musicians create music by recording improvised sessions and then training machine learning models based on these recordings. Subsequently, they improvise together with each other’s “bots” in different constellations.

Now in its fourth year, the group has performed several concerts, published peer-reviewed papers, articles, and a forthcoming book chapter, launched a software repository, and held presentations in Norway and abroad. Starting in 2023, Tejaswinee Kelkar has joined Co-Creative Spaces as an additional musician and computer scientist. She is a much-needed resource to consolidate the software and bring it to the next level, and to extend the musical diversity in the project.

At AR@K24, Bernt Isak and Tejaswinee will perform a short impro session together with a variation of bots trained on members of the group. After the performance, Noto will moderate a conversation focusing on lessons learned from the project so far and challenges to address going forward.

Contributors

Co-Creative Spaces

Notto J. W. Thelle, Tejaswinee Kelkar and Bernt Isak Wærstad

Thelle
Head of Section at Makerspace, Oslo Metropolitan University (NOR)

Kelkar
Music technologist, teacher and vocalist
Associate professor II, University of Oslo (NOR)
Data analyst at Universal Music Norway

Wærstad
Producer, programmer, performer and composer

Category: Music. Impro. Science

What, when & where:
Participant in the chaired session “Music and Technology” on 19 March 10h45–12h30 in room FAU – 310
Intermedia: Blurring the boundaries between sound/music, visuals and text using art and technology

I propose a performance of an open-ended, real-time-generated intermedia piece comprising sound/music, sung/spoken text, and visuals, which transcend their initial, fixed forms to generate new, hybrid, free-form modalities. The piece will be performed using a virtual intermedia instrument built in the visual programming language Max, allowing the sound/music and text to transform into visuals, and the visuals to be affected and controlled by the changes in the sound/music and text.

This piece/intermedia instrument was conceived and crafted at the intersection of art and technology. It aims to challenge the nature of sound/music, visuals, and text as fixed media, and of creative processes in general as pre-determined and well-rehearsed activities, on- and off-stage. This virtual instrument allows for the interplay between the above media, in an intermedia performative space, where the lines between these media are blurred. This line-blurring generates intermedia cross-modalities that are different with each new performance, intertwining with and bleeding into one another in real-time in unpredictable ways. This unpredictability helps us uncover the points of fluidity between sound/music, visuals, and text, and reflect on the interplays between them in both digital and analog worlds.
Trondheim Voices and Maccatrol – improvising and composing with new technology in a long-term creative community

This presentation is about the collective development of music technology as a tool for new expressions and performances. The field of research is the development and artistic use of Maccatrol™ by Asle Karstad, sound designer and device designer, and Arnvid Lau Karstad, programmer. Maccatrol is a custom made portable wireless midi controller, developed for the improvising vocal ensemble Trondheim Voices to use with Ableton Live.

The research resembles the useful feedback model of action research for recognizing, questioning, exploring, developing, feeding back in to, improving, and sharing practice – related knowledge.

Research questions:
• What practice – generated issues are discovered during the process of developing customized music technology (Maccatrol) through the cooperative process with sound and device-designer, programmer and ensemble?
• What role does technology play when we compose for Trondheim Voices and Maccatrol2 – what new possibilities, parameters, concepts, terminology – but also habits and pitfalls are uncovered in the process?
• In what ways are our involvement with technology building on/inflected by our common history and knowledge as ensemble “before” and “without” technology?
• What do we experience as different between using Maccatrol as a tool for composition vs. as a tool for improvisation?
In his well-known thought experiment regarding artificial intelligence (AI), John Searle sketched up the philosophic idea of the Chinese room – a room in which comprehensible rules (a program) allow a person to perfectly correlate one set of unknown linguistic symbols (a question) with another (an answer) of the same unfamiliar kind. In our creation of an AI-based micro-opera for humans and machines, we have come to reflect upon our concept as an artistic response to Searle’s arguments and a mirroring complement to his debated figure.

Our immersive and interactive opera was conceived as a modular series of musically paced meetings between individual visitors and a singing seeress in contact with the digital realm. As an analogy to the Delphic oracle, the seeress delivered AI-prompted answers to the visitors’ questions in real-time framed by poetical, musical, and theatrical structures.

In Searle’s Chinese room, goal-oriented computational mechanisms remain detached from understanding during the linguistic operation. In our Delphic room, understanding is key for carrying out the aesthetic operations intended to artistically stimulate a coupling of intellectual and visceral information processing in open-ended and personal ways.
In Norwegian

Saxofon i elektronisk lydbilde


Skogly og Iversen synes det er spennende å utforske mulighetene som ligger i kombinasjonen med akustiske og elektroniske format, der saxofonen til dels tar en vokalistisk rolle. De har i dette arbeidet forsøkt ulike uttrykk som involverer både prosessering og effektbruk på saxofon, prosesserte feltopptak og en rik palett innenfor produksjonstekniske valg.

Resultatet spenner fra groovy partier, dramatiske harmoniseringer til sarte hymner, og er et utforskningsprosjekt i hvordan saxofon og et elektronisk lydbilde kan lage en troverdig helhet i et melodisk, dynamisk og lekent musikalsk univers. Arbeidet vil bli presentert av Skogly og Iversen med refleksjoner av arbeidsprosess og funn, samt lytteeksempler av ferdig resultat.
Fryseriet/The Freezer: VR work/Digital art as agent in cultural heritage/sustainable place development

We propose to present the VR-work FRYSERIET/The Freezer connected to the German-Norwegian media art project Nyksund Reloaded.

Nyksund Reloaded aims to re-think sustainable place development in rural areas through materials of the archive and seeks to highlight and activate the material legacy (archive) of a much-forgotten Berlin-initiated environmental youth programme of the 1980s/90s in the former fisher village of Nyksund, Nordland. It asks how can we re-think future challenges through the materials of the past?
Nyksund Reloaded consist of several parts:
1. An Artistic Archive
2. The Freezer as Cultural arena
3. The Network.

The Freezer is a sub-project in which technology, cultural heritage, sound art, media art and cultural entrepreneurship is entangled. It seeks to develop FRYSERIET/The Freezer, the digital model of a post-industrial building, into a virtual cultural arena for art experiences, exhibitions, and discussions. The digital model FRYSERIET/The Freezer represents a former 1950s fish-factory that soon will be demolished to give way to a new hotel designed by Snohetta. When Fryseriet was left empty in the early 1970s, artists rediscovered the dilapidated building as a “place” for artistic interventions, concerts, installations, or performances. Our photogrammetric model of FRYSERIET, calculated from 18 000 photographs, preserves the building in its current condition as cultural heritage, with traces of use from different times.

With the digital model of this building as a starting point, the artist collective NODES wants to develop the VR work prototype THE FREEZER in cooperation with Kristiania University College, Oslo, which visitors can experience interactively online on site in planned exhibitions in Nyksund and in Berlin October 2024.
Creating room to think

We are experiencing a crisis of trust, largely driven by social media. Fake news, extremism, cancel culture and an increase in AI-generated, faked images and video makes it hard to know what to believe in. How can we communicate and discuss important topics in such an environment? The artistic research project NUMB (PhD) explores how emotionally charged and ethically challenging interactions can invite more reflection on important topics than communicating with the authoritative, linear formats that have dominated media up until the new storytelling affordances offered by digital technology.

Elin Festøy presents how inviting participation in interactive experiences that simulate the different aspects of important themes and topics can offer the visitor new agency to explore and reflect, and thus room to doubt, test and make up one’s own mind based on personal experience. The findings of NUMB are based on the development of a row of VR concepts exploring how to communicate objectification and human decision making.
The speaking “ghost”: Book design, materiality and the rhetoric of the format

This paper explores material properties of books as rhetorical devise in design, taking the authors collaborative book design projects as means and method for artistic explorations of communication. Revisiting the book as a mediational technology, it delves into the material aspects of book design, approaching this in terms of a speaking “ghost” in the “machine”, exploring the agentic capacities (Wakkary 2021) of printed matter. It responds to Freek Lomme’s (2015) call for attention to tactility in design of printed matter.

By delving into two explorative book design projects, this paper discusses the book as a material technology, with reference to the book project Fashions, as well as an untitled ongoing project where book design serves as an organizing technology for assembly and organization of a body of photographs.

In designing these books, the material modes of communication are key. It focuses on format, materiality, weight, and texture, framed as a search for the “ghost in the machine”.

Synne Skjulstad and Fredrik Eive Refsli

Skjulstad
Associate professor at Kristiansand, dept. of Creative, Storytelling and Design

Refsli
Associate professor at Kristiansand, dept. of Creative, Storytelling and Design

Category: Book design

What, when & where:
Participants in the chaired session “Tech and Art” on 19 March 13h15–14h45 in room FAU – 310
In Norwegian

SPIS MEG! – et samspill mellom analog og digital kommunikasjon


Spis meg! er et samarbeidsprosjekt mellom forskergruppen Talk Nature, Norges Sopp- og nyttevekstforening (NSNF), Naturhistorisk museum (UiO) og Viltgodt.no.

Lene Utigard, Annette Kriszat and Margaret Rynning

Utigard
Høyskolelektor
Westerdahls institutt for kreativitet, fortellning og design

Kriszat
Høyskolelektor
Westerdahls institutt for kreativitet, fortellning og design

Rynning
Dosent
Westerdahls institutt for kreativitet, fortellning og design

Category: Design. Media. Teknologi

What, when & where:
Participants in the chaired session “Design and Technology” on 19 March 13h15–14h45 in room FAU – 310
The homo ludens museum project – Instagram meets Homo Ludens for play or existential void?

A physical pop-up exhibition where play and photo-sharing technology meet. The project will explore the dynamic intersection between the self and video and photo sharing technology (Instagram etc.) in an immersive physical interactive art installation. With inspiration from Instagram museums, the term Homo Ludens (the playing human) by Johan Huizinga (1872–1945) and artists like Yayoi Kusama Johansen creates an interactive and immersive experience using one of the black boxes at the college.

The project is an exploration of the value of play by means of a temporary place and bounded period. The idea is that the public interacts with the interactive exhibition and then posts their experiences on the social digital network Instagram. Then by using a separate #. An interesting contact can then arise between the physical interactive experience and the digital universe using photo-sharing technology. With this, the project wants to create a wonder about sharing technology, play, spatial design versus existential void and an escape from reality.

Jannicke Johansen
Associate Professor
Westerdahls institutt for kreativitet, fortelling og design

Category: Exhibition. Installation. Play. Interaction

What, when & where: Playful interaction, open all day on 18 and 19 March room 615.
Poetry installations: Nature vs technology

Poetry is the intersection of words and form. This encounter usually happens in a two-dimensional space, such as how the poem is laid out on a book page. However, in today’s world, fewer people read poetry books. Instead, poetry is thriving in social spaces like social media, music lyrics, and different visual expressions in public. This poetry installation project aims to present poems in a three-dimensional format, allowing the reader to experience them in a dynamic and temporal way. By moving through the space, the recipient becomes a co-creator of the poem, entering the world of poetry with their entire being.

The materiality of the poetry installations is an integral part of the physical experience and enhances the poem’s theme of taking care of nature. The combination of handmade and digitally developed elements may create a sense of tension. Using modern audio technology to create 3-dimensional soundscapes will also constitute an important factor in enhancing the bodily experience of the poems. Finally, presenting poems as speculative objects allows us to challenge the dichotomies that we use to interpret our experiences. It raises questions about the distinctions between subject and object and how the mind and body interact.

Margaret Rynning, Thor Magnus Tangerås and Jan-Tore Diesen

Rynning
Professor
Westerdals Department of Creativity, Storytelling and Design
School of Arts, Design and Media

Tangerås
Associate Professor
Westerdals Department of Creativity, Storytelling and Design
School of Arts, Design and Media

Diesen
Associate Professor
Department of Music
School of Arts, Design and Media

Category: Exhibition. Installation. Poetry. Audio technology

What, when & where:
Playful interaction,
open on all day 18 room 209
Practical information
Presentations will be in English or Norwegian (the title indicates the spoken language) with a duration of 30 minutes in total (including Q&A).

Most presentations, except for the keynotes, are organized as parallel sessions, located in different rooms at the Fjerdingen building. A variety of presentations are thematically organised as chaired sessions. These sessions consist of up to three presentations each, led by a chair/moderator. You can put together your own program for the day. The program schedule overview is to be found in the back of this catalogue.

Room locations
Ground floor   F101 (auditorium), Skjenkestua Studentbar
First floor    Mezzanine floor
Second floor   F308, F310, F311
FUN209 + F615

Luggage storage
F201

Social event
At the bar Skjenkestua.
No need to sign up.
Light refreshments.

Program Schedule
<table>
<thead>
<tr>
<th>Time</th>
<th>Room F101</th>
<th>Room F308</th>
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<tbody>
<tr>
<td>09:00–09:30</td>
<td><strong>Registration and Coffee:</strong> Mezzanine floor and surrounding areas (ground floor and first floor)</td>
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<tr>
<td>09:40–10:00</td>
<td>Welcome and symposium opening</td>
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<td></td>
<td>• Kristi Bache, Vice-Chancellor for Research and Artistic Research</td>
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<tr>
<td>10:00-11:00</td>
<td><strong>Keynote:</strong> Dominic Lees</td>
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<td>11:00-12:30</td>
<td><strong>Exploring Narratives</strong></td>
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<td>Chair: Siri Senje</td>
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<td>• Rosamund Davies and Luke Clancy</td>
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<td>• Trygve Bjellvåg</td>
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<td>12:30</td>
<td><strong>LUNCH BREAK</strong></td>
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<td>13:30-14:45</td>
<td><strong>Narratives meet tech</strong></td>
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<td>• Marie Dahlén</td>
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<td>15:15-16:30</td>
<td><strong>Ethics and Tech</strong></td>
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<td>• Henning Birkeland and Sigbjørn R. Galåen</td>
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<td>• Andreas Bergsland and Madeleine Shapiro</td>
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<td>17:00-18:00</td>
<td><strong>Keynote:</strong> Bull Miletic</td>
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<td>18:00</td>
<td><strong>SOCIAL EVENT:</strong> At the bar <em>Skjenkestua</em>. 18:30: <strong>Disobedient</strong> (a student-led event)</td>
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<td>Time</td>
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<td>10:00–11:00</td>
<td><strong>Music and Tech</strong></td>
<td><strong>Design</strong></td>
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<td>Chair: Claus S. Andersen</td>
<td>Chair: Ole Egeberg</td>
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<td>• Øyvind Brandtsegg</td>
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<td>• Michael F. Duch</td>
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<td>• Vesma Kontere McQuillan</td>
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<td>• Ivar Grydeland and Michael F. Duch</td>
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<td>15:15–16:30</td>
<td><strong>Exhibition: Jewellery</strong></td>
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<td>Chair: Synne Skjulstad</td>
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**Interactive pop-up exhibition:**

*The Homo Ludens Museum Project*

- Jannicke Johansen

**Poetry installations:**

*Nature vs technology*

- Margaret Rynning,
  Thor M. Tangerås and
  Jan-Tore Diesen
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<td><strong>Chair:</strong> Synne T. Bull</td>
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<td>10:45–12:30</td>
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<td><strong>Dance and Technology</strong></td>
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<td>15.00</td>
<td><strong>Panel discussion</strong></td>
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<td>17:30</td>
<td><strong>SOCIAL EVENT:</strong> ROM for Kunst og Arkitektur, Maridalsveien 3</td>
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**Room 615**

**Open All Day**

**Interactive pop-up exhibition:**
*The Homo Ludens Museum Project*
- Jannicke Johansen

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<td>• Elisabeth Brun and Ivar Kjellmo</td>
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<td>• Elin Festøy</td>
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Curator and Project manager AR@K24
Ole Egeberg

Production coordinator
Ole Egeberg with kind and invaluable help from Leen Echelpoels

AR@K24 Committee
Claus Sohn Andersen, Ole Egeberg, Jørn Mortensen, Hilde Rustad, Kai Hanno Schwind, Siri Senje, Synne Skjulstad

Chairs
Claus Sohn Andersen, Synne Tollerud Bull, Ole Egeberg, Jørn Mortensen, Kai Hanno Schwind, Siri Senje, Synne Skjulstad

Graphic design
Maria Prøis Rønneberg og Jon Tore Modell

Marketing and communication
Per Olav Solberg

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