Doing Experimental Media Archaeology:

Practice & Theory

8 & 9 September 2022

Science Center, Differdange, Luxembourg

Presentation Abstracts

Flexible, Emergent, and Medium-Specific: Methodologies for Hands-on Experimentation

Keynote

Prof Lori Emerson

Abstract: In opposition to what Lori Emerson and her co-authors called "scientificity" in their recently published The Lab Book: Situated Practices in Media Studies, Lori Emerson will discuss the importance of developing flexible, emergent, and medium-specific methodologies for hands-on experimentation in the arts, humanities, and media studies. Emerson will explore the merits and drawbacks of relying on the scientific method when one is faced with a wide range of media artifacts--ranging from, for example, magic lanterns to digital computers and even digital telecommunications networks--that one wishes to experiment with from the inside-out.

Lori Emerson is Associate Professor in the English Department and the Intermedia Arts, Writing, and Performance Program (IAWP). She is also Director of IAWP and the Media Archaeology Lab. Emerson is co-author of THE LAB BOOK: Situated Practices in Media Studies (University of Minnesota Press 2022) with Jussi Parikka and Darren Wershler, author of Reading Writing Interfaces: From the Digital to the Bookbound (University of Minnesota Press June 2014), and editor of numerous collections.

Device and Dispositif: Conceptual Tools for Experimental Media Archaeology

Keynote

Prof Dr Erkki Huhtamo

Abstract: A foundational challenge for experimental media archaeology is bridging the gap that separates “us” from “them” - those long since forgotten people who created and used devices that serendipity has saved for us from oblivion and destruction. We can insert an oil lamp in a magic lantern and light it up, perform experiments found from handbooks of experimental physics, or turn the crank of a phonograph or an animation device. We can create replicas of ancient gadgets. If we are lucky, we manage to recreate an experience, but can we be sure that our responses match those of the people in the past?

Here we encounter a problem familiar for cultural historians and historical anthropologists. It is possible to try things separated from their original contexts, but even if physical interactions with the devices may be identical, the interpretations may be widely divergent. To address this issue it is useful to draw a distinction between “device” and “dispositif” and to observe their mutual interactions in cultural contexts, including our own. Both concepts have levels of existence between the material and the discursive. They exist as plans, models, and projects, as well as realized artifacts and systems where technology is put to use.

In this lecture I will try to clarify the relationship between these terms, device and dispositif, and to demonstrate what can be gained by exploring their dialectic interconnections. For this purpose I have selected a few historical artifacts for closer examination. These include the once popular but now forgotten “white shadows” as well as the Cosmoscope, a very rare viewing device invented by the British pioneer of photography Francis Frith (1822-1892). By concrete demonstrations of these artifacts I am trying less to propose definitive answers than to ask new questions. I believe that the future of experimental media archaeology depends on our abilities to experiment, but also on our skills of putting things into context.

Erkki Huhtamo is Professor of Design Media Arts, and Film, Television, and Digital Media at the University of California Los Angeles. He is considered one of the founding figures of Media Archaeology.

Recreating elements of Stockhausen's Sirius on a restored EMS Synthi 100

Dr Sean Williams

Abstract: I relate my experimental approach to recreating elements of the electronic music from Karlheinz Stockhausen's *Sirius* (1975) using the restored EMS Synthi 100 at KSYME, Athens and the Synthi 100 at the WDR Museum Studio, Cologne. Without having months of studio time, it was impossible to recreate very much of the original material, but nonetheless, I was able to focus on some particularly fascinating areas of practice.

There is no realisation score, and so this project by necessity made use of a wide range of sources including composer sketches, technicians' notes, ethnographic material, analysis of recordings etc.. It is this engagement with sources that I believe is perhaps the most fundamental methodological necessity for experiments such as this.

A lot of writing about the Synthi 100 verges on hagiography, where the technicians familiar with the instrument are brutally honest about its failings. Without the ethnographic element I almost certainly would have given up my experiments believing that the Synthi 100 at KSYME had not been restored properly. I had some dialogue with the restorer, and was able to work around some problems. As it happens, much of the promised functionality of the device never really worked properly even when new. This helped me get into a similar troubleshooting mindset as Stockhausen, Müller and Eötvös, who realised the electronic music for *Sirius*.

I present audio and video examples, but the experiments primarily allowed me to build a rather nebulous body of knowledge related to the practice which is hard to put into words. Key findings were the enormous effort it took to create simple sequences; the amount of studio performance practice involved in creating the sounds; and a sound and demonstrable understanding of Stockhausen's embodied compositional technique that features note durations as a composition parameter, linking up with his very early electronic practice.

Sean Williams is a Senior Lecturer in Music at the Open University. His main area of research is in electronic music technology and practice in the second half of the twentieth century. As a practice-led researcher he builds, maintains and customises analogue electronic instruments, using them to realise and perform new and existing pieces. He performs internationally and runs the Free Range Orchestra in Canterbury.

An archive of animators' gestures?

Dr Chloé Hofmann

Abstract: The Swiss Film Archive preserves the films, cameras, paper cut-outs, puppets, scripts, storyboards and production documents of many animators. The knowledges and gestures, which are central to the practices of animation filmmakers, occupy only a minor place – or even none at all in some cases – in the institution's collections. These bodily, non-discursive, immaterial elements which are the gestures of the animators, would benefit from being archived in a more systematic way in order to allow their preservation but also to encourage research on this type of "object". This presentation therefore proposes to think of the gestures of the animators as "objects" that can be used to analyse and understand the film-making process, in the same way as, for example, the documents and machines present in the "non- film" collections of the Swiss Film Archive. This approach makes it possible to make gestures an archival issue - by raising the question of their conservation - but also a scientific issue. We will thus see how the researcher can bring out knowledge on singular practices and uses with working from film sources showing animators at work.

Chloé Hofmann received her PhD in January 2022. She dedicated her thesis to the technique of sand animation in which she developed a hands-on approach. During her research, she took part in the TECHNES project – an international research partnership on cinema technology – and notably participated in the writing of an article on film scraping at the National Film Board of Canada. She is currently working as a scientific mediator at the Center for Film Studies of the University of Lausanne and develops film workshops for high school students. She is also a member of the editorial board of the film review “Décadrages" and is the author of various articles on animation.

A Historical Re-enactment and Reconstruction in the Field of Music using the BBC Micro, Music 500 Synthesizer and AMPLE Software

Alex Peverett & Paul McConnell

Abstract: This re-enactment aims to provide viewers with a material experience of early computational home music-making and audio-synthesis using the BBC Microcomputer, so that they may gain insight into how 'apparatus and uses are picked up and sustain themselves in certain cultural situations' (Parikka, 2012).

The re-enactment will showcase aspects of work undertaken in the Sussex Humanities Lab, at the University of Sussex, that investigates relevant cultural contexts and processes, relating to the BBC Microcomputer, which was developed and released as part of its Computer Literacy Project in the UK in the 1980's (Gazzard, 2016) - particularly home music-making using the Acorn Music 500 synthesiser and AMPLE software.

Created by Hybrid Technology in 1984 to work with the BBC Micro, the Music 500 synthesiser and accompanying AMPLE software were described as, "remarkably advanced" and it was stated that the days of "annoying aliasings and restricted bandwidths" were consigned to history. Some of the remarkably advanced features included; individual channel sampling at rates of 46.857Hz, oscillator indexing, frequency modulation, powerful ring modulation, logarithmic coding of wavetables and most importantly, the capability to program events concurrently. (Ellis, 1984)

Through re-engaging with home music-making on the Music 500 with AMPLE, this re-enactment aims to interrogate creative coding practices for music, to assess how this combination of software and hardware encourages us to reapproach musical structures, drawing parallels with historic processes and those that have sustained themselves into today's computational music making.

Parikka, J. (2012) *What is Media Archaeology* Cambridge: Polity Press

Gazzard, A. (2016) Now the Chips are Down: the BBC Micro Cambridge, Massachusetts: MIT Press

Ellis, D. (1984) 'Acorn Music 500 Synthesiser Hardware and Software for the BBC Micro' Electronics and Music Maker, December 1984. Available at: https://www.muzines.co.uk/articles/acorn-music-500/8055

Alex Peverett (University of Sussex) is Research Technician and School Tutor, Sussex Humanities Lab.
Paul McConnell (University of Sussex) is Senior Lecturer in Creative and Critical Practice.

Recovering Theory from the Artefacts: The 18th-Century Optical Machine

Prof Dr Rod Bantjes & Ana David Mendes

Abstract: The aim of our experimental research is to explain both how the 18th-century optical machine produced an illusion of spatial depth from single images, and how the 18th-century makers of these devices understood the perceptual principles at play. Our method involves what Peter Galison calls "taking the instruments seriously" in two ways. First, we conducted empirical tests on period devices to measure their optical properties and measure the technical aspects of the optical images they were designed for, then gauged the supposed optical effects of the assemblages on human observers. Second, we approached the artefacts with an artisan's eye, seeking to read the "material language" embedded within them. Contemporary written accounts of the devices are few and they tend to frame their explanations within mechanistic eighteenth-century optics as exemplified by the camera obscura and linear perspective. Jonathan Crary is right that this "scopic regime" based on the "figure of the camera obscura" was dominant during this period. However, the evidence we find in the artefacts suggests that artisans had begun, in advance of philosophical orthodoxy, to embrace a new paradigm according to which the forms of the external world are projected by the mind upon incomplete sense data – a process of world-production that philosophers such as Immanuel Kant were attempting to explain using metaphors of optical devices like the magic lantern, the concave mirror, and the theatre stage. We are currently planning a further stage of experiments with the devices and will discuss developments in our methodology and present two of our experimental devices built according to period principles, but designed to allow each perceptual principle to be isolated and its effects varied.

Rod Bantjes is a Professor of Sociology at St. Francis Xavier University, Nova Scotia. His sociological work has addressed spatial themes as well as technologically mediated perception /representation in modern environmental discourse. His current project addresses eighteenth and nineteenth-century 3D technologies in the context of changing physical and social conceptions of space and perception. This recent work has been published in the *Journal of the History of Ideas*, *Art History*, the *History of Photography*, *Technology and Culture*, *Early Popular Visual Culture*, and the *International Journal of Film and Media Arts*.

Attending the Ph.D. in Contemporary Art at the University of Coimbra, **Ana David Mendes** has a specialization in Museology. CICANT - PhD Research Scholarship in the scope of the project "Curiositas: Peeping Before Virtual Reality. A Media Archaeology of Immersion Through VR and the Iberian Cosmoramas. She was coordinator and artistic curator of Banco das Artes Galeria, the Municipal Gallery of Contemporary Art in Leiria, since 2018. She co-founded the m|i|mo - moving image museum in 1996, having been the museum coordinator until 2013 and scientific and artistic coordinator until the end of 2017. Since 1999 she has developed several appropriation projects starting from old media devices, belonging to the museum's collection, as mediators, enabling not only research, but stimulating artistic creation in a logic of recreation, such as camera obscura, magic lanterns, optical boxes, perspective theaters. The interactive project "Oficina do Olhar [The Eye Workshop]", created in 2010, is the paradigm of this principle, mediation of museum collection contents through new technologies. Since 2013 she has participated in several research programs coordinated by Victor Flores (Ph.D.) of CICANT, related with stereoscopic photography, participating on the Organizing Committee of the International Conference on Stereo & Immersive Media: Photography and Sound Research and has curated several exhibitions dedicated to stereoscopic photography. She participates in the research project '*The Amazing Optical Machine: Workshop / Rational Recreation / Exhibition*' coordinated by Professor Rod Banjes, from St. Francis Xavier University, Nova Scotia, Canada. Since 1997 she coordinates international artistic exchange programs, mainly with Germany, France, and Brazil.

Presence and historical experience as a mode of comprehension in experimental media archaeology

Dr Gert Jan Harkema

Abstract: In their introduction to a special issue of *Early Popular Visual Culture* Huhtamo and Galili call for "a greater degree of self-reflexive engagement with the goals of media archaeology" (2020, 335). This paper, therefore, seeks to situate and theorize the method and aims of experimental media archaeology beyond the field of media studies. What characterizes the media archaeological approach is an emphasis on non-linear historical trajectories and a renewed attention to the material and experiential persistence of the past in the present. As I will argue in this paper, the method of media archaeology therefore can be seen not just as a symptom, as Elsaesser would hold, but as connatural to a regime of historiocity marked by *presence* (Hartog 2015).

Over the past two decades, the field of the philosophy and/or theory of history has seen fundamental debates about the importance of historical experience and materiality. The discussion on *presence*, in this sense, refers to a renewed attention for a direct contact with the past (Gumbrecht 2004; Ankersmit 2005; Runia 2006; Runia 2014; Kleinberg, 2018; Bos 2022). Thereby the affective dimensions of doing history are addressed while, at the same time, the importance of Huizinga's "historical sensation" is re-emphasized (Domanska 2009; Robinson 2010).

By drawing connections to debates about historical sensation and *presence* this paper delivers a critical reflection on the methods and aims of experiential media archaeology. The paper follows three important reconfigurations from historiographical theory: the issue of historical distance, the notion of historical representation, and the process of narrativization. In doing so, it makes a case to reconsider historical *media* experience as a mode of comprehension (Diaz-Maldonado 2019).

Gert Jan Harkema is lecturer in film studies at the University of Amsterdam. He has published on very early cinema and theories of experience in *Early Popular Visual Culture* and *TMG Journal of Media History*, and more. He received his PhD from Stockholm University with a dissertation titled "Aesthetic Experiences of Presence: Case Studies in Film Exhibition, 1896-1898." His current work focuses on 19th century media performances of nature and socio-technological performances of human-nature relations.

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Singing with the Gramophone: Genealogy of an Idea, from Language Records to the Prosthetic Singing Teacher

Dr Daniele Palma

Abstract: The inclusion of sound recordings among the objects of musicological interest provided a fundamental epistemological ground for a shift from text-based analyses focussed on composers and compositional processes, to performance-oriented research reassessing the primary essence of music in its actual making. Effective and influential as this turn may have been, it must be noted that "phonomusicology" has not always paid proper attention to how recordings work as media objects. Generally speaking, phonomusicologists drew a dividing line between recordings made before and after the advent of editing tools, considering the first ones as repositories of information about past performing practices, and treating their technological features as a limitation to cope with, mostly in terms of decoding processes.

In this paper, I focus on the case of vocal recordings to assess an alternative view based on two principles: 1) that, besides being objects for entertainment or aesthetic contemplation, sound artifacts could (re)mediate and empower different kinds of practices, especially in the worlds of vocal expression; 2) that recognising the constructed nature of the phonographic voice might be a base for re-grounding our knowledge of past performing practices. To do so, I take into account the idea of "singing with the gramophone": firstly, I reconstruct its genealogy in discourses widespread at least from the pioneering activities by the Spanish linguist Rafael Díez de la Cortina (1859-1939). Then, I discuss how these ideas progressively consolidated into specific products, and in particular into two singing treatises respectively by Hermann Klein (1909 and 1915) and Oscar Saenger (1916- 1917). By experimenting on these recorded treatises through my own voice, I aim at showing how the different degree of medial awareness by the two authors brought to diverse results, thus influencing the way in which the operatic voice could be perceived and practiced by a non- professional performer.

Biography: Daniele Palma is a post-doctoral research fellow at the University of Bologna, working on evidence of Giuseppe Verdi's operas performance practice in 19th century music periodicals. His research concerns voice cultures in the 19th and 20th centuries, media archaeology of opera, and amateur music practices, from children records to mental patients. On these topics, he has published articles in scholarly journals (*Rivista Italiana di Musicologia*, *Palaver*, *Acusfere*, *Mimesis Journal*) and book chapters (Guerini, Neoclassica, Routledge). In 2019, he has been awarded an Edison Fellowship by the British Library. He is co-editor of *Sounds of the Pandemic: Accounts, Experiences, Investigations, Perspectives in Times of Covid-19* (Routledge, 2022).

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Digital Disenchantment and Experimental Media Archaeology in Education

Dr Ben Roberts

Abstract: This paper looks at the use of experimental media archaeology in UK media and communications education practice. It argues that doing experimental media archaeology can provide an experiential avenue for students (and researchers) to reflect on 'digital disenchantment' (Kaufmann et al., 2020). In the field of media and communications, engagement with 'analogue' media often provides a way for students to experience the apparent limitless potential of the digital as also a form of constraint, one imposed by the ubiquity of screens and pointing devices as mechanisms to consume diverse media. Equally engagement with older forms of digital technology – such as home computers – provides a way for students to reflect on changes in the way digital technology has been imagined, designed and thought about.

The case studies for this paper are drawn from teaching practice across two different UK universities, the University of Bradford and the University of Sussex. One case study focuses on a tape splicing / looping workshop that was run for Bradford students through a collaboration with Dick Mills, a former member of the BBC Radiophonic Workshop. The other case study was run with students at Sussex and consisted of several sessions dedicated to experiencing home computing in the 1980s, especially through working with the BBC microcomputer, a very successful British home computer of the period which was created as part of the BBC's then computer literacy project (Gazzard, 2016; Lean, 2013).

Discussion of these case studies then leads to a wider discussion of how students can learn from the juxtaposition of current dystopian versions of the digital – concerns about platform or surveillance capitalism, algorithmic bias, misinformation and filter bubbles – and the 'utopian potential' of older technologies.

Gazzard, A. (2016) *Now the chips are down: the BBC Micro*. Platform studies. Cambridge, Massachusetts: MIT Press.

Kaufmann, M. et al. (2020) 'Beyond cyberutopia and digital disenchantment:', *First Monday* , https://journals.uic.edu/ojs/index.php/fm/article/view/10617.

Lean, T. (2013) 'Mediating the microcomputer: The educational character of the 1980s British popular computing boom', *Public Understanding of Science* 22 (5): 546–558.

Ben Roberts (University of Sussex) is Senior Lecturer in Digital Humanities and co-director of Sussex Humanities Lab, as well as the editor (with Mark Goodall) of *New Media Archaeologies* (Amsterdam UP, 2019)

The Iron Age Performed – Providing Depth while Deconstructing Prejudice through Storytelling, Song and Slingshots

Dr David R Howell & Morgan G. I. Black

Abstract: The experimental reconstructed Iron Age settlement of Castell Henllys in Pembrokeshire, Wales, has since its inception in the 1980s, served as a unique venue in which ideas about life in the British Iron Age can be tested, constructed and deconstructed. One of the most consistent challenges faced in 'telling' the story of Iron Age communities is preconceived notions of barbarism and a lack of civilisation. Castell Henllys looks to confront and contest these notions through on-site interpretive methods. Increasingly, a more performative approach is being shown to have a direct impact on the capacity of audiences to engage with, and retain, more positive narratives regarding this period. The introduction of musical instruments, appropriate to the Iron Age, and interactive weapons demonstrations, place visitors in a dynamic learning environment. This paper will illustrate the critical role played by performative media, in an experimental archaeological context, in reshaping attitudes towards a period of poorly understood British pre-history. Through a sensory system of audience engagements, which introduces media that engages senses such as touch and hearing, a living history is established which places visitors in a performative setting, as much as the 'performing' interpreters themselves. This approach introduces a level of depth and retention which other on-site interpretive methods, including digital and text based media, fail to secure. The results of visitor-based studies, linked to the performative media utilised on site, will be used to outline approaches for experimental archaeological interpretations across Iron Age sites in Britain, and beyond.

Dr David R Howell is a lecturer in History & Heritage with the University of Gloucestershire, and a performative archaeological interpreter at the Castell Henllys reconstructed Iron Age visitor attraction in Pembrokeshire, Wales.

Morgan G. I. Black ARSM is an animateur (musical professional engaging audiences with new or unfamiliar forms of music) working in heritage interpretation at Castell Henllys, currently writing an MA on Reconstructing Celtic Music with University of Wales Trinity Saint David.

Theorizing Informal Media Archeology Experiments: the Case of Analogue Camera YouTube Channels

Liri Chapelan

Abstract: Our paper will concern itself with people unwittingly doing experimental media archeology, outside the habitual framework of academic institutions, archives or research laboratories. We will focus on individuals that use video-sharing platforms to showcase their skill in handling obsolete media devices, and sometimes also the final output of their operations, which is inscribed in a two-folded technico-aesthetic discourse. Building on three case studies (the Youtube channels Analogue Resurgence, The Vintage Filmmaker and FilmPhotographyProject), we will detail the visual language that these practical demonstrations use, the rhetorical strategies the creators deploy in order to reach as wide an audience as possible despite the niche profile of their content, as well as to maintain their viewers' attention, and the unintended methodologies that emerge from the synthesis of these distinctive presentation styles. These methodologies are worth examining for their creative and accessible formulas which, when structured by the scientific rigor of conventional experimental media research, could inject new blood in the discipline and improve its comprehensibility and attractiveness in educational contexts. Similar videos that display the manipulation of current media devices, such as the popular category of unboxing videos, will be assessed in the light of their potential utility for future experimental media archeological researchers. To take it a step further, we will advocate the preventive collection of a selection of these videos (made on criterias of readability, accuracy, quality of the demonstration and relevance of the device that are to be more precisely decided upon in accordance with the profile of the institution which will manage the project) in a constantly growing archive of ephemeral media gestures.

Academic affiliation: National Film and Theater Art School I.L. Caragiale, Bucharest, Romania - PhD Candidate in Cinema and Media Studies

Liri Chapelan holds a BA in Film Directing and a MA in Film Studies. She is currently embarked on a PhD with a thesis that endeavors to develop a typology of contemporary hands-on usages of obsolete film technologies. A few of her areas of interest include the sociopolitics of the acts of film making and film viewing, the underrepresentation of animation in film studies and the efforts of preserving and restoring cinematic heritage, especially in non-western countries. She aims to explore these topics by fusing editing, academic writing, teaching and curating.

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Experimenting in Circles: Agfa and the Art of R&D

Miriam De Rosa, Dr Andrea Mariani & Prof Dr Benoît Turquety

Abstract: The panel critically taps into the approach that values and acknowledges the centrality of materiality-inspired research and hopes to offer new insights to the shift from discourse-oriented to experimental media archaeology, by looking at its possible epistemological impacts.
Focussing on small-gauge cinema, it gathers presentations that move from 16mm films analysed as a case study to further develop a multi-layered exploration of film, cameras and the way we practice and think of them.
Italian filmmaker Ubaldo Magnaghi's work and his city symphonies provide a rather illustrative example: active in the early 1930s as an independent filmmaker, between 1930 and 1933 he produced 5 films sponsored by Agfa, who was expanding its market (cameras and film stocks) in Italy. *Symphony of Life and Work* (1933), the most astonishing film of this series, was rewarded with the first prize in the first experimental and amateur film contest at the Venice Biennale in 1934. Magnaghi's experimental films were thought to stress the material resistance of cameras (especially an Agfa Movex 30) and the filmstock (Agfa Isopan reverse) and they were meant to promote Agfa technology, to the extent that even the projector Agfa Movector was mentioned in the credits of each film as an integral part of the promotional technical equipment.

The films will be looked at from the point of view of the affordances offered to the filmmaker both in terms of the specificities of the film stock and of the camera involved in the production process. More specifically, the panel will provide insights regarding the films' onto multiple levels: the film's historical background (the role of Agfa in sponsoring and supporting experimental films); the linkage camera/movement/filmmaker by stressing the bodily entanglements encapsulated into the camera object (the handheld Agfa Movex 30, decoupling the lens from the eye to engage in more radically embodied camera movements); the way Magnaghi's camera moves around objects in circles (a recurring and repeating motif echoing a gestural protocol), and how the experimental gestures of the filmmaker were supposed to inform adjustments in the design of the apparatus, encompassing a sort of "formatting" impulse. In fact, in the model proposed by Agfa, amateur, experimental filmmaking could involve the chemical treatment, and the industry encouraged tinkering around with developing and printing the black and white film. This chemical part of the experiment can explicitly be traced back to Magnaghi's films. These elements will concur to recompose the small-gauge film dispositif broadly conceived, that is, grasped in its heterogeneous, spatialised, experiential features. This way we aim at proposing a critical perspective that considers films, machines, uses, symbolic, performative and socio-cultural aspects as an indivisible yet dynamic media configuration that is able to transform spaces, communicate ideas, frame both reality and the subjects, as well as to explore the tension within the notion of the "experimental" between the experiments induced by artistic expression, and the experiments involved in industrial innovation.

Inspired by Magnaghi's films, the three papers attempt to heuristically practice the author's circling camera movements by offering an analytical trajectory that experiments in crafting a study that assembles the various components of the filmmaker's work in a rounded film experience. The panel aims in other words to offer a materiality and pragmatics-oriented reading of small-gauge cinema as a non-neutral yet empowering device able to create a complex room for critical analysis eliciting new ways of looking, problematising and therefore thinking reality.

Presentations can potentially be accompanied by a theatrical screening of one of the most compelling film of the series, *Symphony of Life and Work* (1933, U. Magnaghi, 13')

Miriam De Rosa researches and teaches film, media theories and archaeology at Ca' Foscari, University of Venice, where she is Associate Professor in film and screen media. She joined Ca' Foscari last year, after working at Coventry University and at the Catholic University in Milan. Her most recent publications include: *Media |Processes. Moving Images Across Interface Aesthetics and Gestural Policies* (2022), *Making conjunctions: thinking topologically with contemporary artists' moving images* (2021), *Dwelling with moving images* (2020). Miriam is also active within IMACS, NECS and as an independent film curator.

Andrea Mariani is Assistant Professor in Film at the University of Udine, where he teaches media theories and conducts his research around Italian experimental cinema, the archive and media archaeology. He is the author of several articles publishes in national and international outlets, as well as the editor of *The Archive/L'Archivio* (2012), *Il cinema si impara?* (2013), *At the Borders of (Film) History*(2015). With Giuseppe Fidotta he has coedited *Archeologia dei media: Temporalita', materia, tecnologia,* which was awarded the Limina- best translation prize in 2019. He is also the author of *Gli Anni del Cineguf* (2018) and *L'audacissimo viaggio* (2017).

Benoît Turquety is Associate Professor in the Film History and Aesthetics Department of the University of Lausanne. After an SNF project on Bolex cameras and amateur cinema, he is now leading a new one on Nagra sound recorders. He recently published *Inventing Cinema: Machines, Gestures and Media History* and *Danièle Huillet, Jean-Marie Straub: "Objectivists" in Cinema* (Amsterdam University Press, 2019 and 2020); *Medium, Format, Configuration: The Displacements of Film* (Meson Press, 2019), and in French, *Le "Direct" et le numérique. Techniques et politiques des médias légers*, co-edited with Caroline Zéau (Mimésis, 2022). His *Politiques de la technicité. Corps, monde et médias avec Gilbert Simondon* will be released next Fall by Mimésis.

From Anamorphic lens to zSpace. On the heuristic potential of EMA for re-sensitizing scholars to the materiality of past media technologies and object-oriented archaeologies of media technologies

Prof Dr Annie van den Oever & Ir André Rosendaal

Abstract: Just suppose one is suddenly invited to touch, operate, and 'play' with a magic lantern, lantern slides, a Zeiss Ikon 35 mm projector, an anamorphic lens, a replica of a Brewster stereoscope, a phenakistoscope, a zoetrope, a thaumatrope, a flipbook, and a series of optical toys, a view master and a kaleidoscope among them?

By putting these media objects in the hands of students, as we regularly do, we are developing two lines of questioning:

A. How can we best understand the materiality of these objects; their sensorial and performative impact; and their potential to (re)sensitize researchers?
B. How to assess the additional use of 3-models of such objects for educational purposes?

We will take our observations in class as a starting point for a discussion of the potential of an object-oriented archaeology of media technologies.

We will devote special attention to a number of 3D models which were made at the University of Groningen as part of the Media Heritage project. We have been using various techniques, including photogrammetry. For the 3D model of the Lumière's Cinematograph, we applied reversed engineering, whereby an existing model was dissected into its various components. In this way, a realistic model can be made of which not only the outside, but also the inside is a faithful copy of the original. By establishing a mathematical relationship between the components, the functioning of the internal mechanism can be shown and explained in class. The 3D model is displayed on a zSpace, an interactive 3D monitor on which the students are invited to reflect, challenged in various ways to probe the functions of the essential components of the Cinematograph. According to one of the students, working on the zSpace "is like a hands-on experience".

In the Open Space and with the help of Nynke Bruinsma and Julia Munuera Garcia, we will invite the conference participants to play with the 3D model of the Cinematograph on a zSpace, a replica of a Brewster stereoscope, a phenakistoscope, a zoetrope, a thaumatrope, some flipbooks, and a series of optical toys, a view master and a kaleidoscope among them.

A.M.A. (Annie) van den Oever is Associated Professor of Film and Head of the Film Archive & Media Archaeology Lab at the University of Groningen. She is also Professor by special appointment to the chair in "Film and Visual Media" at the University of the Free State, South Africa. Her books include: *Ostrannenie. On "Strangeness" and the Moving Image. The History, Reception, and Relevance of a Concept* (ed. 2010). *Sensitizing the Viewer. The Impact of New Techniques and the Art Experience* (2011), *Foundational Questions for a Film and Visual Media Programme* (inaugural lecture, 2014), *Technē/Technology: Researching Cinema and Media Technologies - Their Development, Use, and Impact* (ed. 2014), *Exposing the Film Apparatus. The Archive as a Research Lab* (ed. 2016, with Giovanna Fossati), Stories. *Screen Narrative in the Digital Era* (ed. 2018, with Ian Christie). For more information, look here https://www.rug.nl/staff/a.m.a.van.den.oever/

André Rosendaal is Project Manager Educational Innovation at CLIQ, the Center for Learning Innovation and Quality of the Faculty of Arts of the University of Groningen, the Netherlands. He was involved in various university, national and international e-learning initiatives, including projects related to Computer Assisted Language Learning, using Video in Higher Education, Active Learning, Flipping the Classroom, Virtual Reality, Online Testing and Virtual Exchange. These projects also reflect his current activities within the CLIQ team. From 2009 to 2014 he was chair of the Dutch HE Special Interest Group "Weblectures" and he is currently member of the Advisory Committee of the Media & Learning Association. André is involved in teacher professionalization and has developed various workshops on using ICT tools in education for staff members of the Faculty of Arts. In 2020, he was co-author of From cinematograph to 3D model: how can virtual reality support film education hands-on?, published in Early Popular Visual Culture, 18:1,70-81.

Making the Circuits Sound – Approaching Archaic Music Electronics through its Components

Dr Christina Dörfling

Abstract: The advent of electrical and electronic components not only changed the way music and sound were reproduced and transmitted, but also the ways in which they were generated and designed. From around 1900 electrotechnical components and circuits previously used in communications technology migrated into music. As novel materials, they got explored, recombined, and rededicated for genuinely musical purposes. This required not only the integration of knowledge hitherto remote from music, but also an engagement with the material itself: Winding and bending wires, stripping and soldering components, designing and trying out circuit configurations. It turned out early: working on circuits means working on sound.

While previous studies on the history of electronic musical instruments have mainly highlighted the discursive backgrounds, I draw upon the two earliest versions of the Trautonium (1930/32) to direct the view into the circuits themselves. Based on extant instruments (Deutsches Museum München), their circuit diagrams, sound samples and patents, I will outline the Trautoniums development as an interplay of material research, aesthetic ideas and circuit design. In doing so, I also reflect on how my media archaeological studies, e.g., the construction of an apparatus combining Theremin, Trautonium and Ondes Martenot (which I will demonstrate), have sharpened my research questions and directed my attention to details whose relevance I was previously unaware of. Finally, I discuss the methodological potentials of a media archaeological approach for what I call a circuit-sensitive musicology and sound research.

Christina Dörfling is a visiting scholar at the Institute for Music and Media Studies at Humboldt University Berlin (department V. Tkaczyk). She was awarded a doctorate in 2019 at the Berlin University of the Arts with the thesis *Der Schwingkreis. Schaltungsgeschichten an den Rändern von Musik und Medien* (Fink Verlag: 2022).

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Scannercube

Luuk Schröder

Abstract: During the ‘Doing Media Archaeology Practice & Theory’ conference I would like to install one or more artistic interventions made with modified media devices that invite to be touched, moved around, and played with. Many of the media devices I use are originally intended to record images or sound but have lost their original purpose due to the way they are modified. My aim is to investigate, through participation, what kind of tacit knowledge about embodiment can be verbalised by using the interventions and what role documentation plays in this process.
An intervention I consider using for this is a cube of discarded usb powered flatbed scanners moulded together with clear epoxy (see portfolio 1, 2). It would be interesting to have the scannercube laying on the floor in a space that is meant for casual usage, like the reception area or cafeteria, as this invites interaction. I want the scannercube to feel accessible but at the same time to be alien enough to produce a sense of wonder. The images that are scanned can be projected on a large scale in the same space, so they are collaged on the wall while being continuously reassembled.

In terms of DEMA, the scannercube is a kind of ‘re-blackboxing’. The epoxy sets the scanners in a shape that cannot be undone and builds new affordances into the device. It is also a re-imagining. We see the scannercube as something alien because we know how a conventional flatbed scanner is used. In terms of sculpture, the scannercube builds on notions of space, participation and embodiment inherited respectively from post-conceptual art, relational aesthetics and performance art. In addition to the initial questions, I would like to investigate how these sculptural concerns relate to experimental methods of DEMA. Perhaps ‘artistic experimentation’, as mentioned in some of the DEMA texts, can be seen as an interdisciplinary mode wherein artistic discourse is incorporated into experimental media archaeology.

Luuk Schröder is an artist and educator working and living in Amsterdam, the Netherlands. He is fascinated by the way space is organized by and caught in between the technological viewing apparatuses produced in our society. His videos, performances and installations repeatedly stage unfamiliar confrontations between the human body and media technology. By using selfie-sticks, slide projectors, digital cameras, concave lenses, smartphones, DC motors and super8 film, Schröder makes moving images that are tangled up in their own making process. While cameras are often a point of departure, recent works include website interventions, a YouTube channel, Twitch streaming and a Twitter bot that programmatically addresses unsuspecting Twitter users.

In 2017 Schröder received the Mondriaan Fund stipend for emerging artists, that concluded with an exhibition at Art Rotterdam 2018. Recent projects include work periods at the National Museum of Modern and Contemporary Art in Seoul and the Chinese European Art Center in Xiamen in 2019 and a live streaming installation at the Seoul Biennale of Architecture and Urbanism in 2021. Schröder has taught at various courses in the Netherlands and abroad, including the foundation course of the Slade School of Fine art and the image and language department at the Rietveld academy. He currently teaches sculpture, unstable media and artistic research at the Minerva Art Academy.

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Clickety-Click, Kerclunk Kerclunk, Wudump Wudump: The Sound of Pictures Moving

Peter Domankiewicz

Abstract: We think we know what operating an old movie camera was like: we imagine a hand turning a little crank at the side of the machine. But before moving pictures were a commercial proposition there were many alternative ideas. Maybe there wouldn't be a handle, maybe it would be a big wheel, and maybe the wheel wouldn't be on the camera, or maybe the wheel would be attached to a foot treadle like a sewing machine. Perhaps it would whirr quietly or perhaps make a noise like a coffee grinder or a piece of industrial equipment. Because we refer to the first period of moving pictures as "silent cinema" we tend to forget that the process was not silent at all.

In this presentation we look at two home movie cameras – one from the early days of mass amateur film-making in the 1920s and another from the 1970s – and then step back to the period of the first pioneers who were trying to capture a rapid series of images on a strip of film via two replica cameras. What is striking is that each different approach to solving the problem of capturing life created a unique sound, a sound that is channelled into the haptic feedback to the operator. That sound and that feeling tell a story of what is and is not working about the mechanism inside, something unknowable through simply looking at pictures or patents.

These cameras will be demonstrated by the speaker, and we will examine how the benefit of reconstructing obsolete or lost devices lies not only in comprehending their functioning, but in entering into the experience of the user and understanding how what they heard and felt fed into the process of creation, experimentation and discovery.

Peter Domankiewicz is a film director, screenwriter and journalist who is also an early film historian, currently undertaking a fully funded PhD at De Montfort University into the work and inventions of moving picture pioneer William Friese-Greene. He has written about early film for Sight & Sound and The Guardian, contributed to reference books and journals, and is currently editing a book about Birt Acres, the early British filmmaker. He has given talks at symposia, film festivals and BFI Southbank, and blogs about his early cinema research at William Friese-Greene & Me.

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The Story Will Out

Ana David Mendes and Eunice Gonçalves Duarte

Abstract:"The Story Will Out", is an exhibition/installation of works developed by the performer and researcher Eunice Gonçalves Duarte, based on an existing film piece in the m|i|mo-museu da imagem em movimento collection.
“The Story Will Out” is an installation of 10 films on paper for magic lantern, which is based on the edition "The Most Beautiful Story in the World", published in 1953, by Allos.

The paper films produced by the artist used the collage technique, constructed manually through a combination of photographs, drawings and images taken from the Internet. Each film tells the story of an episode in the History of Portugal.

My curatorial approach to the objects developed to the presentation of a multimedia installation project that results from formal and conceptual appropriation processes, in which we observe the creative process that resulted in a set of illustrations inspired by the original story and in the crossing as digital universe of the internet for the research of new images to be worked on by the author. The special projection of these 10 films took place during the exhibition period in 4 projection lanterns, created and produced by the artist, with the support of the Calouste Gulbenkian Foundation, and also integrates the original publications of the time and part of the original film from the 50’s, in a multimedia and performative context that takes place with the activation of the pieces by the spectator.

Is it important to maintain the performative relationship with the audience, animating narratives, resorting to the old devices, re-enacting and re-creating a fantastic production of images?

When objects are recovered and studied, they enter a circuit of research, viewing and reinterpretation they enter a creative process, in new narratives, associated with new gestures, materials and manipulations, showing how "art reprograms the contemporary World".

Ana David Mendes

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Where shall I put the camera? (TBC)

Andrew McCarthy & John Adderly

Abstract: This is the first question which a director and cinematographer must think about when they set up a shot. Imagine that you are filming on a battlefield. You have limited light and unpredictable weather, you risk being shelled by the enemy, and you are using a heavy, hand-cranked 35mm film camera; you must focus the lens and set the exposure by hand.

These were the conditions under which Geoffrey Malins and John McDowell shot much of the 1916 feature film The Battle of the Somme.

The perception that 'old films are scratched and jerky' is widespread. We want to show that if you shoot modern 35mm filmstock on a camera and lenses made during the Great War, 1914-1918, the images are of the highest quality; sharp, detailed, and fairly steady. We also want to show that the type of camera you use affects the way that you shoot your film. You use a 35mm camera and a digital camera in different ways. A digital camera isn't better, or worse. It's just different.
The History Faculty of Oxford University and the University of Westminster film school financed a short 35mm film of Great War re-enactors in period uniform, directed by Andrew McCarthy, and photographed by John Adderley on a 1920 Williamson camera, fitted with lenses made in 1910.

Andrew will present an analysis of pictorial war-reporting from 1855 to 1918. He will examine different methods of recording and reproducing images, and examine their truthfulness, or otherwise.

John will show how a motion picture camera works, and give a practical demonstration of a hand-cranked 35mm camera.

Andrew McCarthy was a film editor with the BBC, before going on to work for independent film and commercials companies as an editor. He has produced and directed short films. Toys for the Boys, about one man's determination to build a working trebuchet, was broadcast twice on Channel 4 in Britain. It was shown at ten international film festivals, and is still showing in German cinemas, under the title Higher Mathematics Made Fun.

Andrew combined his love of history and cinematography to make a short 35mm film, which showed how the Official Kinematographers filmed the Great War. His book, The Huns Have Got My Gramophone: Advertisements from the Great War was published by the Bodleian Library in 2014. Andrew has given many lectures about wartime advertising. His most recent lectures were at the Institute of Historical Research and at Oxford Brookes University in March 2002.

John Adderley is an experienced cinematographer. He was a staff member of the BBC Film Department at Ealing Studios for twenty-three years. He continued working for the BBC after he went freelance, and has photographed ninety complete BBC programmes. John photographed Tacita Dean's anamorphic 16mm film Fernsehturm (2001 at Tate Britain). He also photographed Tacita Dean's anamorphic 16mm film Disappearance At Sea (2006 to 2007 at Tate Modern). It was projected in 16mm anamorphic in a darkened room.

John is an expert in the art and craft of hand-cranked 35mm cinematography. He owns eight vintage hand-cranked cameras and many vintage lenses. All his cameras work, and can shoot film.

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Reinventing the Wheel: Contemporary Remediations of the Zoetrope and Phenakistiscope.
by Guido Devadder

Abstract

This contribution aims to compare contemporary remediations of the zoetrope and phenakistiscope against their historical counterparts, based on the author's own artistic research on the media archaeology of loop animation. In their historical appearance, the phenakistiscope and zoetrope featured a number of shared characteristics but also distinct differences, as shown in previous research by Dulac & Gaudreault and Veras. However, in contemporary remediations a synthesis between both devices emerges when two conditions are met. (1) Replacing the two-dimensional strips or discs with three-dimensional (3D-printed) sequences which imagery both on the horizontal and vertical axis. (2) Outsourcing the initial shutter (succession of interrupted slits) to either a synchronised strobe light or digital camera, which grants an 'omniscient' perspective on the side of the spectator. In the artistic work of the author, the combined zoetrope/phenakistiscope serves as the basis for creating 'live action' animated films. When presented as an installation, the audience can interactively explore the animation using a smartphone camera as external shutter, which enables a process of co-creation.

Keywords: zoetrope, phenakistiscope, remediation, artistic research, media archaeology

Bio

Guido Devadder (1975) is a visual artist working mainly in the field of graphic storytelling and experimental animation. A transhistorical approach and questioning perception of reality is central to his work, often through hybrids of old and new media. His work was published, screened and awarded internationally.

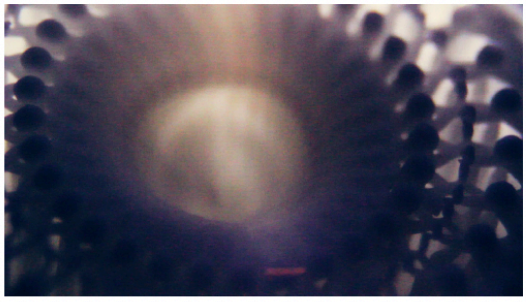
He is affiliated to the Audiovisual Arts department at LUCA School of Arts where he teaches Image Research and Drawing. Additionally, he works on a practice-based PhD entitled *From Post-cinema to Pre-cinema and Back: Media Archaeology of Loop Animation.*

Artwork

All artwork can be demonstrated live at the conference.

A selection of works on video:

- *Status Quontinuum*, 2021 (https://drive.google.com/file/d/1HTXtHTZSQZy-q4OGKZ3GWvQn_X2NB_BZE/view?usp=sharing). Screened internationally. Awards: Audience favourite award at ESMoA Video Art + Film Festival (USA) 2021, Honourable Mention Experimental Animation at Happy Valley Animation Festival (USA), 2022.
- *Fossilised*, 2021 (https://drive.google.com/file/d/1ZBabV6XK8nQemDL752VM-yjsNBwlm-8tE/view?usp=sharing). Screened at ALC Video Art - Museo de Arte Contemporáneo de Alicante, (Spain) 2022, El Ojo Iluso (Venezuela), 2022.
- *Hungry Ghost*, 2022 (https://drive.google.com/file/d/1URqJP3gKr0pao774HEJOFtK0sbH-D7IOS/view?usp=sharing). Will be released in July 2022.



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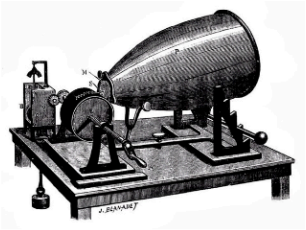
Bernie Lubell (Video Presentation)

Making a Scott de Martinville Phonautographe: a Media Archaeological Experiment
Proposal for: DEMA, Luxembourg, 2022 - Bernie Lubell

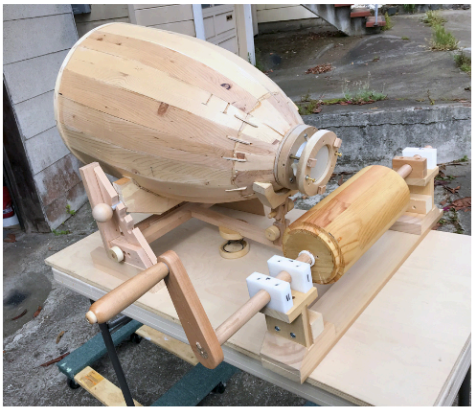
In 1994 I discovered the pneumatic physiological research of Etienne Jules Marey (1830-1904). One of Marey's innovations was the earliest practical cardiovascular imaging; and medical imaging saved me from an aortic aneurism a year later (1995). This personal connection to Marey's work led me to *Etiology of Innocence* (1999), a room sized heart simulation. Although I had not heard of Media Archaeology, I found that this was precisely what I was engaged in. During the following decades my art installations were filled with low tech interactive installations exploring Marey style measurement, that I extended to measuring participants' social interactions - most cogently with *Conservation of Intimacy* at Ars Electronica in 2007, FACT and v2 (2009), 0/1 in San Jose (2010) and other venues.

Unlike the Renaissance technologies that had previously inspired me, the mid 19th century tech is not only recognizable in today's tech, it speaks directly to our modern relationships with machines. But even in early artwork I was reimagining past technologies to manifest current issues between ourselves and our machines, like *Archaeology of Intention* (1992), a stone-age digital computer.



At this moment, my passion for19th century measurement has led me to make a Phonautograph based on versions of Édouard-Léon Scott de Martinville's 1857 sound recording device.

My talk will present visual details and discussion of some Marey inspired work and my Phonautograph fabrication. The Phonautograph is not an exact reproduction. As I have tried to understand and make the essential parts using tools and supplies on hand in my wood working shop, the piece became larger than the original and predominately made of wood. Except for a few 20th century concessions, my Phonautograph is essentially a 17th century version of a 19th century invention. Images below show the current state of my endeavor.



Bernie Lubell Bio

Bernie Lubell's interactive installations have evolved from studies in both psychology and engineering. Inspired by the Sputnik "menace" he started college at Carnegie Tech but by his twenties, he had drifted into social psychology. During the student unrest of the late 1960's Lubell was seduced by the potential for discovery he found in making art. He has been using art to answer questions ever since.

Since the early 1980's his installations have been shown around California, Florida, China and Europe. *Sufficient Latitude* was part of the 6th Guangzhou Triennial (2019), *Etiology of Innocence*, *A Theory of Entanglement*, *…and the Synapse Sweetly Singing* & other large scale installations were featured at FACT, Liverpool, UK and v2 in Rotterdam, NL. (2009), and *Party of the First Part* and others in the Exit/Via festivals, France (2012).

Awards include: San Francisco Arts Commission Individual Artist's Grant (2017), Guggenheim Artists Fellowship (2011), Adolph & Esther Gottlieb Artists Grant (2009), Pollack Krasner Foundation Grants (1999 & 2002), an Arts Council Grant (2000) and an Award of Distinction for Interactive Art from Ars Electronica (2007) for *Conservation of Intimacy.*

Lubell lives and works in San Francisco, CA.

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