

NEW MEDIA AND OLD  
ARCHIVES: EXPLORING  
TWENTIETH-CENTURY MUSIC,  
MEDIA AND TECHNOLOGY

2023 GRAINGER SYMPOSIUM

8 DECEMBER 2023

GRAINGER MUSEUM  
UNIVERSITY OF MELBOURNE  
AND ONLINE

*The Grainger Museum acknowledges the Traditional Owners of the lands upon which it is situated, the Wurundjeri people of the Kulin Nation. We pay our respects to their Elders past and present, and extend our respects to the First Nations artists, audiences and collaborators involved in this project.*

# Welcome

As part of the Grainger Museum at the University of Melbourne's new research programme, this conference explores the theme of music history, composition, and performance in the context of innovation, exploration and engagement with of new media and new technologies. It takes a broad definition of both music and new media, allowing historical consideration of those genres and technologies dominant during the lifetime of Percy Grainger (1882–1961)—the composer, inventor, and musical innovator who founded the museum—and current digital media responses to music research and material in music museums and archives.

Grainger was keenly aware of and interested in the possibilities of new media, particularly those that made music accessible to a wide and varied audience. Through the first half of the twentieth-century, Grainger made use of recording and reproducing technologies to disseminate his own music and the music of others, made field recordings of folk song on phonograph, broadcast music and lectures, was fascinated by Hollywood and film music, and engaged with electronic music, developing his experimental free music machines.

The conference themes include, but are not limited to, Grainger and his contemporaries' engagement with new media and technology ranging from broadcasting, recorded sound, piano rolls and pianola technology, interventions in folk song recording, experimental and electronic instruments and film and film music. We also explore ideas relating to present-day engagement with new technologies in the context of music archives, including the Grainger Museum and Collection, and other archives that preserve music, sound, and cultural history of the twentieth century.

*The Grainger Museum at the University of Melbourne is home to a diverse collection of art, photographs, costumes, musical scores and instruments created and acquired by Percy Grainger. The archive and collection of the Grainger Museum are accessible to researchers by appointment, and the Museum is open to the public at regular times throughout the year.*

<https://grainger.unimelb.edu.au/>

# Program

<b>Session 1: Engaging with the Archive Today</b>	
Chair: Sarah Kirby	
9:00am	Filipa Magalhães (Universidade NOVA de Lisboa) – Gulbenkian Contemporary Music Meetings (1977-2002): Reflections on Archival Practices and the Benefits of Interdisciplinarity for the Treatment of the Documentation
9:30am	Jörg Holzmann (Hochschule der Künste, Bern) & Christoph Siems (Grieg Begegnungsstätte, Leipzig) – The Piano Roll as Soloist: Grieg’s Piano Concerto and Early Recordings Informed Performance Practice
10:00am	Monica Lim (University of Melbourne) – Music, Technology and Living Archives at the Grainger Museum
BREAK 10:30am – 11:00am	
<b>Session 2: Percy Grainger and Musical Experimentation</b>	
Chair: Michael Christoforidis	
11:00am	Paul Jackson (Independent) – Lines of Beauty: The Development of Graphic Notation in the Music of Percy Grainger
11:30am	Teresa R. Balough (Eastern Connecticut State University) – The Wider Implications of Percy Grainger’s ‘Free Music’
12:00pm	Katherine Pittman (University of California San Diego) – Hearing Queer Hybridity in Percy Grainger’s Experimental Instruments
BREAK 12:30pm – 2:00pm	
<b>Session 3: New Technology and New Media</b>	
Chair: Sarah Kirby	
2:00pm	John Gabriel (University of Melbourne) – New Audiences, New Challenges: Radio Music Theatre in Weimar Republic Germany
2:30pm	Maurice Windleburn (University of Melbourne) – Indexicality and Disjuncture in the Creative Use of Cards and Paper Slips
3:00pm	Michael Christoforidis (University of Melbourne) – Igor Stravinsky’s Étude (1917) and Composing for Pianola
BREAK 3:30pm – 4:00pm	
<b>Session 4: Radio and Recording</b>	
Chair: Madeline Roycroft	
4:00pm	Jean-Baptiste Masson (Université Rennes-2) – The sound art of amateur sound hobbyists in the 1950s and 1960s, in France and Britain
4:30pm	Martin Elek (University of Cambridge) – Wilhelm Furtwängler and Sound Recording
5:00pm	Pedro Moreira (Universidade de Évora) – Portuguese National Radio, ethnographers, and the recollection of traditional Music during the 1940s
5:30pm	Michelle Ziegler (ETH Zürich) – Recording Realities: Edgard Varèse as a tape and film music composer

# Abstracts and Presenter Biographies

## Session 1: Engaging with the Archive Today

Filipa Magalhães (Universidade NOVA de Lisboa)

### **Gulbenkian Contemporary Music Meetings (1977-2002): Reflections on Archival Practices and the Benefits of Interdisciplinarity for the Treatment of the Documentation**

The starting point of this paper is a training internship that took place at the Gulbenkian Archives (AG) of the Calouste Gulbenkian Foundation (FCG), as part of the Postgraduate Course in Historical Archivistcs in 2021/22, taught at the Universidade NOVA de Lisboa – Faculty of Social Sciences and Humanities. The main purpose of this internship was to carry out the technical-archival treatment of the documentary series Gulbenkian Contemporary Music Meetings (EGMC), belonging to the FCG Music Service. In total, twenty-six editions occurred between 1977 and 2002 and all the documentation of EGMC is housed at the FCG. Until now, no technical-archival treatment of this documentation had been carried out, its content is extremely important in the context of the Portuguese avant-garde musical scene. This work seeks to reflect on the importance of interdisciplinarity between two areas of knowledge, in particular musicology and archival science, and demonstrate how musicology is useful for the technical-archival treatment of this type of documentation. Also in this paper, musicological contributions to the treatment of the documentation are exposed, with special emphasis on the way in which musicology assists archival practices by making the description of information more intelligible. Based on the observation and nature of the EGMC documentation, some approaches will be discussed regarding the procedures to be adopted.

*Filipa Magalhães is a Portuguese musicologist and researcher. She completed her Ph.D. in Musicology (2020), a Master's degree in Musical Arts and a Bachelor's degree in Musicology at the Universidade NOVA de Lisboa and Post-Graduation in Historical Archivistcs at the Faculty of Social Sciences and Humanities of Universidade NOVA de Lisboa (2022). As a scholar, she dedicates herself to the preservation of works in the context of music theatre, aiming at documenting and studying them by crossing methodological approaches from musicology and archival science*

Jörg Holzmann (Hochschule der Künste, Bern) & Christoph Siems (Grieg Begegnungsstätte, Leipzig)

### **The Piano Roll as Soloist: Grieg's Piano Concerto and Early Recordings Informed Performance Practice**

In 1922, Grieg's Piano Concerto was performed for the first time in a version using a pre-recorded piano roll of the solo part. Conducted by Willem van Hoogstraaten, the New York Philharmonic accompanied Percy Grainger's playing captured on roll one year before. This source is particularly valuable as Grieg considered Grainger to be the Concerto's best interpreter and had studied the score with him only a few weeks before his death. For this reason, the Concerto has been performed again and again in this constellation ever since.

As the resulting concert situation is a combination of historical recording and new interpretation, a divergence arises between the solo and the orchestral part. The sound information on the roll is fixed, but the members of the orchestras are subject to changes in taste during the last one hundred years. On the basis of historical audio recordings, it can be assumed that the pianists' playing in the romantic tradition also presupposes orchestral playing of the time, with typical stylistics as, for example, the extensive use of portamento.

The paper first wants to examine how the use of a historical solo part reproduced by a piano roll affects the way "modern" orchestras play while accompanying. In a second step, it will be assessed to what extent this special setting is suitable for the concept of musical re-enactments. The performance of the orchestral part can be seen as a scientific process aiming to come as close as possible to the historical ideal as well as a creative process that helps to re-interpret specific features of historical performance practice.

*Jörg Holzmann first studied classical guitar at the HMDK Stuttgart, graduating with the highest marks in both the artistic and pedagogical courses. He was awarded prizes at major competitions in Spain, India, Korea and the USA. This was followed by studies in musicology, literature and art history in Leipzig and Halle, his Master's thesis dealing with piano rolls by women for Hupfeld. From 2018 to 2020, he was research assistant at the Musical Instruments Museum at the University of Leipzig. Since 2020, he has been employed in the same position in the project "Historical Embodiment" at the Bern University of the Arts, where he is writing his PhD on musicians in early sound film documents.*

*Christoph Siems studied musicology at the universities of Leipzig and Halle. Already during his studies, he specialised in the music of Scandinavia. He further deepened his knowledge through a semester abroad at the NTNU in Trondheim along with other stays abroad. Since 2021, he has been a doctoral student with Tomi Mäkelä at Martin Luther University Halle-Wittenberg. His doctoral thesis focuses on religiosity in the music of Rued Langgaard and Fartein Valen. In 2022, he has been spending a DAAD-funded research semester at the Centre for Grieg Research at the University of Bergen and in 2023, he was appointed manager of the Grieg Memorial Centre Leipzig.*

Monica Lim (University of Melbourne)

### **Music, Technology and Living Archives at the Grainger Museum**

This paper describes the processes and outcomes of a Creative and Research Residency at the Grainger Museum at the University of Melbourne. As part of the Residency, resident researcher Monica Lim worked with students across multiple faculties to engage with the Grainger Museum Collection to investigate and speculate about Artificial Intelligence (AI) in the Creative Arts. Archival material such as physical mannequins, scores and music instructional language became living artefacts which were transformed and re-used in multiple ways to create a multi-faceted exhibition addressing contemporary concerns about technology in a form of 'archival performativity'.

*Monica is a Melbourne-based sound artist, researcher and composer. She is interested in cross-disciplinary forms and the intersection of new technologies with music. Her work spans and combines theatre, contemporary dance, installations, video, ensemble performance, Extended Reality, AI and gaming technology, and has been presented at Arts House, AsiaTOPA, Science Gallery Melbourne, White Night, Melbourne Fringe, Bundoora Homestead Arts Centre, Liquid Architecture and Arts Centre Melbourne as well as international symposiums such as ISEA (International Symposium for Electronic Arts) and*

*NIME (New Interfaces for Musical Expression). She has worked extensively in cross-cultural collaborations, particularly with artists from Southeast Asia, with a deep curiosity about cultural traditions and their potential collision with new technologies in order to break down false divisions between traditional/new media art. Monica is currently undertaking her PhD in Interactive Composition at the University of Melbourne, researching the body as a site for participatory sound-making. She is part of the research team at VCA Dance's TrakLAB and the University of Melbourne's Centre for Artificial Intelligence and Digital Ethics. Within the community, Monica serves on the boards of the Melbourne Recital Centre, the Substation and Liquid Architecture and is co-founder of Project Eleven, a philanthropic initiative which supports the contemporary arts.*

## Session 2: Percy Grainger and Musical Experimentation

Paul Jackson (Independent)

### **Lines of Beauty: The Development of Graphic Notation in the Music of Percy Grainger**

The 1935 composition, Free Music No. 1, originally written for string quartet, but adapted in 1937 for four theremins, is notable not just as an early and striking example of Grainger's Free Music, but also because it introduced a form of graphic notation quite unlike anything the composer had previously employed. An attempt, according to Grainger, to introduce into music William Hogarth's concept of the 'Line of Beauty', similar notation systems would form the bases of the control mechanisms of his Free Music machines of the 1940s and 1950s, and also more complex compositional systems developed by such composers as Daphne Oram and Iannis Xenakis, which enabled the real-time realisation of music comprised of unstriated pitch complexes. Grainger's notational experiments did not quite appear out of thin air, however, and this paper will explore his work in the context of the development of parallel notation systems in the field of ethnomusicological transcription and psychological studies in the early decades of the twentieth century. In particular, Milton Metfessel's system of phonophotography, and the work of psychologist Carl Seashore, which sought to visualise the phonetic and prosodic elements of speech and song, will be shown to intersect with Grainger's own developments in notation, providing further links between his folk music transcriptions and Free Music.

*Paul Jackson is a performer, academic and researcher, based in Cambridge, UK. Following posts at the Royal College of Music and the University of Hertfordshire, he was Head of Music and Performing Arts and Director of Music and Performance for Anglia Ruskin University, Cambridge from 1998 until 2018. His writings about Grainger have been published in The New Percy Grainger Companion, in Grainger Studies: An Interdisciplinary Journal, and in The Grainger Journal, for which he is editor. He is the President of the Percy Grainger Society, based at Grainger's White Plains home in New York.*

Teresa R. Balough (Eastern Connecticut State University)

### **The Wider Implications of Percy Grainger's 'Free Music'**

Percy Grainger was one of the few creative voices of the 20th Century to stress the importance of the future of music, placing it even above the present. He saw the future as ideally being one of freedom and flexibility. He equated this freedom in music with the pursuit of a type of spiritual freedom in which all of humanity would at last be able to express itself in a peace-loving, democratic, harmonious-with-nature way.

As a young man Grainger gained the courage to risk his reputation as a pianist and popular composer of light-hearted pleasant works to write daring harmonies with complex irregular rhythms. In middle age he took up the cause of lesser-known composers and encouraged the appreciation of music from all cultures and all times. And as the years advanced, he devoted himself more and more to the development of his 'Free Music' ideals and their implementation in the physical world through the development of the Cross-Grainger Free Music Machines.

It's not just Grainger's beautiful melodies, touching harmonies, innovative rhythms and exquisite orchestrations that are at last coming to the fore, but also his equally iconoclastic



ideas about the spiritual uses of music and the measuring of freedom in music to freedom in our lives. It is not just the sound of Grainger's 'Free Music' that matters but the concept behind that sound. This paper takes a deeper look into the ideas and ideals behind Free Music

*Teresa Balough, who is an adjunct professor of music history at Eastern Connecticut State University, has been studying the life and work of Percy Grainger for many years, since the publication of her A Complete Catalogue of the Works of Percy Grainger in 1975. She is the author of The Life and Work of Percy Aldridge Grainger: Till Life Become Fire (2023), co-editor of Distant Dreams: the Free Music Correspondence of Burnett Cross and Percy Grainger (1944-1960) (2020) and has published three other books and numerous essays, articles and monographs on Grainger.*

Katherine Pittman (University of California San Diego)

### **Hearing Queer Hybridity in Percy Grainger's Experimental Instruments**

Percy Grainger's experimentations with music technologies of the early 20th century (the pianola, theremin, electronics, and those of his own invention) demonstrate a yearning for new sounds and ways of making music—but also a kind of musicianship that lies beyond the musician. Pairing these experimentations with Grainger's explicit aims toward self-preservation of his life story and life's works reveals the man-machine hybridity in these technological projects. In this paper, I will consider Grainger's experimental musical life and his compulsion to document for posthumous fame as part of a lineage of queer posthumanism. This paper explores Grainger's invented instruments (the Reed-Box-Tone-Tool, the Kangaroo Pouch and the electronic Free Music Machine) as cyborgian hybrids of the self in the spirit of Science and Technology Feminist Donna Haraway (1991) and reads a queer relationship to time (Freeman 2010) and monstrosity (Stryker 1994) in his baffling oscillation between self-aggrandizement and self-loathing within the same stroke of the pen. In applying frameworks of queerness in Grainger Studies, I seek to pose questions that challenge and reorient traditional discourses around technological innovation in music while recognizing the limitations of such frameworks.

*Katherine Pittman (they/she) is a PhD student in the Integrative Studies program in University of California San Diego's Department of Music. They are a scholar of the American wind band, performing ethnographic and archival research that explores legacies of militarism, whiteness, masculinity, and ableism as they have been codified and renegotiated in the marching band and concert band traditions. She is in the early stages of writing her dissertation on the American wind band, Percy Grainger, and masochism.*

## Session 3: New Technology and New Media

John Gabriel (University of Melbourne)

### **New Audiences, New Challenges: Radio Music Theatre in Weimar Republic Germany**

The introduction of radio in Weimar Republic Germany offered contemporary composers the tantalizing potential to reach a larger audience than ever before, but music theatre posed a particular challenge: how to transfer theatre's visual component from the physical stage to the listener's imagination. To the discourse and experimentation of radio practitioners, avantgarde composers brought musical and theatrical techniques. Some composers felt this new medium required a new kind of music theatre, one whose music and dramaturgy worked together to create and fill this imagined space without relying on narration to fill in the gaps. Paul Hindemith and Walter Gronostay, for example, composed *Hörspiele* [lit. acoustic plays] with music, and Walter Goehr wrote the first radio-opera, or *Funkoper*. In other cases, the transfer to the listener's imagination allowed the listener to ignore the work's visual and dramatic elements. Connoisseurs embarrassed by the mundane plot of Schoenberg's *Von heute auf morgen*, for example, praised the way radio broadcast allowed abstract appreciation of the music. Finally, others imagined a radical new kind of montaged sound theatre for radio, a *Hörfolge* [lit. acoustic series], constructed by splicing together excerpts from recorded newscasts, music, and sound effects. Modelled on the political theatre of Erwin Piscator, narrative and meaning emerged out of these sounds' juxtaposition. Understandably, such diverse experimentation led to mixed results, but ultimately laid the foundation for the role of speech, sound effect, and music in twentieth-century radio drama.

*John Gabriel is Senior Lecturer in Musicology at the University of Melbourne. His research focusses on, but is by no means limited to German and Czech speaking Central Europe from the fin-de-siècle to the early Cold War. He is currently completing a book on the music theatre of the New Objectivity and beginning a new project on how Germany's loss of its colonial empire after World War I impacted German musical culture and German musicology. Recent publications include chapters on New Objectivity and the middlebrow, representations of China in German opera, and radio music theatre in the Weimar Republic. With Sarah Kirby, he co-edited the volume Australasian Music at Home and Abroad, which appeared earlier this year.*

Maurice Windleburn (University of Melbourne)

### **Indexicality and Disjuncture in the Creative Use of Cards and Paper Slips**

Traditionally, index cards are scholarly aids: note-taking devices for consultation on future projects, or organizing devices that help arrange ideas and structure a text. Soon after their invention, these cards were implemented in library catalogues and bureaucratic offices. In libraries, they normally contain bibliographical information and book locations, while in bureaucracies, they are used for accounting purposes or—with governments and banks—to keep tabs on citizens and potential clients. Generally, these cards are stored in 'slip boxes': primitive database of sorts—paper machines that pre-empt our computer search engines.

In this paper, I give an overview of the many philosophers, writers, artists, and musicians who have used index cards, or a similar tool, to construct their work. The scholarly use of paper slips dates back (at least) to the Renaissance polymath Konrad Gessner, while their

use for explicitly creative purposes can be traced to the Romantic author Jean Paul. From a scattered array of examples I will highlight how the indexicality and disjuncture inherent to paper slips as a medium subsists throughout the varying contexts of their use and the intermedial transformations (into poems, novels, conceptual art, music etc.) to which they are subject.

*Maurice Windleburn holds a PhD in Musicology from the University of Melbourne, Australia. His research focuses on avant-garde music, music philosophy, and aesthetic relations between music and other artforms. His work has been published in a number of journals, including Organised Sound, Tempo, and the Journal of Comparative Literature and Aesthetics. He has a forthcoming book with Routledge titled, John Zorn's File Card Works: Hypertextual Intermediality in Composition and Analysis.*

Michael Christoforidis (University of Melbourne)

### **Igor Stravinsky's *Étude* (1917) and Composing for Pianola**

Igor Stravinsky's *Étude* for pianola (1917), later subtitled 'Madrid', is one of the most innovative works realised by the Russian composer during World War I. The mechanical reproduction of the *Étude* allowed Stravinsky to explore textures and chords so dense as to be unrealisable by human execution on the piano. Stravinsky claimed that his imagination was exercised by the unlimited possibilities of "precision, velocity, and polyphony" offered by the pianola, which facilitated the creation of a sonic collage in the *Étude*, one that evoked the plucked and percussive sonorities he had encountered in Madrid.

The use of the pianola was possibly inspired by Stravinsky's encounter with the Italian futurists and their fascination with machines and mechanical instruments. In this work one also senses the influence of the visual arts, especially the currents of cubism and collage, and it is likely that the *Étude* was born of Stravinsky's desire to adapt the techniques employed by Pablo Picasso. The *Étude* for pianola presents a distilled musical tableau of Madrid in which Stravinsky created a novel, and arguably modernist, approach to representing Spain musically.

*Michael Christoforidis is a Professor of Musicology at the University of Melbourne. He has published extensively on Spanish music and its impact on Western culture. Other research interests include the visual arts and musical modernism, national identity and exoticism in music, and the history of the acoustic guitar. His monographs include Manuel de Falla and Visions of Spanish Music (Routledge, 2017) and Carmen and the Staging of Spain (with Elizabeth Kertesz, Oxford University Press, 2018).*

## Session 4: Radio and Recording

Jean-Baptiste Masson (Université Rennes-2)

### **The Sound Art of Amateur Sound Hobbyists in the 1950s and 1960s, in France and Britain**

Sound hunters were amateur sound hobbyists who, from the 1950s, started to form clubs, national and international organisations, to produce radio programmes, and to organise national and international contests. Such hobbyists were active since the beginning of sound recording technologies, but it was with the advent of tape recorders that the movement grew to a large scale.

Based on archives held by the Archives Nationales, the Bibliothèque Nationale de France, and the BBC Written Archive Centre, this paper will present the work of French and British sound hunters who experimented with the tape recorder. As soon as the 1950s, using this newly available technology, many amateur sound hobbyists started to make sonic experiments, sometimes with home-built machines: recording of very faint sounds, sound collages comparable to what Fluxus artists will do decades later, field recordings preserving disappearing sounds and musics, etc.

It is therefore an alternative history of electroacoustic music and field recording that I will present, with people who were amateurs but who nonetheless achieve results comparable to professional composers, sometimes earlier. Through written and sonic archives, I will show that *musique concrète* and electronic music were practised beyond state-subsided studios, while field recording was practised beyond academic ethnographers and ornithologists. At a time where the sound recording field was not stabilised, I will demonstrate that the definitions of 'amateur' and 'professional' were porous, with people freely going from one to the other. Sound hunters, their clubs, magazines and radio programmes, were vectors of knowledge transfer on listening and sound recording, when sound recording curricula did not yet exist.

*Jean-Baptiste Masson recently completed his PhD while he was a fellow of the White Rose College of the Arts and Humanities at the University of York. He worked on the history of the sonic practices of amateur sound recordists, in France and Britain. He is now a Marie Skłodowska-Curie / Bienvenüe fellow based at the Université Rennes-2 and a research fellow at the Cinémathèque de Bretagne, where he works on a manual for the restoration of the sound of amateur films.*

Martin Elek (University of Cambridge)

### **Wilhelm Furtwängler and Sound Recording**

The conductor Wilhelm Furtwängler (1886–1954) was a dominant figure of German musical life in the early twentieth century. Featuring the leading European orchestras of the time, Furtwängler's performances were regularly recorded both in the concert hall and the studio. Despite his general aversion to sound recording, he produced a vast and wide-ranging discography, and he witnessed first-hand the emergence of magnetic tape recording, which was used to capture his philharmonic concerts from the early 1940s onwards. In this paper, I examine Furtwängler's relationship to sound recording, the characteristics of his live and studio recordings, and the problems with the modern reissues of these recordings. Finally, I

provide an overview of Furtwängler's recordings of Brahms's Fourth Symphony, op. 98, to provide insights into the variability of his performance conceptions.

*Martin Elek studied at the Liszt Academy of Music, Budapest, where he received BA and MA degrees in musicology. Between 2016 and 2019, he was a member of the Department for Hungarian Music History at the Institute for Musicology, Budapest. He is currently a PhD candidate at the University of Cambridge under the supervision of Professor John Rink. Martin's main research interests include nineteenth- and twentieth-century musical performance practices, early sound recordings and performance studies. His PhD research focuses on the creation and inference of musical structure in performances of symphonic music and the conducting style of Wilhelm Furtwängler.*

Pedro Moreira (Universidade de Évora)

### **Portuguese National Radio, Ethnographers, and the Documentation of Traditional Music during the 1940s**

The Portuguese National Radio (Emissora Nacional) was officially founded in 1935 by the authoritarian regime dubbed Estado Novo, which lasted from 1933 to 1974. In the 1940s, National Radio (NR) encouraged some composers and ethnographers to collect presumably authentic rural music from Portugal, both on paper (transcriptions) and magnetic tape. The purpose was to record and broadcast 'authentic' traditional music in radio shows, but also to provide composers with musical material for the composition of art and popular music based on rural melodies and rhythms. Several composers, like Artur Santos (1914–1987) or Armando Leça (1891–1977), engaged in rural music documentation in the 1940s. Armando Leça traveled around Portugal between 1939 and 1940 recording several expressive practices on magnetic tape. The recordings had the technical support of National Radio and represent the first systematic audio recording of traditional music in Portugal. The purpose was for the recordings to be part of several initiatives held by the Exhibition of the Portuguese World (Exposição do Mundo Português) in 1940, a fair that celebrated the nation and empire, becoming one of the most important propaganda events during wartime. This presentation aims to question the role of National Radio in the documentation of Portuguese traditional music, considering its intersections with the nationalistic cultural policy of the Portuguese authoritarian regime, and the profile of the radio ethnographers during the 1940s in Portugal.

*Pedro Moreira is an Assistant Professor (Professor Auxiliar) at Universidade de Évora, Portugal, and integrated researcher at Instituto de Etnomusicologia - Centro de Estudos em Música e Dança (INET-md). He holds a degree in Musicology and a Ph.D. in Ethnomusicology focusing on radio and popular music during the Portuguese Authoritarian Regime, from Universidade Nova de Lisboa, under the supervision of Professor Salwa Castelo-Branco. In 2017 he concluded his post-doctoral research about music, radio, and migration in the Paris region, at the same institution. His main research and publication topics concern popular music, radio, cultural policy, and the uses of folklore in Portugal during the 1930s and 1940s.*

Michelle Ziegler (ETH Zürich)

### **Recording Realities: Edgard Varèse as a Tape and Film Music Composer**

The creative process of Edgard Varèse (1883–1965) is traditionally understood along the lines of traditional authorship: a composer working alone at his desk on his mostly handwritten scores. However, when Varèse received an Ampex 401 tape recorder in 1953 and started creating his first tape compositions for the interpolations of his instrumental piece *Déserts* (1952–54) and for the film *Around and about Miró* (1955) by Thomas Bouchard, this framework fails to reflect reality: The process of recording sounds in factories, on the street and in churches and manipulating them in the atelier and studio not only reveals the composers engagement with the new technology of the tape recorder, but also the upshot of collaboration. Varèse closely worked together with the composer and sound designer Ann McMillan and with engineers in different studios. This paper inquiries into the working practices with recorded sound for Varèse's tape and film music—thereby reinterpreting the creative process as a prolific engagement with new media. The analysis incorporates written accounts and documents, but also the makeup tapes that are preserved in archives in Washington and Basel. The methodological approach integrates an understanding from media and technology studies into the study of sketches on different carriers. It thereby connects the sound world of field recordings and the material practice of working with tape: the realities of the recorded sound s and recording processes.

*Michelle Ziegler is working as a research associate at the Chair of History of Technology at ETH Zurich (project on recording technologies ) and a lecturer in Basel, Bern and Vienna. After studying musicology, history of art and communication in Fribourg, she received her PhD 2018 at the University of Bern with a dissertation on the graphic working methods of the Swiss composer Hermann Meier (1906–2002). Subsequently she worked in the DACH project 'Writing Music' at the Paul Sacher Foundation Basel. She has published numerous articles as a music journalist and worked as a curator and project manager.*