

institut für elektronische musik und akustik



22nd Sound and Music Computing Conference & Summer School



Saturday, 12.07.2025, 20:00

MUMUTH, Lichtenfelsgasse 14, 8010 Graz

Program

Peter Plessas – Les Innumériques / 12'00'' - player piano, video

Music machines, such as the player piano, are akin to electronic music instruments in that they provide their own energy source and are able to reproduce a musical score without a human performer. While Stravinsky embraced the player piano for its ability to deliberately rule out any musical interpretation by performers, many pieces for player piano usually constitute repertoire that would be unplayable by humans. Music machines are available for music composition since centuries and share a bewildering array of topics with computer-based algorithmic composition. I often prefer to compose algorithms instead of writing notes directly because it allows me to compose what would otherwise remain unwritten or unimagined.

For "Les Innumériques" I imagined the keys of the piano as beads, as physical objects which are interconnected and will form one large string. Keys would then react to their neighbor's position via elastic links, turning the piano keyboard into a moving physical structure. Upon having created a physical model of the piano keys using the pmpd library for Pure Data, I went on to compose the piece by shaping the parameters of this dynamic system.

"Les Innumériques" is inspired by the abstract of the article "Une étude du concept d'Innumérisme" by Jean-Paul Fischer and Camilo Charron in *Psychologie Française* in 2018. Therein, innumeracy describes the absence of numeracy, the ability to use and to reason with numbers and other mathematical concepts. A good level of numeracy is considered the best protection against unemployment, low wages and poor health by the authors, and was declared a "national priority" in France in 2013.

Trained in violin and guitar, Peter developed a strong interest in studio composition and electronic music during high school. Influenced by musicians Robert Lepenik and Helmut Schäfer he began writing electroacoustic and experimental music in addition to pop music, EDM and DJing. Following studies with Gerhard Eckel and Winfried Ritsch, Peter graduated in sound engineering from the University of Music and Performing Arts Graz. He established himself as live electronics musician and Klangregisseur for contemporary music, collaborating with Peter Ablinger, Marino Formenti, Gerd Kühr, Klaus Lang, Philippe Leroux, Olga Neuwirth, and ensembles Klangforum Wien, musikFabrik Köln and Radio Symphonie Orchester Wien, amongst others.

Peter's compositions feature acousmatic tape music, chamber music for DJ ensembles, spatial music for icosahedral loudspeakers, computer music performances and works for dance and theater.

His artistic output is lined by research and publications in digital instrument design, computer music, auditory perception and spatial audio systems. Peter has been a visiting scholar to UC Berkeley, McGill and Concordia Universities and has taught at the Graz Institute of Electronic Music and Acoustics (IEM). He is currently a senior lecturer for electroacoustic composition at the Vienna University of Music and Performing Arts. Writings and works are available at <https://plessas.mur.at>

Flora Feldner - piano player machinist

Alejandro Alborno – **Apenas paisaje** / 11'18" - fixed media

"Apenas Paisaje" ("Just Landscape") is an acousmatic/electronic piece inspired by a bittersweet feeling, the certainty of inhabiting a space with a great future, the power and fertility of nature, which is offered everywhere in my country, but the discouraging idea of people not knowing how to deal with it to secure the growing of best idea of being human within themselves. However, the plenty of energy inspires hope, like the fresh liveness of singing birds. The work explores the conjunction of electronic sounds and field recordings, connecting the both worlds by means of electroacoustic techniques. The title is based on the final verses of the poem "Chile" by Chilean author Nicanor Parra: "We think we are a country and the truth is that we are just landscape". This piece was composed thanks to the support of the Soundlapse project: <https://soundlapse.net>

Technically, the work explores sound materials through synthesis, resynthesis, and the processing of field recordings made in various locations within and around the city of Valdivia in Southern Chile. The rainforest ambience and local bird songs were recorded by the Soundlapse project team using a variety of high-quality microphones and techniques including first and second order ambisonics, binaural stereo and stereo. The environment around the oldest tree in the world, the larch known as Lañilawal or the Great Grandfather, which lives in the Alerce Costero National Park, was recorded by the author himself using a handy recorder. For the synthesis and processing of materials, hardware and software equipment were utilised (see below please). The spectral colour and rhythmic patterns of the different sources were combined and transferred freely from one to another in a manner inspired by musique concrète. The main birds (soloists) appearing in the piece are: Fío-Fío (*Elaenia albiceps*), Trile (*Agelasticus thilius*) and Siete colores (*Tachuris rubrigastra*). You can find them at: <https://birds-soundlapse.vercel.app>

Alejandro Alborno - Chilean contemporary electronic music composer and performer, PhD in Electroacoustic Composition, University of Sheffield, UK.

He studied electroacoustic composition with Rodrigo Sigal and Federico Schumacher in Chile and Adrian Moore and Adam Stanović in the United Kingdom. He works on acousmatic and live electronics since 2004, he usually composes for theatre and dance pieces and his music has been performed in Europe, the Americas and Asia. Currently is lecturer and researcher at the Music & Sonic Arts School at the Universidad Austral in Southern Chile. The central topics in his research are the human voice, poetry, language, and analysis of acousmatic pieces, both in multichannel and stereo formats. More recent is his research into bringing electroacoustic music closer to children and youth audiences. With a past on underground electronica scene in Santiago de Chile at the end of the 1980s, he had evolved over the years composing industrial, synth pop, ambient, IDM, electronic free improvisation and acousmatic music.

Vilbjørg Broch – Netop Som Digter (Just as a poet) / 13'45'' - electronics, voice

The computer music is based on the enigmatic mathematical object the E8. E8 can in one way be understood as a symmetric structure in 8 dimensional space generated by repeated reflections of 8 primitive elements. In this work a static interference field in 8D is considered, a field consisting of plane waves along the 240 'root' vectors of the structure. Audio is generated as mappings of properties of this field and projected onto 3D. The 3D projection space is constantly rotated which gives new views on the E8. There are as well transformations between affine and projective 3-space. Two spatial reverberation systems are implemented. Both are variations on FDN Wave Guide Meshes with 240 nodes. Both have some time variance due to the ever changing 3D projection. One of them further has time variance created with reflection in rotating hyperplanes. The work is realized as one large external object for Pure Data. This object is handling all audio processes and the encoding to ambisonics. The work is generated offline due to computational intensity. It is generated in one piece without post editing, since some geometric processes must run uninterrupted all the way through. All sound arise as DSP interpretations out of the same geometric transformations. It is set up so that a new rendering will have different details. For other performances I might make other versions.

The fixed media is performed with the contrast of acoustic voice. I have practiced the form over many years, it is a state of mind. The text for the vocal performance is taken from S. Kierkegaard's book 'Gjentagelsen' / 'The Repetition', written under the pseudonym Constantin Constantius. The book lingers over the question whether anything repeats and if anything can be repeated. The fragments are taken towards the end where the writer

speaks about a poet he has invented for this book, a poet who writes poetry of his own.

Link to text and translation: <https://frekvensverden.dk/files/digter.pdf>

But the fragments are not easily understood, they are more meant to appear as signs of Kierkegaard's work in general, in which some of the stories told start with the story of the paradox and that of the personal perspective.

Vilbjørg Broch was born in 1967 in Denmark. Lived in The Netherlands for several decades but I am now based in Denmark. Studies include dance and improvisation at the SNDO Amsterdam and voice with coloratura soprano Marianne Blok. Worked with multi media and improvisational projects of all sorts and sizes the past 30 years. Projects include interpretations of a wide variety of text sources. I work with computer music for a bit more than 20 years. The development of this has been parallel with a self study of higher mathematics aimed at algorithmic composition and DSP. The work in spatial audio has developed thanks to working periods and residencies in places such as CCRMA Stanford, IEM Graz, ICST Zurich, EMS Stockholm and NOTAM Oslo.

Vilbjørg Broch - voice performance

Markus Sepperer – Angry Birds Suite / 11'10'' - electronics, player piano

1. Piper's Paradise - 2'30''
2. Purpurplanes - 4'50''
3. Hydrobate's Madness - 3'50''

The Angry Birds Suite was created exclusively using the following bird calls: Tree Pipit, Red-throated Diver, Little Grebe, Whooper Swan, Cape Verde Shearwater, Purple Heron, Kingfisher, and Storm Petrel.

This three-part Angry Birds Suite is a fixed-media composition designed for a 10-channel setup, with 2 MIDI channels controlling an auto-playing piano and 8 audio channels arranged in a circular formation around the audience. The starting point is an idyllic, paradisiacal state where bird calls engage in dialogue with the piano, evoking an untouched natural world. However, the MIDI transcriptions of these bird calls—created with the help of AI—subtly hint at the onset of the Anthropocene.

As the piece progresses, the animal sounds become increasingly dense and transformed, gradually morphing into a landscape permeated by technology, ultimately evolving into the sounds of jet engines.

Markus Sepperer (born 1978 in Carinthia, Austria) is a musician and visual artist whose work spans instrumental performance as an oboist in

contemporary music ensembles, free improvisation, and electronic experimentation. He began his musical education studying classical music at the Mozarteum University Salzburg and the Vienna Conservatory, later expanding his focus to contemporary and avant-garde music through further studies in Leipzig and London.

Driven by a deep interest in sonic exploration, Sepperer has collaborated with numerous contemporary music ensembles and developed his own electronic projects, often combining acoustic instruments with live electronics and experimental sound design.

Alongside his musical practice, he studied artistic photography at FotoK-Wien, receiving international recognition through the Epson Art Photo Award and exhibiting at Art Cologne. In 2011, he was awarded a Cultural Promotion Prize by the Austrian government, and in 2015, he completed an artist residency at Organhaus Chongqing in China.

His performances and visual works have been presented internationally, including in Austria, Germany, China, Hong Kong, Macau, Serbia, and Italy. Since 2023, Sepperer has been furthering his studies in electroacoustic and experimental music at the University of Music and Performing Arts Vienna (MDW).

Flora Feldner - piano player machinist

Jakob Gille – Natura Morta / 6'30'' – fixed media

"To me there is nothing more surreal and nothing more abstract than reality." - Giorgio Morandi

In "Natura Morta" I was inspired by the works of Giorgio Morandi to create an electroacoustic composition for multichannel playback. This creative process was characterised by an exploration of my personal impressions of Morandi's paintings, although I consciously chose not to translate them directly into music. Instead, I concentrated on highlighting Morandi's focus on seemingly banal, everyday objects such as bottles and small boxes. These objects, which were commonplace in his time and now have a nostalgic character, are transformed by Morandi into something artistic. His ability to abstract the perception of these objects and the light that surrounds them and translate it into art reveals an inner perception that goes far beyond the real and left a great impression on me.

"If you make things and put them down on a table or a shelf in your studio, or if you take a cup from the cupboard and make yourself coffee and then wash it up and stack it on the draining-board by the sink, you are on the edges of still life." - Edmund de Waal

Jakob Gille began his formal education at the Hochschule für Musik Carl Maria von Weber Dresden, where he studied composition and music theory. His passion for sound and experimentation led him to institutions such as the ZKM Karlsruhe and the Darmstädter Ferienkurse. There, he worked with the Akusmonium GRM Paris and the Studio für elektronische Musik HfM Dresden respectively.

He is the driving force behind Into Sound, an initiative that has organised multiple concerts in Berlin for 3D loudspeaker setups since its inception in 2018.

His compositions have been played several times at the Medium Sonorum concert at the Ars Electronica Linz, in Ústí nad Labem in combination with the Ambisonics Summer School 2023, at the Festival Izis in Koper, the Apnées Festival in Grenoble and at the ICMC in Boston. In 2023, he won an honorable mention at ISAC in Pesaro.

Currently, he is pursuing a master's degree in computer music and sound art at KUG & IEM Graz.

John Gibson – Air Traffic / 10'00'' - electronics, trumpet

Often my inspiration for pieces comes from observing the natural world or worrying about what's happening to it. In Air Traffic, I'm thinking about honey bees. In his book Honeybee Democracy, Thomas D. Seeley, a scientist at Cornell, gives a detailed account of the behavior of these bees, including their ability to scout out a new home and navigate there, while keeping together a hive of thousands. Seeley performed experiments showing that scout bees guide the others to a new home they've discovered: the scouts fly quickly, in a straight line through the bee swarm, thus encouraging the other bees to follow, instead of flying randomly in all directions. My piece enacts such a swarm in its middle section, using a colony of synthetic "bees" that fly around the concert hall, while the trumpeter, as scout bee, gets them to fly right. When the bees find their home, they break into a celebratory song, with a swinging beat.

But there are real bees in this piece, too! To help me get a better sense of what honey bees are like, I met with a local biologist at the university hives. I dropped microphones in a hive and witnessed a terrifying, claustrophobic, and frenzied sound world, which you will hear accompanying the trumpet. I even donned a bee suit to better see what they were up to. You will hear a bit of my conversation with the biologist at the end of the piece.

In Air Traffic, I aim to surround the trumpet with fragments of its own live sound or with synthetic voices, using an immersive eight-channel loudspeaker arrangement. In addition to the synthetic bees mentioned above, the piece features an algorithmically constructed jazz accompaniment to the trumpeter, whom I ask to improvise within a musical

environment unmoored from a clear harmonic grounding. It's meant to come across as an exuberant free-jazz romp, before subsiding into a return of the opening soundscape, situated in a hay field with cars passing in the distance and bees buzzing from the nearby hives.

John Gibson composes electronic music, which he often combines with instrumental soloists or ensembles. He also creates fixed-media audio and audiovisual works that focus on environmental soundscape. His portrait CD, *Traces*, is available on the Innova label, along with other recordings on the Centaur, Everglade, Innova, and SEAMUS labels. Audiences across the world have heard his music, in venues including the D-22 punk rock club in Beijing, the Palazzo Pisani in Venice, and the U.S. Botanic Garden in Washington, D.C. Presentations of his electroacoustic music include concerts at the Seoul International Computer Music Festival, the Bourges Synthèse Festival in France, the Brazilian Symposium on Computer Music, the Australasian Computer Music Conference, and many ICMC and SEAMUS conferences. Significant awards include a Guggenheim Fellowship, a Charles Ives Scholarship from the American Academy and Institute of Arts and Letters, the Paul Jacobs Memorial Fund Commission from the Tanglewood Music Center, and a residency in the south of France from the Camargo Foundation. He was a Mentoring Artist at the Atlantic Center for the Arts in May 2017. Gibson is associate professor of music and director of the Center for Electronic and Computer Music (cecm.indiana.edu) at the Indiana University Jacobs School of Music.

Eduardo Gracia García - trumpet

Instrumental and voice performers of SMC 2025 are students of KUG's post-graduate PPCM course (Performance Practice in Contemporary Music)

PPCM professors: Gan-ya Ben-gur Akselrod, Holger Falk, Dimitrios Polisoidis

Rehearsals and production: David Pirrò

Sound Direction: Lukas Gölles, David Pirrò, Stefan Warum

Technical Assistance: Roman Sorokin

"Autoklavierspieler", invented by Winfried Ritsch, is an robot piano player, also called "Vorsetzer", designed to play every common (grand) piano with individual dynamics for each key as fast as possible. A massive frame with 88 electromechanical finger, which are moved by solenoids, is mounted on a keyboard. Controlled by microcontrollers, which are driven over a dedicated computer, the Autoklavierspieler can be controlled over Network, MIDI files and realtime generated algorithmic music.