DACA Matinee

Konzert, Ausstellung und Diskurs

05. März 2022 - 09-13h

Mumuth, Kunstuniversität Graz, Lichtenfelsgasse 14

10h45-12h **Konzert** mit Werken von
F. Ekeberg, A. Kobzar, R. Park,
N. Rolnick, P. Venus

09 - 13h **Ausstellung mit Feature zur Konferenz** /
Radio Cyborg Transmitter

09h15-10h /

12h15-13h **Sound Walk 1/2** – Führung des Publikums mit Kopfhörern durch die Stadt

9h45 **Fishbowl-Diskussion** mit
F. Ekeberg (Künstler und Komponist/ Norwegen),
D. Maraun (Wegener Center für Klima und Globalen Wandel),
H. Weiland (Land Stmk. Klima- und Energieinitiative) und dem Publikum

Die vorgestellten Arbeiten sind zum Großteil in den Proceedings/ Katalog der DACA Konferenz erfasst:

http://dataclimate.org/daca-2022-proceedingscatalogue/

:: EXHIBITION ::

Outside/ ground floor :

Radio Cyborg Transmitter :: Reni Hofmüller

Data Wayfairing :: Tim Shaw

Sound walks 09:15-10:00 and 12:15-13:00

Foyer/ first floor :

Anthropocene Maze :: Alisa Kobzar, Benedikt Brands, Valerian Drack

Drizzle :: RAY LC, Zijing Song and Yating Sun

Inflow :: Frank Ekeberg

Ligeti hall/ backside :

Without Strings :: Hongshuo Fan

Videos of the DACA conference & Hongkong exhibition :: various

:: EXHIBITION ::

Radio Cyborg Transmitter/ Reni Hofmüller

The Radio Cyborg Transmitter RCT was produced by esc medien kunst labor Graz in the context of the Graz 2020 Cultural Year, concept: Reni Hofmüller

the DACA feature / Valerie Quade

The Radio Cyborg Transmitter uses Geiger counters and other sensors to record emission values such as temperature, humidity, radiation (UV radiation, electromagnetic waves) and fine dust. The live measured data is converted into sound, a constantly changing soundscape is created - the performance space becomes audible.

At the Radio Cyborg Transmitter RCT there are sensors mounted for measuring the environment such as Geiger counter and radiation in general, temperature or humidity and also fine dust. These sensors provide data in real time, which are either directly converted into sound (oscillators, granular synthesis, etc.) or indirectly serve as triggers for other controllable events (compositions, light control, volume, etc.)

The data measured live is converted into sound and thus the concrete environment becomes audible: a completely new form of soundscape is created and information that would be inaccessible or only very limited to us humans with our senses becomes sensually perceptible. The SENSORium thus becomes a sonic sensorium for the listener and, when implemented as an audio stream, enables the perception of the environment even from a spatial distance.

All software interfaces are implemented with Python and PureData, i.e. everything is programmed in free software and

can and should therefore be used and developed further by others. Parallel to the audiostream, the direct MQTT sensor data will also be available online on the computer via a password-protected port, so that I myself have the possibility to extend the code and other artists have access to it and thus further compositions can be created.

Reni Hofmüller, *born 1966, lives in Graz. Artist, musician, performer, organiser and activist in the field of (new) media, technology and politics, and engaged in the development of contemporary art.*

Valerie Quade *is a media pedagogue and creator living in Graz. She focused on 3D audio Design and sustainable acoustic city planning and works as a radio producer and educator at Radio Helsinki.*

Data Wayfairing - Tim Shaw
Augmented soundwalks :: 45:00

In this augmented soundwalk Shaw will take a group of people on a journey around Graz, Austria. Participants will experience a combination of live soundscape composition, constructed from real-time sounds of the environment, and data sonification from immediate environmental data streams collected through wearable sensors.

Both soundwalking and sonification are potential methods for revealing and attending to aspects of our shared perceptual environments. Soundwalking is a method for attending to an environment through movement and listening. Developed through the research of the World Soundscape Project, the practice of soundwalking was motivated by attempting to acknowledge the changing soundscape of the contemporary

world. Sonification is the practice of turning data into sound, a way of being able to understand complex data streams through listening. Sometimes used as an alternative to visualisation, it is a method commonly employed by scientists, designers, artists and musicians in attempt to understand and render data in new ways.

Data Wayfaring proposes a combination of these two practices, a listening walk engaging with environmental signals investigating a novel way of navigating data through movement. This piece extends two previous projects Ambulation and Netwalk. Ambulation is a soundwalk which uses field recording techniques and listening technologies to create a walking performance using environmental sound. Netwalk is an augmented soundwalk which broadcasts altered soundscapes and processed video to an online audience. Developed during the lockdowns of 2020 it has become a method for sharing an embodied soundwalking experience to remote audiences. The research around the development and presentation of these sound walks contributes to the idea of field recording and sound walking as a live, procedural practice, moving away from the ideas of the movement of documentary material from one place to another or the playback of fixed audio files.

Tim Shaw *is an artist working with sound, light and communication media. Presenting work through performances, installations and sound walks Tim is interested in how listening environments can be constructed or explored using a diverse range of techniques and technologies. He works with field recordings, electronics, video, synthesis, sound objects, self-made hardware and DIY software. Tim is a Lecturer in Digital Media at Newcastle University and a member of the RADICAL research project investigating sonification, listening and aesthetics.*

Anthropocene Maze/
Alisa Kobzar, Benedikt Brands, Valerian Drack
Interactive sound installation

The Anthropocene Maze is an interactive audio installation based on a pressure sensitive floor, which acts as metaphor for the ecological footprint of mankind. The visitor is guided by Ariadne, a computer voice, who takes the guest from some undefined future back in time to the year 2021. She guides through five different habitats, where the human impact on the Earth's geology and ecosystem gets tangible by walking on the floor. The related footstep sounds and their contextualisation by ambient sounds lead to an immersive audio environment which lets the visitor explore the degrading habitats auditorily.

The floor uses PYZOFLEX® technology by courtesy of Joanneum Research DIGITAL.

Bio of Alisa Kobzar: see concert section

Valerian Drack *is a student at the University of Music and Performing Arts and University of Technology Graz, where he is completing his Master's degree in electrical engineering and sound engineering. He has focused on digital signal processing and 3D audio during his studies so far and has applied this knowledge in technical and in artistic projects. Either as a technician or as electronic musician he worked with several artists on sound installations, at concerts and performances. Being trained in classical music and jazz he is mainly interested in electronic music.*

Drizzle/ RAY LC, Zijing Song and Yating Sun
A storytelling exhibition using climate change data narratives

Climate change is difficult to grasp due to the remote nature of its action compared to immediate timeframes and surroundings, so arguments and statistics about its occurrence can fall on deaf ears, especially for science skeptics and climate change deniers, who interpret such persuasive strategies of political rhetoric. True change of people's opinions and habits requires not debates and data, but rather personal stories that align the viewer's own objectives with those of climate action. To show the consequences of climate change in data form that is palatable to climate change skeptics, we adapt a narrative strategy to show the data of climate change, creating a covert visual narrative in manga form showing both the ideals espoused by climate action and the climate change data in a visual narrative framework. These comic stories are presented for particular goals of climate action, such as individual responsibility, long-term vision, and collective conservation strategies, utilizing design fiction to narratively engage antagonistic viewpoints. To encourage audience involvement the full spread of the comic is presented on the wall of the gallery to allow visitors to read and share with others, immerse each other in the data it presents, and visually engage with the personal virtues that align with climate action without utilizing overt forms of argumentation and policy discussion.

Web: https://recfro.github.io/drizzle/

RAY LC's *practice creates interaction environments for building bonds between humans and machines. He takes perspectives from his own research in neuroscience and HCI in his artistic practice, with notable exhibitions at BankArt, 1_Wall, Process Space LMCC, New York Hall of Science*

Residency, *Saari Residency*, *Kyoto Design Lab Residency*, *Kiyoshi Saito Museum*, *ICRA Elektra Montreal*, *ArtLab Lahore*, *Ars Electronica Linz*, *NeON Digital Arts Festival*, *New Museum*, *CICA Museum*, *NYC Short Documentary Film Festival*, *Burning Man*, *NeurIPS*, *Deconstrukt*, *Angewandte Festival*, *Elektron Tallinn*, *Floating Projects*, *Jockey Club Creative Arts Centre*, *Osage Gallery*.

https://raylc.org/

Ingenmannsland/ Frank Ekeberg

Sound installation

Ingenmannsland (No Man's Land / Niemandsland) is a constantly changing, speculative soundscape highlighting issues of deforestation, resource extraction, habitat loss, species extinction and natural vs. artificial life. The installation is based on field-recordings made in old-growth forest that has been a constant for many hundred years and contributed to the Norwegian identity of closeness to nature, processed to reflect a contemporary reality of fragmentation and rapid change. The focus of the installation is in particular on the rainforest that once covered much of the west coast of Norway. Only scattered fragments remain of the rainforest today, and it is now on the red-list of endangered habitat types. 80 percent of the coastal rainforest has been lost only in the past 100 years, and it is predicted to disappear completely within the next five decades. The loss of species and habitat is reflected in the installation by 80 percent of the sounds of birds and insects gradually disappearing as the day of the exhibition progresses. When this decline reaches a tipping point, sounds start to re-appear, but these are different – more static and artificial, as if we are entering another reality. The soundscape becomes a speculative environment based on projected future scenarios. What

happens when forests disappear or dry out? Can our natural environment be replenished? Will it be replaced by artificial life? Is this the function of biomimicry?

Bio: see concert section

Without Strings/ Hongshuo Fan
Audio-visual installation

'Without strings' is a real-time environmental data interactive audio-visual installation. It is inspired by the traditional Chinese ink painting and the Guqin performance. It emphasizes the 'hidden' and 'blank' in ink painting and the 'Improvisation by feeling surrounding' in the Guqin performance. The visual part is a virtual tree that grew by absorbing environmental data, and the sound part is a physical modelling Guqin synthesizer driven by a pre-trained AI model. The combination of visual and sound creates an artistic reflection of how the machine senses the world, also a natural and immersive experience for the audience.

Hongshuo Fan *is a Chinese cross-disciplinary composer, new media artist and researcher. His work has involved various real-time interactive multimedia contents, such as acoustic instruments, live electronics, generative visuals, light and body movements. His research and creative interest focus on the fusion of traditional culture and cutting-edge technology in the form of contemporary art. His output spans live interactive electronics, installations, and audio-visual works. Hongshuo is currently a PhD candidate at NOVARS Research Centre (The University of Manchester), also the teaching assistant for the interactive Media Technologies course and postgraduate technical leader on the MANTIS System.*

:: CONCERT ::

I can hear the ice go #2 ::
Margarethe Maierhofer-Lischka and Peter Venus
dialogue for double bass and ice :: 12:00

Processes of climatic change usually happen across large time spans beyond the limits of human perception. “I can hear the ice go” calls attention to accelerated glacial melting. The piece is a dialogue for a musician and a prepared ice cube using field recording techniques to amplify the miniscule acoustic sensations caused by the ice’s melting process. What is normally happening unnoticed is transformed into a performative setting.

The audible cracks and hisses of the melting ice turn into an aural score for the interaction with the human performer.

Margarethe Maierhofer-Lischka *(born Regensburg, GER) studied double bass, music pedagogy and musicology in Dresden, Rostock and Graz. Currently she works as freelance double bass player, improviser, sound artist and researcher. She is co-founder, dramaturg and member of Ensemble Schallfeld, a group dedicated to contemporary chamber music, with which she also tours worldwide. For her work she has been receiving several awards, such as the Stockhausen music award, the Theodor-Körner-Preis and a scholarship from the Austrian Federal Ministry of Culture and the Arts. Since 2021 she is lecturer in Music & Media at the University*

of Salzburg.
https://suonoreale.mur.at

Peter Venus *(born in Dresden, GER) is a sound director, media artist and performer based in Graz. He studied sound engineering and experimental sound practice in London, Graz and Cork. The main focus of his work is the creation and development of immersive media environments as well as the performance practice of live electronics in the context of contemporary music and theatre. He works with numerous ensembles and theatres and is a lecturer at FH Joanneum in Graz.*

Algorithmic music composition :: Rosa Park
Pre-recorded performance :: 06:38

"Algorithmic Music Composition for The Environment" is an interactive sound performance representing scientific data on global warming and climate change. The work aims to reflect the impacts of the climate crisis through sound by illustrating the alarming records of four environmental sectors: Global Land-Ocean Temperature, Sea Level Change, Antarctic Ice Mass Variation, and Atmospheric Carbon Dioxide (CO2) Levels. The music composition of the project is built in Pure Data (Pd), a data flow programming language for electronic music that converts climate data to sound. The performer controls and improvises on the generated sounds from Pd through the GUI (Graphical User Interface) modules and a MIDI controller, adding the conceptual domain to the latest scientific data that tells urgent and aggressive action is needed.

Rosa Park *is a sound artist whose research interest is centered on the study of psychoacoustics, computer music, digital/mixed media, sonification, and the physicality of*

sound. Park explores various aural materials and their sonic characteristics, seeking unusual ways of seeing and hearing that unlock new experiences. She has taught at Rhode Island School of Design, Florida Atlantic University, and currently, serves as Assistant Professor in the School of Cinema at San Francisco State University, teaching courses in sound design and production, interactive cinema, and experimental filmmaking.

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a letter to Humboldt :: Alisa Kobzar and Lisa Mc Guire (Duo rotkäppchen)
improvised multimedia and dance performance:: ca. 11:00

Alexander von Humboldt (1769-1859) is a German geographer, naturalist, explorer and the first person to describe the phenomenon and cause of human-induced climate change, in 1800 and again in 1831, based on observations generated during his travels. How could he react on the climate changes today? In the piece *a letter to Humboldt*, we want to direct people's attention to the beauty and – at the same time – the vulnerability of nature. This performance is about the man-made changes over the huge period of time. As background processes, the temperature differences in Austria between 2014 and 2021 are affecting the visual part of the performance.

An excerpt from the 40-min long work will be demonstrated.

Alisa Kobzar (*1989) - *composer, multimedia artist, teacher, graduated (MA) from Kyiv National Music Academy (Ukraine) in 2014 (department of composition, instrumentation and musical informational technologies). Since 2018 she lives in Graz (Austria), studies Computer music in Graz University of Arts (with prof. G. Eckel) and works within the research project "Inter_agency", being a part of the organising*

committee of AIMC 2021 conference. Alisa took part in different international composers' masterclasses on instrumental and electronic music, festivals, workshops, residencies. Her music is performed in Ukraine, Poland, Germany, Austria, Sweden, Russia, Portugal, Italy, France, USA, Japan, Switzerland, Greece, UK. Her compositions include instrumental, chamber, symphonic, electronic, electroacoustic, acousmatic music, multidisciplinary and interactive multimedia projects.

Lisa McGuire *(*1991) – dancer, performer, gyrokinesis trainer. Got certification in IGTanz Steiermark, GYROKINESIS (R), GYROTONIC, studied in the summer-school of Martha Graham (New York, USA), attended private ballet classes along with Afro Modern Cuban dance class, as well as contemporary performance classes of Valentina Moar, Bostjan Ivanjsic, Tomas Danielis and others. She took part in the La Strada festival (Graz, 2020) in the choreographic project of Kitt Johnson, choreographic project by Liz King (Graz, Austria, 2015), Refugium Graz (IGTanz), interactive dance-performance by Bühnenwerkstatt (Graz, Austria, 2017). Lisa had successful interactive performance improvisations with live musicians, sculpture, theatrical performances, she was filmed for dance videos and advertisements.*

Inflow :: Frank Ekeberg

Electroacoustic music composition :: 14.00

Inflow takes as its starting point sound materials recorded above and below water, in liquid and solid form – sometimes recognizable, sometimes heavily processed – combined into a compositional structure that builds on Earth's hydrological cycle where water melts, evaporates, condenses and freezes. In this cycle, water absorbs, stores and releases energy and

distributes energy around the globe via air and ocean currents that lead to warmer and cooler regions and seasons. Even a minimal increase in temperature will disturb this cycle's fragile balance and affect the distribution of water to areas that will experience lushness, flooding, drought and desertification. This fragility is illustrated in the work by playing on the balance between stability and breakdown, accumulation and disintegration, transformation and constancy.

Frank Ekeberg *is a transdisciplinary artist, music composer and researcher working in the intersection of art, science and technology. He received his degrees in music composition from Mills College in Oakland, California where he studied with Pauline Oliveros and Alvin Curran, and from City University London under Denis Smalley and Simon Emmerson's tutelage. Ekeberg's work explores issues of ecology, time, space and transformation, with a particular focus on nature spaces, ecosystems and the interplay between human and non-human worlds. His research-based approach often involves collaborations within as well as beyond the art field. He was awarded the 2017 Smithsonian Artist Research Fellowship, and is currently Research Associate at the Smithsonian National Museum of Natural History in Washington D.C., USA. He is primarily based in Trondheim, Norway.*

www.frankekeberg.no

Oceans eat cities :: Neil Rolnick
Video, live electronic and string quartet :: 17:00

Oceans Eat Cities is a musical sonification of data which projects the likely impact rising sea levels will have on cities globally. It is also a musical representation of why we need to

address the issue of climate change now. The data used in the piece was supplied by Climate Central, of Princeton, NJ. It details how rising sea levels will inundate individual cities. It considers various possible scenarios based on the degree to which we mitigate the release of carbon emissions in the atmosphere. For each city, under each scenario, there is data which shows the percentage of the population which will be displaced. I have used the two most extreme scenarios. In the scientific literature they're described according to the Representative Concentration Pathways (RCP), which track carbon emissions over time. The first movement uses data from the scenario in which carbon emissions continue as they were in 2015, or RCP 8.5. The second movement uses data from the scenario in which we are successful in cutting most carbon emissions, or RCP 2.6. The first movement uses data from Shanghai (China), Mumbai (India), Bangkok (Thailand), and Osaka (Japan). The second movement uses data from Miami (USA), Sidoarjo (Indonesia), and Tianjin (China). The basic data mapping of the piece is very simple: After an initial statement of a oneminute musical idea, the idea is repeated, but with the percentage of population which will be impacted by sea level rise in the particular scenario reflected by subtracting that percentage of the notes from the music. The data changes every 5 years, and that time frame is reflected with a musical change every 20 seconds or so, ranging from the year 2015 to 2100. The years from which data is taken are marked in the score as boxed text. As you might expect, the first movement nearly disappears, since it reflects the scenario of "business as usual" in terms of carbon emissions. The second movement changes, but not nearly as drastically.

There is a video which accompanies the piece, created by R. Luke DuBois and Emilio Hernandez Cortes, and available at https://youtu.be/veEHLTaBxwQ. The video shows street maps of the cities whose data is being used in each ovement, and

the year. As the score moves through the years of the 21st century, each map is overlaid with blue, representing the encroachment of the ocean as projected in Climate Central's data.

A second level of data mapping involves the processing of the acoustic sounds of the quartet, and it is more or less the inverse of the process described above. Using the same data sets as are used to subtract notes from the musical materials, the volume of the processing is increased to reflect the percentage of population in the city which will be displaced by the rising sea level. The processing covers portions of the music, just as the ocean will cover portions of the cities.

Composer Neil Rolnick *pioneered the use of computers in musical performance, beginning in the late 1970s. Based in New York City since 2002, his music has been performed world wide, including recent performances in France, China, Mexico and across the US. His string quartet Oceans Eat Cities was performed at the 2015 UN Global Climate Summit in Paris. In 2016 he was awarded an ArtsLink residency in Belgrade, Serbia. In 2017 he was a fellow at the Bogliasco Foundation in Italy, and received a New Music USA Project Grant.*

In 2019 he received a NYSCA Individual Artist Grant. He has released 21 CDs of his music. His work ranges from digital sampling and interactive multimedia to acoustic vocal, chamber and orchestral works. Throughout the 1980s and '90s he was responsible for the development of the first integrated electronic arts graduate and undergraduate programs in the US, at Rensselaer's iEAR Studios, in Troy, NY.

Though much of his work connects music and technology, and is therefore considered "experimental" music, Rolnick's music has always been highly melodic and accessible, and has been characterized by critics as "sophisticated," "hummable and

engaging," and as having "good senses of showmanship and humor."