ARS ELECTRONICA

JKU
JOHANNES KEPLER
UNIVERSITÄT LINZ

CMS
Computer Music Studio

ANTON BRUCKNER
PRIVATUNIVERSITÄT
Tanz
Musik
Schauspiel
OBERÖSTERREICH

# Bridges 2019 @ Anton Bruckner Private University

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LAND OBERÖSTERREICH  KULTUR

## Formal Music Night

# "ASR –
# algorithmic and
# stochastic resonance"

## MI 17.07.2019
## _ 20.00 Uhr
## Großer Saal _ ABPU

Institute for Composition, Conducting and
Computer Music | Computer Music Studio
Institute of Keyboard Instruments

Eintritt frei
Weitere Informationen unter
http://avant.mur.at/concerts/2019/Bridges/
http://bridgesmathart.org/bridges-2019/

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Ö1 CLUB

# — PROGRAMM —

Bridges 2019's Music Night features a concert of algorithmic and stochastic compositions, improvisations and realtime processing organised by the Computer Music Studio of the Institute of Composition, Conducting and Computer Music in cooperation with the Institute of Keyboard Instruments at the ABPU.

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**Idem**                           **minimal music for accordion duo**
by Andreas Weixler

accordion: Miloš Katanić, Vojtěch Drnek


**Trois cent notes**               **multidimensional vectoral composition for piano solo**
by Karlheinz Essl (2019 Austrian premiere)

piano: Jan Satler


**Time Paradox**                   **8 channel electroacustic composition**
by Rosalia Soria (2015)

based on 3 different sonifications of a mathematical model representing a mass-spring-damper system implemented in Supercollider


**Suite Irrational, 4. Satz**      **super symmetrical composition for 2 grand pianos**
by Kurt Hofstetter (2018)
Uraufführung

piano performer: Till Körber and Sven Birch


**Pascherischer Tanz**             **quantum music for accordion**
**(Paschen-Dance)**                by Kim Helweg (2018)

accordion: Miloš Katanić

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| **Ashley Ave** | **algorithmic composition for piano and stochastic multichannel spectral delay**<br>by Andreas Weixler (2008)<br><br>piano: Aleksandra Dragosavac |
| **Momentum I** | **Realtime groove and melody generation through tessellation and randomized patterns for violoncello and electronics**<br>by Michael Mayr/Katja Finsel<br><br>cello: Katja Finsel<br>electronics: Michael Mayr |
| **In großen Takten singt das Meer** | **composition for 2 pianos and resonances**<br>by Se-Lien Chuang (version Bridges 2019)<br><br>piano performer: Till Körber & Aleksandra Dragosavac |
| **Virtuoso Chances** | **realtime computing of audiovisual intermedia improvisation with stochastic controlling methods**<br>by all performer (2019) |

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**Performed by ABPU professors, staff, students and alumni:**

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| piano performer | Till Körber, Sven Birch, Aleksandra Dragosavac & Jan Satler |
| accordion | Miloš Katanić, Vojtěch Drnek |
| cello | Katja Finsel |
| electronics | Michael Mayr, Se-Lien Chuang, Andreas Weixler |
| CMS Organisation<br>VA Büro ABPU:<br>Technikleitung | Andreas Weixler & Se-Lien Chuang<br>Ursula Weber, Katrin Truttenberger<br>Mathias Burghofer, Michael Wirthig |

**Idem**                    minimal music for accordion duo
                           by Andreas Weixler

                           performed by Miloš Katanić and
                           Vojtěch Drnek, accordion

In 1990 I joined the concert series and the Austrian composers association „die andere saite" to get my current work for two pianos premiered.
Idem is one of the significant pieces in my artistic work, it led me from minimal music, which I see as the archetype of algorithmic composition, on to computer music. Today, 29 years later, I deal with audiovisual interactivity in artistic consistency. It took just as long as 12 years for „idem" to be premiered in my wonderful home town Graz in a concert for two pianos. You see, as a composer you sometimes have to be patient, but visions become carried out from time to time. That's why I have good hope to see more ideas come true. Tonight you hear the 2019 version for two accordions for two wonderful young musicians who choose this challenge. And I have already taken a deep breath and wish you all a wonderful concert evening.
Yours Andreas Weixler

Idem (Latin for the same) is a cycle of a group of works of various instrumentations, which deal with the the change of perception of equivalent events in different context. Idem I and Idem II are a procedure of two whole-tone groups in a minimal music composition. The consistent thought for Idem is the multilayered polyrhythmic shift of musical motifs, which allow the listener to hear new tonal contexts, gradually mutate into accompaniment while new material of the accompaniment grows out and, in turn, forms itself motivically. The music lies in the ear of the listener.

Performances and CD
Idem was already performed amongst others by Klangforum Wien and Zurich Ensemble for New Music and became part of the Toy Piano World Summit at the Philharmonie Luxemburg dedicated to the 100th birthday of John Cage and is released on the CD d.a.s. 2 with the percussion ensemble Dama-Dama.

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**Programmänderungen vorbehalten!**

Sie möchten regelmäßig über das Veranstaltungsprogramm der Bruckneruniversität informiert werden? Gerne halten wir Sie mit unseren Newslettern auf dem Laufenden! Jetzt anmelden unter **https://www.bruckneruni.at/newsletter/**

**Trois cent notes**     **multidimensional vectoral composition for piano solo**
by Karlheinz Essl (2019 Austrian premiere)

performed by Jan Satler, piano

Trois Cent Notes weist einen Tonumfang von drei Oktaven ab und besteht aus drei Abschnitten zu je 100 Tönen. Die Oktavverhältnisse werden auch auf die Tempoveränderungen übertragen, die das ganze Stück prägen. Die Harmonik ist ebenfalls daraus abgeleitet: der Ton f spreizt sich über drei Oktaven zu einem vierstimmigen Oktavklang aus; diese Übergangsvektoren werden an 13 verschiedenen Punkten vertikal abgegriffen und ergeben unterschiedliche Akkorde, die jeweils aus gleichen Intervallen bestehen.

In this piece which last around 4 minutes, the sustain pedal has to be depressed until the very end.Although notated solely in quavers, the tempo emcompasses a wide range from very slow to extremly fast. Starting with a speed of MM = 50, it gradually accelerates to MM = 400 which equals three "time octaves", speaking with Karlheinz Stockhausen (cf. his famous article ...how time passes... from 1957). A similiar transition also happens in the harmonic domain where the range of three octaves (from F to f") finally collapses into a single pitch (f'):And also in the dynamics, a permanent process of crescendo and diminuendo takes place. Needless to mention, all this processes happen simultaneously at the same time. Despite its strict structure, the piece should be played in a fluent rubato attitude with lots of espressivo. Pay attentention to the piano resonance while playing – they will guide you through this sound journey.     **http://www.essl.at/works/TCN.html**

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**Time Paradox**     **8 channel electroacustic composition**
by Rosalia Soria (2015)

based on 3 different sonifications of a mathematical model representing a mass–spring–damper system implemented in Supercollider

This piece was composed using 3 different sonifications of a mathematical model representing a mass–spring–damper system implemented in Supercollider. The sonifications consist of multichannel synthesisers, modulated by the mass position and velocity when different "virtual forces" were applied to it in real time. The behavior of the system translates into changes in timbre and motion illusions.
These synthetic sounds are combined with recordings of the very traditional singing bowls to create depth and contrast. Additional textures where created by transforming fragments of these recordings using the dynamics of an inverted pendulum model manipulated in real–time in Max.

# — PROGRAMM DETAILS —

**Suite Irrational, 4. Satz**    **super symmetrical composition for 2 grand pianos**
by Kurt Hofstetter (2018)
Uraufführung

Suite Irrational was composed using the Supersymmetrical Composition Technique, which was defined and published by Hofstetter Kurt in 2016. This technique is based on the time-space commutation through the application of Inductive Rotation, a recursive method for generating aperiodic and asymmetric patterns – Irrational Patterns. Due to precise overlapping, Inductive Rotation simultaneously creates two levels of Irrational Patterns that are interrelated and in supersymmetrical relationship – i.e. the transparent overlap of foreground and background pattern is completely symmetrical.

Here, the Inductive Rotation is applied on matrices of notes defined as points (x,y) where x-axis=time and y-axis=pitch, to generate Irrational note patterns.  Iteratively, these matrices of notes are rotated successively by 90 degrees, so that the time axis of the note is converted to the pitch of the note and vice versa. In this way, for example, successive notes of the same pitch become chords and vice versa.

Transparent strips of points/notes cut out from the foreground and background patterns form the elements for successive arrangement in the composition. The points correspond to notes on a piano, in the same way as the holes on the perforated paper roll for a mechanical player piano (Phonola / Pianola) correspond to piano notes. The notes of the foreground patterns are assigned to one piano and those of the background patterns to a parallel, second piano. Being played with the pedal depressed closes the circle to its sound.

- supported by the commission for composition from the City of Vienna and the Federal Chancellery of Austria

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**Pascherischer Tanz**    **Quantum music for accordion**
**(Paschen-Dance)**    by Kim Helweg (2018)

performed by Miloš Katanić, accordion

„This piece was composed in 2018 as a part of an Erasmus agreement between the University of Music and Performing Arts in Graz and The Danish National School of Performing Arts and directly written to Milos Katanic.

The title indicates that the music is inspired by dance and also science. Friedrich Paschen was a German physicist well known for the discovering of the Paschen series in 1908, which is one of the series of the hydrogen spectral lines. The Danish physicist Klaus Mølmer has composed a list of the hydrogen series as frequencies, which by transpositions can be used as musical scales. The 6 first scales are based on the Lyman, Balmer, Paschen, Brackett, Pfund and Humphrey series. In this piece, the Brackett and the Pfund "scales" are used and it is the first piece using two different series.
This quantum composing technique was developed 2015–2018 in the international artistic research project called Quantum Music, which was supported by Creative Europe and the Danish Arts Foundation.
The piece is built on two ideas:
1) A very rhythmical section aggressively presenting the Brackett scale. First, one note alone then slowly adding the other notes of the scale.
2) A lyrical theme using the tonal aspect of the Quantum series.
In the development section, the material is mixed and it ends up this way, that the lyrical theme takes over the rhythmical shape of the first material. The mood of the music expresses an atmosphere of both mechanical movements and of pastoral harmony. The sound of quantum mechanics."                                    Kim Helweg

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**Ashley Ave**                    **algorithmic composition for piano and stochastic**
                                  **multichannel spectral delay**
                                  by Andreas Weixler

                                  piano: Aleksandra Dragosavac

This composition has been created during the residence at SARC – the Sonic Arts Research Center at the Queen´s University in Belfast.
It deals with pulsation of single chord notes wihtin random functions – an arpeggio of virtuoso chances if you will.
The acoustic sound of the grand piano  will then be slightly processed by spectral delays and spatialised by the sarcastic system (algorithmic sound diffusion system by the author).

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**Momentum I**                    **Realtime groove and melody generation**
                                  **through tessellation and randomized patterns**
                                  **for violoncello and electronics**
                                  by Michael Mayr/Katja Finsel

                                  cello: Katja Finsel
                                  electronics: Michael Mayr

# _ PROGRAMM DETAILS _

**In großen Takten singt das Meer**

**composition for 2 pianos and resonances**
by Se-Lien Chuang (version Bridges 2019)

This piece is conceived of experiencing the harmonic series of open strings – i.e. muted keys – on the piano, where the resonances of the unplayed strings/notes could be induced. From the open bass strings that vibrate through the overtones of the related pitch we can surprisingly generate audible virtual sound waves.
To perceive the musical sounds without the optical/visual corresponding feedback of the keystrokes is a challenging listening reflection.

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**Virtuoso Chances**

**realtime computing of audiovisual intermedia improvisation with stochastic controlling methods**
by all performer (2019)

piano performer: Till Körber, Sven Birch, Aleksandra Dragosavac & Jan Satler
accordion: Miloš Katanić, Vojtěch Drnek
cello: Katja Finsel
electronics: Michael Mayr, Se-Lien Chuang, Andreas Weixler

The realtime processes of an audiovisual interactive computer system collude with a free artists musical expression. Our art work and research describes the hook-up between human and machine, between musical inspiration and digital concepts. Nowadays, as different forms of machine musicianship are blooming and where computer act like virtuoso musical instruments we are focusing on a very specialized form of realtime performance with a computer system. Every performance of our interactive audiovisual works – even of the same title – is unique not only because of the inherent concept of improvisation, but also because the computer system and the progamming are further developed for every event to perform virtuoso audiovisual interaction with musical instruments. To achive this we combine improvised music and real-time computer processes in an audiovisual real-time improvisation. The live sound of acoustic instruments serve as an interface in an audiovisual interactive concert. To control the big punch of available parameters we use limited random functions – which we call virtuoso chances. The peculiarity is the intuitive and artistic control and linking of the parameters and treating the computer system like a musical instrument, which has to be studied, continueously trained and rehearsed to perform in a virtuoso manner. The intention of our realtime performances is to create a special field of improvisation between the instrumental player and the computer performer, the computer performer are considered as an equally active improvising and composing musician.
The musical and visual components interact and reciprocally influence each other in order to blend into a uniqe, synaesthetic, improvisational work of art.

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