

CCM

FACULTY ARTIST SERIES
PRESENTS

MARA HELMUTH, COMPOSITION

ASTRAL REFLECTIONS

Esther Lamneck, tárogató

Elysian Trombone Consort: Timothy Anderson,
Chad Arnow, Bradley Kerns, Nathan Siler

Timothy Northcut, tuba

Jacob Ottmer, vibraphone

Tuesday, September 5, 2023
Cohen Family Studio Theater
7:30 p.m.

University of
CINCINNATI



COLLEGE-CONSERVATORY
OF MUSIC

PROGRAM

Expanding Space

Timothy Northcut, tuba

Mara Helmuth
(b. 1957)

Opening Spaces

Mara Helmuth

Sound Dunes

Esther Lamneck, tárogató

Mara Helmuth
Esther Lamneck

From Orion to Cassiopeia

Bill Gwynne, video

Mara Helmuth

Astral Reflections

Elysian Trombone Consort

Timothy Anderson

Chad Arnow

Bradley Kerns

Nathan Siler

Mara Helmuth

Onsen: Hot Springs

Jacob Ottmer, vibraphone

Mara Helmuth

Burren Wind

Esther Lamneck, tárogató

Alfonso Belfiore, video

Mara Helmuth
Esther Lamneck

PROGRAM NOTES

Expanding Space

The title refers to the astronomical concept of the expanding universe. As we on earth fly through space, the universe is increasing in size, increasing our distance from other suns and galaxies. As we obsess with our phones or other technologies, what is lost in real human communication? Are we becoming closer or more remote from each other?

Opening Spaces

Opening Spaces originated with my contribution to a virtual reality installation project collaboration with CCM composition students. The listener in the installation navigated among transforming Menger Sponge structures. I was surprised that virtually experiencing these structures had a nurturing and relaxing effect on me. Python scripts were used to make the fractal models in Blender, which were then brought into Unity 3D with localized RTcmix sound algorithms.

Sound Dunes

Sound Dunes, for tárogató and fixed media, is the third collaboration composed by both Mara Helmuth (computer music) and Esther Lamneck (tárogató). It was inspired by exploration of the tárogató sound world, and its digital transformations. The piece has resonances with the natural environment of a sand dune, with its curving contours and granular texture. The piece was premiered at the Diffrazione Multimedia Festival 2019 in Florence, Italy, and an immersive version was created for 40 channels in the Sonic Laboratory at Sonic Arts Research Centre in Queens University Belfast. It is heard tonight in eight channel audio.

From Orion to Cassiopeia

From Orion to Cassiopeia emerged from experiments with sonification of pulsar data. One of the more interesting types of celestial objects, pulsars are formed when the fire in a star burns up all of the fuel, ending with a supernova explosion. Rotations of pulsars can be so precise as to serve as a clock. Scientists have observed gravitational waves after neutron stars collide. Telescopes on earth detect pulses of many different frequencies and spectra, from pulsars across the galaxy. Each pulsar has a unique set of characteristics. Granular synthesis is a logical synthesis technique to use for this sonification because of the appropriateness of mapping the pulsar rotation speed to grain rate and frequency. *From Orion to Cassiopeia* contains sounds from each known pulsar from galactic longitude 270 degrees to 360/0 to 120 degrees.
(cont.)

PROGRAM NOTES

A sparse fantasy section in the middle, from a stretched out version of the piece, interrupts the high densities near the galactic core. Synthesis was done using new RTcmix granular synthesis instruments programmed by Kieran McAuliffe and Mara Helmuth. The piece was generated from a single script.

Bill Gwynne, astrophotographer, sound engineer and musician, created the video from his photos of space.

Astral Reflections

Astral Reflections is inspired by space, in the beginning with colorful resonances heard through vast distances, followed by explorations of time and trombone glissandi. The final section evokes the fiery physics of stars. The piece was written for the Elysian Trombone Consort in summer, 2023.

Onsen: Hot Springs

Onsen: Hot Springs, for vibraphone and stereo fixed media, was inspired by the luminous sound of the vibraphone and also by audio samples of percussionist Joseph Van Hassel, who commissioned the piece, striking metal sculptures on the University of North Carolina campus. The most intriguing of these sounds came from structures with tentacle and metal hole shapes. Families of rhythmic sounds with rich timbres were generated with digital signal processing (granular synthesis, spectral editing, and delays) applied to the samples, for the electronic part. The energy and form of the piece were also inspired by a visit to Shoya-onsen, the hot springs south of Tokyo where I experienced the bubbling, invigorating warmth of the natural mineral springs.

Burren Wind

The Burren is on the Wild Atlantic Way on the coast of Ireland, where one experiences the “ancientness” of limestone landscapes, the winds off the ocean, and intricate rock shapes with colorful bursts of lichens and flowers. These all inspired the lines, sounds and textures of Burren Wind, with audio and video created from tárogató multiphonics, granular synthesis algorithms and images of the Burren. Esther Lamneck and Mara Helmuth created the piece after visiting the Burren, following the International Computer Music Conference at the University of Limerick. Alfonso Belfiore created an interactive video component based on his images of the Burren.

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