MUSICAL OF TODAY: PERFORMING WITH THE BRAIN

Friday, April 19, 2019 - 7:30pm
Meany Studio Theater
FREE

DXARTS co-founders Richard Karpen, left, and Juan Pampin discuss the musicians' brain waves during a rehearsal on the UW campus in Meany Studio Theater. (Alan Berner/The Seattle Times)
Using only their brain waves, quadriplegic artists improvise with professional musicians in this collaboration between DXARTS Art+Brain Lab and Swedish Neuroscience Institute. In a research project hosted at DXARTS' Art + Brain lab in collaboration with Swedish Neuroscience Institute, the patients learned to perform the Encephalophone, a novel Brain Computer Music Interface allowing the creation of music without movement. Made possible with funding from a Creativity Connects grant from the National Endowment for the Arts.

**PROGRAM BACKGROUND**

*Performing with the Brain: A musical performance by patients with motor disabilities.*

**Project directors: Thomas Deuel, Juan Pampin and Richard Karpen**

The Encephalophone is a music prosthetic which uses EEG signal ('brain waves') from paralyzed individuals to play musical instruments hands-free, thus re-enabling musical expression in those who have lost this from neurological injury. In conjunction with DXARTS at U.W., clinical trials are being completed at Swedish Neuroscience Institute under a Creativity Connects grant from the National Endowment for the Arts, culminating in this unique event. This workshop-style experimental concert features two quadraplegic artists from the clinical trial - Jeremy Best and Jonathan Sari - improvising with the Encephalophone with an ensemble of professional jazz musicians (Chris Icasiano - drums, Evan Flory-Barnes - bass, Alex Guilbert - piano, Ray Larsen - trumpet). They will play original compositions written specifically for the instrumentation of the Encephalophone by composer Allan Loucks. The experimental nature of this performance and its musical and technological challenges will make for an unprecedented musical event.

**PROGRAM**

Introduction and background of the Encephalophone, clinical trials, and performance preparation by Dr. Thomas Duel

*Jeremy's Changes*, a rearrangement by Allan Louks of *Sue's Changes* by Charles Mingus

*Jeremy Best, Encephalophone*

*Motor Neuron*, original composition by Allan Louks

*Jonathan Sari, Encephalophone*

*Epilogue*, original composition by Allan Louks

*Disklavier duet for Encephalophone with Jonathan Sari and Jeremy Best*

Open improvisation over *So What* by Miles Davis

**ARTIST BIOS**

*Thomas Deuel*

Thomas Deuel received his B.A. in Molecular Biology from Princeton University, after initially concentrating in Music Composition. He received both an M.D. and a Ph.D. in Neurobiology from Harvard University, where his doctoral dissertation focused on genetics and neurophysiology of cortical development. In parallel, he studied jazz composition and performance at New England Conservatory in Boston. He did a residency in Neurology at Massachusetts General Hospital and Brigham and Women's Hospital, and fellowships in Neurophysiology at Beth Israel Hospital in Boston and the University of Washington. His post-doctoral research focused on complex sound and music processing in the human cortex.

He also brings several years of practice as a sound artist, making site-specific sound installations, interactive music devices, and sound sculptures. His current work involves development of a brain-music interface, using thought control of the subject to create music compositions without movement. He is currently on medical staff at Swedish Hospital as a practicing neurologist, and an epilepsy and EEG specialist.
Juan Pampin (b. Buenos Aires, 1967) is Professor of composition at University of Washington and founding faculty member of the Center for Digital Arts and Experimental Media (DXARTS) for which he currently serves as Director.

Pampin received an MA in Composition from Conservatoire National Supérieur de Musique de Lyon, France and a DMA in Composition from Stanford University, where he studied with composer Jonathan Harvey. Juan Pampin's works explore the territory articulated by the concepts of space, memory, and material, using algorithmic composition and signal processing tools of his own development.

Juan Pampin's music compositions, including works for instrumental, digital, and mixed media, have been performed around the world by world-class soloists and ensembles. His work "On Space"—for percussion sextet and 3D electronic sounds—has been recently released on CD as part of Les Percussions de Strasbourg 50th anniversary historical edition box published by Universal France.

Richard Karpen is a composer and researcher in multiple areas of music and the arts. His compositions for both electronic media and live performance are widely known, recorded, and performed internationally. Over the last 30 years, he has also been in the forefront of the development of computer applications for music composition, interactive performance, and the sonic arts. He recently returned to the stage and the studio as a pianist.

Karpen was the founding director of DXARTS and is currently Director of the School of Music at the University of Washington, where he is also Professor of Music Composition. He has been the recipient of many awards, grants, and prizes, including those from the National Endowment for the Arts, the Bourges Contest in France, and the Luigi Russolo Foundation in Italy. Karpen has composed works for many leading international soloists, such as soprano Judith Bettina, violists Garth Knox and Melia Watras, trombonist Stuart Dempster, flutists Laura Chislett and Jos Zwaanenberg, guitarist Stefan Östersjö, and ensembles such as The Six Tones, JACK Quartet, The Seattle Symphony, and the Harry Partch Ensemble. Karpen is a founding member, with Cuong Vu, of the experimental improvisation ensemble Indigo Mist. As a pianist, Karpen has performed and recorded with Cuong Vu, Bill Frisell, Ted Poor, Steve Rodby, and others. Karpen's compositions and performances have been recorded on a variety of labels including Wergo, Centaur, Neuma, Le Chant du Monde, DIFFUSION i MeDIA, Fleur du Son, Capstone, and RareNoise.

People Involved: Juan Pampin, Richard Karpen
Event Type: Faculty Performances, Performances, Special Events, Visiting Artists and Scholars
Related Areas of Study: Composition, Jazz and Improvised Music

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