



UNIVERSITY OF OREGON

**SCHOOL OF MUSIC AND DANCE**

VISITING ARTIST  
**James Dashow**

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**Season 112, Program 88**

**Beall Concert Hall**  
**Saturday, April 27, 2013, 7 p.m.**



### The Music of James Dashow

***Soundings in Pure Duration n.3*** James Dashow  
for guitar (MIDI pre-recorded) and  
hexaphonic electronic sounds\*

***Soundings in Pure Duration n. 2a*** James Dashow  
for pre-recorded percussive sounds  
and hexaphonic electronic sounds

***Soundings in Pure Duration n. 4*** James Dashow  
for viola (MIDI) and octophonic electronic sounds\*

\* guitar, viola and harp soloists are pre-recorded MIDI realizations

### Intermission

***Soundings in Pure Duration n.5*** James Dashow  
for harp (MIDI) and octophonic electronic sounds

***Two scenes from ARCHIMEDES*** James Dashow  
a planetarium opera (hexaphonic electronic sounds)

1. Prologue - in which it all begins  
Philip Kerr, voice of prime mover
2. Mathematics III

he composed the first works of computer music in Italy; he has taught at MIT, Princeton University, the Centro para la Difusion di Musica Contemporanea in Madrid and the Musica Viva Festival in Lisbon; he was invited by the Conservatorio di Musica Benedetto Marcello in Venezia to teach an intensive series of workshop/masterclasses in digital sound synthesis techniques applied in particular to compositional practices, and to various aspects of the spatialization of sound.

In 2011, Dashow was presented with the distinguished career award "Il CEMAT per la Musica" from the Federazione CEMAT (Roma) for his outstanding contributions to electronic music.

He was composer in residence at the 12th Florida Electroacoustic Music Festival, and he continues to lecture and conduct master-classes extensively in the U.S. and Europe. Recent engagements have taken him to Cracow, Den Haag, Cosenza, Trento, New York, Rutgers University, Edinburgh, Aberdeen, Huddersfield, Sheffield, Chicago, Boston, Universities of Iowa and Maryland, and Washington D.C. His current tour is taking him to Santa Barbara, San Francisco, Eugene OR, Seattle and MIT in Cambridge. Dashow served as the first vice-president of the International Computer Music Association, and was for many years the producer of the radio program "Il Forum Internazionale di Musica Contemporanea" for Italian National Radio.

He has written theoretical and analytical articles for *Perspectives of New Music*, the *Computer Music Journal*, *La Musica*, and *Interface*; he is the author of the MUSIC30 language for digital sound synthesis, and the Dyad System, a compositional method and technique for developing pitch structures and integrating them in electronic sounds. He was the subject of an extended interview published in the *Computer Music Journal* (Summer, 2003). His music has been recorded on WERGO (Mainz), Capstone Records (New York), Neuma (Boston), RCA-BMG (Roma), ProViva (Munich), Scarlatti Classica (Roma), CRI (New York), BVHAAS (Amsterdam) and Pan (Roma).

Dashow makes his home in the Sabine Hills north of Rome.

Further information and downloadable software relative to the composer's Dyad System and MUSIC30 are available at his website: [jamesdashow.net](http://jamesdashow.net)

in ARCHIMEDES, coming in the opera's finale. Here I let Archimedes speculate on the mathematics and mathematical physics of the 20th and 21st centuries. The images associated with these extraordinary developments, both abstract and physically real, are again given 3-dimensional choreographic life as they dance and gambol around the planetarium dome, always in synchronization with the music whose primary goal is two-fold: generating textures that fully complement the visual realization of the images, and generating different kinds of spaces in which the images move. The spatialization of the sounds is as important compositionally as the invention and transformations of the electronic timbres. The sounds not only move *in* space, but they are often designed to give the feeling of the movement *of* space, or of several kinds of spaces with different characteristics that move and evolve contrapuntally.

The graphics sequence begins with Feynman diagrams, the very simple but highly effective imagery designed by Richard Feynman to suggest the interactions of sub-atomic particles. These are followed by cloud chamber images (that were used prior to computer graphics for discovering sub-atomic particles), that transform into representations of chaos, then twistor space and superstring theory emerge, followed by some of the cosmological contemplations of brane theory and its inevitable relationships to relativity. Archimedes is rudely interrupted in his fantastications, and this action takes the opera to its tragic conclusion. In this concert version the interruption is only hinted at (the transformed inharmonic guitar sounds), and the piece ends with Archimedes last, idealistic, vision.

### ABOUT DASHOW

**James Dashow** has had commissions, awards, and grants from the Bourges International Festival of Experimental Music, the Guggenheim Memorial Foundation, Linz Ars Electronica Festival, the Fromm Foundation, the Biennale di Venezia, the USA National Endowment for the Arts, RAI (Italian National Radio), the American Academy and Institute of Arts and Letters, the Rockefeller Foundation, Il Cantiere Internazionale d'Arte (Montepulciano, Italy), the Koussevitzky Foundation, Prague Musica Nova, and the Harvard Musical Association of Boston. In 2000, he was awarded the prestigious Prix Magistere at the 30th Festival International de Musique et d'Art Sonore Electroacoustiques in Bourges.

A pioneer in the field of computer music, Dashow was one of the founders of the Centro di Sonologia Computazionale at the University of Padova, where

The series of pieces, ***Soundings in Pure Duration***, are all designed to explore timbral and spatial aspects of a wide variety of audio material. Although the pieces have much in common, especially in the electronic sounds, these latter have been carefully designed to blend, mix and contrast with the different solo instruments in ways that capture and complement the articulation and timbral characteristics of each instrument.

Generally these works are in three or four parts that are performed continuously. The intervallic structure for the pitched instruments is rigorously derived from my Dyad System, each work exploring different ways of going about designing successions and simultaneities that emerge from the procedures I invent for and with the System; so far, the System has proven to be so rich in possibilities that I have used a different procedure for each piece, and this includes works prior to the *Soundings* series.

While the electronic sounds usually contain the soloist's pitches embedded in them, once again according to the principle techniques of the System for generating sounds based on specific dyads, in these pieces I have taken some liberties in the choice and transformations of some of the sounds in order to both have a more refined timbral control and obtain the *appropriate* variety that I felt necessary at various moments during each piece.

The piece with percussion sounds treats the percussion electronically rather than as pitched instruments, even though with computer sampling I was able to employ a full array (20 or more precisely tuned) of such instruments as bongoes, congas, log drums, djembes, nagaras, etc. The principle compositional approach for *n.2a* (and its companion piece *n.2b*, which won't be performed tonight) was in working out spatialization ideas, where the percussion instruments clearly mapped out their trajectories (or what I like to call "choreography") in ways very different from the sustained electronic sounds whose mode of generating spatial awareness is more like an enveloping cloud than a precisely defined pathway.

But to one degree or another, all of these pieces attempt to elaborate my twin spatialization concepts of movement *IN* space, and movement *OF* space. The former is the usual way of moving things around; the latter is not only more difficult to achieve but rather difficult to define until you've actually heard/felt it: the listener has an awareness of a certain kind of space that moves from one *area* (rather than point) to another. The space can transform dimensionally or timbrally as it moves, and if acoustics and loudspeakers permit, two or more kinds of space can move around in a sort of spatial counterpoint. The dynamics of moving in and of space offer compositional

possibilities that are quite unique; contrapuntal lines are now literally, physically, moving around in their own spatial patterns and velocities, the listener now has the (extraordinarily expressive) sense of being *inside* the counterpoint rather than outside looking at a single audio point containing all the lines together. It is as if the single audio point is exploded into its full dimensionality. Following the trajectories of 2 or more sequences of events is every bit as fascinating as keeping track of multiple contrapuntal lines in traditional instrumental writing. Where music up to now has largely been What Happens When, it is now What Happens When and Where.

The title, ***Soundings in Pure Duration***, comes from Henri Bergson in one of his essays on Time; in the original French the word "Soundings" is limited to meaning only (something like) "inquiries" or "plumbing the depths", which it shares with English. The French doesn't have the play on the word *Soundings* as does English (you might say it loses something in the original), and so in its double sense it seemed to me a perfect description of my approach to electronic music.

**ARCHIMEDES** is an opera designed for performance in a Planetarium. The multi-channel music that creates the audio sense of space and depth is composed to interact with the three dimensional depth video, produced by the new computer controlled planetarium technology, which surrounds the audience as much as does the sound. The planetarium people refer to this as full immersion, and it is this sense of full immersion that is an integral part of the theatrical conception realized in ARCHIMEDES.

The story is derived from what little we know about the life of the great mathematician from Plutarch's Life of Marcellus; the "facts" of his life are the basis for some imaginative interpolation to create a theater work that begins with a Planetarium spectacle, and evolves from opera buffa to opera tragica during the course of the work. The "electronic stagecraft" of the planetarium visuals is as much a part of the story as is the narrative. One of the interpolations allows Archimedes to speculate on the entire history of mathematics and mathematical physics up to our own times, in three separate Mathematics Sequences. The images associated with these developments of over 2000 years of thought are made to dance and transform on the planetarium dome, ranging from the fundamental geometries of Archimedes himself through the calculus (a version of which Archimedes invented but lacking algebra, could not develop further), through non-euclidean geometries to relativity, and to sub-atomic particle physics and molecular biology: all of these disciplines have associated with them

beautiful imagery which I and my graphic associates elaborate into a planetarium audio-video motion artwork. To borrow a phrase from William James, the opera is conceived as "a stream of metamorphosing tableaux and echoing images", complete with an unexpected, almost Da Ponte-like, ending.

In the **Prologue**, I take advantage of the resources of the Planetarium to depict the beginning of it all, a Big Bang and the spectacular evolution of our Universe that includes, of course, the evolution of one tiny part of those immense forces and unimaginable mass into a very unique creature called Archimedes.

There are two parts: in the first, the Prime Mover creates it all including life and the lesser gods; and in the second, the Demiurge, one of these latter creations, is assigned the difficult task of generating specific earthly creatures, including, especially, humans. It is the Demiurge who decides on the grand experiment, creating one man with extraordinary insight and understanding.

The text for The Prime Mover, by poet Theodore Weiss, is a masterly adaptation of Plato's Timaeus where the creation of the universe is described in terms of a pure geometry.

The sounds are a mixture of extreme transformations of acoustic sounds, and original electronic sounds generated with MUSIC30. The Prime Mover is characterized largely by a multi-channel voice and chorus sounds, while material for the Demiurge is derived from transformations of a variety of recorders ("flauto dolce"), soprano, alto, tenor, bass in F and bass in C, recorded for me by Antonio Politano.

The Prologue makes use of a great many spatialization techniques, for the movement of sounds in space, for creating different senses of volumes (3D space), and simply for making different kinds of timbral mixes. Electronic sounds and electronically transformed acoustic sounds are combined into a rich variety of sonic objects, which, to the composer, are like huge, invisible, ever changing, living things.

Only The Prime Mover, in part I, is presented here in a complete performance. *Computer animations/video by Kevin Beaulieu.*

**Mathematics III** is the third and final sequence of mathematical images