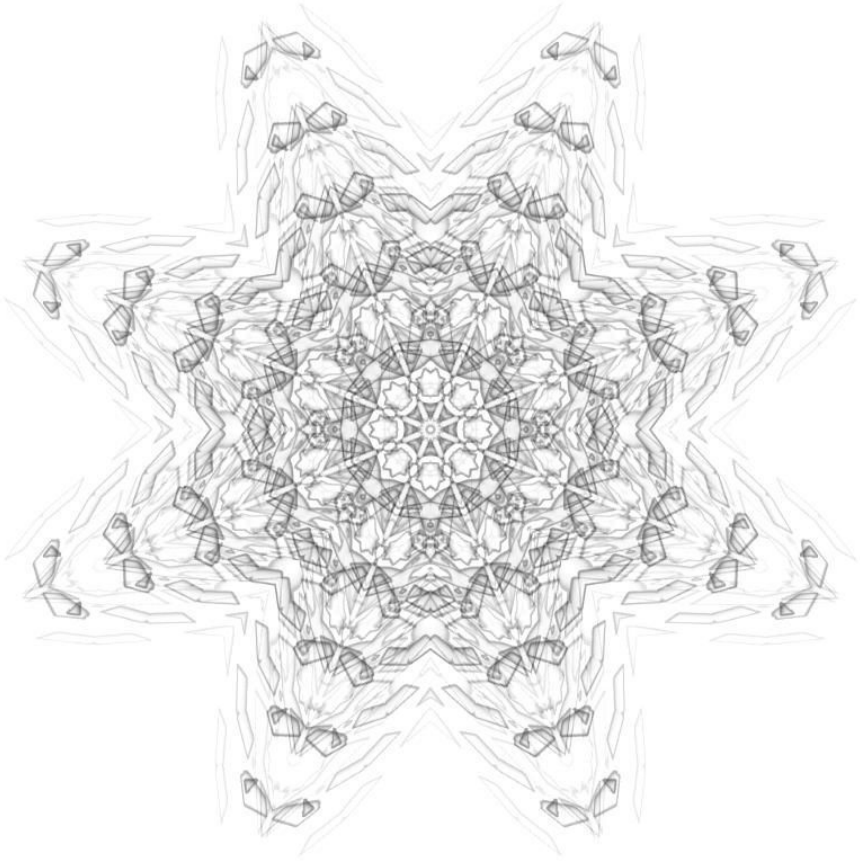
MAT
Media Arts and Technology
End of Year Show



Audio-Visual Programming

1605 Elings Hall, UCSB
8:00pm May 23, 2013

About Purpose Loop Tim Wood

An improvised performance combining acoustic sounds and poetry blended together using some home made looping tools. Intricate patterns rise and fall when you embrace repetition.

www.fishuyo.com

Improvisation Charlie Roberts

Live coding is an experimental improvisation practice where performers create a piece of music or visual art by coding it in front of an audience. The code is projected for audience members to see. The expectation is not that all audience members will be able to follow the code that is generated, but rather that there will be varying degrees of understanding in the audience just as there is in any musical performance. This particular live coding improvisation will focus on the idea of resampling. Generative music will be recorded and the resulting sounds will then be layered on top of the original material at different speeds. As this procedure is repeated, dense textures emerge from simple beginnings.

Gibber, the software used for this performance, runs in the browser. You can try it out at www.charlie-roberts.com.

Salton Sea Revisited Xárene Eskandar

5 minutes. Real-time time-lapse. Shot from 6 to 9am on 6 March 2012.

As an artist, I study the relationship between our body and space, primarily the space of the natural landscape devoid of the built environment.

Aesthetically my videos render the screen as a surreal window unto surrounding landscapes and are situated in a lineage of meditation in film, and abstract studies of light, form, and air. They capture the subjective and perceptual qualities of time expressed as events, moments, memory and landscape. The goal is to break the linear experience of time, allowing viewers to perceive multiple times within a single viewpoint. As a result insignificant moments become significant events, heightening one's experience of the landscape and one's existence in that particular moment in time and space.

As a concerned human being, I am interested in troubled and impaired bodies of water and the water rights of wildlife. These interests determine the locations I choose to create in, thus far in California: Harper Dry Lake, Owens Lake, Malibu Lagoon, and the Salton Sea. This water-focused work allows me to merge my interests and to use my art beyond aesthetic inquiries and as social action.

Audio Notes:

The soundscape begins with a dialog between the environment: the waves, the bleached barnacle beach, the train, the birds. The envelope of the composition follows the envelope of the aural activity of the day and the patterns of the birds, which tend to be noisiest at dawn and dusk with a calm in mid-day.

www.tentativearchitecture.net

Two Pieces from *Collection XVIII* Casey Mongoven

Let a and b represent two non-negative integers. Let $G(n)$ represent a generalized Fibonacci sequence where $G(0) = a$ and $G(1) = b$ and $G(n) = G(n\text{-}1) + G(n\text{-}2)$. Let $\Phi = (1 + \text{sqrt}(5))/2$, the larger golden ratio value.

Stolarsky Arrays no. 1

A Stolarsky array is as a class of arrays in which each row is a $G(n)$. The first row is the classic Fibonacci sequence, where $G(0) = 0$ and $G(1) = 1$. We will call the first integer that occurs in each row u. The north-west corner of the original Stolarsky array appears as follows:

u	round($u\Phi$)					
1	2	3	5	8	13	→
4	6	10	16	26	42	→
7	11	18	29	47	76	→
9	15	24	39	63	102	→
12	19	31	50	81	131	→
14	23	37	60	97	157	→
17	28	45	73	118	191	→
↓	↓	↓	↓	↓	↓	↘

The first integer in each row in any given Stolarsky array is the lowest integer that has not yet occurred in any previous row. The second integer in each row, however, can be either floor($u\Phi$) or floor($u\Phi$+1). There are thus an infinite number of Stolarsky arrays, and each one contains every positive integer once and only once.

This composition makes use of four Stolarsky arrays: the original Stolarsky array, the Wythoff array, the dual Wythoff array, and the even first column (EFC) Stolarsky array. Eight sequences are derived from these arrays. The first four sequences give the *column* in which an integer *n* occurs in each array. For example, the corresponding sequence for the original Stolarsky array shown above begins <1,2,3,1,4,2,1,5,...>, because these are the column numbers in which the integers <1,2,3,4,5,6,7,8,...> occur in the array. The remaining four sequences give the *row* in which *n* occurs in the array. So for the above array, the corresponding sequence begins <1,1,1,2,1,2,3,1,...>. Each of the eight sequences is sonified on its own individual speaker.

Rep Sequences no. 19

For any given G(*n*), we can count the number of ways that we can represent an integer *z* as a sum of distinct members of that particular G(*n*). For instance, if G(*n*) = <1,2,3,5,8,13,...>, we can list the number of possible representations of an integer as follows:

n	# possible reps	reps
1	1	1
2	1	2
3	2	3 = 2+1
4	1	3+1
5	2	5 = 3+2
6	2	5+1 = 3+2+1
7	1	5+2
8	3	8 = 5+3 = 5+2+1
9	2	8+1 = 5+3+1
10	2	8+2 = 5+3+2
11	3	8+3 = 8+2+1 = 5+3+2+1
12	1	8+3+1
13	3	13 = 8+5 = 8+3+2
↓	↓	↓

With most G(*n*), it is not possible to represent certain integers. For instance, if G(*n*) = <1,3,4,7,11,18,...>:

n	# possible reps	reps
1	1	1
2	0	–
3	1	3
4	2	3+1 = 4
5	1	4+1
6	0	–
7	2	7 = 4+3
8	2	8 = 4+3+1
9	0	–
10	1	7+3
11	3	11 = 7+4 = 7+3+1
↓	↓	↓

This composition makes use of such sequences counting the number of possible representations for eight different G(n): <2,1,3,4,7,...>, <1,3,4,7,11,...>, <3,1,4,5,9,...>, <1,4,5,9,14,...>, <4,1,5,6,11,...>, <1,5,6,11, 17,...>, < 3,2,5,7,12,...>, and < 2,5,7,12,19,...>. Each sequence is sonified on its own individual speaker. The 0s in each sequence—where integers are not representable—are sonified as silence.

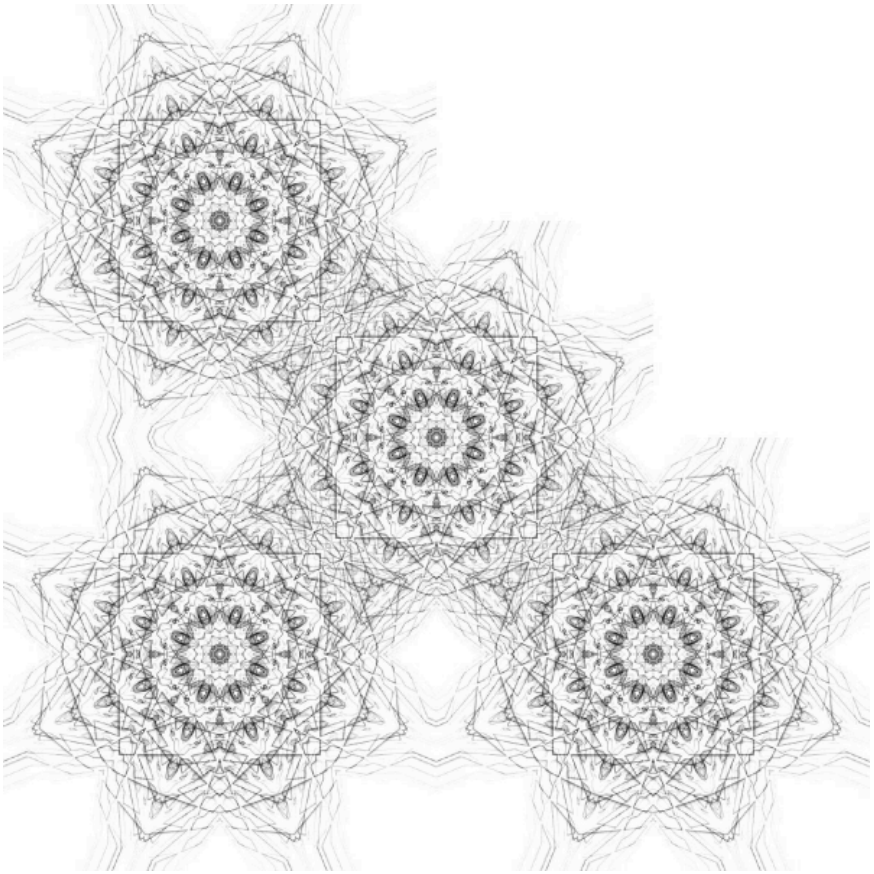
www.caseymongoven.com

Study of Transtemporal Ensemble Instrument CREATE Ensemble

Study of Transtemporal Ensemble Instrument (STEI) seeks to bridge the disconnect between the past, present, and future utilizing cross-time-scale, loop-shifting software created by founding member of the CREATE Ensemble and composer of STEI, Karl Yerkes. Using multi-touch gestures on a sound-pressure-versus-time graph interface, members of the CREATE Ensemble attempt to create musical variety and stability by placing a sound under a loop-based microscope. Although largely an improvisatory work, STEI is held together by the structure and idiosyncrasies of a predesignated palette of sounds created and/or chosen by the members of the ensemble and a loose set of rules agreed upon by members of the ensemble and Pauline Oliveros (without her knowledge).

Tweakyr is a new interface for musical expression that emphasizes real-time manipulation, sonification, and visualization of waveforms with a multitouch surface, offering different interactivity at different time scales, within the same waveform. The interactive audiovisual aesthetic of Tweakyr draws from the performative abuse of cheap, real-time, nonlinear digital audio editor software in the late 1990s and early 2000s, is motivated by the need for increased parsimony and transparency in electronic musical instruments, the work of Curtis Roads on time scales as qualitative musical parameters, and Edward Tufte's "data-ink" principles for the improvement of data graphics.

www.create.ucsb.edu



mat.ucsb.edu

Media Arts and Technology
University of California, Santa Barbara
3309 Phelps Hall
Santa Barbara, CA 93106-6065

Phone: (805) 893-5244
E-mail: mat-info@mat.ucsb.edu