

**Lance Putnam**

**TITLE of proposal: *Adrift***

**TYPE of proposal: Live Performance (length 8 min. 35 sec.)**



**Abstract:**

*Adrift* is an audio/visual composition made for 3D immersive environments (currently being shown in UCSB's AlloSphere facility). The goal of the work is to allow one to intuitively experience what it could be like to be inside a mathematical space embodied through unified visual and aural sensations. The underlying algorithm is a recursive matrix multiplication that generates a continuous sequence of coordinates. Adjusting the matrix coefficients gives an endless variety of both regular and complex patterns. The work interpolates from one parameter set to another producing an evolving visual and sonic environment. The coordinates are graphed in space as oriented triangles and connected in sequence with light-like "rays" (Figure 1). Sound is generated by scanning along the rays and mapping the position information to the phases of several sine oscillators. The sound is spatialized according to the position of the viewer allowing local timbres to be emphasized and transition as the space is traversed.

The work will be run live from the performer's laptop. The room setup is shown in Figure 2. A more minimal setup of one projector and two speakers is also possible depending on available equipment. A preview of the work can be found online [1].

**Topic: Music**

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<http://www.art.aau.dk>

**Main References:**

[1]

<http://www.mat.ucsb.edu/~l.putnam/adrift>

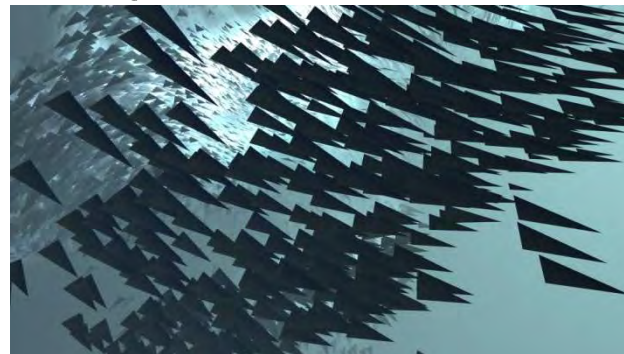


Figure 1. Still from *Adrift*.

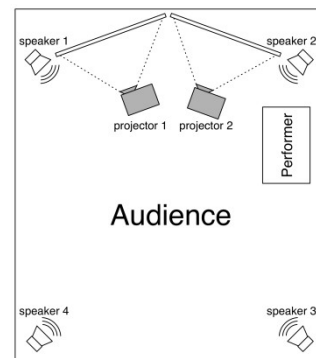


Figure 2. Two projector, four speaker setup for the performance.

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**Keywords:** Audiovisual composition, immersion, complex systems, mathematical art