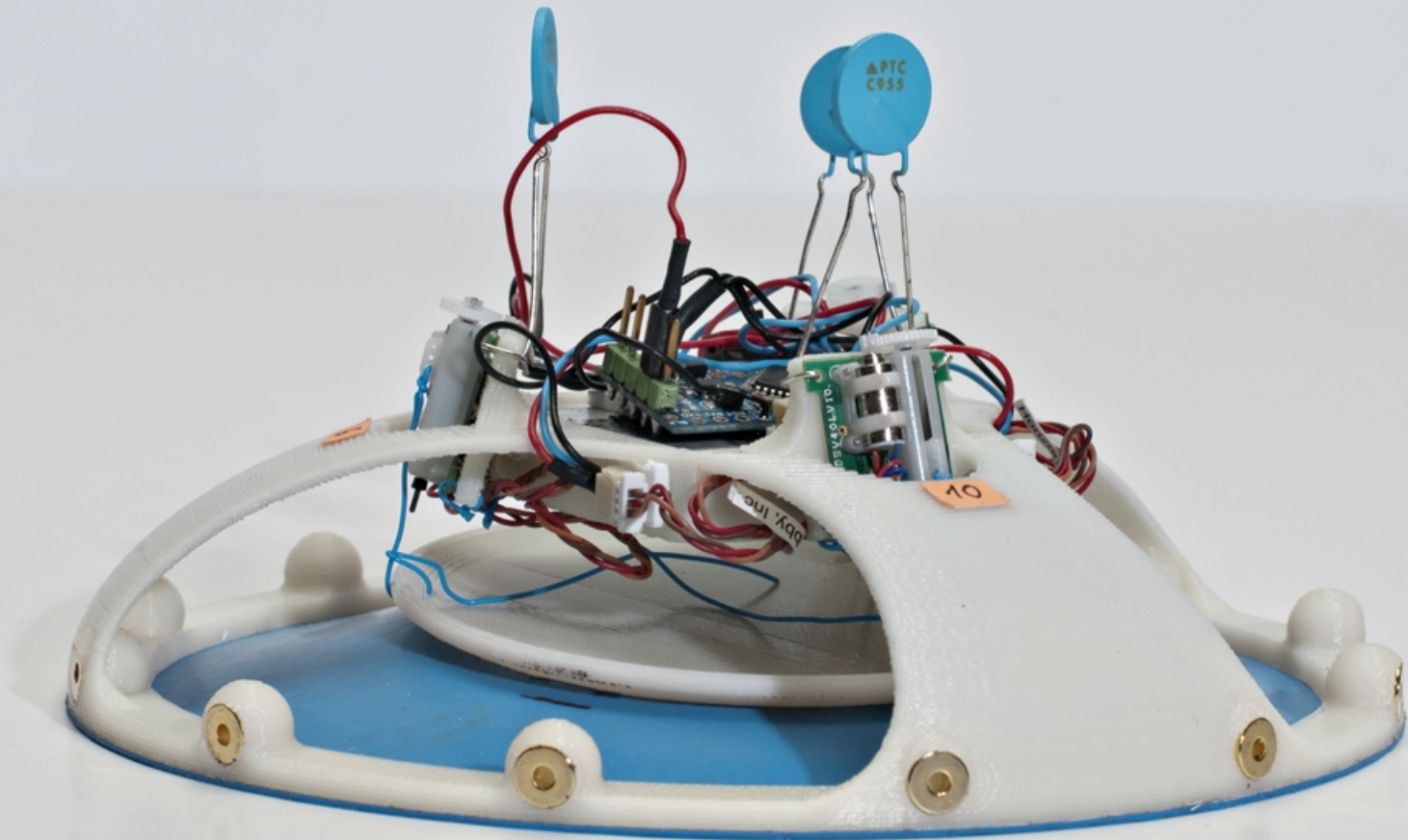




University of Zurich
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Artificial Intelligence
Laboratory



Aesthetics of Emergent Patterns in Aural Systems



Autotrophs

Aesthetics of Emergent Patterns in Aural Systems

I intend to build autonomous mobile robots that generate sensory stimulation through motion and at the same time get stimulated through their real world.

The goal is to create an aleatoric/emergenten sound composition played by a machine(-choreography)

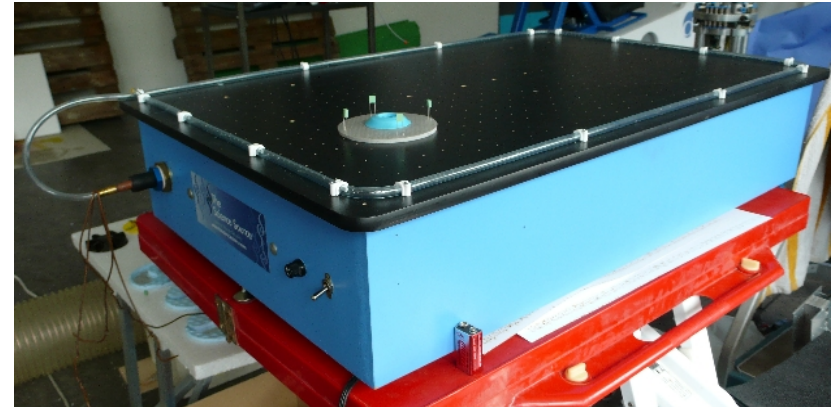
Each module/sub-unit reacts internally by changing states due to the surrounding causality. Multiple module internal states show patterns in a global way.

Though the robot's are not only heading towards the sound they hear, they also generate sound by their movements. The sound is feedback generated by microphones on the robots & loudspeakers.

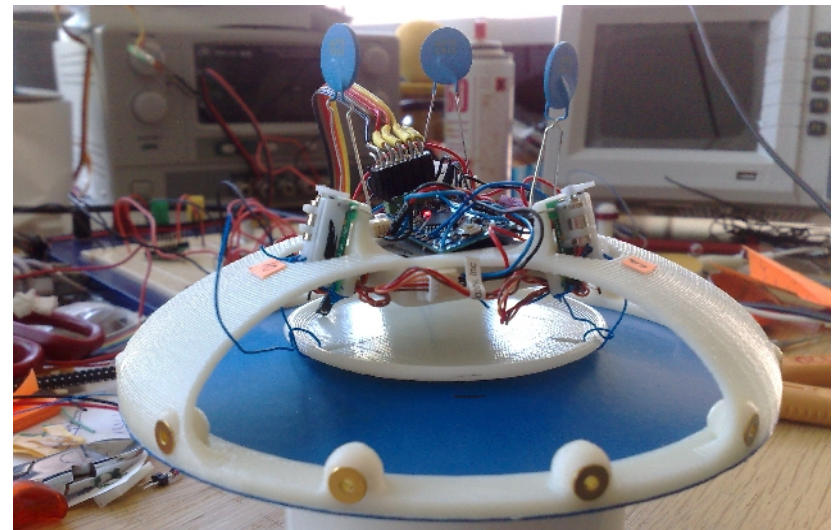
Analog to the gravitational slingshot of spaceships whose movement is guided by gravity of celestial bodies the robots' locomotion is stimulated by sound as 'gravitational' force. Similar to the 'Necrosphere' in Stanislav Lem's 'The Invisible', a swarm of minuscule, insect-like machines, my robots assemble into a swarm-like microsystem of sensorimotor devices:

Inspired by the phonotaxis of the fly *Ormia ochracea* i'm studying the dynamics of robots within an environment created by itself through sonification: systems equipped with acousthesia - aural sense - interact with/navigate within their environment upon noise, that is being created by their own movements (phonotaxis). Resulting from the self-organized behavioural patterns, emergence in the form of various compositions of feedback noises and movements is generated.

September 2010 by Olsen Wolf – Artist-in-residence – <http://hasa-labs.org>



Air table for hovering experiments



Current state of the robots