

Erin Gee - Production Portfolio 2018

I am a creative technologist driven through my curiosity regarding physical infrastructures for “human voices in electronic bodies.”

I am curious about the physiology of the voice, the ultimate “black box” we use every day. Exploring physical systems as equally important to their content is important to me, particularly how electronic media extend, distort, amplify and confuse voices and bodies.

Lately I have been considering the materiality of the body in emotion: develop unique interfaces that highlight emotion in the technological world.

This portfolio therefore represents many many ways of singing, vibrating and making songs from meta content and architectures.

For more information and media examples:

<http://www.eringeen.net>

pinch and soothe (2018)

This is a project I developed as part of a 2-month residency at the Institute for Electronic Music Graz, which focused on the thematic of “embodied algorithmicity.” I am still waiting for official video documentation materials for this work. In the meantime I’ve made a small documentation from cell phone footage and documentation of the process and uploaded to YouTube. Central to this project is (1) my limitation to only use hardware systems to process embodied sound, and (2) the experience of the link between one’s body and the sonifications are a key aspect of the musical experience – the composition is social in nature, inspiring curiosity in the biorhythms of the other participant.

The hardware system is seen in the background of the image as installed onto a wall in the gallery: it runs on a Teensy microcontroller.



Watch: <https://youtu.be/CqI7KJnRo9E>



Machine Learning Series

to the sooe (2018) (featured above) <https://soundcloud.com/user-204030287/to-the-sooe/s-6BIAr>

of the soone (2018) (audio featuring roleplay in language treatment centre: 18m41s)

machine unlearning (2018) livestreamed performance https://youtu.be/WGL_1MKS6eY

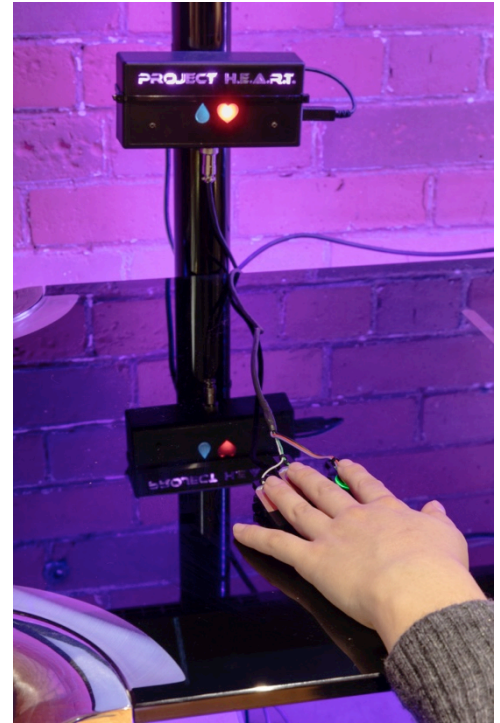
This year I have been collaborating with media artist Sofian Audry to re-vocalize the outputs of long-short term memory algorithms the affective vocal style of Autonomous Sensory Meridian Response (ASMR). In particular we have focused on a deep recurrent neural network agent that “reads” Emily Brontë’s classic novel *Wuthering Heights* character by character, familiarizing itself with the syntactical universe of the text. As it reads and re-reads the book, it attempts to mimic Brontë’s style within the constraints of its own artificial “body,” hence finding its own alien voice. For these works I re-performed texts generated by the LSTM agent (symbols that slowly develop into legible language) through soft vocalizations, whispers, and gentle sounds of tapping and rubbing hands, and also experimented with the creation of roleplays. Through the disembodied nature of sound in combination with the imagination of the listener we create an embodied relationship between the listener and these assemblage of agencies: deceased author Emily Brontë, LSTM algorithm, and Gee as ASMR (re)performer. The reading of this AI-generated text by a human speaker allows the listener to experience simultaneously the neural network agent’s linguistic journey as well as the augmentation of this speech through vocalization techniques adapted from Autonomous Sensory Meridian Response (ASMR) sounds, attempting to induce “tingle” feelings on the listener’s skin in response to acoustic “triggers” such as gentle whispering, fingers scratching or tapping. These autonomous responses might reveal the listener’s own automated physiologies as part of a speculative system of embodied algorithmicity. Gaps in writing, reading, listening, and embodiment activate and reference different modes of time, exposing how cognition, language, and technologies of communication create distinctive noise and intimacies between human and computational bodies/intelligences alike.

Project H.E.A.R.T. (2017)

Project H.E.A.R.T. is the code name for the **Holographic Empathy Attack Robotics Team**, a biosensor-driven virtual reality artwork developed by Erin Gee in collaboration with 3D artist Alex M. Lee.

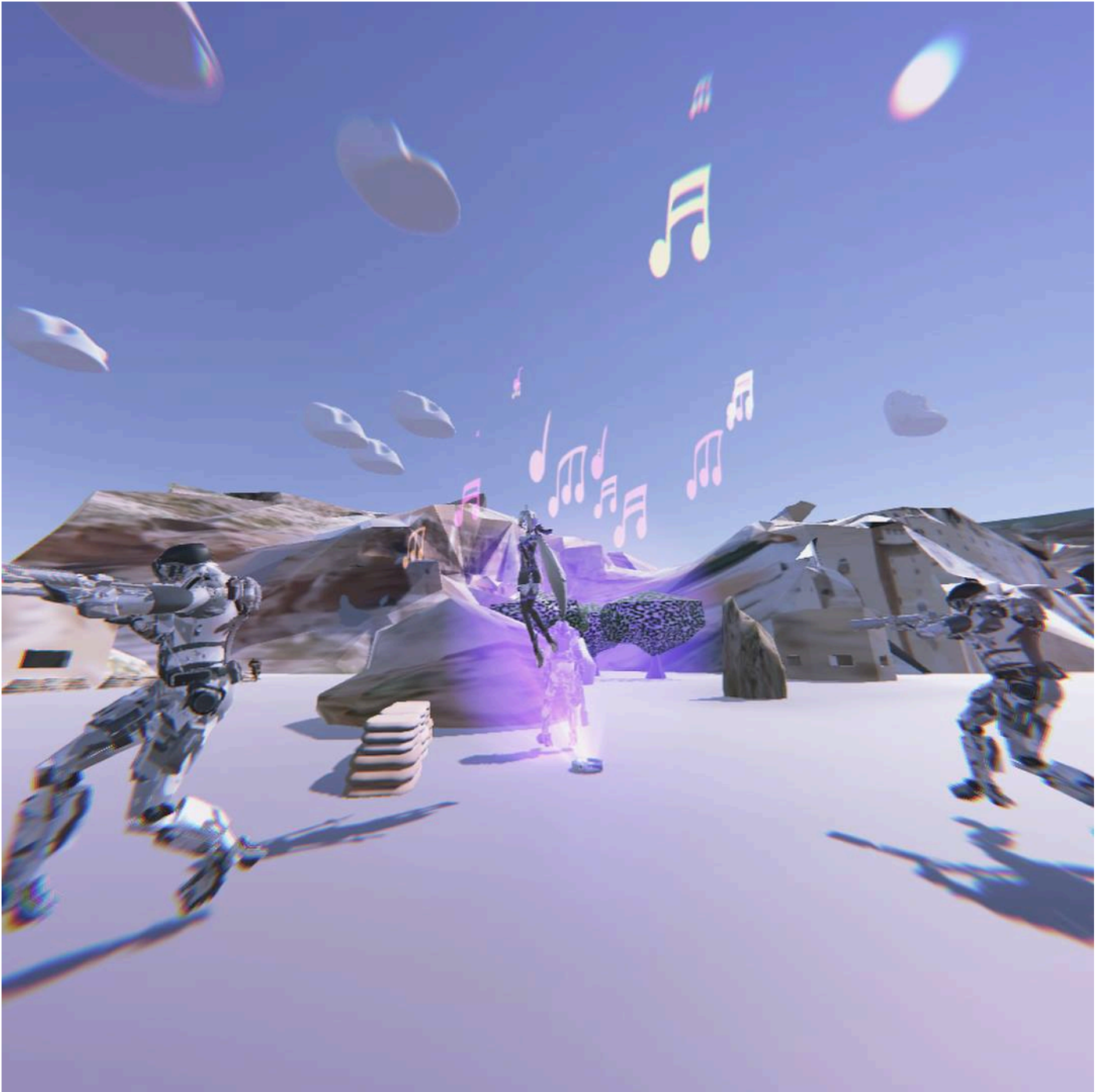
A twist on popular “militainment” shooter video games, Project H.E.A.R.T. invites the viewer to place their fingers on a biodata gathering device and then summon their enthusiasm in order to direct their avatar, Yowane Haku, in “combat therapy.” The biosensor device gathers the human player’s positivity and energy to drive Haku’s voice forward to boost morale as soldiers battle not only against a group of enemies, but also against their own lack of confidence and rising anxiety.

Fans of the Vocaloid characters may recognize Haku as the “bad copy” of Japanese pop celebrity Hatsune Miku, a holographic personage that invites her fans to pour their content and songs into her virtual voice.



The colorful landscape of the game was built from from geopolitically resonant sites found on Google Maps, creating a dreamlike background for the warzone. In-game dialogue wavers between self-righteous soldier banter typical of video games, and self-help, bringing the VR participant to an interrogation of their own emotional body in a virtual space that conflates war, pop music, video games, emotional investment, and virtual-movement induced nausea.



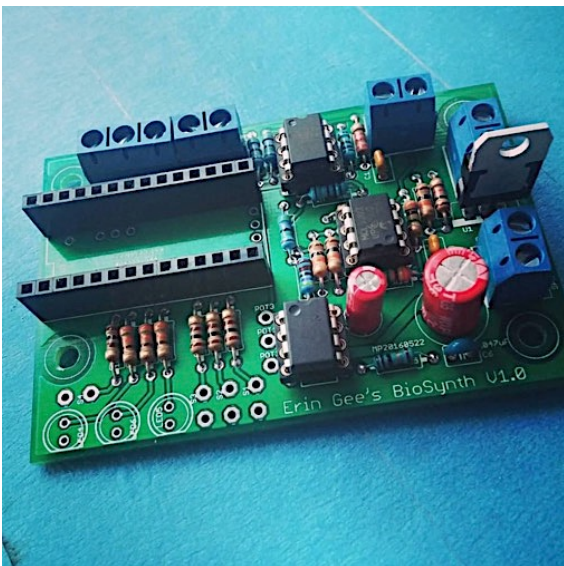


Screenshot of Project H.E.A.R.T (2017) gameplay



Song of Seven: Biochoir (2016)

In this song, young performers contemplate an emotional time in their lives, and recount this memory as an improvised vocal solo. During these solos, choir members attached to a musical instrument I call the BioSynth—a small synthesizer for each choral member that individually sonifies heartbeats and sweat release. As sweat is a robust measure of emotional engagement, I use musical tones to concretely sonify GSR (galvanic skin response) data, picked up by sensors on the fingers; meanwhile the heartbeats of each chorister provide a light percussion.



The choir is instructed to deeply listen to the tale and empathize with the soloist, using imagination to recreate the scene.

The musical score combines traditional music notation with vocal games and rhythms determined not necessarily by the conductor or score but by beatings of the heart and bursts of sweat. Discreet flashing lights on the synthesizer boxes in front of the choristers, which allowed me to incorporate the rhythms of the body into the final score as singers could discern the rhythms and patterns of their heart and sweat glands.

Video: (Hamilton Children's Choir 2016)

<https://www.youtube.com/watch?v=M8iCzYPxd7I>

Swarming Emotional Pianos (Static Version) (2014) 20-minute video projection, aluminium tubes, servo motors, custom mallets, electronics, iCreate platforms. Approximately 27” x 12” x 12” each robot.

A cybernetic musical performance work that bridges robotics and physiological markers of human emotion, *Swarming Emotional Pianos (static version)* is an installation that features twenty minute video documentation of method actors moving through extreme emotional performances of happiness, sadness, anger, fear, and sexual arousal—invoked only by memory and imagination. During this performance, the actors were wired to biosensors that measured shifts in their heartrate, sweat and respiration during these emotional performances. I inputted these shifting biodata into an algorithmic music generator to “sonify” the actor’s physiological experience of emotion. The installation’s video is time synched this data-driven music performance, which is enacted through six robots that surround the video projection. The end result is a robotic “soundtrack” driven by recordings of the physiological shifts in the actor. Sonic “bursts” of activity thus connect the actor’s *experience* of the emotion to the images of the emotional performance, somewhat like an abstract polygraph. Research is ongoing for further iterations of this system, which will integrate movement, biofeedback performances and integration of skin sensitive neural activity through microneurography. I maintain an active dialogue with microneurographer and neurophysiologist

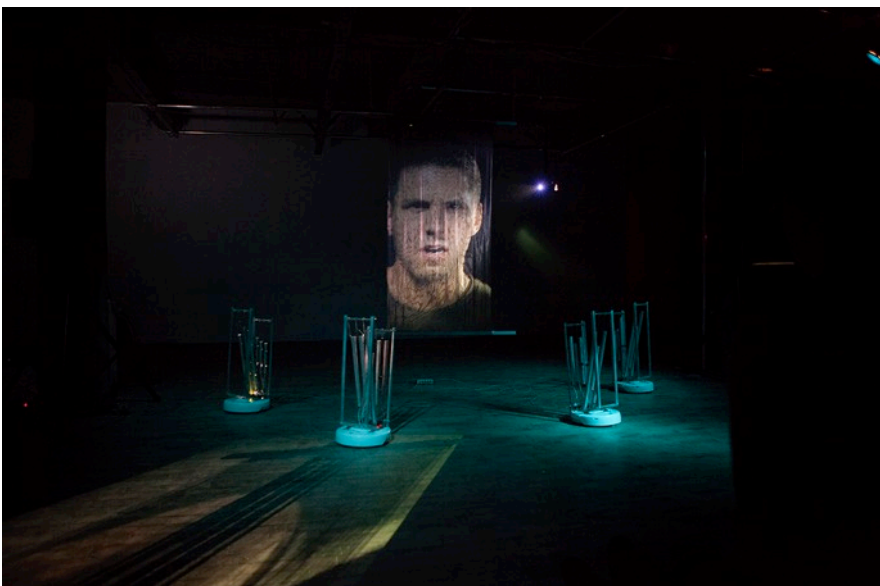
Vaughan Macefield in anticipation of scientific research opportunities that might link aesthetics with therapeutic applications of this technology.

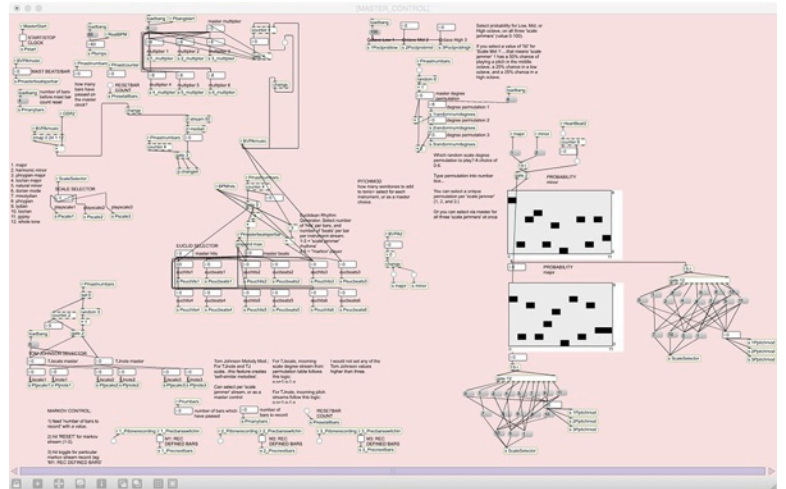
Video: (movement tests, Eastern Bloc 2013)

https://www.youtube.com/watch?v=wxgK_ufO-1U

(Premiere Performance, Eastern Bloc 2014)

<https://www.youtube.com/watch?v=QD2mkdDQafQ>

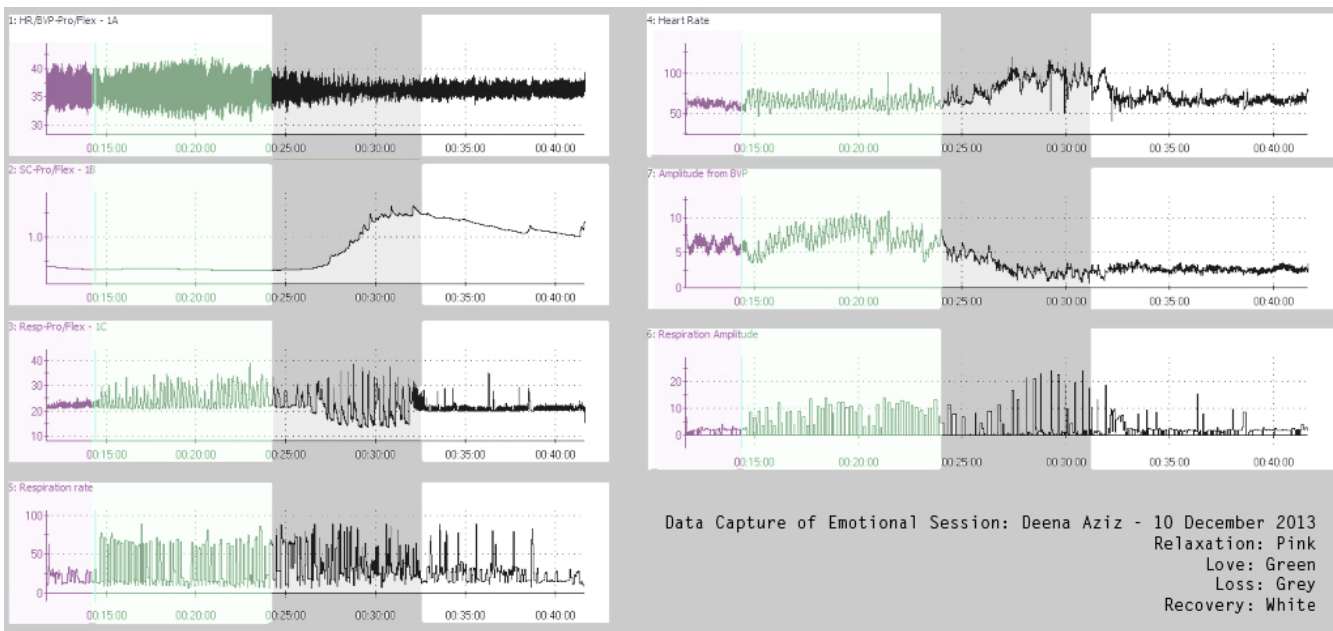




(Above) Max/MSP algorithmic music patch

(Left) Documentation of data-gathering process during video recording

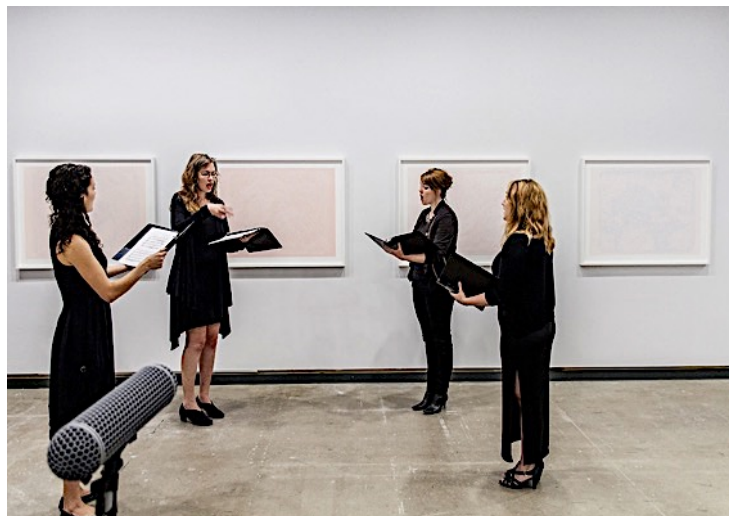
(Below) Images of biodata (heart signal, sweat, respiration signal, respiration depth, heart rate, blood pressure, respiration rate) collected during a twenty-minute emotional session





Larynx (2012-2015) Series of four 34” x 48” digital prints on archival paper, vocal quartets.

This series of four prints derive from endoscopic footage of the human throat. When I vectorized the image, making it more akin to a circuit board or topographical map, I saw what appeared to be musical staves abstractly in the borders of the digitized image. I transcribed these songs from the silent digital throat for four human voices.

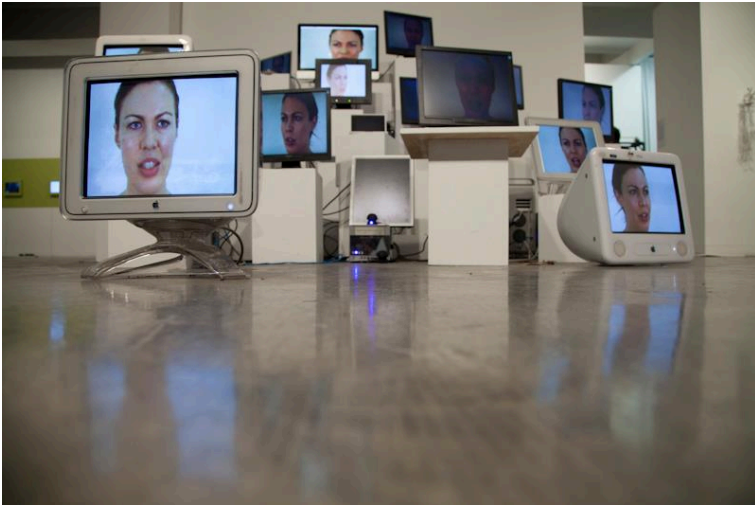




GIG VOCALOID (2015)

Work for five performers and multi-channel video, where human voice is lost and pop music reigns supreme – images of larynxes and lyrics on screens create architecture around the absent voice. Performed at Nocturne X+1: Evening of Internet-inspired art – Musée d'art contemporain de Montréal.






Anim.OS (2012)

Anim.OS is an intra-networked algorithmic choir developed by Oliver Bown and Erin Gee that creates generative music for “as many computers as possible.” Text derives from Elizabeth Grosz’s “Architecture from the Outside.” Installation and performance at Tin Sheds Gallery (2012).

Video: <https://www.youtube.com/watch?v=sR8MiCgBtQs>

Analytics Video Manager

Anim.OS - Development - Lab Improvisation with Oliver B

 Erin Gee Channel settings

849 views

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Formants (2008) fiberglass, plexiglas, hair, copper, wood, electronics
20" x 49" x 27.5"

Formants is an interactive audio sculpture featuring the heads of two female figures that sing when their hair is brushed.

Video: <https://www.youtube.com/watch?v=m1QB1i4kNsA>