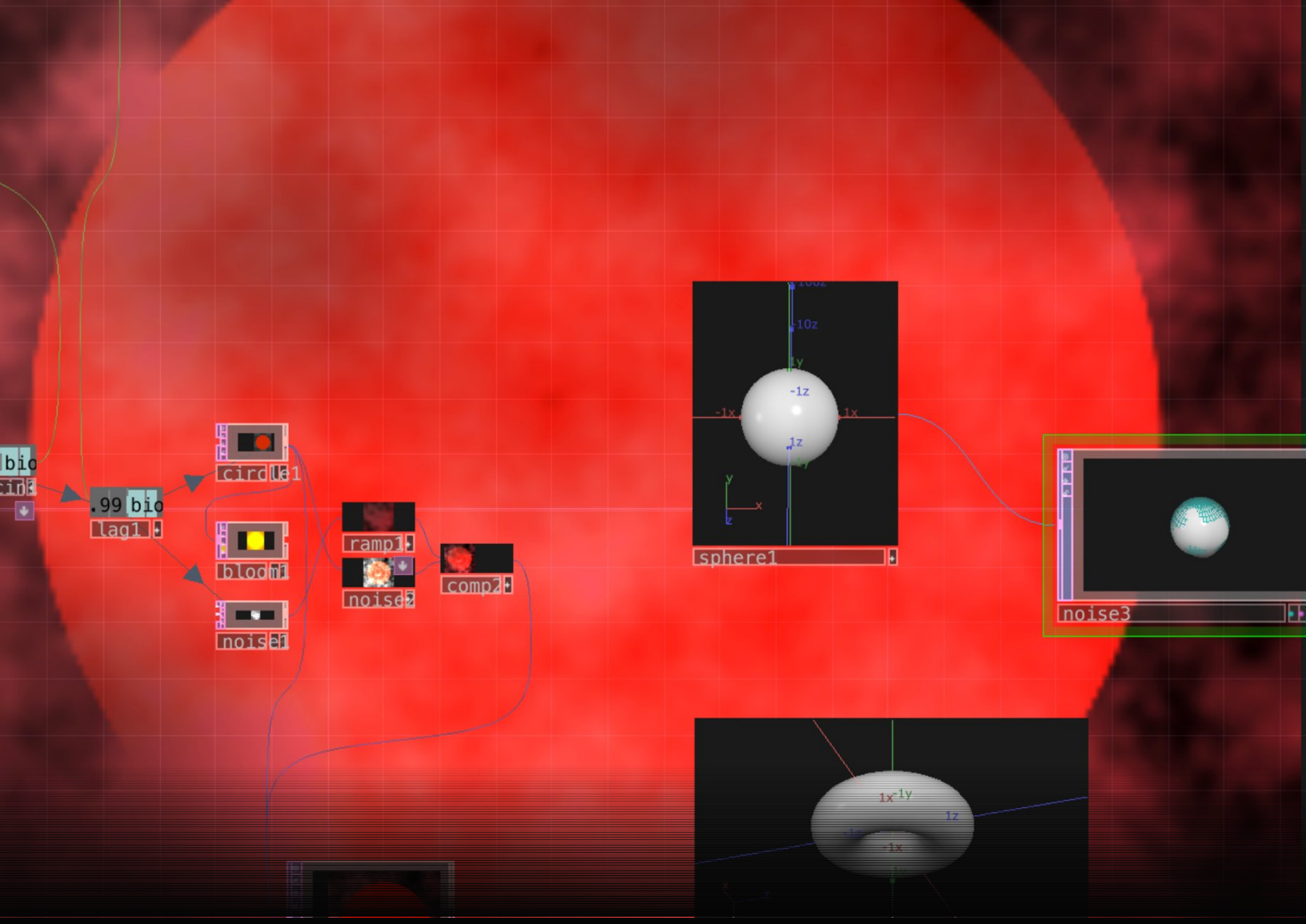


RESIDENCY & COMMISSION PROPOSAL · 2026

BIOSYMPHONY

The body composes.

A bio-kinetic performance system by Mila Tina that translates heart rate variability, breath, and movement into real-time generative sound and image. **BioSymphony: The Heart** exists today as a working prototype. This proposal seeks a residency, commission, or research partnership to develop it into a fully realized public performance and installation.

Mila Tina · Interdisciplinary artist, percussionist & researcher · New York / Chile
milatina.io/biosymphony-bio-kinetic-system · pulse@milatina.io · @milatina.official

01 · PROJECT OVERVIEW

The body becomes the instrument

Contemporary systems prioritize external data streams, while internal biological processes remain largely unexpressed within technological environments.

BioSymphony is an interdisciplinary research and performance project investigating how internal physiological states can function as compositional material. It positions the body as both source and author of data: emotion, attention, and regulation become active variables in a live work.

The current phase, **BioSymphony: The Heart**, translates heart rate variability, respiration, and embodied movement into real-time generative sound and visual environments. By making normally invisible biological processes perceptible, the project creates a feedback loop between physiology, technology, environment, and human perception.

BODY → SIGNAL → TRANSLATION → ENVIRONMENT → PERCEPTION ■

02 · RESEARCH QUESTIONS

Can internal physiological states become an instrument?

• How does perceiving biological activity as image and sound alter embodiment, emotional awareness, and self-regulation?
• What new forms of performance emerge when the performer's autonomic state becomes part of the composition?
• How might multiple bodies generate a shared audiovisual environment?

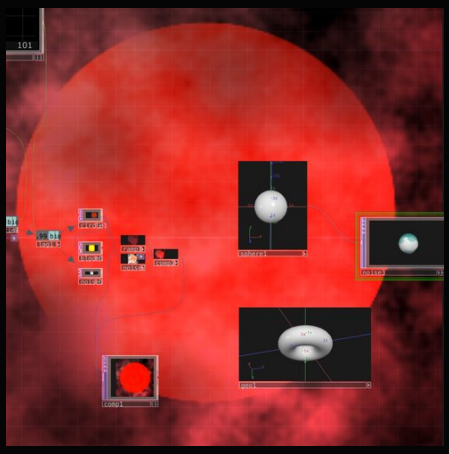
03 · ARTISTIC MOTIVATION

Rhythm begins before music

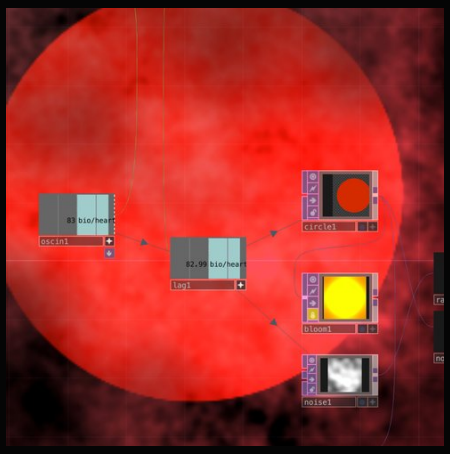
As a percussionist, Mila Tina has long investigated rhythm as both a biological and cultural phenomenon. The first rhythm every human being encounters is the heartbeat. BioSymphony extends this principle by treating physiological rhythm not as passive data, but as an active creative agent capable of shaping sound, image, performance, and collective experience. The work approaches rhythm as physiology, communication, regulation, movement, and perception.

04 · CURRENT PROTOTYPE

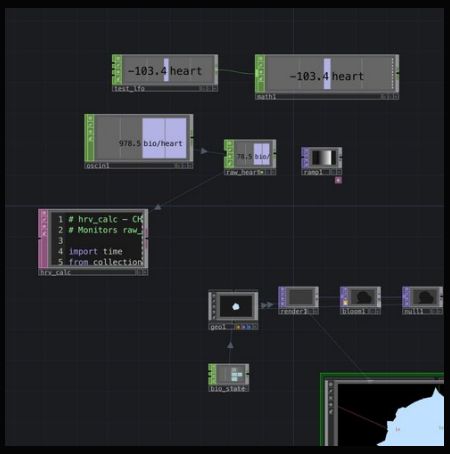
Already working. Ready to expand.



Prototype interface: live HRV input mapped to visual behavior.



Signal network: OSC input, smoothing, and state values driving the visuals.



Generative output rendered from live physiological data.

Working now

- HRV sensor integration (HeartMath Inner Balance)
- Real-time data streaming
- OSC communication pipeline
- TouchDesigner visual engine
- State-mapping architecture
- Projection-ready output

In development

- Expanded visual behaviors
- Stronger HRV-to-visual mappings
- Breath integration
- Percussion and movement integration
- Live performance format
- Audience interaction protocols
- Spatial sound exploration

Future phases

- Multi-person biofeedback
- Collective physiological environments
- EEG integration
- Neural signal translation
- Research collaborations
- Advanced data sonification

05 · SIGNAL ARCHITECTURE

Input	Translation	Output
Heart rate variability (inter-beat intervals)	HeartMath Inner Balance via Bluetooth LE	Generative visuals
Respiratory rhythm	Python bridge forwards data over OSC	Projection environments
Embodied movement	TouchDesigner computes RMSSD and a	Sound modulation
Percussive gesture	coherence score, smoothed in real time	Spatial composition
	One state channel drives all parameters	Interactive performance

The system does not illustrate the body. It lets physiological dynamics influence the behavior of the environment itself. Python handles only the low-rate biosignal stream; rendering runs natively in TouchDesigner, so the system stays stable for live use.



Mila Tina in live performance with a projection environment.

06 · PERFORMANCE & EXPERIENCE

A performer regulating internal states in real time

The audience watches shifts in breath, tension, and rhythm generate dynamic visual environments. Internal processes emerge as visible structures, establishing a direct relationship between biosignal and perception.

Performance mechanism

Coherence: stability and controlled rhythm.
Activation: increased intensity and variability.
Release: expansion and dissipation.
Each state generates distinct visual behaviors, forming a temporal structure for the work.

Visual language

Form: circular structures representing pulse and identity.
Noise: dynamic distortion representing variability.
Light: bloom and luminosity representing energy output.

Presentation formats

Live solo performance: direct interaction between the artist, the biosignal, and the generated environment.
Installation: continuous system output, so environments persist as autonomous works.
Expanded performance: multiple performers in future phases, toward collective biological symphonies.

Research dimension

Physiological regulation · emotional states · human-machine interaction · perception of internal states.

07 · RESIDENCY DEVELOPMENT

The system exists. The next phase needs time, space, and exchange.

BioSymphony needs dedicated studio time, technical experimentation, interdisciplinary dialogue, and participant testing to expand the prototype into a fully realized immersive performance system. The residency is not sought to begin the project. It is sought to turn a functioning prototype into a public artistic experience.

Technical development

Refine HRV acquisition and state mapping, develop generative visual behaviors, strengthen system stability, and integrate projection and performance environments.

Artistic research

Test relationships between rhythm, physiology, and image; develop an embodied performance score; explore breath, gesture, percussion, and autonomic response; decide when data should control, influence, or destabilize the system.

Public engagement

Open studio, work-in-progress presentation, artist talk or lecture demonstration, participant-based biofeedback experiments, and collaborative workshops where appropriate.

Documentation

Prototype video, installation and performance photography, technical diagrams, research notes, and material for future exhibitions and partnerships.

08 · OUTCOMES

A modular work that adapts to the host's resources, duration, research focus, and public program: immersive audiovisual installation · live biofeedback performance · participatory physiological environment · projection-based performance study · public lecture demonstration · workshop or open laboratory · audiovisual prototype film · touring and exhibition framework.

09 · EVOLUTION PATH

Phase I · Active: BioSymphony: The Heart. HRV, breath, movement, percussion, and real-time generative environments.
Phase II · Planned: Collective Resonance. Multi-person physiological interaction and shared audiovisual environments.
Phase III · Future research: BioSymphony: The Mind. EEG integration and the translation of neural activity into generative systems.

10 · TECHNICAL ENVIRONMENT

TouchDesigner · Python · OSC · HeartMath Inner Balance HRV sensor · Ableton Live · signal processing · generative graphics · projection systems. Ideal host conditions: studio or black-box time with projection and a sound system, and opportunities for participant testing. Additional equipment can be integrated according to the residency environment.

11 · THE ARTIST

Mila Tina

Chilean-American interdisciplinary artist, percussionist, and researcher

Her practice investigates the body as a source of signal and explores how physiological processes, movement, sound, and interactive systems can generate new forms of perception and collective experience. Drawing from percussion, martial arts, creative technology, and embodied research, she develops performance systems that connect biological rhythm with computational environments.



Related work
Symbiotrix: a multidisciplinary performance with a martial artist, using neurofeedback technology to visualize real-time brainwave activity alongside live drumming and movement, presented at Art Basel Miami.

Stages & opened for
Repeat performer at Envision Festival, solo, with other artists and with an orchestra, and led a rhythm and neuroplasticity workshop there. Performed at Art Basel Miami and Gold Dust Womxn, solo and in ensemble. Opened for Latin Grammy winners Los Amigos Invisibles.

Collaborated with
Members of the Red Hot Chili Peppers, Paul Simon's rhythm section, and Grammy Award winner Chris Berry. Percussionist for the Hamptons Dance Project.

Selected stages & institutions
Art Basel, New York Fashion Week: The Shows, Parrish Art Museum, Guild Hall, Bay Street Theater, LongHouse Reserve, Southampton Arts Center, NYC Pride, Capital Pride, San Diego Pride.

Press
"Mila Tina is a drumming powerhouse, using her solo performance to incorporate her unique brand of drumming, vocals, dance, and video to tell a story of empowerment for women worldwide." The Southampton Press

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ENTRY POINT

Develop BioSymphony within your residency, institution, or research environment.

Seeking artist residencies, research partnerships, technical collaborators, and experimental performance opportunities.

pulse@milatina.io · milatina.io/biosymphony-bio-kinetic-system · milatina.io/epk