Frank Musarra
Multimedia Artist and Technologist
Born in Cleveland OH, 1981
BA, Bard College, Annandale-on-Hudson, NY, 2003
Lives and works in Brooklyn NY

Selected Multimedia Fabrications

2019:

Kunsthalle Basel, Dora Budor: 'The Preserving Machine', Basel, Switzerland

- Raspberry Pi & Arduino microcontroller programming, biomechanical flying bird controlled via bluetooth and custom javascript / node.js code. Flight pattern based on data taken from Beethoven's 9th symphony. Musical data was parsed with Ableton Live and a custom Max/MSP patch, data translated into Javascript.

Nike, 'Nike Soho: Department of Unimaginable', New York, NY

- Kinetic sculpture commission for mixed media installation and window display at Nike's 5-story Soho retail location. 3D printed components, Arduino microcontroller programming, LEDs, GPU liquid cooling system pumps and fans, UV sensitive paint and filament, reclaimed e-waste.

Esther Klein Gallery, Laura Splan: 'Remote Entanglements', 'Contested Territories', Philadelphia, PA

- Designed, programmed, and fabricated custom networked sculptures. Modified fan, wireless Raspberry Pi control, adjusting wind speed in real time to data from a biological laboratory. Twitter actuated lab mixer, IOT microcontroller, networked control.

Wonderspaces Gallery, Foo/Skou: 'Harmony of Spheres', San Diego, CA

- Prototyping, development and fabrication of an interactive light and sound sculpture. Eighty-one wooden spheres coated in touch-sensitive conductive paint triggering eighty-one audio loops of choral vocalists and eighty-one LED spotlights. Interactive spatial playback on eighteen separate audio channels. Arduino microcontroller programming, capacitive touch sensor, polyphonic audio module, programmable LEDs.

Amaro Montenegro, 'Zest's Lab', Brooklyn Bar Convention, Brooklyn, NY

- Interactive sculpture commission for immersive theater performance / experiential marketing campaign. Mixed media, custom audio synthesizer, lighting, peristaltic liquid pumps for elaborate cocktail mixing device. 3D printed components, Arduino microcontroller programming, LEDs, UV sensitive paint and filament.

2018:

Google, 'Google Hardware Store Pop-Up', New York, NY, 2018

- Prototyping, development and fabrication, Raspberry Pi, Arduino and Particle Photon microcontroller programming for various interactive stations within Google interactive retail experience. Programmed voice activated routines with custom coding (Python / C++ / Javascript) for controlling Google home devices, integration with Lutron Caseta light system, Google Pixel selfie station print-outs, modified kitchen touch drawer opener to use voice commands, auto power system for industrial servo motor swing installation.

2018 (continued):

Belgrade Biennale, Ivana Bašić: 'A thousand years ago 10 seconds of breath were 40 grams of dust #2', Belgrade, Serbia, 2018
Het HEM, Ivana Bašić: 'A thousand years ago 10 seconds of breath were 40 grams of dust #2', Amsterdam, Netherlands, 2019

- Redesigned custom circuitry and repairs to kinetic sculptures, two malleted solenoids hitting an alabaster stone in synchronicity. Arduino microcontroller, 12v solenoid electro-magnets, wiring.

Wassaic Project, Frank Musarra & Tom Costa: 'The Shaded Path', Wassaic, NY, 2018

- Artist residency / collaborative installation with artist Tom Costa. 40 foot long hallway / raised walkway, lined with 20 gallon liquid ink reservoirs, 25 Arduino-controlled pumps, ultrasonic sensors, custom nozzles, water resistant paint, recirculating stream of black ink in the peripheral vision of the viewer as they walk down the hall, resulting in generative painting.

Samsung / MVP Interactive, 'Samsung Grammy Awards Party', New York, NY, 2018

- Developed custom hardware and software for doorway fabrication to pair with custom Samsung Galaxy app. Raspberry Pi and Arduino microcontroller programming, RFID 16.56 MHz NFC Module to respond to custom Android RFID Key app, electromagnetic door locks, NeoPixel LEDs, Python, C++, HTML, XML scripts.

Jane Lombard Gallery, Sean Shim-Boyle: 'Fee Fi Fo Fum' (various), New York, NY, 2018

- Custom fabrication and engineering, 8'x8' Plexi/LED light panel, manual controller / motion activated sliding door, custom modification of industrial paint shaker, auto timer wiring.

Unbound, 'Tech Crunch Disrupt SF', San Francisco, CA, 2018

- Contributed to development of custom prototype for Unbound, a multi-speed, waterproof vibrator ring. Resin SLA 3D printing, minutaure vibrating motor and motor driver, multi-speed setting control, rechargeable lithium battery, wiring.

2017:

Mural Arts Philadelphia / Monument Lab, Kara Crombie: 'Sample Philly', Philadelphia, PA, 2017
Clough-Hanson Gallery, Kara Crombie: 'Sample Memphis', Memphis, TN, 2019 (Version 2)

- Designed, engineered, and implemented custom hardware & software for an interactive public arts project. Custom Max/MSP audio software to function as sampler / instrument / mixer for a curated digital audio archive. Developed an interactive electronic console with 150+ channels of General Purpose I/O for oversized touch controller installed in an outdoor kiosk, 12v arcade style buttons, rotary encoders, LEDs, various Arduino microcontrollers & digital-to-analog multiplexer.

Howl Happening, Johnny Detiger: 'Amplified Space', New York, NY, 2017

- Interactive multimedia installation featuring custom Max/MSP/Jitter patch to crossfade video projection based on viewer tracking. Arduino microcontrollers, ultrasonic sensors, Macbook Pro, custom coding.

2016:

America's Cup World Series, 'Sperry Virtual Reality Experience', Chicago, IL, 2016

- Virtual reality installation, 360° Oculus Rift experience of the America's Cup boat race in Chicago with kinetic effects. Custom engineered and fabricated wind and water spray cues in sync with virtual actions in the video. Developed serial protocol to sent during select keyframes in Unity3D, triggering timecode commands on the Arduino, to cue a water pump, reservoir, mister, and IR modified fan.

SmartBe, 'Intelligent Stroller Prototype', New York, NY, 2016

- Developed touchscreen control interface for self-driven baby stroller concept. Raspberry Pi touchscreen, custom coded Tkinter Python GUI interface, with serial protocol to control over two dozen mechanical functions.

2015:

Museum of Contemporary Art, Terry Adkins: 'Native Son (Circus)', Chicago, IL, 2015
Institute of Contemporary Art, Terry Adkins: 'Native Son (Circus)', Philadelphia, PA, 2016
Brooks Museum of Art, Terry Adkins: 'Native Son (Circus)', Memphis, TN, 2017
Lévy Gorvy Gallery, Terry Adkins: 'Native Son (Circus)', New York, NY, 2018

- Designed and fabricated posthumous sound-based kinetic sculpture for Salon94 / estate of Terry Adkins (d. 2014), based on mockup sketch from 2006. Thirty-seven machine polished crash cymbals, thirty-seven solenoid electromagnets mounted on repurposed drum hardware. Arduino controlled.

Music Production and Engineering - Selected Discography

A$AP Twelvyy, 'All Skarz And Pain', ASAP Worldwide, 2019
Girl Talk & Erick The Architect, 'Trouble In Paradise', Single, 2018
Hearts of Darknesses & Takeshi Muto, 'Positive K', Auxilia / Defunkt, 2018
Smegma, 'Tales From The Grease Trap', Voodoo Doughnut, 2016
Liturgy, 'The Ark Work', Thrill Jockey, 2015
Girl Talk & Freeway, 'Broken Ankles' EP, feat. A$AP Ferg, Waka Flocka Flame, Jadakiss, 2014
CX KiDTRONiK, 'Krak Attack 2: Ballad Of Elli Skiff', Stones Throw, 2013
30 Seconds to Mars, 'Love, Lust, Faith and Dreams', Virgin, 2013
Pterodactyl, 'Spills Out', Jagjaguwar, 2011
Hearts of Darknesses, 'Shit Fan Punx Get Busted', Deleted Art, 2009
Girl Talk, 'Feed The Animals', Illegal Art, 2008
Hearts of Darknesses, 'Music For Drunk Driving', Schematic/Asphodel, 2004

Remix (as Trey Told 'Em)

Ke$ha, 'Tik Tok', 2010
Kings of Leon, '17', 2009
Of Montreal, 'Gronlandic Edit', 2007
Simian Mobile Disco, 'I Believe', 2007
Tokyo Police Club, 'Cheer It On', 2007
Thrill Jockey Mega Massive 15th Anniversary Mix, Remix LP, 2007