

GABRIELLA LEVINE Curriculum Vitae & Statement

Brief artist statement

Gabriella Levine is an artist, creative technologist, and hardware designer interested in the relationship between technology and ecology, with the overall vision of developing modular robotic toolkits for massive impact in the future. She studied Biology and Piano at Cornell University and Oberlin College, then worked doing Cancer Research at Albert Einstein College of Medicine before abandoning the lab for the outdoors to become a wildland fire fighter based in Oregon. She holds a Masters degree in Design and Technology from ITP, Tisch School of the Arts, NYU. She creates sculptural and robotic works that mimic environmental phenomena and animal behavior. She is passionate about biomimetic robots, PCB's, electromechanical actuation, wireless sensor networks, and coding. Current projects include Protei Inc (open hardware shape-shifting robotic sailing drones) and Sneel.cc (biomimetic swimming robotic snakes to sense environmental data), and OCP (an open collaboration platform for developing marine technologies). She works out of Floating Point Studios, Brooklyn.

Since 2010, Levine has exhibited work internationally including Ars Electronica, The Science Gallery Trinity College (Dublin), MIT Media Lab, Meta.Morf Electronic Arts Biennial (Norway), Transnatural Arts Festival Nemo Arts Center (Amsterdam), Eyebeam (NYC), and the American Museum of Natural History. She received the 2012 Prix Ars Electronica Hybrid Arts Award, the first Artist in Residence at Instructables, the NYU Task Force Green Grant, the Gulfstream Navigator Savannah Ocean Exchange Grant, and was named Woman of the Hour top 24 women in Tech in 2011 by Limor Fried, Adafruit Industries. She teaches at ITP in NYC and CIID in Copenhagen. She has presented globally at symposia and lectures including the Open Hardware Summit 2011 (NYC), Startup Festival (Bangalore), TEDxNavesink, DARC (Drones and Aerial Robotics Conference) and Unreasonable at State (US State Department). She has been elected President of the Board of the OSHWA (Open Hardware Association), and her work has been written up in Wired, HyperAllergic, CNN, Vice Magazine, Scientific American, and NYTimes.

Levine recently returned from a radical experiment, circumnavigating the world by boat, as a Fellow of the *Unreasonable At Sea* accelerator, exposing *Protei* to 14 different ports worldwide, while innovating through human-engagement using a design-based approach of the Stanford d. School.

education

2010 – 2012	MPS Masters Degree. Interactive Telecommunications Program (ITP), Tisch School of the Arts, NYU, NY
2008	School of Visual Arts, Multimedia Sculpture and Electronic Media, NY
2005 – 2007	B.A. Biology, Oberlin College, OH
2003 – 2005	BS. Candidate, Biology and Classical Piano, Cornell University, Ithaca, NY

relevant professional experience

2013	Creative Technologist, <i>FakeLove</i> , NYC
2013	Creative Coder & Software Developer, <i>Potion Design & Perch Interactive</i> , NYC
2013	Adjunct Professor, <i>Interactive Telecommunications Program</i> , NYC
2013	Visiting Professor, <i>Copenhagen Institute of Interaction Design</i> , Denmark
2013	Fellow, <i>Unreasonable At Sea</i> , Stanford d.School & The Unreasonable Institute
2011 – present	COO, <i>Protei Inc</i> , open-source autonomous sailing drones, US, Hong Kong
2012 – present	President, <i>Open-H2O</i> , open marine technologies, US & Worldwide
2011 – 2012	Hardware & interactive designer, <i>Portent Technologies</i> , New York, NY
2011 – 2012	Creative technologist, <i>Protei / Open_Sailing</i> , Rotterdam, NL

2011 Fabricator and creative developer for Maria Michails, Eyebeam, NY
2011 Creative collaborator and developer, The Windmill Factory, NY
2010 – 2011 Media Intern, American Museum of Natural History, Exhibitions department, NY
2009 – 2011 Interaction Designer, Weeels, Taxi-sharing cell phone application, NY
2007 – 2008 Laboratory Technician, Albert Einstein College of Medicine, Oncology Department, Bronx, NY
2005 Research Assistant, The American Museum of Natural History, Southwestern Research Station, Portal, AZ
2003 Research Assistant, Roswell Park Cancer Institute, Laboratory of Surgical Oncology, Buffalo, NY

relevant teaching experience

2013 *Intro to Drone Automation*, DARC Drone Conference, NY
2013 *Biomimetic Design*, Interactive Telecommunications Program (ITP)
2013 *Understanding Biomimicry Seminar*, ITP Summer Camp
Logging Remote Sensor Data ITP Summer Camp
2013 *Exploring Biomimetic Interfaces*, Copenhagen Institute of Interaction Design (CIID)
2013 *Hardware Workshop: DIY robotic sailboats*, Sahara Labs, Tarfaya Hackerspace, Morocco
2013 *Control systems for autonomous robots*, Semester at Sea (with the Stanford d.School & The Unreasonable Institute)
2012 *Arduino basics and advanced*, Tech Shop, AutoDesk, INC., San Francisco, CA
2012 *Robotic boat building Arduino workshop*, Eyebeam Gallery, NYC
2011 *Designing biomimetic water robots: Re-make the Holidays*, New York Hall of Science, Flushing, NY
2011 *Robotic boat building Arduino workshop*, Science Gallery, Trinity College, Dublin, Ireland
2011 *Introduction to Arduino*, All Kinds of Minds workshop, Pace High School, NY
2011 *Introduction to simple robotics and electronics*, Tech Camp, Jewish Community Center, NY

grants and awards

2013 Shortlisted, Intel@CIID fellowship
2013 Shortlisted, Art Along the Avenue of Technology Award
2013 Shortlist, Watershed's Playable City Award
2013 Fellow, Unreasonable Institute, Unreasonable at Sea
2013 Elected President of the Board, Open Hardware Association, OSHWA.org
2013 Advisory Board Member, The Ocean Exchange
2013 Winner of SAP-Sponsored Pitch event Unreasonable Cape Town
2012 Savannah Ocean Exchange \$100,000 Gulfstream Navigator Award
2012 Artist in Residence, Instructables.com, Autodesk
2012 Prix Ars Electronica Hybrid Arts Award for Protei
2012 Shortlist, Eyebeam Resident, Eyebeam.org NYC
2012 Windsor Biennial contest winner, Procedure and The Human Repeater
2012 Sponsorship from SEED Studio for Protei prototype 10
2011 NYU Sustainability Task Force Green Grant, \$14,638, the Bellflower Project
2011 Woman of the Hour, Adafruit.com, #ADA11 24 Women in tech
2003 \$3,500 Fellowship for biomedical cancer research, Lab of Surgical Oncology, Roswell Park Cancer Institute

exhibitions

upcoming

December 2013 LANscapes, Interactive Art Fair, Miami, FL
Jan - March 2013 LANscapes, Strathmore, Washington DC

past

2013 Sneel, Open Hardware Summit, MIT, USA
2012 Protei+Sneel at Meta.Morf, Trondheim Electric Arts Biennial, Norway
2012 Sneel, New Biologies, Geekdown, 92Y Tribeca gallery, NYC
2012 Protei, Ars Electronica CyberArts Festival, Linz, AU
2012 Protei + Sneel, Transnatural Art Festival, Amsteram, NL
2012 Protei_008, Eyebeam Gallery, Surface Tension: The Future of Water, with
Science Gallery Trinity College Dublin, New York, NY
2012 The Bellflower Project, NYU, NY
2012 Shape/Shift, Internet Week NYC, New York, NY
2012 FaceBank, 2012 Tisch Gala, New York, NY
2012 FaceBank, 2012 ITP Spring Show, New York, NY
2012 The Payphone Revival Project, Fusebox Festival, Longbranch Inn, Austin, TX
2012 The Human Repeater, 319 Scholes Gallery, Not Spring Not Winter, NY
2012 Protei_007, ITP Winter Show, NY
2011 Procedure, Big Screens performance, IAC building, NY
2011 Protei_002, Surface Tension, Sciance Gallery, Trinity College, Dublin, Ireland
2011 Protei_002, Strata Big Data Conference, Mini Maker Faire, NY
2011 Protei_002, World Maker Faire, Flushing, NY
2011 ByteLight, New York Hall of Science, World Maker Faire, NY
2011 Reflecting the Stars, in collaboration with The Windmill Factory, Pier 49, the
Hudson River, NY
2011 Protei_006, in collaboration with Open_Sailing, Wereld van Witte de With
Festival, V2_ Institute for the Unstable Media, Rotterdam, NL
2011 Protei_006, in collaboration with Open_Sailing, World Port Day, Rotterdam
2011 ByteLight, Geekdown, 92Y Tribeca Gallery, NY
2011 Crude Landscapes, ITP Spring Show, NY
2011 The Handcar Project, with Maria Michails, New Museum Festival of Ideas, NY
2010 ByteLight, ITP Winter Show, NY
2007 Rugby Love x 4, Museum of Contemporary Art, Cleveland, OH

commissioned

2013 Station to Station, Levi's *Make Our Mark* campaign, USA
2012 Transpiration, 240 Central Park South, New York, NY

bibliography / press

2013 NY Times, A Cruise on the SS Brainstorm, Collaboration on the High Seas
2013 Wired Japan, Unreasonable at Sea with Robotic Sailboats to Cleanup Oceans
2013 BBC, Unreasonable at Sea with Protei
2013 South African Local, SAP Pitch Winner
2012 Hyperallergic, Art at Internet Week, May 22
2012 Wired, Designing Sailboats to Mop Up Oil Spills, April 27
2011 Radio 1, Ireland Public Radio, The Mooney Show with Terry Flanagan, Oct. 20
2011 Scientific American, Neuro-Science, Hackers Use Open Hardware to Solve
Environmental Problems, September 16
2011 CNN, Robotic Sailboats built to clean up oil spills, October 20
2011 Motherboard.tv, Building Robot Sailboats to Suck up Oil Spills, October 18
2011 Maker Faire Daily, Slick Engineering, September 18
2011 Autism's Edge, Tech Camp at the JCC, June 20
2011 NY1, NYU Students Bring Latest Tech Advances To Light, May 16

- 2011 Core77, Design Photo Galleries, ITP Spring Show, May 15
- 2011 InHabitat, The Best Green Designs from the NYU ITP 2011 Spring Student Show, May 15
- 2010 Core77, Design Photo Galleries, ITP Winter Show, December 15
- 2010 ByteLight in A New Days Work, January 24, 2010

publications

- 2012 *Academic*: Protei: Open Source Sailing Drones: A Platform for Education in Ocean Exploration and Conservation. ITHET 2012
- 2011 *Academic*: Protei Handbook, Vol.1, ISBN: 978-1-105-01895-4
- 2010 *Blogs*: Motherboard.tv, Vice Broadcasting Systems, Vice Magazine, tri-weekly interviews and articles
- 2010 – 2011 *Blogs*: Weeels.com and St-rlab.org
- 2003 *Academic*: American Cancer Association panel, Urinary Plasminogen Activator in the Serum of Breast and Colon Cancer Patients

lectures / symposia

- 2013 LISA, Leaders in Software Art, *DIY and the st-ART-up community*
- 2013 Prism Breakup, Eyebeam, *Encrypt your Metadata*
- 2013 TEDx Navesink: *Global adventures with open hardware biomimetic robots*
- 2013 DARC (Drones & Aerial Vehicle Conference), NY, USA
- 2013 Unreasonable at State, Protei, US State Department, USA
- 2013 Unreasonable Barcelona, Protei, ASA Auditorium, Spain
- 2013 Bangalore Startup Festival, Protei with Unreasonable Institute
- 2013 Unreasonable Singapore, University of Business, Singapore
- 2013 Unreasonable Ghana, Protei, The Hub Ghana, Africa
- 2013 Kerala Start Up Village, Protei, India
- 2013 Unreasonable Tokyo, Protei, Digital Garage, Japan
- 2013 Unreasonable Shanghai, Protei, China
- 2012 CIID (Copenhagen Interaction Design Institution), Protei, Copenhagen
- 2012 Meta.Morf TEKS Biennial Exhibition, Protei workshop and symposium, Trondheim, NO
- 2012 UC Berkeley, Laboratory of Hydrodynamics, Protei objectives, USA
- 2012 The Exploratorium San Francisco, Protei Research Topics, Brown Bag Session and Presentation
- 2012 Lucid NYC, Protei: a fleet of robotic sailing drones to clean up the ocean, New York, NY
- 2011 Open Hardware Summit, Open Oceans and Open Hardware: Protei, a proliferating fleet of DIY sailboat drones to clean up oil spills, NY Hall of Science, Flushing, NY

other professional experiences

- 2008 – 2010 Wildland Firefighter, Winema Hotshot crew, US Forest Service, Klamath Falls, OR
- 2005 – 2012 Climbing instructor and guide, Cornell Outdoor Education, Oberlin Outdoor Club, Brooklyn Boulders, Chelsea Piers, USA
- 2007 – present EMT, various volunteer services, CA, OH, NY
- 2007 Mechanic, Metro Bicycles, New York, NY
- 2005 – 2006 Whitewater Raft Guide, Tagalong Expeditions, Moab, UT

technical skills

Music: classical piano, jazz trumpet, Reason, Logic, ProTools, Soundtrack Pro, Ableton Live,

Computer: Adobe Suite, MS Office, Data Desk, Origin Pro, Filemaker Pro, FinalCut Pro, GraphPad Prism, SolidWorks, Rhino, MasterCam, Eagle, GIS

2D and 3D design - Illustrator, Photoshop, After Effects, InDesign, Unity, Maya, MeshLab, ZBrush

Video Processing - FinalCut, Premiere Pro

Software (5 years):

C : Arduino IDE, raw C, writing libraries for Arduino, Texas Instruments microcontrollers

C++ : Cinder, OpenFrameworks, Pocode; - extensive experience with camera vision, face tracking, graphics / OpenGL

OpenCV: and other libraries / wrappers in C++ and Java

Java : Processing - lots of experience - data vis, interactive work, graphics designs, large scale projections for big installations; Eclipse - some work connecting Android to Arduino w/ Android ADK board

JS, HTML/CSS / node.js / SpaceBrew- a bit of experience integrating with hardware with node.js, simple web apps

Python- programming on Raspberry Pi, text parsing, data visualization

Hardware (6 years):

EagleCAD – designing & debugging boards

Arduino - expert

Sensors (environmental, positional, data logging: analog, I2C, SPI, wireless sensor networks)

Wireless communication: xbee, bluetooth, RFBee, infrared, R/C systems, OSC, UDP, TCP (for screen based work)

Raspberry Pi - much experience with Pi, Raspicam, running processes, start up scripts, using it as a media controller, and as

an interface for controlling I/O pins with hardware

Texas Instruments (BeagleBone & F-Palette) - somewhat experienced basic analog circuits / electrical circuitry

Kinect / camera hacking - ample experience with sending remote imagery over WIFI and other, Kinect, Infrared

Motors/actuators - very experienced with motors, specs, wiring, controlling etc

Batteries - in depth knowledge of different batteries, specs, etc

Sustainable energy - a number of projects harnessing energy with solar, mechanical energy

Mechanics (10 years) :

Designing/constructing moving mechanisms - joints, materials, wood, metal, plastics, glues, resin, fiberglass, waterproofing

Hand and power tools - metal, wood, and plastic work

Digital fabrication techniques: CNC, MasterCam, 3D design (Rhino, SolidWorks), 3D printing, lasercutting

sites

Portfolio: gabriellalevine.com

Blog: levinegabriella.com

Github: github.com/gabriella

Vimeo: vimeo.com/gabriellalevine

Flickr: <http://flickr.com/gabriellalevine>

Teaching and presentations:

levinegabriella.com/exploringbiomimicry/ciid

levinegabriella.com/teaching

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