

RAY LC

neuro . tech . art

PROFILE

creative technology
and interactive art in-
spired and supported
by multidisciplinary
understanding of
human behavior.



EXHIBITION / AWARDS

- 2020 "[Network Intelligence](#)" CICA Museum.
- 2019 Ars Electronica [Future Innovator](#) summit
- 2019 Columbia University I-House exhibit
"[Technology and Social Good](#)" curator.
- 2019 ICRA-X Robotic Art "[Expressive Motions](#)"
- 2019 "[An Immersive Rohingya Experience](#)"
[Ars Electronica](#) Linz; ArtLab Lahore.
- 2019 "[Machine Gaze](#)," NYSCI, cur. Liz Slagus.
- 2019 "[Creative Flow](#)" exhibit at De Construct.
- 2019 [Creative Tech Week](#) art talk, cur. Draves.
- 2019 [Critical Creative Practice](#) keynote
Northeastern University, cur. D. Curry.
- 2019 [A' Design Award in Social Design](#).
- 2018 "[FLORA](#)" exhibition, Java Studios NYC.
- 2018 "[Artistic Intelligence](#)" exhibition.
[ISCMA](#) City University of Hong Kong.
- 2018 "[gARment](#)," NYCMediaLab, cur. Hendrix.
- 2018 [Adobe Design Achievement award](#).
- 2018 [Microsoft Imagine Cup finalist](#),
VRbal: VR training for speech therapy.
- 2017 "[Secret Lives of Machines](#)" exhibition.
Major Major Dimension show, Parsons.
- 2017 [Best Presentation](#) Verizon AI Design Jam.
- 2016 [Falling Walls](#) speaker, Tokyo Japan.
- 2015 "[3rd Skin](#)" fashion paint performance.
Tokyo Golden Egg, cur. V. Ruijters.
- 2014 "[ダンス目なし](#)" photos: dance no sight.
12th 1_Wall show, cur. R. Takano.
- 2014 "[Kapayaan](#)" Bohol Center, cur. Cabarrus.
- 2013 "Implicit Mirror" BankArt NYK at TPAM.

EDUCATION

- 2017 - 2019 | Parsons School of Design
Design and Technology, MFA 2019
- 2013 - 2017 | Tokyo MODE Gakuen (東京モード学園)
Fashion Design and Technology, MPS 2017
- 2000 - 2003 | University of California, Berkeley
Electrical Engineering and Computer Sciences, BS 2003

RESEARCH / DESIGN

- CORNELL TECH FUTURE AUTONOMOUS RESEARCH LAB | 2017 - 2019
[Research](#): building interactive chairs for gestural interactions (with Wendy Ju).
- PARSONS SCHOOL OF DESIGN | 2017 - 2019
[Design](#): 3D poetry installation (Jess Irish), smart objects shy lamp (Carla Diana).
- LOOMIA CREATOR LAB | 2017 - 2018
[Design](#): smart textile clothing for gesture-based 3D dance environment UX.
- RIKEN BRAIN SCIENCE INSTITUTE | 2013 - 2016
[Research](#): rewards are necessary to extinguish PTSD stress (Josh Johansen lab).
- UNIVERSITY OF CALIFORNIA LOS ANGELES | 2007 - 2012
[Research](#): modeling inhibitory movement circuits in cerebellum (Tom Otis lab).
- PALO ALTO RESEARCH CENTER | 2003 - 2005
[Research](#): particle filter for predicting human motion in clutter (David Fleet lab).
- UC BERKLEY GROUP FOR USER INTERFACE RESEARCH | 2002 - 2005
[Design](#): gesture-recognition post-it wall UI/UX in web design (James Landay).

GRANTS / RESIDENCIES

- 2019 [Kone Foundation Saari artist-in-residence](#): human perception of broken machines.
- 2019 [Davis Peace Prize](#): for interactive VR documentary of Rohingya refugee camps.
- 2019 [NYSCI New York Hall of Science designer in residence](#): educating computer vision.
- 2018 [Brooklyn Fashion Design Accelerator residency](#): Tek Tiles smart textiles design.
- 2018 [Yahoo-Verizon Sports-Media-Tech startup grant](#): for 5G stadium app for AR views.
- 2018 [Verizon Connected Futures III grant](#): AI-based VR for emotional training for autism.
- 2017 [Process Space LMCC Governor's Island](#): gesture recognition in dance music improv.
- 2015 [JSPS Kakenhi Wakate B grant-in-aid](#): (科研費若手) for young scientists 25871125.
- 2013 [1 Wall at Guardian Garden residency](#): communication of dance "without eyes."
- 2012 [BankArt Studio Yokohama residency](#): mirroring human implicit acts with wearables.
- 2011 [National Science Foundation DIGSSS training grant](#): Suzhou Cold Spring Harbor.
- 2009 [National Institute of Health Neural Microcircuits grant](#): voltage sensitive dyes UCLA.

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RAY L C

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MEDIA

robotic interaction
interactive installation
mixed media sculpture
affective computing
fashion technology
nonlinear narratives



AIMS

I create human-machine gesture dynamics with environmental intelligence to let our world talk to us, so we can empathize deeply with others and with ourselves.

I AM NOT

just an artist, or just a scientist, designer, or engineer, despite working in each as my career. I apply psychology, technology, and creative practice to build interactive experiences that enable empathetic communication, from the multidisciplinary perspectives of neuroscience, installation art, social robotics, and storytelling.

SELECT PRESS

[Refugee VR narratives @Ars Electronica](#)
[Using AI and VR to treat anxiety @Adobe](#)
[Kinetic fashion for social anxiety](#)
[New Faculty intro @Northeastern CAMD](#)

[Designing for a billion: Gandhinagar India](#)
[Gesturized fashion @Loomia Creator](#)
[Fashion tech for elderly and immobile](#)
[Unlocking dopamine's role in PTSD](#)

RECENT WORKS

We stare at our screens and devices all the time. How do machines see us? An interactive exhibition and workshop at NYSCI explores how computer vision detects faces using a knowledge base and movement. We refurbished a supermarket security camera and souped it up with machine learning and motors to show audiences how interactions with intelligent machines in the future depends on human perception. [\[Machine Gaze\]](#)

We are always talking about ourselves, thinking about ourselves, taking pictures of ourselves. Using EEG technology to illustrate our obsession about ourselves, I constructed a two-way mirror based on Moritz Wehrmann's Alter Ego installation but made it interactive based on attention signals from NeuroSky headsets. The more we talk and think about ourselves the more we see ourselves, and others see us. [\[Look at Me, Think of Me\]](#)

Machines are becoming specialized and hard to understand. Instead of simplifying in the digital realm, I adapt the digital to humans by creating smart devices and spaces that evoke emotional reactions. They can be caring, flaky, trusty, nagging, attention-craving, occasionally angry, and mildly jealous. A harmonious future involves machines that are part of human ecology instead of opposing it. [\[Secret Lives of Machines\]](#)

Machine Learning (ML) has been employed to extend human abilities in image and speech processing. Instead of using ML for data mining, I instead take ML agents part of human ecosystems, applying ML to unexpected forms of interactions that subvert what we think machines ought to do, creating situations where ML goes beyond human expectation of what machine intelligence should mean. [\[AI: Artistic Intelligence\]](#)

