

Creative scientist, founder of science communication program

- Co-founder and lead writer for grassroots science communication program at Carnegie Mellon University
- Developed 12 workshops in science communication, teaching over 500 faculty and graduate students
- Recognized by NSF-funded program as one of the top 30 innovators in science communication nationwide
- Graduate Research Fellow with the National Science Foundation
- Created interdisciplinary research tools to expose animals to altered gravity, compress with microfluidics, align with 3D-printing, and machine learning image analysis, leading to three first-author papers in prep

Education

Carnegie Mellon
University
2018

Ph.D. in Biology
Tools to Examine Mechanotransduction
Certificate in Teaching Excellence

Oberlin College
2009

B.A. in Neuroscience with Chemistry Minor
B.A. in Music Theory with Honors Thesis

Research Summary

Life on Earth evolved under the influence of gravity. After gravity deprivation, astronauts come back health problems that resemble premature aging. It's still unclear how living things sense gravity. So I lead an interdisciplinary team to develop new devices that deliver mechanical forces to fruit flies, and software tools to analyze the results. By analyzing how cell communication changes, we can better understand how living things sense mechanical force. In the long term, this helps develop new treatments for mechanical dysfunctions, such as age-related diseases and space travel.

Work Experience

Public Communication
for Researchers
2012 – 2017

Co-founder, Lead Writer & Designer

- Created 12 workshops in a curriculum on science communication
- Developed a five-year strategic plan, logos, posters, advertisement campaigns, website
- Taught faculty in Computer Science, 500 students in all STEM departments
- Worked closely in a team of three to organize events, manage \$10,000 annual budget
- Graduate Student Service Award 2015

Rorus, Inc.
2014 – 2015

Co-founder, Chief Technology Officer

- Established a lab, synthesized metal nanoparticles for a water purification technology
- Directed communications for successful grants, scripts for videos, technical white papers, presentations for investors, and startup contests
- Startup cohort in AlphaLab Gear, Pittsburgh, and Founder.org, Stockholm, Sweden

Workshops Developed in Science Communication

Telling science stories	Talking to the media	Why are facts not enough?
Vocal delivery	Distilling your message	Motivated reasoning and cultural cognition
Theater techniques	Goal-driven communication	Intro to strategic frame analysis
Crafting explanations	Scientific graphic design	Communicating across social constructs

Presentations

Faculty Media Training	Carnegie Mellon University School of Computer Science
Creating 2D Research Stories	Stanford University Human-Computer Interaction, San Francisco, CA
Finding your expert blindspot	Harvard University Strategic Data Project, Boston, MA
Explaining complexity	GSL Labs, San Francisco, CA
Clear thinking made visible	AAAS Conference 2015, San Jose, CA
Telling research stories	Texas A&M University webinar
Jobs outside academia	Carnegie Mellon University Department of Biological Sciences
Keynote speaker, lecturer	Indiana University Science Communication Symposium
Why are facts not enough?	Institute for Religion in the Age of Science, Star Island, NH
Panelist	SXSW edu 2017, Austin, TX
TEDxCMU speaker	Understanding music theory. TEDxCMU, Pittsburgh, PA

Writing in Science Communication

Editorial Consultant	Grant & Jay 2017. <i>Breaking Through Gridlock</i> . Berrett-Koehler Publishers.
Contributor	<i>Integrating Science Communication Training into STEM Graduate Education</i> .
Author	<i>A 5-Year Plan to Build a Science Communication Center</i> .
Author	<i>Grad School is Hard on Mental Health</i> . Chronicle of Higher Education.
Author	<i>A Biologist's Prayer</i> . Article at ScienceNonFiction.org.

Honors and Awards

National Science Foundation Graduate Research Fellow
First place, McGinnis Venture Competition for Pittsburgh Startups
TEDx talk named editor's choice with over 120,000 views

Skills

Presentation	Statistics	Graphic design	Programming
Keynote	GraphPad, Mathematica	Affinity Designer, Pages	Java, LaTeX, ImageJ