

Creative scientist, founder of science communication program

- 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
- In research, created interdisciplinary 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

Work Experience

Public Communication for Researchers

2012 - 2017

Co-founder, Lead Writer & Designer

- Developed 12 workshops in a curriculum on science communication
- Taught faculty in Computer Science, 500 students across all STEM departments
- Developed five-year strategic plan, advertising campaigns, graphics, website, blog
- Contributing author to national recommendations on STEM education
- Worked closely in a team to organize events, manage \$10,000 annual budget
- Recognized by Graduate Student Service Award 2015, profiled by NSF

Rorus, Inc.

2014 - 2015

Co-founder, Chief Technology Officer

- Built a chemistry lab, synthesized nanoparticles for a new water purification technology
- Directed communications for successful grants, presentations for investors, technical white papers, scripts for videos, startup contests
- Startup accelerator training in AlphaLab Gear, Pittsburgh, and Founder.org, Stockholm

Education

Carnegie Mellon University

2018

Ph.D. in Biology expected September 2018

National Science Foundation Graduate Research Fellow

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 with health problems that resemble premature aging. It's still unclear how living things sense gravity, in part because experiments focus on only a few animals at a time. So I lead an interdisciplinary team to develop new devices that can deliver mechanical force to hundreds of fruit flies, and software tools to analyze the results. By learning how living things sense mechanical force, we can develop new treatments for mechanical dysfunctions, such as age-related diseases and space travel.

Workshops Developed in Science Communication

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| Presentation skills | Telling science stories | Crafting metaphorical explanations |
| Scientific graphic design | Distilling your message | Why are facts not enough? |
| Vocal delivery | Talking to the media | Motivated reasoning and cultural cognition |
| Getting jobs outside academia | Theater techniques | Intro to strategic frame analysis |

Presentations

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| <u>Faculty Media Training</u> | Carnegie Mellon University School of Computer Science |
| 2D Story Analysis | Stanford University Human-Computer Interaction, San Francisco, CA |
| <u>Finding your Expert Blindspot</u> | 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 | Webinar, Texas A&M University |
| Science Communication | Keynote speaker, Indiana University Science Communication Symposium 2018 |
| Why are Facts not Enough? | Speaker, Institute for Religion in the Age of Science, Star Island, NH |
| <u>"Oh, I get it"</u> | Panelist, SXSW edu 2017, Austin, TX |
| <u>The Protein Hustle</u> | Director, Dance Your Ph.D. |
| <u>Understanding Music</u> | TEDxCMU, Pittsburgh, PA |

Writing in Science Communication

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

Honors and Awards

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

Skills

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