

# COMSCICON 2022

Flagship Workshop

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Thank You to Our Sponsors!

Find us **@comscicon** on any of our social media accounts linked below! Be sure to read and share ComSciCon 2022 stories with our official hashtag: **#ComSciCon22**.

<u>Instagram</u>



<u>Facebook</u>



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## Welcome

Dear ComSciCon Participants,

Welcome to the ComSciCon 2022 Workshop, our 10th annual flagship event. We are extremely pleased to have you join us!

Since ComSciCon began in 2012, our goal has been to empower the graduate students who are poised to become future leaders in science communication, encouraging young scientists to expand the impact of research in their field to broad and diverse audiences as ambassadors for science and engineering. ComSciCon aims to connect these inspiring young scientists through our annual Flagship Workshop and the many Local Workshops held in nearly a dozen cities, allowing them to collaborate on new projects and expand the reach of their own initiatives.

We believe that graduate students have the greatest potential of any group to revolutionize how the scientific community interfaces with our broader society. Through science outreach, writing, digital media, founding scientific organizations, and other entrepreneurial endeavors, ComSciCon participants will help shape the culture and perception of science for future generations.

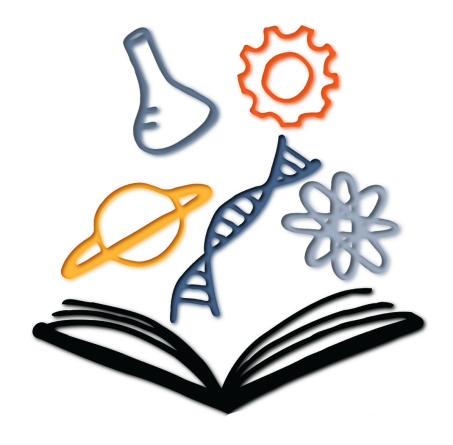
After two years of online Flagship Workshop, we are pleased and excited to return to an in-person format. In the following three days, you will meet some of the most accomplished and ambitious science communicators from both the U.S.A. and Canada, exchange experiences and ideas through active discussion, collaborate together to revise your own written works, and push the boundaries of your capabilities as a science communicator.

We are grateful, first and foremost, to the remarkable graduate students from across the world who will participate in this year's ComSciCon. The opportunity for this cohort to meet, interact, and collaborate with each other is the fundamental function of ComSciCon.

We thank the invited experts who have shared their time with us, guiding us towards these ends. And we applaud the sponsoring organizations and supporters of ComSciCon, whose enduring commitments have made this program possible.

We know the test of this workshop's success will be how its impacts carry on with you throughout your career, whether through research, education, journalism, policy, or other ventures. We encourage you, from the moment you read this letter, to develop and maintain relationships with the participants of ComSciCon 2022, and reflect thoughtfully on how the principles discussed and exhibited here can be incorporated into your own practice. We hope that you will stay in touch with your fellow attendees and continue to be a part of our inclusive science communication group. Thank you, again, and welcome to the ComSciCon community.

Yours truly, The ComSciCon 2022 Organizing Team



# ComSciCon 2022 Schedule

All times are in E.T.

### Legend:

| Talk | Panel | Workshop/Activity | Break/Social Event |
|------|-------|-------------------|--------------------|
|------|-------|-------------------|--------------------|

## Thursday, August 4, 2022

| 8:30am - 9:00am   | Breakfast   |  |  |  |
|-------------------|---|--|--|--|
| 9:00am - 9:30am   | Welcome to ComSciCon Flagship 2022!                   |  |  |  |
| 9:30am - 11:00am  | Diversity in SciComm  Asma Bashir, Gb Kim, Huei Sears |  |  |  |
| 15 minute break   |   |  |  |  |
| 11:15am - 12:45pm | Controversial Topics Shannon Rose Geary               |  |  |  |
| 12:45pm - 1:45pm  | Lunch   |  |  |  |
| 1:45pm - 2:15pm   | Pop Talks   |  |  |  |
| 2:15pm - 4:15pm   | Disability in STEM  Gabriella Serrato Marks           |  |  |  |
| 15 minute break   |   |  |  |  |
| 4:30pm - 6:30pm   | Create-A-Thon Expert Review                           |  |  |  |
| 7:30pm - 9:30pm   | Banquet Dinner  |  |  |  |

## Friday, August 5, 2022

| 8:30am - 9:00am   | Breakfast   |  |  |  |
|-------------------|---|--|--|--|
| 9:00am - 11:00am  | Create-A-Thon Expert Review                                 |  |  |  |
| 15 minute break   |   |  |  |  |
| 11:15am - 12:00pm | Poster Session 1  |  |  |  |
| 12:00pm - 1:00pm  | Lunch   |  |  |  |
| 1:00pm - 1:45pm   | Poster Session 2  |  |  |  |
| 1:45pm - 2:15pm   | Pop Talks   |  |  |  |
| 2:15pm - 4:15pm   | Science Policy Saud Anwar, Pam DiBona, Claudia Ward-de Leon |  |  |  |
| 15 minute break   |   |  |  |  |
| 4:30pm - 6:30pm   | Combating Misinformation Workshop  Matt Heid                |  |  |  |
| 7:00pm - 9:30pm   | Pizza Dinner  |  |  |  |

## Saturday, August 6, 2022

| 8:30am - 9:00am   | Breakfast  |
|-------------------|--|
| 9:00am - 9:30am   | ComSciCon Info Session: How to Get Involved with Your Local Chapter  |
| 9:30am - 10:00am  | Pop Talks  |
| 10:00am - 11:30am | Keynote Lecture: "Alone In The Dark Room: Leaving Academia For SciComm"<br>Madeline Sofia                            |
| 11:30am - 12:30pm | Lunch  |
| 12:30pm - 2:30pm  | SciComm Careers: Roundtable Discussion  Diana Chien, Jacqueline Goldstein, Susan Heilman,  Ashley Smart, Emily Zhang |
| 2:30pm - 3:00pm   | Conclusion   |

# **Code of Conduct**

ComSciCon is committed to providing a safe, hospitable, and productive environment for everyone present, regardless of race or ethnicity, religion, ability, socioeconomic status, age, physical appearance, economic or professional status, country of origin, sex, gender or gender expression, or sexuality. A conference where people feel uncomfortable or threatened is not productive, nor tolerable. Accordingly, ComSciCon prohibits intimidating, threatening, or harassing conduct during our conference and is committed to creating and maintaining a safe environment for everyone during the workshop. This policy applies to speakers, organizers, expert reviewers, and attendees, and by participating in ComSciCon, you agree to adhere to this policy.

ComSciCon expects that participants will:

- **Be** considerate and respectful to all community members.
- **Refrain** from demeaning, discriminatory, or harassing behavior, materials, and speech (more below).
- **Speak up** if they observe anything at an event that conflicts with this Code of Conduct. If you are being harassed or feel uncomfortable, notice that someone else is being harassed, or have any other concerns, please contact a member of the ComSciCon organizing team immediately.

Unacceptable behavior from any community member will not be tolerated. Unacceptable behavior includes, but is not limited to:

- Intimidating, harassing, abusive, discriminatory, derogatory, or demeaning speech, materials, or conduct by any Participants of the event and related event activities. Many event venues are shared with members of the public; please be respectful to all patrons of these locations.
- Violence, threats of violence, or violent language directed against another person.
- Failure to obey any rules or regulations of the event venue.

Harassment of participants will not be tolerated in any form. Harassment includes:

- Offensive verbal or written comments related to gender, gender identity and expression, sexual orientation, disability, physical appearance, body size, race, age, religion, national origin, affinity group, etc.
- Viewing or sharing sexual images in public spaces.
- Deliberate or perceived intimidation, stalking, or following.
- Harassing or non consensual photography or recording.
- Sustained disruption of talks or other events.
- Inappropriate physical contact.
- Unwelcome sexual attention.
- Advocating for, or encouraging, any of the above behavior.

Participants asked to stop any harassing behavior are expected to comply immediately. If a participant engages in harassing behavior, ComSciCon organizers will take any action they deem appropriate, ranging from a verbal warning to expulsion from the conference, to contacting local authorities.

ComSciCon organizers may take action to address any behavior disrupting the conference or making the environment hostile for any participants. We expect participants to follow these rules at all conference events and ComSciCon-related social activities.

If you are being harassed, notice that someone else is being harassed, or have any other concerns, please contact a member of the conference staff immediately at the designated confidential address: <a href="mailto:comscicon22-coc@comscicon.org">comscicon22-coc@comscicon.org</a>. Organizers will be available to assist anyone experiencing unacceptable behavior and will work to help you feel safe for the duration of the event. All reports will be held as confidential by ComSciCon event organizers.

We value your attendance, and want to make the conference experience as educational, productive, and fun as possible.

# Organizing Committees

#### **Organizing Committees**

A huge thank you to this year's PC and LC members for all of their hard work!

| <b>Programming Committee (P</b> | C) Logistics | Committee (LC) |
|---------------------------------|--------------|----------------|
|                                 |              |                |

Nicolas Scrutton Alvarado Lauren Girouard-Hallam

Dana Boebinger Gus Beane

Emily Costa Mike Foley

Mike Foley Leanna Kalinowski

Julie Fornaciari Claire Lamman

Elena Lin Nadia Lana

Jamie Moffa Björn Lütjens

Victoria Russell Gloria Marino

Cadence Payne Cadence Payne

Bill Smith Victoria Russell

Teodora Stoica Alexia Simon

Ralph White III Lieke van Son

# **Attendees**

Gervin Apatinga Srijana Gautam Julie Maurer

Jessie Bersson Kaushal Raj Gnyawali Brenden Moeun

Melissa Betters Ryan Golant Ibukunoluwa Naiyeju

Emma Carley Nika Hajari Elizabeth Nand

Ana Carneiro Ashley Hayden Pamela Perrimon

Callie Chappell Dillon Jones Mark Popinchalk

Jessica Chomik Apsana Kafle Andy Proctor

Brianna Chrisman Milanpreet Kaur Bec Roldan

Robert Clemenson Sarika Khanwilkar Meredith Schmehl

Megan Cook Elena Krasovskaia Nina Sokolov

Jeremy Côté Sumeet Kulkarni Jimena Stephenson

Natalie Crnosija Si Eun (Ruth) Lee Victoria Sayo Turner

Kaustav Kashyap Das Giselle Lin Manasvi Verma

Meghomita Das Gwenyth Lu Skyler Ware

Tuba Dolar Taissa Lytchenko Heather Wild

Andrian Gajigan Muhammad Taha Aara'L Yarber Manzoor

Daniela Zarate

A huge thank you to our attendees for joining us this year!

# **Invited Experts**

### **Keynote Speaker**



#### **Madeline Sofia**

Maddie Sofia is a scientist and journalist. She got her start as a journalist at NPR in 2016. In 2019, Maddie became the founding host of NPR's award-winning daily science podcast Short Wave. In 2020, Short Wave went on to become the most popular science podcast on Spotify in the United States.

Maddie's work is centered inclusive on communication and increasing the representation marginalized communities in science iournalism. She COVID. has reported on

inequities in academia and public health, and some of the earth's most fascinating creepy-crawlies. She is particularly interested in highlighting queer voices and issues.

Before hosting Short Wave, Maddie hosted the NPR video show Maddie About Science and co-developed the worldwide NPR Scicommers program. The program (now at Boston University) focuses on supporting scientists interested in science communication through mentorship, community, and editorial support. The program has helped more than 100 scientists get published in popular science outlets. Previous to NPR, she received her Ph.D. in microbiology and immunology from the University of Rochester Medical Center.

Maddie is currently freelancing, teaching, and speaking. She enjoys talking with students about careers outside of academia, inclusive science communication, and storytelling. Maddie has been designing and participating in science communication workshops for more than 10 years. She enjoys cooking, reading SciFi, and frolicking in the mountains with her partner Natalie.

### **Science Policy Panel**

#### Saud Anwar

State Senator Saud Anwar was first elected to the Senate in February 2019 to represent the residents of the 3rd State Senate District towns of East Hartford, East Windsor, Ellington and South Windsor. Saud was first elected to public office in 2011 as a member of South Windsor's Town Council. He has served two terms as South Windsor mayor, once from 2013 to 2015 and once from 2017 to 2019.



Saud is a medical doctor with specializations in treating lung diseases and critical care medicine,

occupational and environmental medicine. He currently serves as Chair of the Department of Internal Medicine at Manchester Memorial and Rockville General Hospitals. Saud was trained in pulmonary and critical care medicine at, and holds a Master's Degree in Public Health from, Yale University.

Saud also works with humanitarian and peace initiatives on a local, national and global scale. He has organized medical missions for disaster relief, receiving citations for doing so from former Governor Jodi Rell, United States Senator Richard Blumenthal and Lieutenant Governor Susan Bysiewicz.



#### Pam DiBona

Pam DiBona is an activist with Extinction Rebellion and Scientist Rebellion in Boston. She holds an M.S. in Environmental Science/Microbiology as well as a Graduate Certificate in Critical and Creative Thinking/Science in a Changing World from UMass Boston. Her work focuses on water resources, coastal habitats, and building capacity among community-based groups for water quality monitoring, data management, and sharing results with decision

makers. She has explored the public sector as both a manager and a union member; the nonprofit sector, where she designed informal ocean education programs; and the private sector with environmental consulting firms (one good and one evil). With regard to communicating with multiple audiences, Pam has been a lobbyist at the Massachusetts State House, a reporter and editor for the Somerville Community News, prepared speeches for the Commissioner of a state agency, and writes a mean grant proposal. Most recently she has been coordinating and preparing for street teach-ins about the climate crisis with Scientist Rebellion members. She is always happy to chat with anyone hoping to enter the environmental landscape of Massachusetts or coastal New England.

#### Claudia Ward-de León

Claudia Ward-de León is a nationally published writer with more than a decade of experience distilling scientific and technical information for public consumption and writing about complex subjects for the general public. As a Communications Strategist at the Union of Concerned Scientists (UCS), she leads creative teams in developing communications pieces that support the organization's scientific analysis and



advocacy in the Global Security and Clean Transportation's programs. These pieces include social media graphics, blogs, web pages, and multimedia for policymakers, community organizations, the media, and UCS' supporters. A first-generation immigrant from Guatemala, Claudia holds an MFA in Writing from Emerson College and a BA in Journalism from Southern Connecticut State University.

When Claudia is not thinking about Climate Change or Nuclear War, she likes to spend time in the woods and experiments with cooking, photography, and poetry.

## **Combating Misinformation Workshop**



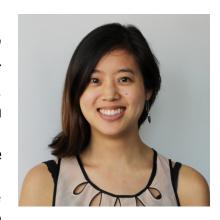
#### **Matt Heid**

Matt Heid is the senior communications strategist at the Union of Concerned Scientists, where he has spent the past decade developing and implementing communication and campaign strategies that promote and defend science-based decision making, advance progress on climate change, and help build a safer, healthier world for all. He currently co-leads the organization's campaign to counter disinformation, including trainings and workshops that empower science advocates with the knowledge and tools they need to effectively respond to disinformation.

#### **Careers Roundtable**

#### Diana Chien

Dr. Diana Chien has led the MIT Communication Lab's mission to support engineering trainees' technical communication skills since 2017, after working with the program since its launch in 2013. From 2013-2015, while completing her Ph.D. in Microbiology, Diana was a Biological Engineering (BE) Communication Fellow. From 2016-2017, she led the BE Communication Lab. During that time, she also co-led the design and launch of the CommKit, the Communication Lab's suite of online



resources, which has received praise from global audiences.

Diana's dedication to science communication grows out of her longtime passion for both biology and writing: as an undergraduate at Princeton University, she majored in ecology and evolutionary biology and minored in

creative writing. Her poetry and fiction have received awards from and been published in major literary magazines.



#### Jacqueline Goldstein

Dr. Jacqueline Goldstein is a queer, first-generation American, astrophysicist and science communication trainer. She is the Instructional Designer at the MIT Communication Lab, where she develops and leads workshops for engineering graduate students in technical communication and peer-coaching best practices. She earned her PhD in Astronomy, minoring in Life Sciences Communication, at the University of Wisconsin. She has been a radio host for astronomy news on WORT 89.9FM Madison, has authored a science comic book about her research on vibrations in stars, has trained researchers in

story communication with Story Form Science, and is the co-creator of the science communication research blog SciCommBites.

Dr. Goldstein views training in academic science communication as a means to deepen scientific understanding, grow knowledge, promote collaboration, cultivate belonging, foster identity, and strengthen community. With the MIT Communication Lab she co-developed a workshop for best practices in Inclusive Coaching, and as an Advancing Research In Society (ARIS) Fellow she is co-developing a guide for best practices in Inclusive Broader Impacts. She is actively seeking to deepen her knowledge and understanding of equity and inclusion in science and science communication.

Dr. Goldstein values community organizing. She has been a leader in her graduate labor union, and is the founder of the community-centered Queer Climbing Social in Madison, Wisconsin. Outside of academia and organizing, she enjoys hiking with her dog and exploring gluten-free baked goods. She currently lives in Somerville, Massachusetts but is originally from San Francisco, California and misses the redwoods.

#### Susan Heilman

Susan Heilman, PhD (she/her) is a life-long STEM learner and educator. She received her BA in Biochemistry from Vassar College and went on to do cancer research at UMass Medical School where she received her PhD in Biomedical Sciences. Heilman then entered the world of informal science education, as an educator at the Museum of Science Boston, delivering live presentations in current science. generating lightning, and wrangling porcupines. Over the past few years, the Museum of Science's mission and Heilman's job description has evolved into being more community focused. As part of the Current



Science Communication team, Heilman leverages the Museum's regional leadership position to convene members of academia, industry, government and the community to work on a variety of topical issues including vaccines, artificial intelligence and mental health. Her role is to foster these relationships, develop new ones, and create innovative programs to further their missions. In her spare time, she loves to cook, read, and play video games with her family.



#### **Ashley Smart**

Ashley Smart is the associate director of the Knight Science Journalism Program at MIT and a senior editor at Undark magazine. He was previously a senior editor at Physics Today magazine. Smart was a 2015-16 Knight Science Journalism Fellow and has served on the advisory boards of the Council for the Advancement of Science Writing and

The Open Notebook. He holds a PhD in Chemical and Biological Engineering from Northwestern University. Smart is co-editor of "A Tactical Guide to Science Journalism: Lessons From the Frontlines" published in 2022 by Oxford University Press.

#### **Emily Zhang**

Emily is a producer at the science YouTube channel Veritasium. She graduated from Columbia University last year, where she received a B.A. in astrophysics. Originally she had full intentions to apply to grad school, but her love of the arts got her involved in theatre, writing, and video production during college – and once she learned about the science media world, she had to give it a shot. Towards the end of her undergraduate studies, she picked up scicomm experience from running BlueShift, Columbia's astronomy club, working an



internship at the Chandra X-ray Center, and publishing her first major article after working with an NASW mentorship program.

Upon graduating, she spent the summer learning about radio at Science Friday under the AAAS Mass Media Fellowship while also beginning her work with Veritasium. After the fellowship finished, she joined Veritasium full-time as a producer. Over the past year, she has gotten to hone both her scicomm skills and her production skills in days that are filled with anything from focused scriptwriting to business logistics to (once) filming from a helicopter.

Emily is excited about the accessibility created by the intersection of science and popular media and hopes to pursue that area in the future. She was born and raised around Boston, and after a five-year journey of living in NYC and then LA, she has moved back home to Boston and is excited to connect with other science media folk in the area! She is extremely game to discuss food, hikes, music, movies, internet pop culture, and, of course, scicomm.

## **Diversity in SciComm Panel**

#### Dr Asma Bashir

Dr Asma Bashir is a neuroscientist by training, having completed her PhD in Neuroscience at the University of British Columbia in Vancouver. For her PhD, she used preclinical and clinical approaches to investigate



mechanisms of traumatic brain injury that lead to cerebrovascular compromise and axonal damage, including preclinical evaluation of a promising therapeutic. She previously completed her BA in Psychology at Boston University.

During her final year as a doctoral student, Dr Bashir founded Her Royal Science, a podcast that aims to humanize STEM researchers hidden behind the walls of the academic ivory tower, with a focus on stories of individuals from historically excluded groups. Inspired by {THE AND} card game, Her Royal Science is a

warm space for guests to share their personal experiences and words of wisdom, where Dr Bashir aims to cultivate and guide honest conversations that will encourage her audience to think about the systems of oppression that target the most marginalized members of our society.

Since starting Her Royal Science, Dr Bashir has expanded her platform's brand offerings into education and film. She is particularly passionate about teaching and mentoring the next generation of STEM trainees and podcasters, and has enjoyed many fruitful collaborations with professional organizations and academic institutions to lecture about science, communication, and the intersection of the two. The Her Royal Science platform also celebrated the release of an eponymous short film earlier this year, which offers a candid look into the makings of her podcast.

#### **Gb Kim**

Gb Kim is a visual artist and a scholar of aesthetic politics, decolonial theory, and history & philosophy of science. Kim believes her responsibilities lie in using artistic practices to disrupt scientific practices, fully accounting the history and philosophy of science, and ultimately enabling a humane medical and technological future. Their ongoing work is focused on imagining non-apocalyptic



science fictions/futures. Gb received a BFA in Illustration from Parsons The New School and an MA in Arts Politics from NYU Tisch School of Arts.

Currently she works with the XBio division of the Science Communications Lab (https://explorebiology.org/) as the primary illustrator.



#### **Huei Sears**

Huei Sears (she/her) is a fifth-year graduate student at Northwestern University in the Department of Physics & Astronomy and the Center for Interdisciplinary and Exploratory Research in Astrophysics (CIERA). Her research focuses on the host properties of long-duration gamma-ray bursts in the early universe.

Huei earned her B.S. in 2017 in 'Mathematics, Advanced' from Lyman Briggs College (LBC) at Michigan State University (MSU) while also completing the requirements for a double major in

'Astrophysics.' Although now undeniably an astronomer, Huei chose mathematics for her degree because of her love of calculus and the numerous extracurricular activities offered by the Department of Mathematics. After graduating from MSU in 2017, Huei took a gap year and started post-baccalaureate work in astronomy at MSU, served as public outreach coordinator for the campus observatory, and volunteered on a U.S. Senate campaign as a campaign finance intern.

Now in graduate school, Huei is an active member of the Astrobites collaboration. Astrobites is an international collaboration of graduate students who write daily paper summaries about recent astronomical research. Astrobites is American Astronomical Society (AAS) sponsored and gets nearly 1,400 web visits per day. In addition to daily science reviews, they also publish 'Beyond' posts that cover all non-research aspects of the (astro) graduate school experience. Now in her third year of membership in the collaboration, Huei currently serves on the DEI, hiring, and administrative committees in addition to co-managing their social media accounts.

Outside of astronomy and academia, Huei enjoys listening to Taylor Swift, walking along the western shores of Lake Michigan, and going to the thrift store.

### **Controversial Topics Workshop**

#### **Shannon Rose Geary**

Shannon is a science journalist and illustrator from Massachusetts. 2019, they graduated from Tufts University with a B.S. in Biochemistry and a lot of confusion about what to do with their life. While at Tufts. Shannon worked STEM as а teacher for education elementary school students and a cartoonist for



the Tufts Daily. After graduation, they worked as a research assistant, a barista, and a science communicator before going on to get their M.S. in journalism from Columbia University.

Shannon focused their journalistic training around investigative skills, audio/video production, and reporting on health and science topics in an ethical, accessible way. During their time at Columbia, Shannon developed a passion for reporting on LGBTQIA+ communities and telling queer stories. Their thesis project looked at the barriers transgender adults in the United States face when attempting to access gender affirming care and how those barriers were affected by the COVID pandemic.

Currently, Shannon works as the assistant producer for Big Picture Science podcast, a production of the SETI Institute. Every week, they get to create shows about bugs, dinosaurs, medical history, and more while asking the big picture questions, like "how DO scientists know where to look for sunken ships?" and "where did that background noise in my audio file come from?".

When they're not writing or producing, Shannon loves to create art. They draw, paint, and make digital illustrations - both science focused and not. Their ultimate career goal is to have a work space filled with Weiner dogs, nice pens, and a soft drink machine that dispenses endless cherry-vanilla Diet Coke.

### **Disability in STEM Workshop**

#### Gabi Marks

Dr. Gabi Serrato Marks is an MIT-trained scientist with a passion for expanding access to science. As a Partner at Stellate Communications, she primarily supports academic researchers, facilitating greater engagement with scientific and non-scientific audiences alike. Gabi received her B.A. at Bowdoin College and her doctorate in geochemistry from MIT. Her research focused on generating records of past climate change using cave deposits. She enjoys creating all types of



media: Dr. Serrato Marks has published work in Scientific American, Audubon, and the PBS Eons YouTube Channel, and has been featured in several articles and podcasts (Nature Career Guide, Physics Today, Disability Visibility). Gabi is also co-editing an anthology of personal stories from disabled scientists (under contract with Columbia University Press). You can find Gabi on Twitter as @gserratomarks, or in Boston drinking iced coffee with her husband and two cats, Spock and Moose.

## **Create-a-Thon Expert Review Panel**

In addition to many of the invited experts above, our Create-a-thon reviewers also include...

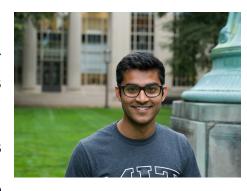


#### **Julie Rorrer**

Dr. Julie Rorrer is an Arnold O. Beckman Postdoctoral Research Fellow and Fellow of the Communication Lab at the Massachusetts Institute of Technology. Her research focuses heterogeneous catalytic upcycling of waste plastics and sustainable feedstocks. She received her B.S. in chemical engineering from Arizona State University and her Ph.D. in chemical engineering from the University of California, Berkeley, where she was a National Science Foundation (NSF) Graduate Research Fellow. She is also the founder of the ongoing outreach initiative ColorMePhD, a free coloring book series communicating PhD-level research to a broad audience, which aims to inspire the next generation of scientists and improve visibility for scientists from traditionally-excluded backgrounds.

#### Rahi Patel

Rahi Patel is a science communicator based in Boston, MA. He currently works at the MIT Museum as a Curiosity Correspondent. In this role, he makes educational and inspirational videos for middle schoolers. He is involved in all aspects of the video production process including scripting, filming, being on camera, editing, and visual effects. During COVID, he



did all of these things by himself in his apartment as part of his series called Home Labs. This series challenges students to do science and engineering projects with things they have in their homes. The videos are as silly as possible because why not? Please check them out!

YouTube Channel: Curiosity Correspondents

For fun, Rahi likes to play tennis, play along to his favorite songs on the piano, and go on long aimless walks.



### Rodrigo Garcia

Rodrigo has completed a Ph.D. in Neuroscience where he studied how astrocytes contribute to well sensorv processing, as in as neurodevelopmental disorders. After a brief postdoc investigating the structural underpinnings of new memory formation, he decided to make a career change into Science Education and Communication. Currently, he works with teams of PhDs to create original, animated content for undergraduate courses

consumed by students at universities around the world.

#### **Gourav Khullar**

Gourav Khullar is an extragalactic astronomer, who works on understanding the assembly of mass in distant galaxies. Having obtained his PhD in 2022 from the University of Chicago, he has employed both ground- and space-based telescopes (including Hubble and JWST!) to obtain observations of massive galaxies for his work. Gourav has been a writer and



administrator at Astrobites since 2015, having written (or contributed to) ~30 articles, and led initiatives related to education, equity and inclusion, and organizational health. He is the co-founder of IDEA — Inclusion, Diversity and Equity in Astronomy — a grassroot organization of astronomers at the University of Chicago that since 2017 has conducted peer education and organized for social justice and policy reform. He has also conducted science communication at the Adler Planetarium, as part of the Astronomy Conversations series. Gourav is a fan of non-fiction books, cricket (both in the field and on his playstation), and mixing music. In September 2022, he will start as a Samuel P. Langley PITT PACC Astronomy Postdoctoral Fellow at the University of Pittsburgh.



#### **Pinar Gurel**

Pinar Gurel grew up in North Carolina and obtained her B.S. in Chemistry from UNC- Chapel Hill in 2009. She pursued her PhD in the Higgs lab at Dartmouth, where she investigated the biochemical mechanisms of actin cytoskeleton dynamics. During her PhD, Pinar was an active member of the Dartmouth Figure Skating Team, and attended her first ComSciCon meeting in 2014. After completing her PhD in 2015, Pinar conducted postdoctoral studies in the Alushin lab at the NIH in Bethesda, MD, then relocated with the lab to Rockefeller University in NYC, where she

used cryoEM to understand how mechanical forces influence actin structure. In 2018, Pinar transitioned to a career in industry at Alkermes, located outside of Boston MA. Her focus is on protein engineering and design to develop therapeutics for immuno-oncology. Throughout her training, Pinar has always dedicated time towards science outreach, policy

and mentoring efforts in both local and national settings. In addition to her passion for science, Pinar enjoys spending time with family and friends, and loves traveling, especially to warm destinations

#### **Tim De Chant**

Tim De Chant is a senior climate reporter at TechCrunch and the founder of Future Proof, a publication covering climate and energy. He is also a lecturer in MIT's Graduate Program in Science Writing and has written for The Wire China, the Chicago Tribune, NOVA Next, and Wired magazine, among others. De Chant was awarded a Knight Science Journalism Fellowship at MIT in 2018, and he received his doctorate in environmental science, policy, and management



from the University of California, Berkeley, and his bachelor's degree in environmental studies, English, and biology from St. Olaf College.

## Poster Abstracts

## **Poster Session 1**

Fri Aug 5, 11.15-12.00

# Deep-sea Travel Posters: Putting the Remote and Rarely-Seen on Display

#### Melissa Betters

The purpose of a travel poster is to entice the viewer to want to know more about the place depicted. Oftentimes, such posters depict beautiful destinations for travel, highlighting the unique features or natural beauty of each place. "Deep-Sea Travel Posters" is an art outreach project I began in 2020 that blends my field of study (deep-sea biology) with my main creative hobby (digital art). The rhetoric surrounding the deep ocean is often saturated with fear or disgust, and so my goal with this initiative was to challenge this narrative and present the deep ocean as engaging and beautiful, rather than remote or frightening. Swapping out realistic travel destinations for deep-sea environments, my goal was for people to look at these posters and understand, through visualize association, that these "destinations" are just as real and just as tangible as any other place one could travel to, even though the route there may be a little trickier. Maintaining scientific accuracy in my designs was of paramount importance, which was challenged by the constraints of stimulating visual interest and distilling the beauty of a location into a single rectangular space. The final designs blend scientific knowledge with art in a way that is interesting and engaging to both scientists in the field as well as the general public.

# BioJam Camp: Toward justice through bioengineering and biodesign with youth

### Callie Chappell

BioJam is a political, artistic, and educational project in which Bay Area artists, scientists, and educators collaborate with youth and communities of color to address historical exclusion of their communities in STEM fields and reframe what science can be. As an intergenerational collective, we

co-learn on topics of culture (social and biological), community (cultural and ecological), and creativity. We reject the notion that increasing the number of scientists of color requires inculcation in the ways of the dominant culture. Instead, we center cultural practices, traditional ways of knowing, storytelling, art, experiential learning, and community engagement to break down the framing that positions these practices as distinct from science. The goal of this work is to realize a future in which the practice of science is relatable, accessible, and liberatory.

Centered in the Greater Bay Area of California, BioJam's radical mission is not to teach, but to co-learn with youth through their own creativity and culture. Now in our fourth year, the program starts with a summer camp where instructors co-learn with teens on the topics of biodesign, biohacking, speculative design, and restorative justice. After camp ends, the program continues throughout the academic year, as youth design and lead projects to engage their home communities in what they have learned. BioJam works to develop deep roots across learning spaces: universities, museums, community bio labs, community gardens, and after school programs. These new intersectional and intergenerational learning spaces push us to expand what is understood as science in the future of bioengineering and biodesign.

## Building diverse, equitable, and inclusive partnerships with Kānaka 'Ōiwi (Native Hawaiians) and Ocean Exploration Trust Megan Cook

Within the past two years, members of the Papahānaumokuākea Native Hawaiian Cultural Working Group and the Ocean Exploration Trust team have been growing an equitable and inclusive partnership honoring 'Ōiwi (Native Hawaiian) knowledge systems and providing opportunities for 'Ōiwi to participate on the expeditions and hear priorities for Native Hawaiian community priorities for education and outreach. On E/V Nautilus expeditions into Papahānaumokuākea Marine National Monument (PMNM) in 2021 and 2022, Kānaka 'Ōiwi were represented as Science & Engineering interns, Science Communication Fellows, and cultural liaisons. Increasing indigenous participation is critical to encouraging the next generation to pursue careers in STEM, ocean sciences, and maritime careers, where they are severely under-represented.

This partnership has led to the creation of Hawaiian names for each expedition, promotional videos in 'Ōlelo Hawai'i (Hawaiian language) for live ship-to-shore interactions programs with kula kaiapuni (Hawaiian

immersion schools), and current efforts to create culturally-grounded ocean science curriculum in 'Ōlelo Hawai'i. These efforts are laying the foundation for many years of collaboration equally valuing Indigenous science and methodologies and creative diverse participation in multi-disciplinary research of biocultural deep sea ecosystems in PMNM.

# "My Journey in Graduate School (and beyond) from three-angles" *Milanpreet Kaur*

In 2018, I started my journey as a graduate student at the University of Calgary, Canada with the aim to become a better researcher and make more contributions to our research community. Little did I know that this journey will also play a key role in social engagement, public awareness, science outreach, and advocating EDI.

My poster will revolve around "community building" as the central theme and will showcase the numerous past and ongoing collaborative events organized under the umbrella of the below-mentioned organizations -

- 1) UCalgary Chemists for Inclusivity, Diversity, and Equity (President) UCalgary CIDE is working towards promoting inclusivity, diversity and equity in the chemical sciences and engineering by connecting its members (including students, postdoctoral researchers, staff, and faculty). It is focused on creating an environment where everyone is welcome.
- 2) Canadian Working for Inclusivity in Sciences, Engineering, and Technology (CWIC) Network (Chief Marketing Officer) -The purpose of this group is to promote inclusivity, equity, and diversity in the chemical sciences by connecting chemical sciences groups across Canada.
- 3) The Graduate College (Chair, University Committee) -The Graduate College is a home for graduate students and postdocs to gain training and opportunities in professional development and become emerging leaders in our communities: local to global.

The poster will document the importance of teamwork and show how various events positively impacted audiences with diverse backgrounds. It will also discuss my challenges and how I reached a solution. Finally, I hope to initiate more collaborations and exchange ideas.

STEM-Pals, a mentorship program connecting today's youth with the scientists of tomorrow

Giselle Lin

STEM-Pals is a mentorship program focused on reaching out to middle school students and generating excitement in STEM. This pen-pal program was founded in 2021 by graduate students at the University of Calgary. Students in grade 8 and 9 are matched with a mentor, typically undergraduate students at the UofC. The goal is to inspire students to explore future careers in STEM, discuss how to overcome obstacles, and form a welcoming and safe space to discuss science topics. Mentors also discuss higher education, how to apply for different opportunities and practice their own scicomm skills by communicating with the younger audience. In its first year, 101 mentors were assembled for the program from the undergraduate, graduate, and post-doctoral population at the UofC. 189 middle-school students were invited to participate. From anonymous feedback collected at the end of the program in June, students reported increased interest in STEM and a positive mentor-mentee relationship. This program has been added to the co-curricular record at the University of Calgary and will continue to be provided to students in Calgary as long as there is interest.

### Who are you talking to? Ibukunoluwa Naiyeju

To communicate science effectively, it is important to know your audience. Who are you talking to? High school students or colleagues? The public or high-level experts? Knowing your audience will influence your choice of language and other communication tools or platforms, and in turn, help you achieve better and more effective communication of your scientific research. This poster aims to cover some points of consideration which aid effective science communication to diverse groups/audiences.

# Yale Science Communication – A Graduate Student Organization: Communicating Science, Igniting Scientific Engagement, and Training Science Communicators

### Lizzy Nand

Yale Science Communication – A Graduate Student Organization (YSC) is the new parent organization that supports the established Yale programs Science in the News (SITN) and Science@Brewery (S@B), with more programs currently in development. We as an organization aim to communicate science and ignite scientific engagement across diverse communities and train effective science communicators. To this end, we

speak about science at venues ranging from libraries to local bars across New Haven, CT and beyond. As Yale graduate and professional students and postdoctoral scholars, we believe we have a responsibility to make science accessible to the general public, especially to under-served communities. By specifically engaging our local communities we are able to have a significant impact in improving science literacy and equity. Our entire organization is composed of Yale graduate students, professional students, and postdoctoral scholars; we recruit these scientists from diverse fields as speakers, coordinators, and directors of our organization. Over time we have developed a tiered mentoring system within our organization to guide our speakers and coordinators through the process of creating their talks. Additionally, we train graduate students and postdoctoral scholars in effective science communication by running workshops and teaching modules in graduate school courses. We are actively working to improve our speakers' training by drawing from the expertise of others and from published research. We have been successful so far in our goals of engaging our local community in science, and we are always seeking new ways to improve. Creating our new parent organization has been challenging, yet immensely rewarding for all of our members, and we intend to continue improving and expanding our YSC programs for many years to come.

# SciPolBites: Engaging early-career scientists in science policy and communication Meredith Schmehl

SciPolBites is a series of reflections from members of the National Science Policy Network (NSPN), covering current events and issues in science policy. Part of the ScienceBites network, the blog provides a platform for NSPN members to practice their science communication skills by sharing their professional and personal perspectives on critical science policy issues. Groups of 2-5 reflections of 300-600 words are published as sets to provide readers with varied perspectives on science and policy topics. To date, 65 unique members have published 20 articles covering themes such as voting by mail, local advocacy, racial justice, and environmental mitigation. Participants increase their confidence in communicating about science with the public and contribute to policy related to their research areas. ComSciCon attendees are welcome to join the National Science Policy Network and participate in SciPolBites or other programming such

as topic-focused committees, advocacy and communication opportunities, and internship programs.

# Astronomy for everyone: Engaging the Latinx community in astronomy through social media outreach. Jimena Stephenson

Social media eliminates barriers to information regardless of race, gender, level of education, or economic background. Platforms like Instagram, YouTube, and TikTok are effective outlets to present information, whether true or fake, to the general public. Far too often they serve as a platform for misinformation and conspiracy theories about how science works, especially in Hispanic communities which are underrepresented in higher education. This is why a year ago I decided to open a TikTok account and talk about astronomy and break down how science works - and how we know what we know. As a Latina based in the U.S., I decided to do it in Spanish. I have reached hundreds of thousands of people and amassed a following of about 8,000 users who are interested in astronomy but may not have had academic exposure to scientific concepts and the scientific method. Nearly 40% of those followers are based in the US, while the rest come from across Latin America. This shows there is a large Spanish-speaking audience with interest in astronomy here in the US and abroad. Over the past year, my followers have shown a desire for more-in-depth astronomy content and have urged me to start a YouTube channel, which would allow me to develop a free course on the fundamentals of astronomy in Spanish. The main goal of this channel is to make astronomy accessible to Latinxs with any level of education, especially those without a scientific background.

# The STEM Ambassador Program (STEMAP): Bringing science into the community Skyler Ware

The STEM Ambassador Program (STEMAP) trains graduate students, postdocs, and faculty to engage effectively with the public in innovative and unconventional ways. While traditional informal education centers like libraries and museums play a valuable role in science education and outreach, various life factors can limit the ways in which certain groups engage with science in those venues. STEMAP engagement activities bring outreach directly to groups within the community, expanding access

to science education for those who do not or cannot visit conventional venues. Alongside building science literacy, STEMAP seeks to build trust between scientists and their communities and to connect community groups with scientists who share their values, identities, and experiences. Outreach and engagement activities are developed in collaboration with the venue or community group, and activities are intentionally designed to build upon the group's existing knowledge and resources and to align with their needs and interests. Since its inception in 2016, STEMAP has trained over 150 ambassadors who have led engagement activities at senior centers, farmer's markets, secure care facilities, game stores, and many more.

Ask me about my battery-themed Dungeons & Dragons adventure!

## **Poster Session 2**

Fri Aug 5, 13.00-13.45

# Bay Area Scientists Inspiring Students: K-5 STEM Outreach through Interactive Lessons

#### Ana Carneiro

Bay Area Scientists Inspiring Students (BASIS) is a STEM volunteer program, run by Community Resources in Science (CRS), in which a community of over 600 scientists teach lessons to K-5 classrooms through hands-on experiments during the academic year. Our goal is to engage students in interactive and question-based activities and establish teaching connections between scientists and local public schools. UC Berkeley has several teams led by graduate students and post-docs that go to public schools throughout the East Bay area. We have developed and taught lessons such as Squishy Circuits, It's Just a Phase, and Renewable Energy. In addition to introducing various science topics to our students, volunteers also share the type of research and science they do day-to-day, serving as role models and mentors for these students. Due to COVID-19, lessons for the past two years have been taught in virtually, but we have still been able to reach hundreds of classrooms - just this past year, BASIS reached 430 classrooms!

## My Fave Queer Chemist: Queering Chemistry Through the Art of Storytelling Bec Roldan

The public recognition and acceptance of the LGBTQ+ community has vastly improved over the last couple of decades. However, the transition towards acceptance and equity has been more gradual in the chemistry field, as a "don't ask, don't tell" culture has long been in place. As a result, finding LGBTQ+ role models in the chemistry field and building a community has proven to be challenging. My Fave Queer Chemist (MFQC) is a podcast dedicated to uplifting the stories of LGBTQ+ chemists at every point in their careers. We believe that through sharing the stories of others, we can help LGBTQ+ scientists combat feelings of isolation and build a community of queer and trans people within the STEM field. Learning about the work of countless out and proud leaders in the field, the many student-driven initiatives and organizations, and the diverse experiences of LGBTQ+ chemists, help us imagine a chemistry field that is built on equity,

justice and true inclusion. To date, MFQC has featured the stories of more than 60 scientists, raised money for queer and trans led organizations in the U.S., and have spoken at a number of national chemistry and STEM conferences. This poster will highlight the stories from the show, the challenges and successes of running a podcast, and the outreach and science communication endeavors that have been born out of this project.

# Montreal Survival Guide: Developing inclusive resource maps for Peoples of Color to foster a sense of belonging in a new environment *Meghomita Das*

Fostering a sense of belonging for Peoples of Color as they immigrate to new cities and countries to pursue higher education is essential to create an inclusive and safe research environment. Such migrations are always riddled with elements of culture shock, language barriers, or differing financial expectations while also navigating ways to fit into a new research environment with different expectations. A resource map is a document that provides a new People of Color colleague with various resources that are available to them, both within and outside the organization and establish a support network for them. At the Department of Earth and Planetary Sciences at McGill University, we decided to create 2 resource maps: Montreal Survival Guide and the Crisis Flowchart Map. These resource maps were developed in collaboration with Unlearning Racism in Geosciences Program. The Montreal Survival Guide listed information that is required to survive and thrive in the city of Montreal, a relatively bilingual city in a French speaking province in Canada. Some highlights from the guide includes information about the city transit system, demographic information about different neighbourhoods of the city and the language expectations required to navigate the city. The Crisis Flowchart Map lists all the crisis response services available at McGill and in Montreal at a quick glance so that any member of our department can access these services without too much hassle. Both these resource maps helped our department members to find a sense of community within Montreal and at McGill by using the power of social capital. We plan to continue to update these resource maps and provide the members with the latest information available in our ongoing efforts to update the onboarding policy of our department.

#### Weaving folklore and science: virus as shape shifting Aswang Andrian P Gajigan

This presentation stems from exploring creative ways to tell stories away from bland delivery of facts. Since myth and folklore are within popular culture, thus accessible and within the public imagination, we can utilize them as a framework for science communication. Here, I will use Aswang as an allegory for viruses. Aswang are creatures of lower mythology, an umbrella term for Philippine mythical shape-shifting beings, somewhat analogous to the western concept of vampires, werewolves, witches, and ghouls. Aswang, like viruses, alters the host's internal and possesses the unsuspecting host. In addition, ecological parallels can be drawn between the two. This presentation will also attempt to theorize the practice of myth-science retelling, its advantages, and potential pitfalls. Virus as Aswang is only one of the many myths and folklores that we can tap for our scicomm needs. Different cultures have rich and varied repertoire of folklores. With this practice, I envision de-privileging of "modern" science and recognizing continuity and co-existence of various knowledge systems, with emphasis on I/indigenous knowledge systems.

### colorSTEMs: it's science by design Ashley Hayden

Imagine one of your college textbooks without any images - no charts, no graphs, no illustrations, and no diagrams with arrows and labels. It is a terrifying thought! Images are an extremely effective form of storytelling, especially when the story is complicated, as it often is in science. However, most scientists never receive training in science visualization, so science is littered with poor data visualizations that confuse readers. To address this problem, I founded colorSTEMs, a science visualization company that helps scientists visualize their work by making custom graphics for clients and hosting workshops to teach researchers how to master science visualization themselves. Since starting in 2020, I have helped over 25 clients by making data-driven figures, graphical abstracts, infographics, posters, slide decks, and more. I have also taught over 100 graduate students the basic principles of graphic design and how to use programs like Adobe Illustrator, BioRender, and Photoshop, colorSTEMs is also heavily focused on outreach projects, with a focus on those aiming to increase public health literacy. However, I need help to spread the news about the services that colorSTEMs offers. I am open to hosting workshops internationally and am seeking more clients to collaborate with, both on science visualization and outreach projects. Please come chat with me to brainstorm about what colorSTEMs can do for you!

# Naturalist Showdown: A Live-Stream Game Show as a Vehicle for Raising Money and Communicating Science Dillon Jones

In May 2022, I hosted the first Naturalist Showdown: a live-streamed game show with the explicit goal of raising money for a series of Non-Profits. Naturalist Showdown was produced in partnership with MammalzTv. During this pilot episode, we raised over \$2,200 for the Hike Clerb, the Native American Rights Fund, and the Rainforest Foundation through audience donations. Additionally, we secured funding and logistical support to produce the show on a monthly basis. The show format is fairly simple, consisting of 3 competitor rounds and 2 audience rounds which take place over the course of an hour. Competitor rounds are largely modeled after popular game shows (e.g. Jeopardy, Family Feud, Trivia etc.), however they are switched out between shows to keep the game new with each viewing experience. Audience rounds are organized through custom Kahoot! trivias that ask relevant questions about the contestants' background, prior trivia questions, and the organizations we are supporting. In order to maintain a competitive atmosphere, while ensuring all organizations benefit, Mammalz matches donations up to \$500 for the first place winner, \$300 for second place, and \$200 for third place. On this poster, I will go into further detail about specific design aspects of the game show, the tools and setup we used to stream to an international audience, and demonstrate how Naturalist Showdown is a unique vehicle for communicating science and nature focused activism through the rigor of competitive game show excellence!

# Bringing Gravitational Waves into the Classroom: Science Outreach at the LIGO Livingston Science Education Center Sumeet Kulkarni

The Laser Interferometer Gravitational-wave Observatory (LIGO) detector in Livingston, Louisiana has a dedicated facility for Science Education and Outreach, consisting of a fully equipped auditorium, a classroom, and an exhibit hall with around 50 interactive science exhibits. The center focuses on bringing LIGO science and cutting-edge astrophysics research into classrooms, and use it to engage K-12 students while teaching basic

physics concepts. It also trains undergraduate STEM students from the Southern University in Baton Rouge, an HBCU, to be docents for school visits and public outreach events at LIGO, putting under-represented minorities in STEM at the forefront in giving science exposure to the next generation. I served as a LIGO outreach fellow here in Spring '22 and participated in various virtual as well as in-person tours and outreach events. This poster will present my experiences there, information about how big experiments/collaborations such as LIGO can engage local communities, and a new web-based tool I developed to teach the physics of oscillations and waves using LIGO gravitational-wave data.

# Science for all: Increasing access to scientific education to Nevada's incarcerated population Taissa Lytchenko

Five years ago, local newspapers reported that imprisonment rate in the state of Nevada is 15% above the national average. This rising number of incarcerated disproportionally effects our diverse individuals, since the Vera Institute of Justice (2019) showed that incarceration rate for Black and Native Americans in Nevada underwent the most drastic increase among all of our populations within the last few years. These individuals often come from low socioeconomic status, with little access or social support for basic education. To address this disparity, we began an outreach project at the University of a Nevada, Reno focused to provide our local incarcerated community with access to education in a 2-fold manner in our detention facilities. First, we update their library to feature literature on fundamental concepts in STEM (biology, chemistry, psychology, sociology, etc.). This material is focused at the 101 level to give the readers a broad overview of topics, and we collect this literature through donations from our university students, faculty and staff. Second, we conduct live presentations teaching fundamentals of various concepts in science, as well as demonstrations in anatomy, using real human & animal brain models. It is well-established in research that educational programming in prison has been influential in more positive outcomes for individuals once they are released (Anderson, Schumacker, & Anderson, 1991; Berk, Lenihan, & Rossi, 1980; Chandler, 1973; Downing, Stitt, & Murray, 1987). This project aims to combat the mindset of many incarcerated that they are beyond hope, and provide them with alternatives in interests and a hope for a brighter future. Likewise, this work provides our group with on-hand experience in communicating difficult science topics at an understandable level for the general public. Our goal is to make science education accessible for all.

# School on a Snow Day: How environmental education and research can intersect to diversify participation in field science. Julie Maurer

Microbial ecology is the study of how our planet's microscopic life interact with larger ecosystems and the earth's climate. Despite the importance of microbial systems to our macroscopic world, community science and public involvement in microbial ecology research is uncommon. In the North Cascades of Washington state, an environmental education non-profit and a research lab collaborated to create an interactive experience for middle school science classes from underserved communities which blended snow shoeing and ecology in a program called Snow School. As field instructors for this program, we developed an engaging, hands-on curriculum in which students collected real scientific data for a study on snow microbes and experienced the beautiful wilderness in their backyard on snow shoes (a first time for many). Increased representation in field science and outdoor recreation are closely linked to environmental justice, public health, and increased literacy on climate change. In this presentation I will use my involvement in Snow School as a model for developing future experiential learning programs in STEM, which have the potential to diversify the outdoors, inspire, and increase participation in cutting edge research.

STEAMPUNK ZINE PROJECT: Cross-collaborative organizational initiative to bring high-quality STEAM (Science, Technology, Engineering, Arts, Mathematics) educational programming and zine technology to the disenfranchised, incarcerated community of Southern California.

#### Daniela Zarate

Incarcerated individuals comprise one of the most vulnerable, marginalized, and disenfranchised communities in modern history. Currently, more than 2 million individuals are detained across federal, state, and private for-profit institutions, giving the United States the dubious distinction of leading the world with the highest per-capita incarceration rate. The establishment of educational programs within institutions of incarceration continues to face significant barriers despite the proven value such programming contributes

towards reducing rates of recidivism (reoffense) and improving general wellness for incarcerated individuals. Here, a collaborative group of graduate students and postdocs from the University of California system are developing a series of science education zine ("small magazine") workshops to be delivered in southern California jails and prisons. We are developing an accompanying zine workbook that will have a hybrid function somewhere between a course textbook, lab notebook, journal, and note-taking space. In addition, each workshop will offer a zine-making session in which students will be able to further process and engage with course material. The use of zine-workshops will allow participants to exercise creativity, imagination, and collaboration for dynamic learning. These zines will then be compiled and some will be incorporated into the course textbook, where the contributions of the students can be preserved and shared with future classes.

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