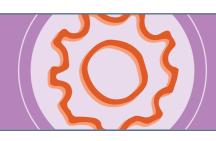


A report on the ninth annual Communicating Science Conference for STEM graduate students



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# Letter from the Organizing Committee



Dear Sponsors, Supporters, and other Members of the ComSciCon Community,

Since ComSciCon began in 2012, our goal has been to empower 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 Chapter Workshops held in nearly a dozen cities across the country, 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.

In recognition of both the necessity to protect the health of our attendees and the opportunity to innovate and extend our programming, our Program Organizing Committee made the decision to transition our Flagship workshop to an online format again this year. For four days, attendees met virtually with some of the most accomplished and ambitious science communicators from both the U.S.A. and Canada, exchanged experiences and ideas through active discussion, collaborated together to revise their written works, and pushed the boundaries of their capabilities as a science communicator.

We are grateful, first and foremost, to the fifty remarkable graduate students from across the world who participated 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 our attendees throughout their careers, whether through research, education, journalism, policy, or other ventures. In the following pages, we have summarized the work done by ComSciCon during the last year, highlighting the value of our workshops for both the scientific community and the public. We are once again deeply grateful to our sponsors for making this work possible: MIT Office of Graduate Education, the American Astronomical Society, Burroughs Wellcome Fund, the American Chemical Society, Science Careers, Community Initiatives, and many individual donors.

We are looking forward to another year of growth for ComSciCon. You can follow our progress at <a href="http://comscicon.com/">http://comscicon.com/</a>.

Yours truly,

The ComSciCon 2021 Organizing Team

## Organizing Committees



### Local Organizing Committee

Chantanelle Nava (Chair)

Claire Lamman (Vice Chair)

Dana Boebinger (PC Liaison)

Naheda Sahtout (PC Liaison)

Gus Beane

Floor Broekgaarden

Verena Sesin

Lieke van Son

Xiaohan Wu

### Program Organizing Committee

Jaye Gardiner (Chair)

Ryan Venturelli (Vice Chair)

Dana Boebinger (LC Liaison)

Naheda Sahtout (LC Liaison)

Bradley Alf

Hannah Chu

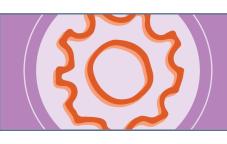
**Emily Costa** 

Julie Fornaciari

Ryan Hulett

Elena Lin

Victoria Russell



### Attendees

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

Aisulu Aitbekova

Jeffre Allen

Zeena Ammar

Albersy Armina-Rodriguez

Jenny Calahan

Bianca Datta

Kelley DePolt

Haley Dunleavy

Hisham Eldardiry

Inayah Entzminger

**Emily Geest** 

Lauren Girouard

Elisa Gonçalves de Andrade

Lauren Granata

Michael Hammer

Laura Hunter

Christopher Jackson

Leanna Kalinowski

Mostofa Kamal

Sandhya Kannan

Rachel Keuler

Nadia Lana

Toby Le

Drake Levere

Lila Levinson

Michael Lim

Malosree Maitra

Gloria Marino

Heather Masson-Forsythe

Tara McDonnell

Jamie Moffa

Melissa Molho

Suchitra Narayanan

Christina Niavi

Carolina Ortiz-Guerrero

Alyssa Paparella

Sumira Phatak

Jaleigh Pier

Carlton Poindexter

Alexa Ruel

Will Saunders

Nicolas Scrutton Alvarado

Arman Shekari

Bill Smith

Masha Stojanova

Teodora Stoica

Shravanti Suresh

Vanessa Vieites

Lauren Wagner

Ralph White III





### **Testimonials**



Hear directly from our attendees about what they loved about ComSciCon 2021!

"I really enjoyed the fact that there was disability representation as **it made me feel less alone** in my own journey. I also enjoyed being exposed to science policy as it was not something I have previously known too much about."

"I very much enjoyed the Creative Storytelling panel because it once again challenged my conventional views of what "counts" as science communication."

"The careers panel had the biggest impact on me because it was refreshing to hear about non-academic careers and how to work towards them."

"I think the Science Policy/Advocacy panel created a shift for me in the way I view my status as an academic within the larger community. I can be very internally focused on the details of academia, but it was really enlightening to hear how I can participate more deeply in advocacy and policy while holding various positions within academia."

"Every panel equipped me with new knowledge, tools and ideas."

"I never thought of myself as a "storyteller" before, and now I think I'm going to **use the brainstorming prompts** learned during the Creative Storytelling session in my day to day life."

"Getting to the heart of science communication was great--it really allowed everyone to think more deeply about their science and themselves!"

"Data visualization had a huge impact on me. I've always thought of concrete data as being separate from popular science pieces, relegated to a journal article hyperlink embedded in the text. Seeing and thinking about how data can and should be presented for everyone to understand, and in ways that were not manipulative, was intensely helpful to me personally and academically."

"The pop talks were useful and so fun. It was such a nice challenge from the normal talks we give at conferences."

"The keynote speaker Jorge Cham taught me about the **importance of seeking your passion** in graduate school, regardless of your current degree of study."

"Jorge Cham's keynote was **wonderful and funny and real.** I connected very much with the reasons he left academia."

"The poster session **gave me the opportunity to connect with people** actively involved in efforts that I would like to initiate and filled me with new ideas."





Our events this year were led by a range of experts in the science communication field.

### **Keynote Speaker**

### **Jorge Cham**

The creator of "PHD Comics"

Jorge is the creator of "PHD Comics", the popular ongoing comic strip about life (or the lack thereof) in academia.



He is the co-author of the Der Spiegel best-selling book We Have No Idea, the co-host of the iHeart Radio show Daniel and Jorge Explain the Universe, and the co-creator and co-Executive Producer of the TV animated series Elinor Wonders Why, which airs on PBS Kids and in countries around the world. He is also the co-founder of PHDtv, a video science and discovery outreach collaborative. He earned his PhD in Robotics from Stanford University and was an Instructor and Research Associate at Caltech from 2003-2005. He is originally from Panama.

Twitter: <a href="mailto:ophdcomics">ophdcomics</a>

Website: http://phdcomics.com/

### **DEI Panel**



#### Yesenia Garcia

Neuroscience PhD student, educator & advocate for Diversity In STFM

Yesenia Garcia is a Latinx, firstgeneration, nonbinary scientist, educator, and advocate for

diversity. They are currently pursuing a PhD in neuroscience at Emory University. They graduated from Vassar College with a BA in neuroscience and a minor in English with a concentration in race and

ethnicity. Their graduate research uses behavioral, pharmacological, and genetic approaches to understand how social experiences influence rewardrelated decision-making in rodents. Additionally, they are interested in researching the science of sex differences. Outside of the lab, they serve on their Graduate Student Council task force as the LGBTQ representative and are on the executive board of the LGBTQ+ Graduate Coalition. They also teach reproductive health at the high school level and serve as a mentor preparing students to enter college. Yesenia created a blog called NonbinaryNeuro to share their experience navigating academia in hopes of finding community and empowering and supporting fellow students in STEM who have been historically excluded, marginalized, and oppressed.

Twitter: @yeseniatweets

Website: <a href="https://www.nonbinaryneuro.com/">https://www.nonbinaryneuro.com/</a>

#### **Tamia Williams**

Science communicator combining physics & arts

Tamia Williams is a multihyphenate science communicator who promotes a more inclusive and creative space within STEAM.



As a science communicator, Tamia uses her knowledge of physics and background in the performing arts to translate science into works of art. In addition to being a physicist and artist, Tamia is also a writer and researcher. You can find her published work in Physics World Magazine, one of the world's largest physical societies, on the Youtube Channel Physics Girl, and on her Blog.

Twitter: @Tamia miaaaa





#### Sallqa-Tuwa Bondoc

Entomology PhD candidate advocating for Diversity & Inclusion

Sallqa-Tuwa Bondoc Mafla is a Filipina-Ecuatoriana PhD candidate studying the island

biogeography and community structure of tropical Odonata at the American Museum of Natural History in New York and Rutgers University Newark, New Jersey. Sallga-Tuwa's research focuses on evaluating how morphology, range, and gene flow vary across species. In particular, she studies how this variation affects insect dispersal and migration across spatial and temporal scales. As a Philippine Islander and an Ecuadorian, Sallga-Tuwa is particularly interested in documenting the life histories of the endemics that inhabit her ancestral islands and mountains while actively engaging indigenous naturalists and entomologists in every project she undertakes. Sallga-Tuwa has conducted field work in Guyana and Mexico, and learned canopy fogging from Dr. Terry Erwin in Ecuador. A main pillar of her work includes empowering historically excluded students to pursue entomological focused research projects. Sallga-Tuwa served as a panelist on Entomological Society of America Diversity & Inclusion panels, and currently serves as the Student Representative to the Governing, the Systematics, Evolution, and Biodiversity section (SysEB) D&I representative, and is a founding member of Entomologists of Color. Sallga-Tuwa's commitment to advocating for entomology and diversity can be seen at her institution, where she has directly mentored five undergraduate students on entomological research projects through Rutgers University-Newark's Louis Stokes Alliance for Minority Participation (LSAMP) program.

#### **Syreeta Nolan**

Disability advocate and co-founder of 'Disabled in Higher Education'

Syreeta Nolan is a disability justice advocate. She serves as co-founder of Disabled in Higher Education on Twitter (@DisInHigherEd) and is the



founder of JADE (Justice, Advocacy and Disability Education) as a holistic disabled justice platform focused on empowering disabled students, faculty, staff and alumni through community and support. Her lived experience as a Black, Disabled, bisexual woman have informed her advocacy goals along with her career goals. As a board member of HealthAdvocateX, she hopes to expand the reach of health advocacy in partnership with her organization while bringing disability advocacy and health advocacy together. Syreeta graduated with her Bachelor's in Human Health Psychology from the University of California San Diego and hopes to continue to obtain a PhD in Health Policy or Prevention Science toward her goal to transform the mental health field through comprehensive preventive systems similar to what we have in our physical health system.

Twitter: @nolan syreeta

### **Data Viz Workshop**



### Eisha Ahmed

Experimental Medicine PhD candidate & brand strategist

Eisha Ahmed is a PhD candidate in experimental medicine at McGill University, studying the cellular and molecular

mechanisms that underpin regulatory B cell development in allergies and asthma. Previously, she obtained her BSc in interdepartmental immunology



with minors in math and computer science at McGill. She also works as the marketing and brand strategist for Dispersa, a Quebec-based cleantech start-up, to ensure that its messaging and communication is as strong as its technology. Eisha believes great potential exists in using an interdisciplinary approach while tackling challenges in and beyond scientific research, and enjoys helping others develop and diversify the necessary skills. She is active in science outreach, developing conferences and programs for high school students, and has volunteered as a science fair judge for over 5 years. She also delivers workshops on various topics in computer programming, analytics, and data visualization aimed at fellow graduate students and researchers. Both scientific rigour and visual design are important skills for scientists in her eyes; beyond research, Eisha has experience as a freelance graphic designer and web developer. When not working in the lab or on the computer, she enjoys biking, learning how to forage, and experimenting with growing food crops.

#### **Sade Abiodun**

Neuroscience PhD student bridging the gap between science and art

Sade Abiodun is a budding neuroscientist by day and aspiring filmmaker also by day. She is currently pursuing her PhD as a President's Fellow at the Princeton Neuroscience



Institute. Her work focuses on neurocinematics — the neuroscience of film — and explores naturalistic approaches to examining affective and cognitive states. She is an ardent advocate for equity, diversity, and representation in science, and has worked with multiple groups and organizations to support and uplift scientists of color. She hopes to bridge the gap between science and the arts through the creation of visual experiences that center marginalized identities and stories.

Twitter: @abiodun et al

### **Creative Storytelling Panel**



#### **Zen Faulkes**

Biologist and advocate for better posters

Starting off our panel of #CreativeSciComm experts is Zen Faulkes, a biologist who writes the Better Posters blog and book on academic poster

presentations. He is currently an instructor at McMaster University.

Twitter: @DoctorZen



#### **Julie Rorrer**

Chemical engineer and founder of ColorMePhD

Dr. Julie Rorrer received her BS in Chemical Engineering from Arizona State University in 2014, and her PhD in Chemical Engineering from the University of California

Berkeley in 2019, where her thesis work was centered on the heterogeneous catalytic conversion of biomass-derived platform molecules to produce fuels and lubricants. She is currently an Arnold O. Beckman Postdoctoral Research Fellow at MIT, where she utilizes heterogeneous catalysis for the chemical upcycling of plastic waste, and is a fellow of the MIT Communication



Lab. In 2018, she founded the ongoing outreach initiative, ColorMePhD, a free coloring book series communicating PhD-level research in science and engineering to a broad audience. As illustrator and creator, she works directly with early-career scientists to explain their work through creative visual metaphors and written descriptions with the aim of inspiring future scientists and increasing representation and visibility for women and minorities in STEM. Since the release of ColorMePhD Volumes 1 and 2, over 15,000 of the initiative's free coloring books have been downloaded around the world. Current initiatives include the translation of ColorMePhD into Spanish, and the creation of a series of coloring pages featuring Black and Indigenous History-Making Scientists to improve visibility for scientists who have persevered against oppressive racism and sexism.

Twitter: @julie rorrer, @colormephd



#### Ben Lillie

Physicist and improv comedian, co-founder of Story Collider

Ben Lillie is a high-energy particle physicist who left the ivory tower for the wilds

of New York's theater district. He is obsessed with the intersection of academics and the performing arts, and is dedicated to finding new ways to blend those worlds. He is co-founder and CEO of Caveat, an event space on the lower east side for those experiments, and other forays into intelligent nightlife. He has a BA in physics from Reed College, a PhD in theoretical physics from Stanford University, and a Certificate in improv comedy from the Upright Citizens Brigade Theater. He did a postdoc at the University of Chicago and Argonne National Laboratory, and has published in The Atlantic, and Slate. He is also the co-founder of The Story Collider, where people are invited to tell stories of their personal experience of science, is a

Moth StorySLAM champion, and spent four years on the editorial team at TED. Find him on Twitter or at almost any Caveat show.

Twitter: @benlillie, @caveatnyc, @storycollider

### **Creative Storytelling Workshop**

### **Onnesha Roychoudhuri**

Writer, speaker & educator for social change

Onnesha Roychoudhuri is a writer, speaker, and

educator with over 15 years of experience working at the intersection of storytelling and social change. She is the author of *The Marginalized Majority:* Claiming Our Power in a Post-Truth America, which Naomi Klein called "a daring intervention to get us back in the game — and



a witty, delightfully personal meditation on collective power." It was also named one of the best books of the year by Kirkus Reviews. Onnesha regularly leads writing and storytelling workshops for organizations across the country, including the Moth, Doctors Without Borders, and Future Now Fund, as well as at universities such as San Francisco State University, Rutgers University, Hunter College, Pratt Institute, and Western Connecticut State University, where she is an instructor in the graduate writing program. A former fellow at the Center for Fiction, Onnesha's investigative journalism, essays, fiction, and other writing have appeared in publications such as Rolling Stone, Kenyon Review, n+1, Virginia Quarterly Review, The Boston Review, McSweeney's, The Rumpus, The Nation, The American Prospect, Salon, and Mother Jones. She is a 2011 and 2012 Pushcart Prize nominee, and has been awarded residencies at Hedgebrook and Blue Mountain Center.

Website: https://www.onnesha.com

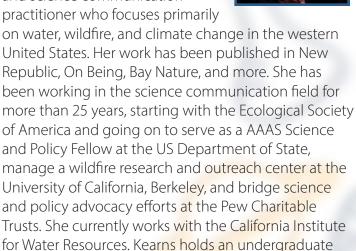


### **Heart of Scicomm Workshop**

#### **Faith Kearns**

Scientist, science communicator, and author of *Getting to the Heart* of *Science Communication* 

Faith Kearns is a scientist and science communication practitioner who focuses primarily



environmental science degree from Northern Arizona

University, and a doctorate in environmental science,

policy, and management from the University of

California, Berkeley.
Twitter: @frkearns

### **Scipol Panel**

### **Emily Therese Cloyd**

Director of the AAAS Center for Public Engagement with Science and Technology

Emily Therese Cloyd is the Director of the American Association for the Advancement of Science's Center



for Public Engagement with Science and Technology. She oversees all Center programming, including the AAAS Leshner Leadership Institute, the AAAS How We Respond project, and the Communicating Science program. Prior to joining AAAS in 2016, Emily led engagement and outreach for the U.S. Global Change Research Program, served as a Knauss Marine Policy Fellow at the National Oceanic and Atmospheric Administration, and studied the use of ecological models in Great Lakes management. She holds an executive certificate in nonprofit leadership (University of Notre Dame), a master's in conservation biology (SUNY College of Environmental Science and Forestry) and a bachelor's in plant biology (University of Michigan). Emily enjoys paddling on the Potomac and Anacostia Rivers (especially in a dragon boat), hiking, and tending her plot in the local community garden.

Twitter: @EngageClimate, @MeetAScientist

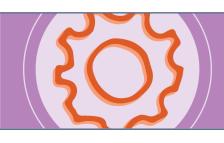


**Ken Spence** 

Senior Policy Advisor with NextGen Policy

Ken Spence works on criminal justice and consumer financial protection issues for NextGen Policy, a California based non-profit organization dedicated

to supporting and advocating for progressive policy,



legislative, and programmatic issues. Before joining NextGen, Ken was Director of Policy and Legislation at the California Department of Pesticide Regulation, Deputy Director of the California Senate Office of Research, and a consultant in the California Assembly Speaker's Office, covering public safety and the Select Committee on Boys and Men of Color. Ken earned a doctorate in Entomology from UC Davis where he studied insect ecology, and a bachelor's degree in Biology and Spanish from Morehouse College. As a Thomas J. Watson Fellow, he visited Costa Rica, Ecuador and Peru studying alternative pest control methods. A year-long fellowship as a California Science and Technology Fellow introduced Ken to the idea of public policy as a career. Ken loves traveling, yardfarming, and outdoor activities.

Twitter: @DaBugDr



### Adriana Bankston

Principal Legislative Analyst at the University of California Office of Federal Governmental Relations

Adr<mark>iana Bankston is a Principal</mark> Legislative Analyst at the University of California Office of Federal

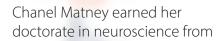
Governmental Relations in Washington, DC, where she serves as an advocate for the university with Congress, the Administration and federal agencies. Prior to this position, Adriana was a Policy & Advocacy Fellow at the Society for Neuroscience, where she provided staff support for special and ongoing projects, including the society's annual lobby event and the annual meeting. In addition to working at UC, Adriana is the Chief Executive Officer & Managing Publisher of the Journal of Science Policy & Governance, an internationally recognized non-profit organization and peer-reviewed publication dedicated to empowering early career scientists, engineers, and policy professionals in international science policy debate. She is also a Biomedical Workforce & Policy Research Investigator at

the STEM Advocacy Institute, as well as a member of the Engaging Scientists and Engineers in Policy (ESEP) Coalition Steering Committee. Adriana earned her PhD in Biochemistry, Cell and Developmental Biology from Emory University.

Twitter: @AdrianaBankston

#### **Chanel Matney**

Program Officer at the Forum for Neuroscience & Nervous System Disorders at National Academies of Science, Engineering, and Medicine





Johns Hopkins, where her research used mapped cortical circuits using transgenics, electrophysiology, and morphological reconstructions of single neurons. While there, she co-founded the Johns Hopkins Science Policy Group, a grassroots advocacy organization that empowers early career researchers to engage with decision makers about the role of research data in policy discussions. After graduating, Chanel took on an array of professional opportunities in strategic communications, editorial support, and policy analysis in the Washington DC area. Chanel headed out to the West Coast to work on education policy as a California Council of Science and Technology (CCST) science fellow in 2019, followed by a service as a committee staffer in the California state legislature, where she worked on transportation issues. These days, Chanel works at the National Academies of Science, Engineering, and Medicine as a Program Officer in the Forum for Neuroscience and Nervous System Disorders, a Washington DC based non-profit that advises and informs the federal government on emerging issues in science and technology.

Twitter: **@chanelmatney** 



#### **Career Panel**



#### **Raven Baxter**

Molecular biologist and science educator

Dr. Raven Baxter, also known as Dr. Raven the Science Maven, is an award-winning and internationally acclaimed science educator and molecular biologist creating

science spaces that are inclusive, educational, and real. She is known for her unique musical teaching practices, combining hip-hop and science to engage the public. Dr. Baxter speaks about innovation in science education and social change in STEM. Dr. Baxter is the creator and co-host of a STEM talk show, STEMbassy, and Black In Science Communication, a group that works to build relationships in the science community, equipping others with the knowledge and resources necessary to share science with the world in their own flavor. Dr. Baxter also owns Smarty Pants, a clothing company that sells fun and stylish STEM-themed apparel and accessories and hosts an annual scholarship for STEM students. Dr. Baxter is a strong voice in the science community and has been recognized as a global influencer in several publications, including Fortune Magazine's 40 Under 40 list. She has also earned the State University of New York Chancellor's Award for Student Excellence in honor of her service in educating the public about COVID-19.

Twitter: @ravenscimaven



#### **Rob Ulrich**

Biogeochemistry PhD student and Associate Director of the Reclaiming STEM Institute

Rob Ulrich (they/he) is a Biogeochemistry PhD student at UCLA who researches how living things make their hard parts. More

specifically, they are interested in developing and using novel geochemical tracers (e.g., trace elements, "clumped" isotopes) to interrogate the strategies used by organisms to make their biominerals. Beyond graduate school, Rob is also the Associate Director of the Reclaiming STEM Institute, Co-Founder of Queer & Trans in STEM (fka Queers in STEM), a writing consultant, and a writer. Their book, The Hard Parts of Life: Windows to the Past; Keys to the Future, about biominerals and their applications is currently up for pre-sale and is going to be published this Winter. In 2019, Rob received the UCLA Curtis Shepard LGBT Leadership award for their leadership and outreach to the LGBTQ+ community at UCLA and abroad, and under their leadership, Queer & Trans in STEM won the UCLA Organization of the Year award. For their research and advocacy, Rob currently holds fellowships with the National Science Foundation and the Center for Diverse Leadership in Science, and they have been invited to speak on the popular podcasts, including Ologies, Talk Nerdy, ExoLore, and at meetings for the American Geophysical Union, National Organization of Gay & Lesbian Scientists and Technical Professionals, the Dr. Lucy Jones Center for Science and Society, the Geologic Society of America, and the California Academy of Sciences. To avoid answering the guestion "What do you want to do after your PhD?", they hide in their apartment and cook and bake, or outside by hiking and going to the beach.

Twitter: @robertnulrich



#### **Phil De Luna**

Scientist, innovator and political candidate

Phil De Luna is a scientist and carbontech innovator turned first-time candidate for political office. He is currently on leave from the National Research



Council of Canada where he led a \$57M Canada-made cleantech program. De Luna is an award-winning scientist and has published in high-impact journals like Science and Nature. He was a Carbon XPRIZE finalist, a Forbes Top 30 Under 30, and hosts a podcast about science and behaviour. De Luna is currently the Green Party of Canada candidate for Toronto-St. Paul's and is running to bring more diversity to parliament and more science to politics.

Twitter: @PhilDeLuna1

#### **Jeff Preston**

Assistant professor of Disability Studies and author of *The Fantasy of Disability* 

Jeff Preston, PhD, is an assistant professor of Disability Studies at King's University College at Western



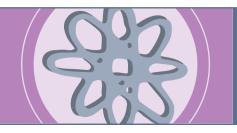
University where he teaches classes on disability, popular culture and policy. A long-time advocate and motivational speaker, Jeff's work focuses on the intersection of disability, subjectivity, biopower and culture. Jeff's first book, *The Fantasy of Disability*, was published in 2016 by Routledge.

Twitter: @jeffpreston

# Awesome! Awesome! Awesome!

Jargon! Jargon! Jargon!

Participants used "Awesome" and "Jargon" signals to provide live feedback to their peers during Pop Talks.



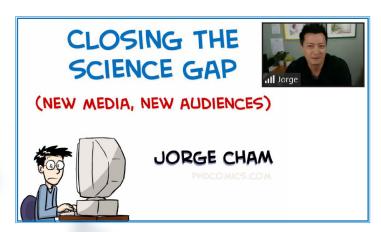
During each annual ComSciCon workshop, attendees not only hear from our expert invited speakers, but also participate in a number of unique, hands-on workshops to learn new skills in science communication.

### **Keynote Speaker**

This year, ComSciCon 2021 programming centered around Creative Storytelling and Science Communication. Our keynote speaker, Dr. Jorge Cham, is the epitome of this theme as he is not only the creator of PHD Comics—an endeavor he started in graduate school much like the initiatives our attendees have started—but is also an author of the best seller We Have No Idea, co-host of the iHeart radio podcast "Daniel and Jorge Explain the Universe", and co-executive producer of the new two time Emmy nominated PBS kids show "Elinor Wonders Why". During his keynote talk, Dr. Cham discussed the circuitous way that research makes it from the lab to the public and as science communicators—especially ones that have a scientific background - we help bridge the "science" gap" and streamline this process. Through his iconically recognizable illustrations and comedic storytelling and delivery, Dr. Cham inspired the audience to pursue what fulfills them and to not be afraid of the unknown —because that, after all, is what science is all about.

### **DEI Panel**

Kicking off the ComSciCon 2021 Workshop, the Diversity and Inclusivity Panel brought together four experienced, talented, vocal, unique, and passionate individuals to talk about the importance of equity, diversity, accessibility, and inclusivity in STEM. The panelists included: Sallqa-Tuwa Bondoc Mafla, a Filipina-Ecuatoriana PhD candidate committed to advocating for entomology and diversity; Yesenia Garcia, a Latinx, first-generation, nonbinary scientist, educator, and advocate for diversity who created a blog called NonbinaryNeuro to share their experience



navigating academia; Syreeta Nolan, a disability justice advocate who serves as co-founder of Disabled in Higher Education on Twitter (@DisInHigherEd) and is the founder of JADE (Justice, Advocacy and Disability Education); and Tamia Williams, a multi-hyphenate science communicator who uses her knowledge of physics and background in the performing arts to translate science into works of art.

Prior to engaging the attendees, the panelists were asked to introduce themselves, comment on allyship, accountability, and how they deal with discouragement, adversity, and the lack of support when it comes to activism. The attendees were given the chance to ask the panelists questions, and this question and answer period touched on stigma, advocacy, fatigue and burnout, balancing research and extracurricular activities, tokenism, privilege, mental health, and how to effectively move forward towards something achievable. All in all, the panel was inspiring and provided the opportunity for everyone to reflect on their role in promoting and pursuing equity, diversity, inclusivity and accessibility in STEM.



### Why visualize data?



Comprehend information quickly



Communicate information to others



Identify relationships and patterns



Visual appeal

### **Data Viz Workshop**

Accurate and effective representation of data is central to communicating patterns and trends in any STEM discipline—and is especially critical for evidencedriven decision making processes, such as in science policy and public health. In this 1.5 hour interactive session, Eisha Ahmed (McGill University PhD Candidate and Dispersa Marketing & Branding Strategist) walked attendees through fundamental concepts in data visualization. Attendees had the opportunity to reflect on questions such as: What are the principles of "good" graphics? How can we choose the most appropriate figure format based on our objective, audience, and medium? How do we design accessible and effective visualizations? Breakout room activities facilitated discussion on ways of improving published scientific figures and implementing key concepts in attendees' own work.

### **Creative Storytelling Panel**

The panel on Creative Storytelling included four panelists from diverse scientific backgrounds who specialize in different media to communicate science through story. These panelists were: Sade Abiodun, a neuroscientist and filmmaker, Dr. Zen Faulkes, biologist and expert in academic poster presentations, Dr. Ben

Lillie, physicist who blends science and performing arts, and Dr. Julie Rorrer, chemical engineer and creator of science-themed coloring books. Questions focused on how their chosen medium enhanced their ability to communicate science, tips or insights on how to tell a good story and how to integrate science into their stories, and how to get stories to the public. Attendees were very engaged with the panelists via Zoom chat and contributed guestions via the Q&A functions of Slido. The panelists were enthusiastic, communicative, and responsive to questions that were pre-determined and came directly from the audience. Several panelists dropped further resources into the ComSciCon slack. Attendees were able to gain new insights from experienced storytellers on how to connect with an audience through a variety of media and leave the panel discussion with new resources to help tell their own science stories.

### **Creative Storytelling Workshop**

We have a variety of goals with ComSciCon, but one of the most important goals is for attendees already budding science communicators—to take their communication skills to the next level. This year, we decided to host a "Creative Storytelling Workshop," in order to better achieve this goal. The lead for this workshop was Onnesha Roychoudhuri, a writer, speaker and educator who leads storytelling workshops for groups like the Moth and regularly writes features for publications like Rolling Stone and Mother Jones. Much of Onnesha's work is not focused specifically on science, which we thought could make her presentation even more compelling because it might encourage attendees to find new ways to think about structure and narrative in their work. During her hour and a half workshop, Onnesha led attendees in a variety of stimulating exercises meant to push the bounds of their storytelling skills. This included having attendees meet in small groups to discuss a list of



storytelling prompts such as "a moment when you understood how high the stakes were," or "a time you saw the world with new eyes." Attendees then used these brainstorming sessions to try to understand what makes a story compelling. As Onnesha explained it, this often involves some aspect of change. Participants in this workshop also had an opportunity to reflect on applying some of these storytelling strategies to their Write-a-thon pieces, and to provide constructive feedback to one another's stories.



### **Heart of Scicomm Workshop**

Empathy in science communication has become increasingly important as recent discussions related to science are riddled with misinformation and partisan politics. The Heart of Science Communication conversation, led by author of *Getting to the Heart of Science Communication* and science communication practitioner Dr. Faith Kearns, encouraged attendees to reflect on their own experiences facing emotion, conflict, and trauma in their work. While empathy in science communication can easily be dismissed as "listening", Kearns emphasized that listening "is not just about empathy and compassion, but also about justice and accountability." As Kearns shared her experience interviewing a variety of science communication practitioners for her book, she noted that we must

remember that "we all have our own traumas" and must approach every instance of communication with an open heart. After attendees learned about the complexities of listening, they entered breakout rooms to discuss how emotion, conflict, and trauma have shown up in their work. After the ten minute breakout room discussions, the workshop ended with a Q&A session where Kearns provided advice for how to communicate in online vs. in-person events, how to start a conversation with unsupportive colleagues, and how to approach audiences who are spreading or believing misinformation. This conversation provided a framework for scientists to approach sensitive topics with compassion, self-awareness, and responsibility.

### **Scipol Panel**

The panel on science policy and advocacy brought together four individual experiences within the community to highlight opportunities and the importance of this ever-growing topic. The panelists, Adriana Bankston, Chanel Matney, Ken Spence, and Emily Cloyd brought their individual experiences to answer the questions. The questions focused on what science policy means to them and within their individual fields, how they got into the science policy world and what the work they do looks like (i.e. dayto-day activities and scope of work). The panelists enthusiastically answered the questions and had a lot of knowledge to share. The attendees were very engaged via the Zoom chat and the active Q&A and asked great questions of the panelists. To continue the conversation, most of the panelists joined the ComSciCon slack and had further conversations there, and we sent the questions to them after the panel to get their answers. Some key takeaways from this panel were: there are two types of science policy science for policy and policy for science; social media provides a great place to engage with scientists; and informational interviews with people are key to gaining a better understanding of their job. Overall,



the conversation could have gone on forever and the attendees were engaged and excited to learn from these panelists.



the panelists to provide information to the attendees regarding things they wish they had done during graduate school. The next question gave the panelists space to talk about their trajectory from graduate school and onwards (or upcoming plans). The final structured question allowed for panelists to give advice to attendees. Attendees then began a thoughtful discussion with the panelists, asking questions ranging from "how do we build a network?" to "how do we balance research and science communication?" This panel created an open and honest environment where panelists, attendees, and even organizers had the opportunity to discuss the diversity of career options available.

### **Careers Panel**

The Careers Panel brought together an extremely thoughtful, powerful, and diverse group of professionals. The panel was designed and panelists were chosen to exemplify several topics which included: how to stand out in your field, how to transition out of academia, and what skills should trainees develop. The panel consisted of Dr. Jeff Preston (Assistant Professor at Western University in Canada), Dr. Phil De Luna (Candidate Toronto-St. Paul's, Green Party of Canada), Dr. Raven Baxter (Founder of STEMbassy and Black in Science Communication), and Rob Ulrich (PhD candidate in the Department of Earth, Planetary, and Space Sciences at UCLA). This panel embodied diversity, with people from many different intersectional backgrounds—which was used as a focal point for how they have built their careers. The session was built around asking the four panelists some preset questions and then opening up for questions from the attendees. Panelists began by talking about their journey during graduate school and where they are now (if they've completed their degree program). This was followed up with a question which allowed

### Write-a-thon

The Write-a-thon provided attendees with an experience that is unique to ComSciCon and difficult to obtain outside of a journalism program: the opportunity to conceive, draft, and refine a written piece from start to finish, all while receiving and integrating constructive feedback from like-minded peers and an expert reviewer. In the summer months leading up to the conference, participants wrote an 800-word piece of science writing from a genre of their choosing (and they chose genres ranging from explainers to op-eds to personal essays) and an accompanying pitch to be sent to an editor at an outlet of their choosing. As per usual, we provided a list of "publication partners," or editors at various science and general interest outlets who've agreed to review pitches from ComSciCon attendees, for our attendees to pitch to, if they wanted. After writing a rough draft of their piece and pitch, attendees peer edited each others' drafts remotely, revised their pieces to final drafts, and then discussed each other's work together and with an appointed expert reviewer in the Write-a-thon workshop portion of the conference. Overall, the Write-a-thon enabled attendees to leave



ComSciCon with a piece of science writing they'd produced, practical advice on how to pitch articles and write about complicated, sometimes intangible topics using accessible and engaging language, and the personalized learning that comes from hearing others' helpful perspectives of their own work. In the past, attendees have pitched and published their Write-a-thon pieces in popular science outlets, field-specific science blogs, or on ComSciCon's blog, and we anticipate that this year's attendees will do the same (and we've expressed our availability to support them in this after the conference).

**Networking Sessions** 

One of the main drawbacks of a virtual workshop is that it becomes more difficult for attendees to socialize with each other and substantively build their science communication network. In an attempt to simulate the impromptu conversations that occur during coffee breaks at in-person workshops, we held a series of optional "Networking Sessions" at the beginning of Days 2 and 3. Topics were suggested by attendees, and included subjects like communicating with populations that are mistrustful of science, blending science communication with performing arts, the pros and cons of accepting a postdoc position while considering a career in science communication, and many more! These networking sessions provided opportunities for attendees to have conversations in small groups that typically ranged from 3-8 people, and to get to know each other in a more intimate and less structured environment than present during the rest of the ComSciCon 2021 virtual workshop. It was a great way to start each day, and attendees repeatedly lamented that an hour of networking conversation was not long enough!





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