ComSciCon

Flagship 2023

Networking

Workshops

Pop Talks

Create-A-Thon

Professional Panels

Community

Research In Motion

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Find us **@comscicon** on any of our social media accounts:

Welcome

Dear ComSciCon Participants,

Welcome to the ComSciCon 2023 Workshop, our 11th 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.

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 2023, 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 2023 Organizing Team

Schedule

All times in E.T.

Thursday July 20

8:30-9:00am	Breakfast
9:00-9:30am	Welcome to ComSciCon Flagship 2023
9:30-11:30am	Creative Storytelling: Katie Silvensky, Sade Abiodun, Emily Costa
11:30-11:45am	Break
11:45am-12:15pm	Pop Talks
12:15-1:15pm	Lunch
1:15-2:45pm	Making Moves through Alternative Media: Abbey Morris, Reyhaneh Maktoufi, Sebastian Rowe
2:45-3:15pm	Break
3:15-5:15pm	Data Visualization: Steven Geofrey
5:15-6:30pm	Tangled Bank Studios Sponsored Panel & Video Showing: The Importance of Hope in SciComm: Robin Nabi, Alex Duckles, Sarah McAnulty
7:00-9:30pm	Sponsored Happy Hour & Banquet Dinner

Friday July 21

8:30-9:00am	Breakfast
9:00-9:30am	Pop Talks
9:30-11:00am	Inclusivity in SciComm: Zakiya Whatley, Abbey Morris
11:00-11:15am	Break
11:15am-12:15pm	Poster Session I
12:15-1:15pm	Lunch
1:15-2:15pm	Poster Session II
2:15-4:15pm	Create-a-Thon (Expert Review)
4:15-4:45pm	Break
4:45-6:15pm	K-12 Session: Allison Williams, Katherine Ziska, Ashley Huderson, Emily Pease
6:15pm	Pizza Dinner

Schedule

All times in E.T.

Saturday July 22

8:30-9:00am	Breakfast
9:00-9:30am	ComSciCon Info Session: How to Get Involved with Your Local Chapter: Harshil Kamdar, Michael Foley
9:30-10:00am	Pop Talks
10:00-11:30am	Keynote Lecture: Nicholas St. Fleur
11:30am-12:30pm	Create-a-Thon (Peer to Peer)
12:30-1:30pm	Lunch
1:30-2:00pm	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.

continued...

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 flagship2023@comscicon.org. If you wish to reach an independent ComSciCon member who is not present at the conference please reach out to info@comscicon.org. 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

Programming Committee (PC)

Nicolas Scrutton Alvarado

Julie Fornaciari

Lauren Girouard-Hallam

Elena YH Lin

Meredith Schmehl

Skyler Ware

Ralph White III

Logistics Committee (LC)

Olga Borodina

Ana Carneiro

Lauren Girouard-Hallam

Ashley Hayden Monahan

Maryam Hussaini

Nadia Lana

Gwenyth Lu

Taissa Lytchenko

MJ Park

Victoria Russell

Manasvi Verma

Attendees

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Anna Rios
Archana Aravindan
Ashley Kim
Benjamin Silver
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Desi Chu
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Eli Chlan
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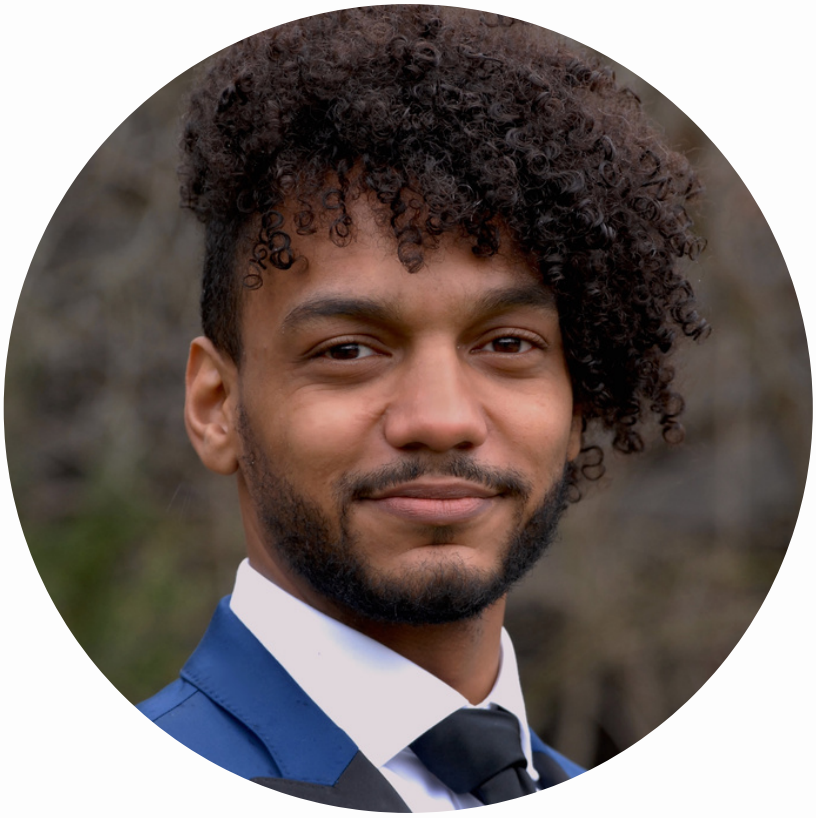
Stacy Pitcairn
Sylvia Hartmann
Taylor Tibbs
Vyshnavi Vennelakanti

Invited Experts



Keynote Speaker:

Nicholas St. Fleur (He/Him)

Nicholas St. Fleur is a general assignment reporter and associate editorial director of events at STAT, where he covers the intersection of race, medicine, and the life sciences. He also hosts the award-winning health equity podcast "Color Code." St. Fleur won the 2021 Evert Clark/Seth Payne Award for Young Science Journalists and the 2023 June L. Biedler Prize for Cancer Journalism. He joined STAT in 2020 as a Knight-Wallace Reporting Fellow. Prior to that, he was a freelance science journalist covering archaeology, paleontology, space, and other curiosities of the cosmos. He previously worked for The New York Times and The Atlantic, and has written for Scientific American, Science Magazine, NPR, and the San Jose Mercury News.

Invited Experts

Creative Storytelling Workshop

Katie Slivensky is the critically acclaimed author of two action-packed children's sci-fi novels (The Countdown Conspiracy and The Seismic Seven), an upcoming children's non-fiction pop-sci book (Smaller: The Search for Subatomic Particles), an upcoming picture book inspired by natural history (This Wolf Was Different), as well as several other exciting projects on the way. She is a professional science educator and enthusiast who has worked in zoos and museums since age 11. Her love of learning has resulted in a lifetime of adventures, including helping separate fighting rhinos, falling down a cliff in search of fossils, flying an astronaut through the solar system (the astronaut was real, the solar system was a simulation), creating million-volt lightning bolts, and handling feisty alligators. With an academic background in paleontology, Katie graduated from the University of Michigan and received her Masters from Stony Brook University. Katie then went on to work at the Museum of Science, Boston, for over a decade, running and leading their outreach programs, field trip programs, live presentations, and the highly successful Astronomy After Hours free observatory program. Prior to all this, Katie worked at the University of Michigan Natural History Museum as well as Potter Park Zoo in Lansing, Michigan. Nowadays, Katie writes full time and lives with her family just outside of Boston. She is represented by Ammi-Joan Paquette of the Erin Murphy Literary Agency.

Katie Slivensky (She/They)

Sade Abiodun (She/They)

Sade Abiodun is an interdisciplinary scholar and storyteller of nigerian and south african descent. their work explores the interplay between the emotional, visual, and temporal dynamics of media and the mind. they are currently a Ph.D candidate at the Princeton neuroscience institute, where their research focuses on neurocinematics — the neuroscience of film — and explores subjective experience of emotion driven by visual narratives. their artistic practice is grounded in cerebral, multilayered storytelling, weaving together various modalities (music, performance, visual experimentation) to craft narrative landscapes, and has been featured in numerous domestic and international festivals, publications, and exhibitions. sade has had a life long passion for all things curiously indecisive, and frequently challenges the boundaries of time, space, and schema to simultaneously explore and bridge creative and cognitive worlds

Emily Costa (she/her) is a cancer biologist based in New York City. She's also an avid science communicator, storyteller, and trivia host, practicing all three through her podcast Facts Machine, which features scientists and academics from a variety of backgrounds and is occasionally performed live at nerdy comedy venue Caveat. She's also a freelance science writer and member of the ComSciCon organizational leadership team, and volunteers with NYC-based organizations aimed towards increasing accessibility and inclusivity in science education, all of which she's eager to dedicate herself more fully to after graduate school. In her free time, she can be found baking, cyanotyping, or tending to her ever expanding family of houseplants.

Emily Costa (She/Her)

Invited Experts

Making Moves through Alternative Media Panel

Abbey Morris (She/Her)

Abbey Morris (she/her) is a Science Communicator with a passion for bridging the gap between art and science. Throughout her life, Abbey has always had an affection for science and an appreciation for learning how the world works. She believes that we can use art to make science more accessible and to spark curiosity in people of all ages. Abbey grew up on the unceded, unsurrendered traditional territory of the Anishinaabe Algonquin Nation in Ottawa, Ontario, Canada. She completed her Master's degree in Science Communication from Laurentian University and holds a Bachelor's degree in Neuroscience and Mental Health with a minor in Psychology from Carleton University.

Currently, Abbey works full-time as a Curriculum Development Manager for Dalhousie University where she helped to develop an online course about the importance of Indigenous-led biological health research. She also recently worked part-time as a Lab Technician for INCUBATOR Art Lab in Windsor, Ontario where she learned about the magical world of bioart. Outside of her main job, Abbey does freelance graphic design work for OnCanada Project, a volunteer-run passion project turned social enterprise that centers marginalized experiences while writing about system inequities and issues facing our society. She also serves as co-director of the ‘Engage’ platform for SciComm Collective, a non-profit organization that aims to improve the accessibility of science by training researchers to engage in effective science communication. Through her paid and volunteer work, Abbey strives to make Sci Comm a more just, equitable, diverse, and inclusive space for people to share their enthusiasm for science in creative and engaging ways. When she is not working, Abbey enjoys travelling, rock climbing, thrift shopping, and drawing flowers.

Reyhaneh Maktoufi is the science communication and outreach fellow for HHMI Tangled Bank Studios. She is involved in research, production, and connecting science communication research to practice. Before joining HHMI Tangled Bank Studios, Maktoufi was a Rita Allen Foundation civic science fellow in misinformation at GBH|NOVA. She is the co-producer, host and illustrator of PBS NOVA's digital series "Sciencing Out," a mini-series on women in history who have used different strategies to communicate their science. Maktoufi holds a doctorate in media, technology, and society at Northwestern University. As a researcher, media strategist/consultant, and producer, her main fields of interest are science communication, misinformation, curiosity, public engagement with scientists, research-practice partnerships, and science communication in media. She was a visiting researcher at the Alder Planetarium, where she studied science communication and facilitated workshops on communication skills and she was also a producer on "The Story Collider" podcast. Before starting her doctorate, Maktoufi worked as a health communication facilitator and cancer preventive/palliative care campaign manager in Tehran, Iran. Maktoufi engages in outreach activities to communicate the science of science through writing blog posts and making science comics and has been interviewed by outlets such as Smithsonian Magazine and the SETI Institute's podcast "Big Picture Science."

Reyhaneh Maktoufi (She/Her)

Invited Experts

Making Moves through Alternative Media Panel

Sebastian Rowe (He/Him)

Sebastian is a science communicator and scientist originally from Rush, Colorado. He completed his undergraduate education at the University of Alabama where he graduated summa cum laude with a Bachelor of Chemistry and a Bachelor of Science in Mathematics and Political Science. He is currently pursuing his Ph.D. in the Chemical Biology Program at Harvard University where he is studying several processes bacteria use to protect themselves from antibiotics in the lab of Daniel Kahne.

At Harvard, Sebastian is the current Co-Director of Science in the News (SiTN), an organization that trains Ph.D. students in science communication. SiTN has initiatives using various mediums to communicate science including: a website which publishes articles breaking down recent news stories or in-depth looks about new advances in science, a podcast series interviewing Harvard scientists, a livestreamed seminar series for the public, a seminar series for retirement homes, pub nights at local breweries with Harvard faculty, and an infographic campaign on Instagram, Twitter, and Facebook.

Sebastian's upbringing in a poor, rural, agrarian community influences his mission to make science widely accessible and impactful. In his hometown, most people's interactions with modern science were predicated on the infrequent trips to see a doctor. At multiple points during his schooling, Sebastian's school did not have a state certified science teacher on staff and relied on alternative methods of schooling. These years with remote classrooms, online coursework, and virtual science labs engendered a desire in Sebastian to make science accessible broadly and easily. With the advancements in modern technology, the primary barrier now is to find and train effective science communicators.

Invited Experts

Data Visualization Workshop

Steven Geofrey (He/They)

Steven Geofrey (he/they) is a research-practitioner in data, design, and computation. Rooted in a background in the natural sciences (biophysics and biochemistry), humanities (Japanese studies), and social sciences (information and media literacy), Steven's work uses the theories and methods of information design, computation, and statistics to interrogate representations, and how those representations are situated in larger systems of meaning-making. Steven currently works at Harvard University, John F. Kennedy School of Government, as a front-end software developer in the Growth Lab.

Before joining Harvard, Steven was an Assistant Teaching Professor and Designer in Residence for the Center for Design at Northeastern University, and prior to that, worked for many years in academic libraries as a specialist and consultant in data visualization and analytics. Steven is also a Senior Research Scientist with Project Information Literacy and a Research Associate in data visualization with Partnering Lab. Steven's freelance practice focuses on the use of data visualization as method in digital humanities and science communication, and includes collaborations with groups such as the Environmental Data and Governance Initiative (EDGI), NuLawLab at Northeastern University, and researchers in archival visualization at The University of Tokyo.

Steven received his B.A. (2011), summa cum laude, in chemistry and Asian studies from St. Olaf College. After graduating, he lived in Kyoto, Japan as a Fulbright Fellow, carrying out computational biophysics research at Kyoto University. After returning to the United States, he subsequently pursued graduate work at Yale University, receiving his M.S. in molecular biophysics and biochemistry in 2013.

Invited Experts

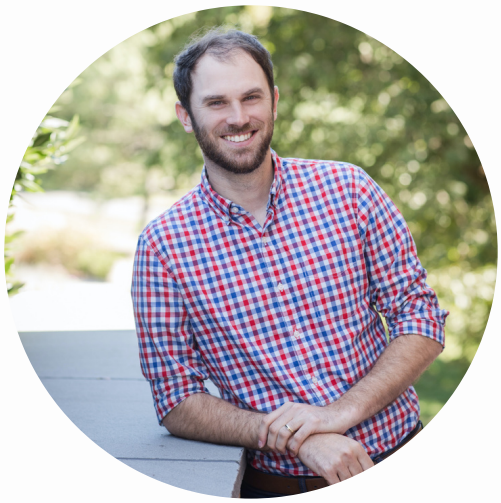
The Importance of Hope in SciComm Panel

Robin Nabi (She/Her)

Robin L. Nabi is a professor of Communication at the University of California, Santa Barbara. She received her AB in Government from Harvard College and her MA and PhD in Communication from the Annenberg School of Communication, University of Pennsylvania. Her research focuses on the role of emotion in media processes and effects, with particular emphasis on the persuasive effect of emotion-based messages and the relationship between media use and well-being. Her most recent work focuses on "media prescriptions", or how inspirational and humorous messages can reduce stress and enhance goal pursuit. She has served as a managing editor of Media Psychology and is a co-editor of the SAGE Handbook of Media Processes and Effects and the upcoming Oxford volume Emotions in the Digital World. She is a past chair of the Mass Communication Division of the International Communication Association as well as the Communication and Social Cognition Division of the National Communication Association. She is the inaugural recipient of the Innovation in Theory Award from ICA's Mass Communication Division for her work on emotional framing, and is a 2017 inductee as an ICA Fellow.

Alex is a digital media and impact producer with HHMI Tangled Bank studios, where he builds and executes digital-first releases for web series, impact materials, and outreach campaigns about science education and storytelling. Alex came to HHMI in 2016 after beginning in digital education and media publishing at PBS LearningMedia and PBS Digital Studios.

Since joining HHMI's team, Alex has focused on making topics like conservation and environmental science accessible and impactful for educators, families, and young audiences through partnerships within the public library system. These projects extended the impact of studio films like 'My Garden of a Thousand Bees,' 'Backyard Wilderness,' and most recently, the Giant Screen film 'Blue Whales: Return of the Giants 3D'. Alex is also a series producer on a newly released partnership with Crash Course Biology, a series of videos covering the full extend of the high school biology curriculum for students and educators.



Alex Duckles (He/Him)

Sarah McAnulty (She/Her)

Dr. Sarah McAnulty is a squid biologist and science communicator. She received her Ph.D. in molecular and cell biology working on Hawaiian bobtail squid symbiosis in 2019. She is currently the executive director of Skype a Scientist, a non-profit that connects 5,000-10,000 classrooms to scientists every year. Dr. McAnulty is a prolific science communicator, with an active presence on Twitter, Instagram, Youtube, and Tiktok. She's been featured by Nature, Forbes, NPR Shortwave, along with many others, for her work.

Invited Experts

Inclusivity in SciComm Panel

Zakiya Whatley is a scientist, educator, and creator. Zakiya believes in science education for all, formal and informal, across platforms. Her efforts focus on broadening access to and persistence in STEM careers. She co-hosts Dope Labs Podcast, which has been praised and recommended by former First Lady Michelle Obama, Gayle King, Aryeh Bourkoff and more. Dope Labs has been nominated for two Webby Awards and a Podcast Academy award.

Zakiya also hosts the 2023 Webby-nominated show Breakthrough, a podcast by Boston Children's. In addition to audio projects, her science communication efforts expand to writing and film. Right now, she is focusing on projects that showcase and support groups that have been historically excluded from science, technology, and art.

Zakiya Whatley (She/Her)

Abbey Morris (She/Her)

Abbey Morris (she/her) is a Science Communicator with a passion for bridging the gap between art and science. Throughout her life, Abbey has always had an affection for science and an appreciation for learning how the world works. She believes that we can use art to make science more accessible and to spark curiosity in people of all ages. Abbey grew up on the unceded, unsurrendered traditional territory of the Anishinaabe Algonquin Nation in Ottawa, Ontario, Canada. She completed her Master's degree in Science Communication from Laurentian University and holds a Bachelor's degree in Neuroscience and Mental Health with a minor in Psychology from Carleton University.

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Invited Experts

K-12 Panel

Dr. Allison J. Williams is an experimental psychologist. She completed her Ph.D. in Experimental Psychology, with a specialization in Development, at the University of Louisville in 2022. Dr. Williams currently works as a Postdoctoral Research Associate at Boston University. She works in Dr. Kathleen Corriveau's Social Learning Lab (www.bulearnlab.com) and is a core team member of the Developing Belief Network (www.developingbelief.com).

Her research interests focus on children's thinking and learning. Specifically, Dr. Williams examines how children identify who (or what) is a good source of information and how this preference might change depending on the domain (e.g., religious vs scientific). Her most recent work examined how accuracy and expertise in science influence 5-9 year old children's judgements of a source's knowledge and how these judgements influence children's preferences for future learning in the science domain.

As part of the Developing Belief Network, Dr. Williams collaborates with researchers across the globe to examine 4-10 year old children's development of religious cognition. This project demonstrates the importance of culture on children's development and psychology. Dr. Williams has experience discussing this large-scale project with collaborators in other countries, as well as religious leaders and educators located in the Boston area. As she builds partnerships with local schools and religious organizations, she offers to visit and share the findings of this study with the community members who participated in the study or individuals who are simply interested in the findings.

Dr. Williams has experience sharing psychology beyond academia and enjoys volunteering at schools and fairs to teach and demonstrate psychological processes to children. Psychology is often a science excluded from children's curriculum; however, it has direct effect on their everyday lives. There are many misconceptions in the world about psychology and child development. By demonstrating psychology to children, Dr. Williams and her research assistants can hone their skills to produce clear and concise outreach to the public in the hopes of clarifying these misconceptions.

Allison Williams (She/Her)

Katherine Ziska (She/They)

As an undergraduate Katherine studied philosophy with a focus on ethics, epistemology, (how we know what we know), and ontology, (concepts and categories). She wanted to take a more applied approach to these questions and became involved in Dr. Alex Shaw's lab studying children's moral development. She was particularly fascinated by research on the moral evaluation of others. Once she graduated, she spent a few years researching canine cognition to better understand human-other relationships. After recognizing that relationships with other species was determined by how humans categorized them, she returned to cognitive development to better understand how children develop and structure categories. Most recently, Katherine completed her Master's at NYU in psychology having worked with Drs Marjorie Rhodes and Emily Foster-Hanson. Her thesis work, currently under review, aimed to understand what parts of cultural input about categories shapes children's understanding of within category variability. This study found that discussing functional goals, but not generic language, affected children's conceptual understanding of trait diversity in the population and typicality choices. This work can inform education interventions for teaching children about diversity and improve biology curriculums. Now Katherine is working as a lab manager for Dr Ying Xu at the University of Michigan researching how Generative AI and voice assistance can be used in children's education. Outside of her research interests Katherine enjoys rock climbing, reading, and scuba diving.

Invited Experts

K-12 Panel

Dr. Ashley Huderson is a STEM policy expert, researcher, entrepreneur, author, and professor with over 15 years of STEM outreach and advocacy in the community. Currently, Dr. Huderson works in the Office of the US Deputy Secretary of Education as a STEM and CS Equity Policy Fellow. She is working to develop and implement a STEM and CS strategy that advances the Secretary's vision for education in America and supports the strategic goals and priorities of the Department.

Prior to joining the Department of Education, Dr. Huderson served as the Director of Engineering Education and Outreach at the American Society of Mechanical Engineers, where she led the Engineering Education and Outreach department in designing, planning, organizing, overseeing and implementing educational programs and projects that define ASME's role and impact in K-12 STEM Education, Engineering Education and Scholarships.

Dr. Huderson has published over 12 peer reviewed articles, including two book chapters on Urban STEM education and counter spaces for minority women in STEM. She has also been the recipient of several awards and honors including the 2019 McD #35 Alum of the Year award, 2020 BEYA Modern-Day Technology Leader award, and the 2020 UNCF WIAC Grace Walker Phillips Leadership Award. She also serves as a member of the AAAS Committee on Science, Engineering and Public Policy (COSEPP).

Dr. Huderson is a native of New Orleans, LA, and completed her undergraduate training at Spelman College (2006), a certificate in Health Policy (2012) and doctoral work at Meharry Medical College (2013). Her post-doctoral work included a fellowship at Georgetown University Lombardi Cancer Center's Office of Health Disparities and Minority Research (2015) and a 2015-2017 American Association for the Advancement of Science, Science and Technology Policy (AAAS S&T) Fellow in the Engineering Education and Centers' division (EEC) at the National Science Foundation. She is currently completing her MBA studies at Georgetown University, with an expected graduation date of May 2023.

Ashley Huderson (She/Her)

Emily Pease (She/Her)

Emily Pease works as a Senior Education Associate at the Museum of Science in Boston. You can find her on the stages of the Museum making lightning, experimenting with liquid nitrogen, or teaching about Mars and other current science topics.

Emily was always fascinated by all things space growing up, and this led her to earning a Bachelor of Science degree in astronomy from UMass Amherst in 2010. During her time at school, she participated in a club called Science Outreach which is where she fell in love with informal education and working with students.

In 2012 Emily started working in the Traveling Programs department of the Museum, and for 8 years she traveled to schools across New England with engaging programs about astronomy, physics, geology, and engineering. Today she teaches those same topics in the Museum, either on stage with a presentation or throughout the exhibit halls with hands-on experiments.

Her passion is science education, and she strives to make science as fun, interesting, and accessible as possible. Her goal is to help people, especially kids, realize that science doesn't have to be hard or scary, and she hopes to spark a love of science in every person she meets.

When she's not at the Museum, Emily enjoys being at home in Brighton with her wife and her cat, playing Nintendo Switch and watching TV.

Invited Experts

Create-a-Thon Reviewers

Katie Slivensky
Sebastian J Rowe
Allison J. Williams
Steven Geofrey
Emily Costa
Sarah McAnulty
Abbey Morris
Katherine Ziska
Ashley Huderson
Sade Abiodun
Zakiya Whatley
Emily Pease
Michael Foley
Jon Honea
Ashley Lee

Poster Abstracts

Research stories: a webcomic that gives the floor to PhD students

Juliette Pierre

All PhD journeys are different. The blog mtlphd.com gives life to students' stories using a webcomic format. What is it that led you into graduate studies? What is the goal of your research subject? How do you feel about your everyday life? All these questions, among many others, were asked to PhD students from various fields in Montreal to try to draw a picture of what a PhD could be. Focused on STEM for now, the blog's team has interviewed Canadian and foreign women studying various subjects such as biochemistry, mechanical engineering, or ecotoxicology. Each story was told in eight illustrated pages. This cartoon format allows to depict remote places, such as research fields in Iceland or restricted labs, as well as to create humoristic situations with more complex concepts like how enzymes work. By combining scientific vulgarization with interviews, the webcomic helps other students realize that every journey is unique, and teaches non-scientists what research is and who the people doing it are. After a bit more than a year of existence, the team has published four stories so far, and even more are to come. Although mostly in French for now, the comics should become fully bilingual in the near future.

SciXplorers: Building an app to inspire lifelong learning in STEM

Gina Errico

Science in a formal classroom setting can be inaccessible and overwhelming for many young students. Although STEM initiatives are on the rise to bridge this gap, access and financial barriers continually exclude students and minorities from engaging in STEM. SciXplorers is working to make science accessible and engaging to all students by introducing them to the scientific method in an informal way and allowing them to participate in science at their own pace and put them in the drivers seat of their own creativity. The app aims to guide kids through various scientific projects created by real-life scientists, by helping them develop questions, methods, and draw conclusions, using little to no supplies or parental supervision. By empowering kids to explore the world at their own pace, the goal is to inspire life-long learning skills that can help them succeed in their future.

Ciencia Pa' Todes: Advancing Inclusive Science Communication in the Caribbean

Melanie Ortiz Alvarez de la Campa

Ciencia Pa' Todes is a groundbreaking, Spanish-language, science communication initiative rooted in the Caribbean, dedicated to fostering inclusivity, intersectionality, and the decolonization of knowledge within academic communities. With a mission to establish an accessible educational platform for scientists and non-scientists alike, Ciencia Pa' Todes strives to redefine traditional scientific paradigms through alternative perspectives and methodologies. We prioritize discussions of race, gender, sexuality, and disability, among other aspects, to challenge existing power dynamics and promote social justice within the scientific community.

Since our launch in August 2020, we have reached over 4,000 people on our main platform and expanded to several social platforms, hosted live lectures about inclusive language, participated in panels, and filmed an intersex documentary series called “Intersexuality: Defying the Binary”, first of its kind in the Caribbean. Our goal is to continue expanding this initiative to benefit scientists worldwide in the years to come. We actively seek collaborations and alliances with organizations to expand our outreach to diverse communities. Together, we can foster a future where knowledge has no boundaries, and science becomes accessible to all.

Knowing Neurons: a nonprofit neuroscience communication and outreach organization

Gil Torten

Knowing Neurons (KN) is a 501(c)(3) non-profit neuroscience education organization designed to teach both fundamental neuroscience concepts and recent neuroscience discoveries in a creative, curiosity-driven format. Knowing Neurons also provides an opportunity for budding neuroscientists (undergraduates, graduates, and post-docs) to hone their science communication skills and improve their ability to describe complex scientific ideas to a general audience. Using diverse media, ranging from blog-style articles and poster-size infographics to podcast interviews and classroom lesson plans, contributors have the creative freedom to explore novel modes of scientific communication that casual learners and professional educators can use at home or in the classroom alike. More recently, KN has also engaged in local outreach and community building efforts to provide more opportunities for students and benefit nearby communities; with our team of 60 volunteers from 6 different countries and 14 different institutions we aim to provide high quality neuroscience content for people all over the globe.

SPOT-ting Science: State-based outreach programs bring science to classrooms to engage students

Shelby Bradford

West Virginia Science Public Outreach Team (WVSPOT) was founded in 2013 to connect students with science topics they otherwise would not have access to and to showcase research occurring in the state of West Virginia. Originally a partnership between the Green Bank Observatory West Virginia Space Grant Consortium and the Katherine Johnson IV&V Facility, today WVSPOT is also sponsored by West Virginia industries and research institutions who in turn provide expertise for class presentations and hands-on activities. As a result, WVSPOT brings science education to classrooms and school events free of charge. WVSPOT recruits college students from across the state to master presentations and activities for classroom delivery. This provides college students excellent opportunities to practice public speaking and science communication skills while gaining valuable volunteering experience and growing their networks. As of the 2021-2022 school year, WVSPOT had visited 340 schools or student groups and met more than 26,000 students through virtual and in-person presentations since it started. Outreach groups like WVSPOT are incredible resources connecting and benefiting research centers, college students, and K-12 learners through science communication.

Building a Remotely Accessible Scientific Experiment Curriculum

Katelyn Queen

Many states, including Vermont, have large rural populations which have limited access to University level resources. To bridge the gap between these rural communities and the experiential learning that happens through collaborations with local institutions, I have been developing a remotely accessible scientific experiment curriculum. This standalone curriculum will allow high school students from around the state to immerse themselves in answering a research question utilizing data acquired with the equipment and resources available to students at a higher education institution. The goal of this project is to reach students who would not normally have the opportunity to engage with the experimental process, especially those in rural areas, and introduce a diverse group of students to the scientific method. Eventually I would love to grow this into multiple curriculum modules that cover a range of scientific fields and would love to collaborate with people to establish these modules.

Club Parkinson's: A wellness and Education Center for Parkinson's Disease Patients

Oluwatosin Adetuyi

Founded by Urbanek and Shana Gatschet in 2021 and located in Wichita, Kansas state, Club Parkinson's is a wellness and education center aimed at helping Parkinson's Disease (PD) patients manage their condition and improve their quality of life. The organization brings PD patients together, giving them a sense of connection that has been proven to be effective in improving their quality of life since studies have shown that isolation and loneliness diminishes the quality of life of PD patients. The club offers classes throughout the week on Yoga, Nordic walking, Fall prevention and Speech therapy. The fitness training employs techniques that target skills that have been proven by research to deteriorate in PD patients. Additionally, empowerment classes are offered weekly to have insightful discussion with patients on crucial topics as well as sharing helpful research findings. Another spectacular thing about the organization is that classes are offered for caregivers to provide them with adequate tips and improve their knowledge of the disease management. Club Parkinson's is dedicated to the well-being of PD patients, creating a supportive community, and offering a wide range of classes that empower individuals to improve their quality of life and face the future with hope.

The value of Storytelling in promoting human-carnivore coexistence

Kennedy Kariuki

Promoting human-carnivore coexistence is a major aspect of wild carnivore governance and management globally, from small to medium and large carnivores. However, there still remains major gaps in linking robust science, policy, and implementation with regards to community ownership whereby stakeholders experience unending challenges of communication barriers. It is worth noting that human-carnivore interactions present a lot of nuanced complexities that have an impact in attitudes among stakeholders. Efficient communication is therefore encouraged in developing governance and management strategies. I aim to present the role of storytelling in bringing together all stakeholders and communicating effectively.

The Language Science Station at Planet Word: A Language Research and Engagement Laboratory at a Language Museum

Hannah Mechtenberg

The Language Science Station (LSS) is a linguistics research and engagement laboratory housed within the Planet Word museum in Washington DC to advance research and public understanding about the science of language. Funded by the National Science Foundation, the LSS develops a partnership between language researchers, students, and museum visitors. The Language Science Station invites museum visitors to contribute to science by participating in research studies right on the museum floor, and to have conversations about language with budding language scientists from a range of backgrounds and local universities. Student training is done via a summer course, and the project's values dictate the design of the training. We focus equally on research and science communication. In addition to equipping students with the expertise needed to be a research assistant in a lab (e.g., research design, ethics, scientific background), students also develop practical skills in science communication (e.g., best practices in informal science learning). We also train researchers to design studies that rigorously answer their research questions in a museum-friendly way. As part of our goals for our second year, we are looking to broaden our connection to the community and attract researchers who want to conduct research in public settings via social media and online publications. Ultimately, we hope to create a model for sustainable public-facing research and science communication, and to share that model widely.

The Burden of Proof Podcast: Exploring Science Mysteries through True Crime Storytelling

Mackenzie White

The Burden of Proof is an upcoming podcast dedicated to bringing captivating science stories to a broad audience by embracing the immersive format of true crime-style storytelling. Our team of science journalists takes a character-based approach to simplify complex scientific information and engage listeners in diverse and intriguing science narratives. With a commitment to amplifying the voices, perspectives, and work of diverse and underrepresented scientists, we strive to foster inclusivity in science communication. I co-created this podcast with members of my 2022 AAAS Mass Media Fellowship cohort, and we are excited to connect with potential collaborators and welcome new ideas for future episodes. Our first episode is currently in production, and we invite anyone interested in the podcast to reach out to us.

Improving Science Literacy and Informed Voting through Senior Citizen Outreach

Emily Schafer

Building science literacy amongst the broader public leads to better evidence-based decision making by individuals, both in their personal lives and through informed voting. Senior citizens are an often-overlooked demographic for science outreach but are optimally positioned to benefit from it. Older Americans are very likely to believe in the importance of scientific research despite their long time period since a formal science education and are the most dedicated voting age group in the United States. Northwestern University graduate students created and currently run Science with Seniors, an outreach program where early-career researchers give short, digestible science talks at local senior centers in the greater Chicago area. Since launching in 2018, we have given nearly 150 science talks at 3 locations and partnered with many organizations to host talks about all types of science, from antibiotic resistance and lab-grown meat to space commercialization and medical imaging. We will share quantitative and anecdotal data for the success of the program in the eyes of our senior citizen guests and for teaching key science communication skills to scientific researchers. We believe in the importance of science outreach to all members of society and hope to inspire other similar programs across the world that reach previously underserved communities with science.

A World of Women in STEM: An Online Learning Platform

Madelyn Leembruggen

Women and gender minorities have always been key contributors to the development of science, technology, engineering, and mathematics. Despite this long history of engagement, at every level of education, there is attrition of young people from underrepresented groups who lose interest in STEM topics due to unengaging content, lack of role models, active discouragement, or any other number of unseen factors. This so-called “Leaky Pipeline” is a well-established challenge to representation, inclusion, and retention of ethnic and gender minorities and women in the STEM fields. A World of Women in STEM (WOW STEM) is a free resource that addresses this issue by providing accessible and engaging blogs, videos, and activities that highlight the lives and science of women in STEM. WOW STEM contributors are graduate students, undergraduates, and early-career professionals in the STEM fields who are passionate about sharing their love of STEM with the world. Our content is designed specifically for girls in 7th-10th grade, when students begin to differentiate their interests, choose their own classes, and develop their sense of self-efficacy and belonging. This is also an education level that is largely ignored in most science communication efforts. WOW STEM fills this outreach gap, provides diverse STEM role models, and inspires curiosity in young women and gender minorities.

A Summer Course to Foster Interest in Civil Engineering and Enhance Educators' Skills in Science Communication

Jose Capa Salinas

The demand for civil engineers in the United States is projected to increase significantly, requiring effective strategies to attract and train future professionals. In addition, the curriculum for graduate students lacks practical training in communicating their research findings to non-experts. This abstract presents a one-week summer course designed to introduce high school students to civil engineering and equip graduate students with innovative teaching practices to convey complex ideas to novice audiences. The course offers students an immersive experience, with activities spanning multiple civil engineering disciplines, field visits, and hands-on projects. Participants from various states relocate to the campus, enhancing the program's diversity and fostering a collaborative learning environment. Key findings from the study indicate consistent growth in civil engineering knowledge among students, regardless of the delivery method. Students identified debates, live demonstrations, hands-on activities, and field visits as the most impactful components, enhancing their engagement and understanding. Furthermore, graduate student instructors reported improved knowledge of research-based educational methods, enhanced skills in conveying complex ideas to non-experts, and greater confidence in assessing student learning. This summer course exemplifies an innovative approach to pre-college education in engineering, attracting new cohorts of students to the field and inspiring graduate students to pursue science communication efforts in their fields.

"Did you know...?" Science Outreach Talks

Nika Fendler

The "Did you know...?" Science Outreach Talks are an annual event hosted by MIT Graduate Womxn in Biology, where biology graduate students volunteer their time to share aspects of their research with high school students. Rather than attempting to explain complex experimental details, the talks are centered around a single question that is core to the research that may not be taught in a high school biology class. Some examples include "Did you know that animals can regenerate?" and "Did you know that you have over 6 feet of DNA inside each of your cells?" The speakers are challenged to avoid showing data and to make their presentations interactive with the students. The most impactful talks utilize impressive visuals to engage the students. The goal of the event is to introduce high school students to the stunning and extraordinary world of cutting-edge biology research to get them excited about science. Seeing female graduate students at MIT may also help encourage young women to pursue scientific research.

Art as a Catalyst: Trans Advocacy through Science and Art with (H)our Glass

Eli Chlan

Currently, over 500 anti-trans healthcare bills have been introduced within the 2023 U.S. legislative season across 49 states. Access to transition-centered healthcare, which is life-saving to many, makes up over 30% of these bills. Science communication is essential in combatting misinformation that lies at the heart of anti-trans legislation. Inspired by the accessibility of art, our collaboration with Science Gallery - an international network of galleries at the crossroads of science - led to the creation of (H)our Glass. This immersive and interactive installation highlights the clinical and societal experiences of transmasculine individuals when starting hormone replacement therapy. Through pairing science and art, we aim to connect with the public on an engaging and accessible level that stretches beyond archetypical science communication. With (H)our Glass, we ask the following: How do limited resources in the clinic uniquely impact trans people? How can we, as a society, foster an environment that supports the transitioning experience? Finally, how can we have the public engage with authentic stories of trans people by trans people in spite of burgeoning misinformation?

Brushes and Breakthroughs: How to amplify your scicomm, market yourself, and get involved

Ashley Hayden Monahan

While academic institutions are increasingly realizing the importance of communicating science, there is still a huge gap in scicomm training and access at every level. To help address this, I founded my own company, SciComm Consulting LLC, that offers visual, oral, and written communication services to clients as well as workshops on all things scicomm. I have had the fortune of working on many different projects – everything from making graphical abstracts and outreach posters, grant editing, one-on-one training on presentation skills, coloring books, to workshops held internationally on all the above. I have worked with many academic, governmental, and industry clients, including massive consortiums on multi-million-dollar grants. However, I was not someone who this came to naturally.

I honestly learned everything I know from Google and, like many here, was afraid to get started. I now want to share the knowledge I have learned from building a business from the ground up and teach you how to share and market your own projects! Please come by to learn insights and practical advice for amplifying your SciComm efforts, tips for developing personal brands, and engaging with the SciComm community. I am happy to talk about your work on a case-by-case basis and offer whatever advice I can give.

Boosting Research Area Interaction in Neuroscience Engagement Hour: Students taking STEM from the bench to public audiences

Jasmine Pathan

Boosting Research Area Interactions in Neuroscience Engagement Hour (BrainE Hour) is an organization at The City University of New York (CUNY), The Graduate Center. The main goals of BrainE Hour are to 1) create a low-stakes space for graduate students conducting STEM research to share scientific ideas and 2) to improve science communication skills of graduate students. Each semester we host a “BrainE Blitz” event related to improving science communication. To prepare for Blitz events, BrainE Hour hosts outside speakers for training on different strategies of science communication. We had a science communication expert, Dr. Denise Croote, run the April 2023 workshop. Since establishing itself as an organization 3 years ago, BrainE Hour has fostered a community across CUNY Graduate Center programs; we have created a community of graduate students with ranging interests, from sharing diverse graduate research work to discussing current issues and events in academia and teaching. Furthermore, BrainE Hour provides opportunities for science communication training in a low-stakes environment. We encourage CUNY graduate students of various backgrounds (STEM and non-STEM) to present and attend our meetings. As part of the mission of developing science communication skills, our workshops and events target different types of audiences, including graduate students in STEM and the wider graduate community at CUNY. Our events are completely organized and executed by graduate students, and event topics span most scientific fields. Our peer feedback system allows CUNY graduate students to improve their communication skills. We believe that BrainE Hour is a model for science communication that can be expanded to other institutions.

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