



ComSciCon16

A report on the fourth annual
Communicating Science
Conference for graduate
students





Table of Contents

p.4	Letter from the Organizing Committee
p.5	Organizing Committee Members
p.6	Executive Summary
p.9	Profiles: Participants
p.10	Profiles: Panelists
p.12	Profiles: Educators
p.13	Special Sessions: Mock Interview & Pitch Slam
p.14	Special Sessions: Storytelling
p.15	Special Sessions: HHMI / Tangled Bank Film Screening
p.16	Write-A-Thon
p.18	K12 Session
p.19	Poster Session
p.20	ComSciCon Franchises
p.21	Longitudinal Impacts
p.23	Statistical Evaluation
p.25	Testimonials
p.27	Thank you to our sponsors!

Letter from the Organizing Committee

To all sponsors, supporters, and other members of the ComSciCon community,

Each year, we on the ComSciCon organizing team continue to be inspired by the incredible outpouring of enthusiasm for science communication we receive from our graduate student attendees and volunteer organizers, our expert panelists, and our sponsors and partners across the country. Now, as we celebrate the completion of our fourth annual ComSciCon national workshop, we wish to share with you a few highlights of the successes and impacts of our program.

Our national workshop has quickly become known across the country as the premier conference for graduate student leaders in science communication and outreach. With over 800 applicants for 50 spots, this year's workshop was once again more competitive and oversubscribed than NSF fellowships, NIH grant proposals, or time allocation on the Hubble Space Telescope. This reflects both the growing notoriety of the ComSciCon brand and the huge demand for professional development training in science communication.

The 50 attendees selected for this year's program participated in our most interactive and innovative workshop yet, as our fantastic team of graduate student organizers introduced several new elements to the tried-and-true ComSciCon model. In addition to the mock interview and pitch slam sessions initiated last year, attendees worked side-by-side with professionals in one of several parallel interactive storytelling modules and discussed the film-making process with HHMI's Tangled Bank Studios, who gave a private screening of their upcoming documentary on the spread of viral infections. Our first ever keynote panel featured experts on the ground in Flint covering the water crisis there, who explained how communicating science to the public can have the real-world implications.

The success of our flagship national workshop and the demand for similar opportunities has helped accelerate the growth of our franchising initiative. These local workshop programs are organized by past attendees of our national workshops and help us to exponentially increase the number of graduate students who receive access to training in science communication. 2016 will see four ComSciCon-local events, including the inaugural workshop in San Diego as well as second annual programs being held in upstate New York, Chicago, and the North Carolina Research Triangle. Alumni from this year's national workshop are already in the process of organizing more local workshops around the country.

In the pages that follow, we present a summary of the progress ComSciCon has made over the past year. In it, we hope to show why our program is so valuable to both the scientific community and the public. We also hope it can express our sincere appreciation to all the people who make ComSciCon possible, especially our sponsor organizations: Harvard University, MIT, the University of Colorado Boulder, the American Astronomical Society, the American Chemical Society, the AAAS/Science Careers, and Microsoft Research.

We look forward to next year's exciting fifth annual ComSciCon!

Sincerely,
The ComSciCon 2016 Organizing Committees

Organizing Committee Members

Local Organizing Committee

Ben Cook, Chair
Harvard University

Rodrigo Garcia, Chair
MIT

Erin Dahlstrom
Harvard University

Susanna Kohler
University of Colorado, Boulder '14, AAS

John Lewis
Harvard University

Amber Medina
Harvard University

Shannon M. Morey
MIT '13

Nathan E. Sanders
Harvard '14

Program Organizing Committee

Erica Kimmerling, Chair
Tufts University

Carrie McDonough, Chair
University of Rhode Island

Reggie Bain
Duke University

Alex Berardino
New York University

Molly Gasperini
University of Washington

Rose Hendricks
UC San Diego

Shayle Matsuda
Univ. of Hawaii at Manoa

Kate McClure
Northeastern University

Christina Sauer
University of Michigan

Anna Schneider
University of Colorado, Boulder



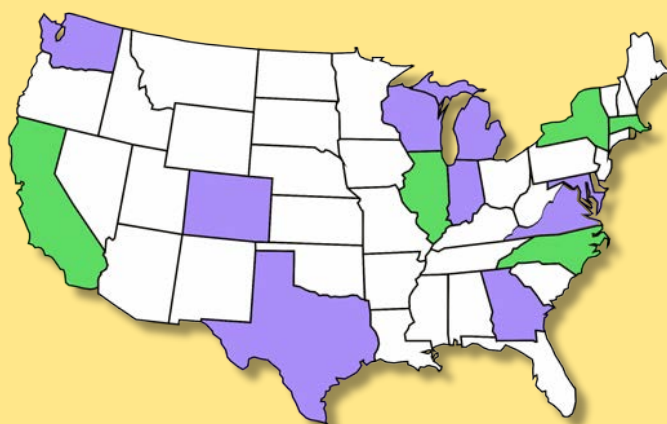
ComSciCon16 Executive Summary

ComSciCon is a workshop series organized by graduate students, for graduate students, focused on leadership in science communication. Our goal is to empower young scientists to share the results from research in their field with broad and diverse audiences. ComSciCon16 was our fourth annual national workshop, bringing together 50 exceptional graduate students selected from over 800 applicants nationwide.

ComSciCon16 Highlights

Continued Growth

In 2016, ComSciCon celebrated the conclusion of its fourth annual national leadership workshop, the second year of its local franchises in Chicago, Cornell, and the Research Triangle in North Carolina, and welcomed a new local franchise in San Diego. The Leadership Team works to sustain our flagship national workshop and to promote the growth our franchise programs throughout the US. Several new local franchises are already being planned for 2017!



Graduate Student Attendees



The graduate students who sought to attend our 2016 workshop were our most qualified and accomplished group of applicants ever, making our application review process even more challenging than in past years. Throughout the workshop, the line between these outstanding young science communicators and the invited experts they conversed with seemed constantly blurred.

Partners

As in past years, graduate students from around the country applied to lead each workshop available at our national leadership conference. We view this level of demand as a testament to the exceptionally valuable and high quality programming made possible through the phenomenal support of Harvard University, MIT, the University of Colorado at Boulder, the American Astronomical Society, American Chemical Society, AAAS / Science Careers, HHMI's Tangled Bank Studios, and Microsoft Research.





Invited Experts

To meet the demands of our expanding programming, our largest ever set of invited experts—twenty-nine—joined us at ComSciCon16. This group included academics extending their impacts beyond the laboratory (David Malan, Harvard and EdX, and Danielle Lee, Cornell and The Urban Scientist), scientists influencing policy everywhere from the AAAS (Erin Heath) to the White House (Bina Venkataraman), journalists from old media (Lisa Grossman, New Scientist) and new (Nidhi Subbaraman, BuzzFeed), our second-ever ComSciCon alum-turned invited expert, Morgan Rehnberg (CU Boulder), and more.



Write-A-Thon

In an integral part of the ComSciCon program, each attendee produced an original piece of science writing or multimedia during the workshop. During the event, each student received one-on-one feedback on their writing from professional writers and editors—our invited experts—and from their peers. With the help of ComSciCon organizers, attendees are now seeking publication for their work at local and national outlets in print and online.

Past ComSciCon attendees have now published more than 60 pieces written at our events!



ePoster Presentations

At ComSciCon, the poster session is not just a time for attendees to broadcast the status of their work, but more importantly it provides opportunities for connections to be made and new collaborations to begin. As in past years, we deployed a suite of electronic displays to facilitate our fourth annual attendee poster session. Attendees used the displays to showcase the websites of science outreach organizations they've founded at their universities, educational videos they've produced, interactive science games they've created, infographics and designs, and more!

Special Sessions

As our Program Organizing Committee continues to innovate, we've not only brought back the mock interview and pitch slam sessions added in 2015, but launched an ambitious new scientific storytelling session. Three of our experts led storytelling breakout sessions imparting wisdom about communicating science through oral story, illustration, and video.





K12 Session

For the third year, ComSciCon attendees worked with K12 educators to develop original lesson plans and classroom activities focused on their own research. Connecting practicing scientific researchers, our graduate student attendees, with teachers at the front lines of science education in the United States is not only integral to ComSciCon's philosophy of active science communication, but part of the model for our K12 education spinoff initiative, BiteScis.

Keynote Address

In his second keynote address to ComSciCon attendees, Bassam Shakhshiri (University of Wisconsin), the godfather of chemistry education in the United States, inspired both awe and action among attendees. He delivered a passionate address about the importance of scientists engaging with the public, policy, and society, drawing on his experience as American Chemical Society President and former NSF Assistant Director. He capped his presentation with a series of his storied chemical demonstrations.

"Bassam Shakhshiri took my breath away. I had never seen anyone who was so perfectly suited to the work they were doing, and who was so clearly joyful about their job. He was amazing."



SCIENCE IS FUN

Organizing Committee

Eighteen graduate students from around the country, including eleven alumni of past ComSciCon events, volunteered thousands of cumulative hours to make ComSciCon16 possible. Their contributions are critical to the operation and quality of ComSciCon, instrumental to its future, and a key outcome of the alumni community we have sought to create.



Profiles

Participants

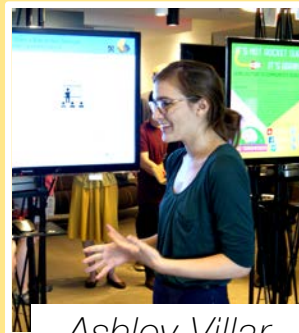
50 graduate students from around the United States convened in Cambridge for ComSciCon16. Our attendees came from a wide array of backgrounds and had diverse research interests, but all have demonstrated exemplary dedication to science communication in their careers to date and at our event. These profiles provide a survey of the interests, motivations, and accomplishments of our attendees:



Eleanor Lutz

Eleanor is a Ph.D. student at the University of Washington, where she studies how information is encoded in the mosquito brain. Through her original science illustration blog, Tabletop Whale, she provides engaging visualization and infographics inspired by real scientific data. Her work has been featured in The Best American Infographics 2015, National Geographic Magazine, and Wired.

Ashley is a graduate student in the department of Astronomy and Astrophysics at Harvard University, where she studies the explosive



Ashley Villar

deaths of stars. She serves as chair of the Administrative team for Astrobites, a daily blog that translates astrophysics research so that it is accessible to undergraduate students.

Aggie is a Ph.D. candidate in the Stress Physiology Laboratory at University of Colorado Boulder. She also writes about the science of exercise and serves as editor for Science Buffs, a STEM research blog that is run by the BioFrontiers Science Alliance at CU Boulder.



Aggie Mika

Christina is a third-year Ph.D. student in the Behavioral Neuroscience program at the University of North Carolina Chapel Hill, where she studies heroin use and immunosuppression. Christina previously attended the local ComSciCon Triangle workshop in North Carolina and will join the organizing committee for that franchise.



Christina Lebonville



William Chen

and students to make engaging games that raise awareness about the impacts of climate change.

Will is a Ph.D. student at the University of Washington using mathematical models to improve water management. At the ComSciCon16 poster session, he shared his work with the Earth Games project. With Earth Games he brings together video game developers, educators,



Anya Burkart

Anya is a Ph.D. student in the lab of Professor Roger Kamm at MIT, where she studies how the nuclei of tumor cells transform as they travel through the body. Anya is a writer for Synapse: The MIT Biotech Report, a biweekly magazine offering news and analysis on biotech.

Profiles

Panelists

29 science communication experts joined us at ComSciCon16, sharing their expertise on panels and facilitating interactive sessions. Read about some of our expert speakers below.



Erin Heath

American Association for the Advancement of Science (AAAS)

As Associate Director of Government Relations at AAAS, Erin Heath empowers scientists to engage with policymakers and the public, focusing particularly on biomedical and public health. Heath heads the selection committee for the AAAS Science and Technology Congressional Fellowships and sits on the steering committee of the Golden Goose Awards, which recognize seemingly obscure scientific studies that have had significant real-world impacts.

Danielle Lee
Cornell University

Danielle Lee has been named a 2015 TED Fellow, a White House Champion of Change in STEM Diversity and Access, and one of EBONY Magazine's Power 100 for her work advocating for diversity in STEM disciplines. Lee is a post-doctoral researcher at Cornell University studying animal behavior and behavioral ecology and is passionate about engaging under-served audiences and writers about STEM diversity outreach at her blog, The Urban Scientist, on the Scientific American blog network.



Ralph Bouquet
WGBH

Ralph Bouquet is the NOVA Education and Outreach Manager, working to deliver quality STEM education content to educators and the general public. He started his career teaching high school biology and chemistry in Philadelphia. Bouquet now works with educators and partner organizations to grow and support NOVA Labs, a digital platform that uses games, interactive activities, and videos to encourage scientific exploration.

Profiles

Panelists

29 science communication experts joined us at ComSciCon16, sharing their expertise on panels and facilitating interactive sessions. Read about some of our expert speakers below.

Bina Venkataraman
MIT

Bina Venkataraman began her career as a journalist writing for the New York Times and Boston Globe covering science, health and the environment. She is now the Director of Global Policy Initiatives at the Broad Institute and is currently a Carnegie Fellow at New America. She previously served as Senior Advisor for Climate Change Innovation in the Obama Administration and was named a 2015 Global Young Leader by the French-American Foundation.



Siddhartha Roy
Virginia Tech

Siddhartha Roy is a Ph.D. student in the Department of Civil & Environmental Engineering at Virginia Tech, where he is a key member of the team working with Professor Marc Edwards studying the citywide lead contamination and other water quality issues in Flint, Michigan. Roy is the Communications Director for the Flint Water Study team, coordinating a wide range of community outreach efforts and running the team's website, flintwaterstudy.org.

Profiles

Educators

For the third time at our national workshops, we were honored to be joined by a phenomenal group of practicing educators from Boston-area K12 schools, museums, and other institutions. As part of ComSciCon's K12 Session, these educators worked directly with our graduate student attendees to prepare their pedagogical research descriptions and classroom activities to face the reality of the teaching environment and student needs. Through this interaction, both teachers and graduate students left with a better understanding of the opportunities and challenges of bringing research to the classroom.

Nifemi Mabayoje
East Boston HS

Nifemi worked for Northfield Mount Hermon Upward Bound Summer Academy as a tutor/counselor/intern, a senior honors teacher and an assistant dorm head. She gained additional teaching experience while working as an assistant teacher at the children's house of the Amherst Montessori School. Additionally, while studying abroad in Costa Rica, Nifemi taught English to fifth grade students. She also worked with a student organization at Amherst College, The EDU. As a member of the leadership committee, she helped to organize Splash, a biannual learning event where local middle and high school students can attend classes taught by college students on diverse topics, ranging from Japanese to survival knot tying.



Kate Wooley-Brown
Brookline HS

As an outreach specialist for the Harvard School of Engineering and Applied Sciences, she coordinated an engineering design mentor program for fifth grade students. Additionally, Kate spent a summer developing and teaching project-based, student driven courses for rising 10th–12th grade students as a mechanical engineering and sustainable engineering instructor for Yale University's EXPLOR program. She also brought science curriculum to local students as an apprenticeship teacher with Citizen Schools and an elementary mentor scientist teacher with Science Club for Girls. She also volunteered as head coordinator of Harvard Science Week and served on the board of Harvard Graduate Women in Science and Engineering.



Emily Berman
Blackstone Academy Charter School

During her freshman year at Wesleyan University, Emily got involved with Wesleyan Science Outreach, a service and education organization that designs and implements a series of weekly, hands-on after-school science activities for local elementary school students. Two years later, she took over running the organization. In this role, she taught a service-learning course to her peers who helped develop lessons for the science club. Emily also worked as an after school science teacher at the local Boys and Girls Club and tutored English Language Learners at the International House while studying to earn an MAT from Brown University.



Special Sessions:

Mock Interview & Pitch Slam

For the second year, ComSciCon attendees had the opportunity to participate in either a mock interview or pitch slam session. We added these features to our program recognizing our imperative to help graduate students build the skills and familiarity required for effective science communication in the real world.

Mock Interview

In the mock interview session, 20 of our ComSciCon attendees seized the opportunity to sit on the other side of the interview table, with cameras rolling, from journalists and scientists experienced in interacting with the media. At the start of this two hour session, the attendees were given a short crash course of interviewing tips and tricks. In their breakout groups, our expert facilitators Kishore Hari (Bay Area Science Festival), Susanna Kohler (American Astronomical Society), and Nidhi Subbaraman (Boston Globe) reviewed short bios of each of their attendees before questioning them. After each interview, the groups reviewed the video of the discourse together and our experts led a discussion to provide detailed feedback to each attendee.



Pitch Slam

In our second ComSciCon pitch slam, 30 attendees heard insiders' lists of do's and don'ts of pitching a story to an editor from five expert facilitators and then held one-on-one pitching practices within their breakout groups. This year's experts included Wade Roush, a contributing editor at Xconomy and Outreach Officer at the MIT Program in Science, Technology and Society; and Ellen Clegg, an editorial page editor at the Boston Globe. The ComSciCon pitch slam adapts the format used at professional science writers' conferences to provide the attendees experience in tailoring their ideas into a succinct story that will gain the attention of editors at popular publications. This experience will be put to good use as many of our attendees begin to pitch their write-a-thon pieces to print and online outlets.



Special Sessions:

Storytelling

Creative modes of science communication have always inspired ComSciCon participants, but transitioning from a consumer to a creator of these works can seem daunting. This year, for the first time, ComSciCon's Communicating Through Creative Outlets and Storytelling panel was followed by a hands-on Storytelling breakout workshop session where participants worked in small groups with an expert panelist in a 60-minute immersive training experience.

This year's breakout sessions included: Storytelling with Kishore Hari (director of the Bay Area Science Festival, co-host of the podcast Inquiring Minds), Storytelling with Video with John Stein (Senior Lecturer in Neuroscience, Brown University) and Thomas Ricci (multidisciplinary audiovisual artist), and Science Scribing with Perrin Ireland (Visual Storyteller, Natural Resources Defense Council).



In the Storytelling session, Kishore broke down exactly what makes a story memorable and impactful. Participants each took turns workshopping engaging storylines of their own with their peers. The Video session highlighted technical pro-tips with a strong focus on the most easily accessible (and easy to use) programs to get started making your first scicomm video. Perrin broke down the "I can't draw" myth by leading her Science Scribing group through a series of fast and fun drafting exercises before taking them on a visual journey through her own inspirations and discussing how to apply color theory and page layout to best get your message across.



What did these sessions all have in common? Besides learning what makes a story stick, all three sessions highlighted ways scientists can reach new audiences, careers in creative science communication, and the assurance that we've all got stories to tell.

Attendee testimonial:

"Communicating through creative outlets and storytelling had a large impact on [me] because it opened up the

world of visual storytelling... I didn't really know about all the potential avenues (drawings/paintings, stop-motion, live action videos) that would be useful in educating the public about science."

Special Sessions:

HHMI / Tangled Bank Film Screening

Tangled Bank Screening

We were excited to welcome Howard Hughes Medical Institute's (HHMI) Tangled Bank Studios to cap off our first day of the national conference program with a screening of their new film on zoonotic diseases. Their sponsorship of this session allowed our attendees to be exposed to creative approaches towards topical discussions at the border of science and society from a leading scientific foundation. HHMI Tangled Bank Studios has produced award-winning scientific programming that addresses contemporary issues as part of HHMI's science education mission.



Accompanying the one hour screening was a question and answer session led by representatives from Tangled Bank Studios. Coming from scientific backgrounds, Laura Helft, a senior manager for public outreach and education, and Kevin McLean, a science education fellow, spoke to the union of accurate scientific content with compelling storytelling. In their discussion, attendees gained behind-the-scenes insight into the process of creating a scientific documentary. The screening was a powerful application of the scientific communication skills our attendees learned throughout the conference.

Careers Mingle and Dinner

ComSciCon graduate student attendees interacted with experts from a diverse range of science communication fields during the Careers Mingle and Dinner event.



During the seated dinner, small groups of four to five attendees were matched with experts in specific areas of science communication based on their career interests. Experts represented careers in writing and publishing, academia, public outreach, industry, consulting, and government and included individuals from the Museum of Science, the Union of Concerned Scientists, Biogen, and NOVA. This event provided opportunity for students to learn about potential careers related to science communication and facilitated connections between attendees and experts.

Write-A-Thon

The write-a-thon is a cornerstone of the ComSciCon experience. It is designed to help attendees create publication-ready science communication pieces tailored to a particular audience. In the process, attendees gain experience giving and receiving constructive critiques.

Before they even arrived at the workshop, attendees drafted an original piece of writing, audio, or video on a scientific topic. Weeks before they stepped foot in the ComSciCon venue, attendees received the work of 3-4 of their peers and were asked to provide digital feedback, allowing everyone one round of edits before the conference began. During ComSciCon, the attendees met with distinguished science communication experts in small groups to further discuss their writing and polish their pieces. They applied concepts they had learned during the workshop to effectively convey their message and draw in their intended audience.

Written pieces were shared with professional writers and editors, including Suzanne Shaw (Director of Communications at the Union of Concerned Scientists) and Kishore Hari (Director of the Bay Area Science Festival). In addition to helping students refine the piece they worked on at the conference, this personalized editing experience fostered ongoing relationships between students and professional communicators, providing them with a network of experts.

Attendee testimonials:

"This was extremely helpful. [...] I got a lot of insight into what editors are looking for, and a lot of help figuring out how to tailor my piece to various outlets."

"My expert reviewer was great help and gave me really useful suggestions for improving my article. She has even kept in touch with me after the workshop ended to find out how my piece is progressing."

Publications:

Following the workshop, attendees are continuing to work with ComSciCon organizers to submit their work for publication to a wide variety of partnering print and online outlets such as Nautilus, New Scientist, and local papers. Below we feature a selection of attendee publications from the first few weeks following ComSciCon16:



Write-A-Thon

Author: Maryam Zaringhalam

Outlet: Scientific American Guest Blog

Title: Failure in Science Is Frequent and Inevitable--and We Should Talk More about It



Link:

<http://blogs.scientificamerican.com/guest-blog/failure-in-science-is-frequent-and-inevitable-and-we-should-talk-more-about-it/>



Author: Allison Caldwell

Outlet: NeuroTransmission YouTube Channel

Title: The Neuroscience of Language



Link:

https://www.youtube.com/watch?v=Ev_oKHWT_qk&feature=youtu.be

Author: Alex Generous

Outlet: Discovery's Edge (Mayo Clinic's Research Magazine)

Title: Mayo Researcher Contributes to Immune Collaboration



Link:

<http://discoverysedge.mayo.edu/2016/07/01/mayo-researcher-hu-li-contributes-to-immune-system-tolerance-collaboration/>



K12 Session

Modern science education should include modern science research. That is the underlying mantra of ComSciCon16's K12-session, where science teachers from around the Greater Boston area attended ComSciCon to work in-person with graduate students to develop research-focused lesson plans ready for classroom use.



Before the conference, each graduate student scientist wrote an original educational piece to be developed for the classroom. Each scientist chose a specific topic or paper focused on an aspect of their own research and that aligned with the new Next Generation Science Standards to strengthen its classroom relevance. The scientist both summarized the topic for a 10th grade reading level and wrote a profile of themselves to help K12 students observe the diversity of people who conduct this research.



Prior to the conference, each scientist also brainstormed activities that could help communicate the topic to students. These were pitched in person to twelve K12 science educators, and workshopped in groups of 4-5 to develop a lesson plan for each educator to use in their classroom. In addition to developing a new lesson plan, K12 educators also attended the morning poster session, where they learned about the cutting edge science communication resources for their classrooms being developed by our attendees. K12 teachers left the conference with both novel classroom resources and connections with practicing scientists for future collaborations.



For graduate students, the K12 session contextualized their research in the educational curriculum of the average American. For educators, this provided new resources and connections to advanced research with which to inspire the next generation of scientists. For the science education community as a whole, these written pieces and lesson plans will be hosted and promoted by BiteScis, a ComSciCon spinoff program that will provide a free online collection of resources accessible to any classroom in the world.

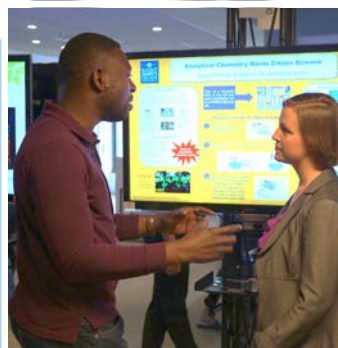


Poster Session

ComSciCon's poster session, coming on the final day of the workshop, is a showcase for and celebration of the remarkable science communication projects that our attendees have initiated and led around the country and online. We featured a select group of 24 initiatives at the workshop, and profile just a few of them here:



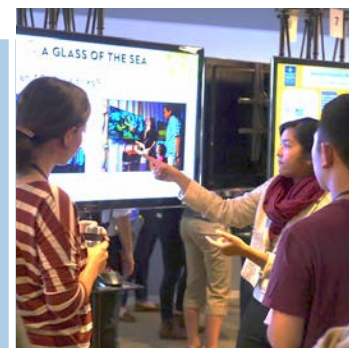
Aggie Mika shows off Science Buffs, a research blog run by CU Boulder graduate students that emphasizes research performed at their university. At ComSciCon, she exchanged ideas about how a student organization like hers can build its social media presence and engage with the local community.



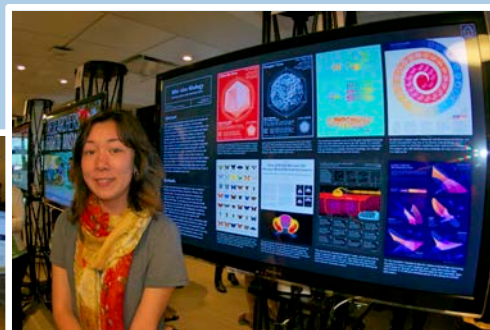
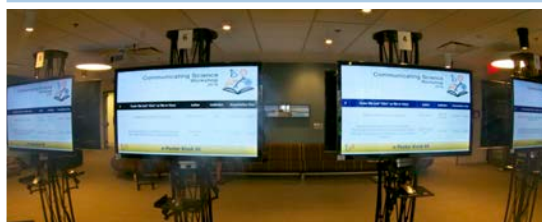
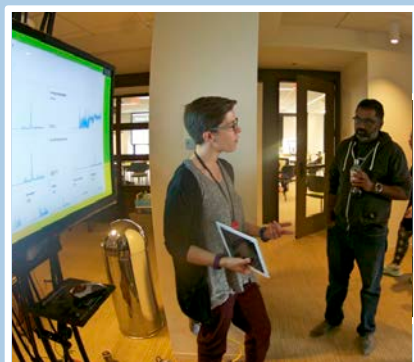
Elizabeth Bajema discusses her Paper Analytical Device project, which has developed a low cost instrument that health professionals in the developing world can use to screen out counterfeit medicines. They engaged non-scientists, ranging from middle schoolers to senior citizens, in an outreach effort that doubled as user experience testing for them to ensure that their instructions are simple and easy to follow.



Rianna Murray introduces ComSciCon attendees to the joint research and outreach work that she and her research group at the University of Maryland have led in the Anacostia River. They have held "recreational fishing days" to celebrate public use of the river while communicating a crucial public health message about the dangers of eating its contaminated fish.



Carla Dario shares her work on the "Glass of the Sea" traveling exhibition, which highlights the astounding biodiversity of the Verde Island Passage in the Philippines, habitat for ninety percent of all coral species on the planet and one third of all fish species. The exhibit has been visited by more than 50,000 people in the Philippines.



ComSciCon Franchises

Since its launch in 2013, ComSciCon has directly served 300 graduate students from around the country through its annual flagship event, the national leadership conference that takes place in Cambridge, MA. But in a major milestone, we have now surpassed this number of graduate students reached through our local franchised workshops.

ComSciCon-local events have now taken place in Cambridge, MA, the North Carolina research triangle (twice), Chicago, Cornell & upstate New York (twice), and in association with the National Association of Science Writers meeting. Later in 2016, ComSciCon-Chicago will hold its second event, and the first ever ComSciCon-SanDiego will take place. In 2017, we anticipate holding an additional eight local events, including four organized for the first time by ComSciCon16 attendees—planning is underway for those now.

Below we feature short vignettes from two recent ComSciCon-local events:

ComSciCon-Triangle 2016

ComSciCon returned to the Research Triangle of North Carolina over two days in May. The workshop brought together 50 attendees from Duke University, UNC-Chapel Hill, NC State, and Wake Forest University. Panelists were all based in local universities and included Kara Manke, a founding organizer of the national ComSciCon workshop



who is now a science writer at Duke. The workshop ended with the closing keynote address from Joe Palca, a science correspondent at NPR, who spoke about his career path and conception that the integration of science in the news may be more likely to interest people who usually find science boring. ComSciCon-Triangle 2016 was generously sponsored by institutions within Duke, NC State, and UNC.

ComSciCon-Cornell 2016

The second annual ComSciCon-Cornell took place in July on the Cornell University campus. STEM graduate students and post-doctoral researchers from universities based in Central and Western New York including



Binghamton, Cornell, Syracuse, Rochester and others were invited to attend. The keynote address was given by Sylvester James Gates Jr., Distinguished Professor at the University of Maryland and current member of President Obama's Council of Advisors on Science and Technology. Like previous local workshops, this two-day conference featured many invited speakers and panelists and gave the attendees a chance to produce and receive invaluable feedback on an original written piece.

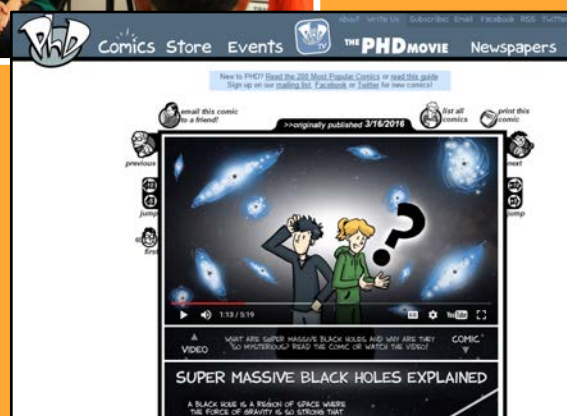
Longitudinal Impacts

As exciting as the three days of activities at our annual workshops are for our organizers and all our participants, the most important outcomes of the workshop come from the enduring impacts that this experience has on our graduate student attendees. On our website, we've recently featured stories about past ComSciCon attendees who have founded new podcasts, become feature writers for major publications, gone on into careers at museums, and more. We highlight some of these stories below, and more are available at <http://comscicon.com/>.

At the same time as we celebrate the continued progress of our attendees towards careers in science and science communication, we recognize that ComSciCon16, our fourth annual national workshop, marked a major generational transition for the organization. Only three of the eighteen organizing committee members for this year's workshop were part of our founding group in 2013. For the first time, none of our organizing committee chairs were founding members of the organization. Below, we feature some of their stories.

Becky Nevin

Becky Nevin is a graduate of Whitman College, an NSF Graduate Research Fellow, and a third year graduate student in astronomy at the University of Colorado Boulder. Her thesis research focuses on the supermassive black holes that power the incredibly energetic, roiling accretion disks at the cores of galaxies throughout our universe, active galactic nuclei. Just a few months after Becky participated in ComSciCon's inaugural mock interview session at our 2015 national workshop, she was tapped by one of America's premiere practitioners of science communication through multimedia—PhD Comics—to talk about her research. Their five minute conversation, rendered in exquisite animation by PhD Comics' Jorge Cham, was viewed about 50,000 times in its first 4 months on YouTube.



Megan Litwhiler

We first met Megan as a biology PhD student at Rutgers when she attended ComSciCon15, and again when she attended ComSciCon-SciWri15, our special workshop organized alongside the National Association of Science Writers meeting. Since then, Megan has completed her degree and took on a new challenge in Research Communications at the famed Museum of Science in Boston. In an interview for our website, Megan told us: *"The ComSciCon workshops definitely solidified my decision to pursue science communication as a career. I left both workshops feeling confident in my ability to communicate science and an ignited passion to help develop a more scientifically literate society."*



Longitudinal Impacts



Maria Drout

One of the founding members of ComSciCon, Maria Drout received her Ph.D. in Astronomy and Astrophysics from Harvard in 2016 and now jointly holds the prestigious Hubble and Dunlap postdoctoral fellowships of NASA and the University of Toronto, respectively. Her research interests center around massive stars and the supernova explosions they produce. Maria was an organizer of ComSciCon's national workshops from 2013-2015, chair of our 2015 Program Organizing Committee, an organizer of our 2014 local workshop in Cambridge, and a current member of our Leadership Team. In addition to her activities with ComSciCon, Maria expresses her passion for science communication through her writing at *Astrobites*, and academic teaching and mentoring.



Jenny Qi

After attending ComSciCon15, UC San Francisco biomedical sciences graduate student Jenny Qi made a bold move: she started a new podcast, *Bone Lab Radio*, which explores the life and death of organisms, the remains they leave behind, and how scientists use these remains to study the past. Her first interview subject for the new podcast was Myeashea Alexander, another biological anthropologist whom Jenny met at ComSciCon15.

Molly Gasperini

A graduate student in genome sciences at the University of Washington, Molly Gasperini joined the ComSciCon organizing committee in 2016 after participating as an attendee in 2015. Her research drives towards the development of new genome editing technologies. Molly is working with other ComSciCon alums to organize a new ComSciCon franchise launching in the Pacific Northwest and, together with her sister Liz, are part of the leadership of the BiteScis initiative mentioned on page 18.



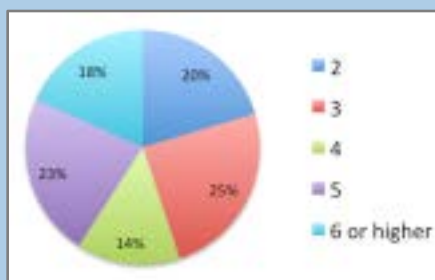
Evaluation

To better understand the state of science communication training in STEM fields and the impact of ComSciCon on attendees, we surveyed attendees before and after the workshop. Below are just a few results from attendee survey responses, which we plan to include in a peer-reviewed publication about the impact of science communication training on STEM graduate students.

Attendee's Backgrounds and Career Interests

ComSciCon 2016 attendees came from various stages in their graduate career, a variety of home institutes, and a wide range of fields of study. Attendees' future career interests also spanned a broad range of possibilities.

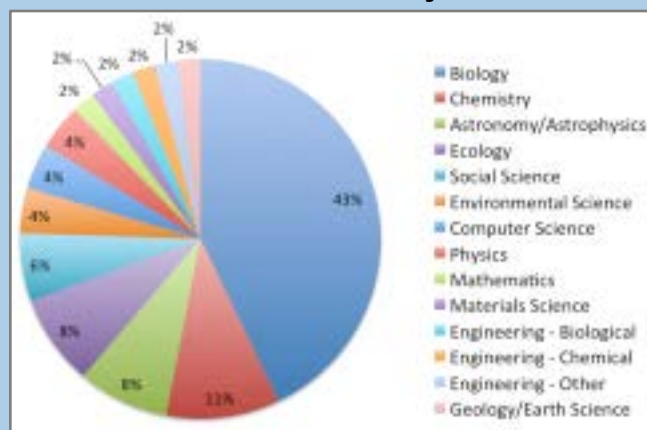
Year in Grad School



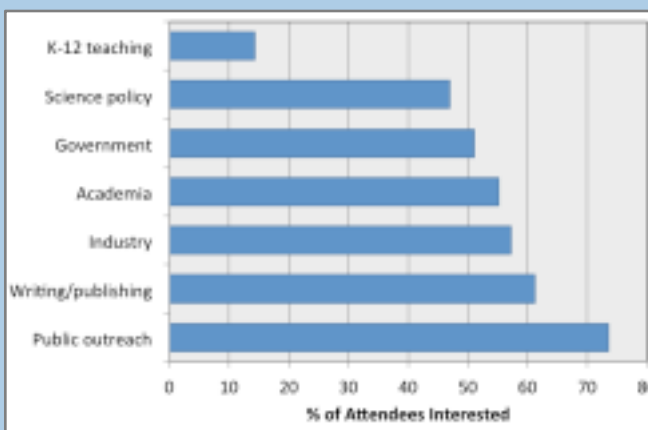
Home institute locations



Fields of Study

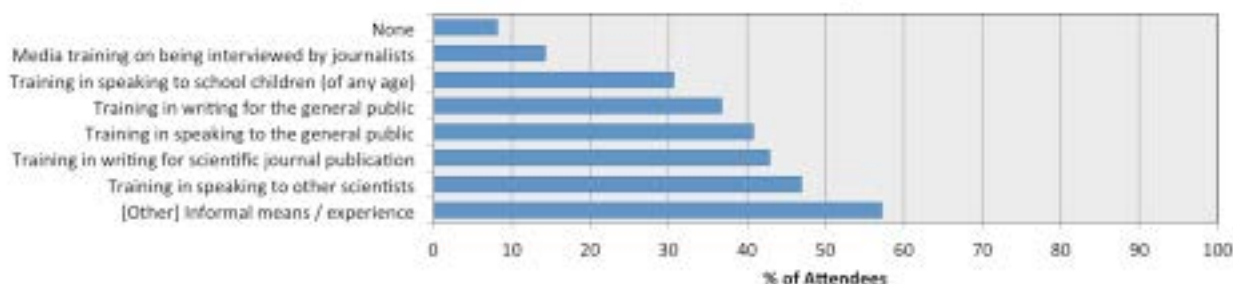


Career Interests



Underscoring the need for programs like ComSciCon, nearly 40% of attendees indicated that they had received no prior formal training in communicating with people other than scientists. As ComSciCon attendees are selected for their exemplary science communication experience, we can expect these numbers to be even lower among the general graduate student population.

Attendee Prior Science Communication Training



Evaluation

Impacts of ComSciCon 2016

After the workshop experience, attendees reported increased confidence in communicating with the public, communicating with other scientists, and submitting their writing to a popular-science publication.

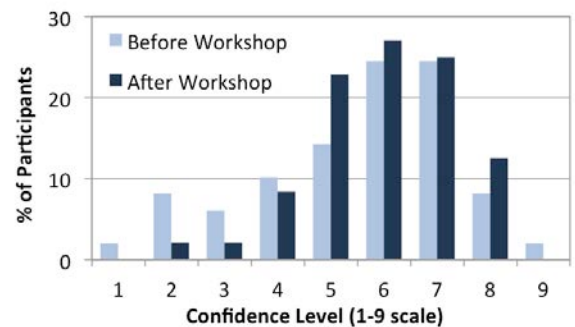
Participants' confidence in their ability to communicate with scientists



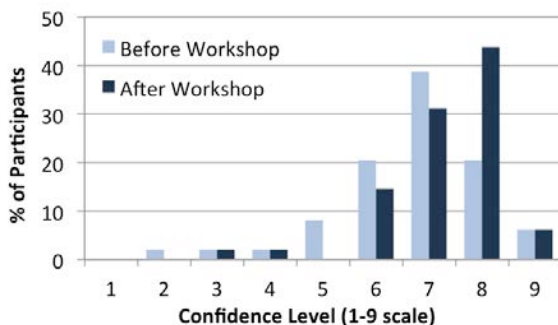
"As scientists, one of our major goals should be to disseminate our research far and wide, not just to the scientific community. I think that ComSciCon gave us the tools to start on this journey of being able to tell the story behind our research."

"Watching skilled communicators connect on a personal level without sacrificing scientific credibility gave me the courage to put it into practice myself."

Participants' confidence submitting an article to a popular science publication



Participants' confidence in their ability to communicate with the public



"I work in a theoretical science, so it can be hard to engage lay folks on why my lab's research papers are interesting or could be useful. I'm pushing both myself and my lab mates to be clearer on this messaging when we publish and actively engage with media who might be inspired by that messaging."

Testimonials

ComSciCon's impact on attendees is reflected in their post-workshop survey feedback as well as their commentary on social media like Twitter as they live-streamed the workshop. Here we share a selection of the comments and testimonials from our attendees.



Anonymous attendee feedback

"This was the first time in my PhD that I didn't feel like I had impostor syndrome. It was incredible to be surrounded (at last!) by students and experts with similar interests and passions, and I made great connections."

"What a terrific, transformative experience."

"I came away inspired, motivated, and filled with renewed energy to improve my own communication skills and to spread my enthusiasm to others."

"This was one of the best experiences I've had in graduate school, and definitely the best seminar/workshop/conference I've been to yet! I loved being able to talk with other graduate students about their outreach activities, as well as what they plan to do post-grad school. I also loved the opportunity to get to talk to professionals that communicate science to the public for a living."

"I walked away feeling that my ideas are valuable. Tapping into a network of like-minded and inspiring individuals invigorated me. The most profound thing I felt was that I'm not alone and I'm so jazzed to collaborate and run with this inspiration!"

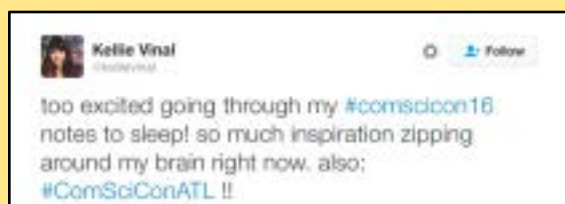
"The workshop reminded me of the big picture of why I do the work that I do and what I love about science."



Testimonials

ComSciCon's impact on attendees is reflected in their post-workshop survey feedback as well as their commentary on social media like Twitter as they live-streamed the workshop. Here we share a selection of the comments and testimonials from our attendees.

Reflections on Twitter



A new view of science communication

"I've become much more aware about my own bias in how I think about science communication. I'm adjusting the way I think so that it's not about "what I want to tell people about science" but more about "what do people find difficult about science, and how do I help?"

K12 session

"What I consider obvious (whether it's a concept, or a justification for why something is important or interesting) can be totally opaque to others. It's essential to collaborate with someone who brings a different perspective, e.g. the 10th grade teacher who helped me dramatically improve my lesson plan."

Thank you to our sponsors!

ComSciCon16 was generously supported by:

- [Graduate School of Arts & Sciences at Harvard](#)
- [Faculty of Arts & Sciences at Harvard University](#)
- [Harvard University Office of the Provost](#)
- [Office of the Dean for Graduate Education at MIT](#)
- [College of Arts & Sciences at the University of Colorado Boulder](#)
- [College of Engineering & Applied Science at the University of Colorado Boulder](#)
- [Office of the Vice Chancellor for Research at the University of Colorado Boulder](#)
- [Graduate School at the University of Colorado Boulder](#)
- [Office for University Outreach at the University of Colorado Boulder](#)
- [University of Colorado Boulder Department of Anthropology](#)
- [American Astronomical Society](#)
- [American Chemical Society](#)
- [American Association for the Advancement of Science & Science Careers](#)
- [Microsoft New England Research and Development Center](#)

