

SUMMER/FALL 2019

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REPORTING ON CLIMATE CHANGE

The Good, the Bad, and the Ugly

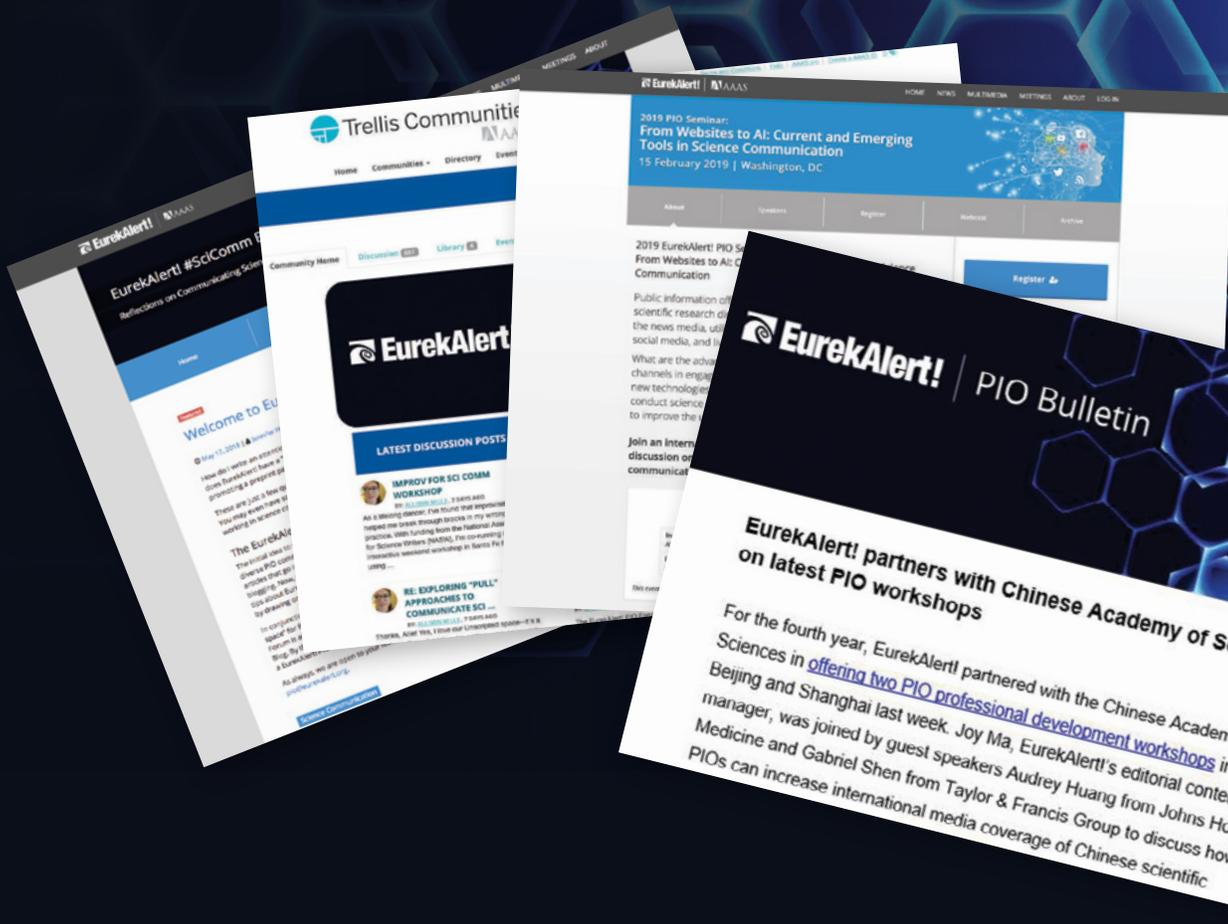
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ABOUT THE NATIONAL ASSOCIATION OF SCIENCE WRITERS

Established in 1934, NASW fosters the dissemination of accurate information regarding science by supporting the professional development of science writers. Membership is open to working journalists, PIOs, writers, authors, and other content creators, as well as students. Our community spans freelancers and employees working at newspapers, wire services, magazines, radio and television, and digital properties, as well as universities, agencies, and other institutions across the United States and beyond. **Above all, NASW fights for the free flow of science news.**

FROM THE PRESIDENT



NASW has been a welcoming professional home to me since the day I stepped off a train in Philadelphia to attend my first NASW meeting two decades ago. The relationships and insights I've gained through my membership in this community have profoundly enriched my career. That's why one of my biggest priorities during my time on the NASW Board of Directors has been to find ways to ensure that our community is as welcoming to all as it has been to me.

In any organization, supporting diversity and inclusion takes many forms. Some outcomes, such as fostering participation of underrepresented groups as conference speakers, can be measured directly and some, such as reviewing policies and procedures to support inclusion, are less readily measured and yet critically important.

In March, several board members joined forces with the **Diversity Committee** to continue exploring practices and policies that NASW could adopt to support diversity and inclusion, building on existing programmatic efforts such as the diversity fellowship. These volunteers are researching best practices for enhancing diversity and inclusion within membership organizations and have reached out to NASW committees and other journalism organizations for feedback. They're considering steps NASW could take in the many areas we touch: our meetings, events we fund, communications, committee makeup and processes, education programs, member recruitment, nominations processes, awards, and new program development.

One essential component of supporting diversity and inclusion is creating a respectful, harassment-free environment. In 2017, our newly formed **Governance Committee** developed our **Conference and Meeting Code of Conduct**. This year, NASW became an inaugural member of the **Societies Consortium on Sexual Harassment in STEMM** (story, page 4) whose mission is to advance professional and ethical conduct, climate, and culture. In addition to sharing the conviction that professional excellence is stymied by harassment, members of the consortium work together to develop resources for policy development.

This winter, the board asked the Governance Committee to review Article VII of the NASW bylaws, which covers membership sanctions and termination. Our goal is to put before the membership for consideration a process in which lack of confidentiality or fear of retaliation do not inadvertently suppress incident reporting. These policy details, needed to effectively put our values into practice, may look like internal squabbling — but it is these very details that reflect who we are and what we value as an organization. I invite you to add your voice to the conversation.

NASW President

Siri Carpenter, *The Open Notebook*
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Summer/Fall 2019 Vol. 68, No. 2

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NASW Releases Information Access Standards

Science journalists and public information officers (PIOs) share a common goal: to inform the public about science and research. Often, however, they end up in opposition, with journalists requesting more information and access to sources than PIOs give.

To bridge that gap, NASW has released a set of **Information Access Standards** to guide interactions between journalists and PIOs and sources at federal science agencies. The guidelines foster the transparent and open exchange of information about science and technology generated, funded, or used by government entities. Journalists are encouraged to refer to them when having difficulty gaining access to sources or information; PIOs are encouraged to refer to them to support efforts to provide greater access to agency sources and information. They are publicly accessible at nasw.org.

“Our work advances the people’s right to know about how the government operates, so they can make informed decisions for themselves, their families and their communities,” said Maryland-based science writer **Gabriel Popkin** (pictured), who led the effort as chair of **NASW’s Information Access Committee**. “This exchange relies fundamentally on journalists having open and unrestricted access to government sources.”

Approved by NASW’s board on March 3, the Information Access Standards are the outcome of an **Information Access Summit** held in October in Washington, D.C., just after the **ScienceWriters2018** meeting. During the summit, journalists and PIOs convened to share their needs, experiences and constraints, and to hear from the wider NASW community. Over the next few months, the committee, with help from summit participants and the NASW

board, edited and refined the guidelines for adoption by NASW.

The Information Access Standards include best practices for PIOs and the agencies they represent, journalists, and for communications between journalists and PIOs. NASW supports their use at federal agencies as well as other types of institutions, including state and local agencies, corporations, universities, and nonprofits.

Siri Carpenter, NASW president, said the guidelines represent the willingness of NASW members to unite in championing the organization’s mission of supporting the free flow of science news.

“The guidelines, like the summit they arose out of, sprang from discussions among a group of members — the Information Access Committee. The project was set up with the intent of open and inclusive dialogue and commitment to collaboration, and that’s exactly what happened,” Carpenter said.

 [Share this story online bit.ly/sw19sum01](https://bit.ly/sw19sum01)

 [Access the Standards bit.ly/sw19sum02](https://bit.ly/sw19sum02)



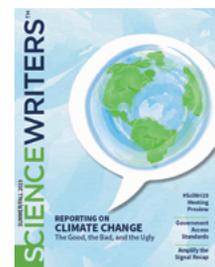
Courtesy of Gabriel Popkin

“This exchange relies fundamentally on journalists having open and unrestricted access to government sources.”

— Gabriel Popkin

Welcome to the Redesigned *ScienceWriters* Magazine

The new *ScienceWriters* is here! We’ve taken your wishlist and created a new layout that is equal parts news wire, business journal, and alumni magazine. Familiar departments like **Advance Copy** and **Regional Groups** are still here — now in vibrant color along with the rest of the magazine. New sections like **Member Benefits** provide convenient reminders of NASW resources available at your fingertips, while **SciWriLife** shares trusted tools of the trade as told by our colleagues. Flip through the pages and give it a spin — we hope you enjoy it.





Ben Young/Landis

NASW Joins New Societies Consortium on Sexual Harassment in STEMM

Together with other leading academic and professional societies, this February NASW became one of 53 inaugural members of the **Societies Consortium on Sexual Harassment in STEMM** (science, technology, engineering, mathematics, and medicine).

The establishment of the Societies Consortium reflects a shared understanding that professional societies have a unique responsibility in their role as standard-setters for STEMM fields to address the pervasive problem of sexual and gender harassment. The new consortium was announced at a panel session held during the AAAS Annual Meeting on February 15, 2019, in Washington, D.C.

The Societies Consortium was established by the **American Association for the Advancement of Science (AAAS)**, the **Association of American Medical Colleges (AAMC)**, and the **American Geophysical Union (AGU)**, with **EducationCounsel** serving as the policy and law consultant for the initiative. It includes member societies representing disciplines across STEMM and continues to welcome others.



An initiative to advance professional and ethical conduct, climate & culture

“This consortium provides both leadership for a broad diversity of our societies’ collective voices and actions to advance ethics, equity, inclusion, and excellence in STEMM research, education, and practice,” said Shirley Malcom, senior advisor at AAAS.

Adapted from press release published online February 15, 2019 by AAAS.

 [Read the AAAS press release bit.ly/sw19sum03](https://bit.ly/sw19sum03)

 [Visit the Consortium homepage bit.ly/sw19sum04](https://bit.ly/sw19sum04)



Courtesy of WCSJ 2019

Congratulations to the #WCSJ2019 Travel Fellows

Ten science writers from the U.S., Latin America and the Caribbean received travel fellowships to this year’s **11th World Conference of Science Journalists** in Lausanne, Switzerland.

Nine of the travel fellowships are **David Perlman fellowships**, honoring the longtime *San Francisco Chronicle* science reporter, and are supported by the **International Program Fund** created by NASW and CASW with proceeds from WCSJ2017. They are: **Will Beaton**, *Sandbagger News*, USA; **Florencia Ballarino**, *Perfil*, Argentina; **Barbara Fraser**, Freelance, USA; **Geoffrey Giller**, Freelance, USA; **Kelsey Harper**, *Sandbagger News*, USA; **Kendall Powell**, Freelance, USA; **Irene Rodríguez Salas**, *La Nación*, Costa Rica; **John Wendle**, Freelance, USA; **Carolyn Wilke**, Freelance, USA.



World Conference of Science Journalists Lausanne 2019

One fellowship, awarded to **Paul Nicolaus**, Freelance, USA, is a **Laura Van Dam fellowship**, funded by NASW since 2007 and awarded in memory of past president **Laura Van Dam**, who died in 2006. Laura was a strong supporter of NASW’s commitment to international science writing.

These fellowships, which are administered and selected by the WCSJ2019 organizers, encourage continued American participation in the world community and enable writers to pursue story opportunities abroad at a time when travel budgets are tight for many. They are among 100 fellowships awarded to recipients in 53 countries and selected from more than 600 applicants worldwide.

 [Share this story online bit.ly/sw19sum05](https://bit.ly/sw19sum05)



“One of my main goals as a science journalist is to contribute to a more diverse writing community — and I’m excited to continue covering underrepresented groups moving forward.”
— Helen Santoro

NASW Diversity Fellowship Recipients Announced

NASW’s Diversity Committee has announced **Rodrigo Pérez Ortega** (pictured, center), **Helen Santoro** (right), and **Anuradha Varanasi** (left) as recipients of our 2019 Diversity Fellowships. As fellows, Pérez Ortega, Santoro and Varanasi will each receive \$5,000 to help defray relocation and living costs associated with completing a summer internship. Each will also receive a one-year membership to NASW.

This year’s fellows were selected from a deep and talented pool of applicants. Pérez Ortega is a graduate student in UC Santa Cruz’s Science Communication program and will intern at Inside Science, a science news service run out of the American Institute of Physics. Santoro is also a graduate student in the UC Santa Cruz program and will

intern at *High Country News* on their West-North desk, covering stories from Alaska, the Pacific Northwest, and the Northern Rockies. Varanasi is a graduate student in Columbia University’s Science, Environment, and Medical Journalism graduate program and will intern at The State of the Planet blog, run by the university’s Earth Institute. All three selectees were lauded by judges for their exceptional writing abilities and compelling personal stories.

NASW’s Diversity Committee conceived the fellowship out of the recognition that making ends meet on an intern’s salary can be hard. Now in its third year, and with an expanded number of awards, the fellowship is designed to supplement summer internship stipends and thereby lower a key barrier to entering the science journalism profession. Fellowship applications were open to any member of an underrepresented group who intended to complete a science journalism internship this summer. Special thanks go to this year’s judges — **Nsikan Akpan, Mollie Bloudoff-Indelicato, Roberta Kwok, Kelly Tyrrell,**

and **Philip Yam** — for their time and help in selecting the awardees.

The fellowship is part of ongoing efforts by NASW’s Diversity Committee to address the lack of minorities in science journalism. The committee has also teamed up with *The Open Notebook* to launch a series dedicated to bringing greater visibility to journalists from underrepresented communities and to issues of special relevance to those communities.

The largest organization devoted to the professional interests of science writers, NASW is a community of more than 2,300 journalists, authors, editors, producers, public information officers, students, and people who write and produce material intended to inform the public about science, health, engineering, and technology.

 [Share this story online bit.ly/sw19sum06](https://bit.ly/sw19sum06)

Science Writing by Storytelling

The **Science Writing by Storytelling Master Class** took place February 18-19, 2019, following the AAAS meeting in Washington, D.C. Organized by **Elizabeth Pennisi**, senior correspondent at *Science*, and **David Malakoff**, deputy news editor at *Science*, the workshop was supported by a Peggy Girshman Idea Grant from NASW. Twenty-one writers attended.

The first day of the workshop included presentations by: **Steve Hall**, a freelancer and science-writing teacher at NYU; **Cathy Alter**, a freelancer and narrative nonfiction teacher for Johns Hopkins; **Siri Carpenter**, editor of *The Open Notebook*; **Laura**

Helmuth, science, health and environment editor at *The Washington Post*; and David Malakoff. These presenters then led small group discussions with participants.

The second day comprised presentations by three writer-editor pairs about their work on narrative pieces, followed by a session on resources and a wrap-up discussion with Malakoff.

 [Access workshop resources bit.ly/sw19sum07](https://bit.ly/sw19sum07)



Top: Laura Helmuth. **Bottom:** Siri Carpenter, David Malakoff, Laura Helmuth.

Courtesy of NASW



Above: NASW Undergraduate Travel Fellows attending the 2019 AAAS Annual Meeting. Starting from left: Taylor White, Suffolk University; Jodie Lunger, University of Toronto; Elizabeth Ladyzhets, Barnard College; Mary-Elizabeth Jobson, University of Florida; Ana Flores, St. Edward's University; Marisa Sloan, University of North Carolina-Greensboro; Adam Peasley, Austin Community College; Shelby Condit, Colorado State University; Courtney Adams, Texas A&M University; Shelby Whitehead, University of Tennessee, Knoxville. **Upper Right:** NASW Member Kasha Patel spoke at the Travel Fellows orientation. **Lower Right:** NASW Member and former Undergrad Travel Fellow Rachel Butch hosted the internship fair booth for Johns Hopkins Medicine.

Ashley Yeager



Siri Carpenter



Rachel Butch

Undergraduate Travel Fellows Report Back from AAAS Annual Meeting

Ten students from across the U.S. and Canada won NASW Undergraduate Travel Fellowships to attend the 2019 American Association for the Advancement of Science (AAAS) annual meeting in Washington, D.C. in February.

This year's fellows are: **Courtney Adams**, Texas A&M University; **Shelby Condit**, Colorado State University; **Ana Flores**, St. Edward's University; **Mary-Elizabeth Jobson**, University of Florida; **Elizabeth Ladyzhets**, Barnard College; **Jodie Lunger**, University of Toronto; **Adam Peasley**, Austin Community College; **Marisa Sloan**, University of North Carolina-Greensboro; **Taylor White**, Suffolk University; **Shelby Whitehead**, University of Tennessee, Knoxville. Academic majors represented in this year's class include biology, journalism, chemistry, microbiology and cell science, biomedical sciences and pharmacology.

The fellows covered a variety of scientific sessions and wrote related news stories for publication on the NASW website.

Fellows were paired with NASW volunteer mentors and treated to a specially designed orientation, during which they heard a talk by **Kasha Patel**, a science comedian and NASA science writer. Students also had the opportunity to meet editors from top news and science writing outlets during the NASW Internship Fair, coordinated by **Erik Vance**, a freelance science writer. Recruiters included NPR, *The Washington Post*, *Nature*, *Science News*, *Chemical & Engineering News*, Audubon, Fermilab, Cell Press/Elsevier, and others.

The **NASW Education Committee**, co-chaired by **Czerne Reid**, a lecturer at the University of Florida, and **Ashley Yeager**, an associate editor at *The Scientist*, selected the fellows from a competitive and diverse pool of applicants. Since 2007, the program has supported 127 students, helping launch careers at the *New York Times*, *The Atlantic*, and other places.

 [Share this story online bit.ly/sw19sum08](https://bit.ly/sw19sum08)

 [Read the Fellows' coverage bit.ly/sw19sum09](https://bit.ly/sw19sum09)



Undergraduate Travel Fellows Get New Mascot

A porcupine armed with a quill proved irresistible as the NASW Undergraduate Travel Fellows new mascot. NASW members, travel fellows and program alumni voted online and in person at the AAAS meeting. With 59 percent of the vote, the Quills bested the Travel Trilobites with 33 percent and the Buckyballs with 8 percent.

\$25k Awarded in NASW Idea Grants in 2019

Science journalists are used to being scooped when it comes to reporting on the latest lawsuits involving Monsanto, Pfizer, or the FDA. That's because automated research services that lawyers use to flag interesting cases are cost prohibitive to all but the largest media outlets.

To change that, **Charles Seife**, a journalist, author and professor at New York University, is building **LegalEye**, an automated research service that will help journalists find new lawsuits that are relevant to their beats and notify them of developments in interesting cases.

Once developed, the tool will be offered free to NASW members and at a low cost to other journalists. Seife expects to launch the tool to a limited number of users by the end of 2019 with a full launch by April 2020.

"This service will make the federal court system much more transparent to journalists," Seife said. "No longer will we be dependent on a tipoff from a litigant or on one of the bigger publications with access to Bloomberg or LexisNexis breaking the news of a new filing. We'll be able to do it ourselves for very little cost."

Seife's project is supported by an \$18,000 **Peggy Girshman Idea Grant** from NASW. Idea Grants support projects and programs that help science writers in their professional lives and/or advance the field of science writing. The grants range from \$1,000 to \$25,000 with selection of successful proposals by NASW's Grants Committee. Since the program's inception in 2010, NASW has funded more than 140 projects totaling close to \$500,000.

Also funded this year was a proposal by **Katherine Mast**, a writer and editor for the Santa Fe Institute and freelance science writer; **Allison Mills**, associate director of

research news at Michigan Technological University; and Phil Weaver-Stoesz, a theater director and performing arts educator.

The trio received \$4,900 to develop and run a two-day, intensive workshop using improv — live performance in which the plot, characters, dialogue, and movements develop in the moment — to help science writers become better storytellers. The workshop (www.sciwriimprov.com) was held August 3-4 in Santa Fe with a condensed version on offer at ScienceWriters2019 in State College, Pennsylvania.

"This is an opportunity for science writers to get out of our critical, intensely focused brains by using movement, storytelling, and voice in creative ways, learn to read others' body language for better communication, and find ways to confidently interact with unexpected material on the fly," Mast said.

A third award this year went to **Diana Crow**, a freelance science writer, and Anne Berlin, a digital strategist, to expand **The Best Shortform Science Writing Project (SciShortform)**, an all-volunteer initiative that highlights excellent shortform science writing by publishing quarterly round-ups on Medium. Their \$2,200 grant will enable them to increase their visibility and refresh their branding, recruit a core group of committed volunteers, and expand into publishing Medium posts on the craft of short science writing.

"Since most early-career science writers write primarily in shortform genres, it is especially important to provide aspirational examples of these science writing forms. However, the overwhelming majority of science writing awards honor longform writing and multimedia," Crow said.



“ This idea fermented and grew into a proposal because of conversations I got to have at social mixers and bus rides at ScienceWriters over the years. And being from opposite ends of the country (New Mexico and Michigan), Katie and I could only meet and talk at these annual meetings — so our collaboration today is definitely NASW networking at its best!”

— Allison Mills

 [Share the LegalEye story
bit.ly/sw19sum10](https://bit.ly/sw19sum10)

 [Share the Improv story
bit.ly/sw19sum11](https://bit.ly/sw19sum11)

 [Share the SciShortform story
bit.ly/sw19sum12](https://bit.ly/sw19sum12)

About the NASW Peggy Girshman Idea Grants

The Peggy Girshman Idea Grant owes its creation to the **NASW Grants Committee**, whose members crafted from scratch a program where science writers could find creative ways to serve and enrich the professional development of their colleagues. Examples of past awarded grants:

Amplify the Signal workshop hosted in 2019 to help PIOs and science journalists better understand and evaluate the studies they write about. (**Story, page 18**)

Austin Science Writers workshops hosted in 2019 to foster a network of science communicators in central Texas and to connect area scientists with science media.

Funds to complete **The ScienceWriters' Investigative Reporting Handbook** published by Liza Gross in 2018.

HBCSciU Science Writing Fellowship funded in 2016 to support students attending HBCUs.

A two-day regional conference "**Measure Globally, Respond Locally: The Business and Science of Climate in the Southern Appalachians**" hosted in 2016.

The University of Arizona workshop "**With Conviction: Reporting on Science in the Courtroom**" hosted in 2015.

A one-day **Bioethics Bootcamp workshop** hosted by SWINY, The Hastings Center and the City University of New York Graduate School of Journalism in 2012.

 [See list of past grants
bit.ly/sw19sum13](https://bit.ly/sw19sum13)

 [Search the hashtag
twitter.com/hashtag/SciWriGrants](https://twitter.com/hashtag/SciWriGrants)



From the Director



In the early part of my pre-NASW scicomm career, I filled out some sort of evaluation called a change-ready profile and was promptly told I had failed. My own perfectionist tendencies (“What? I failed a test?”) aside, it’s true that change is something that I have to consciously work on inviting and embracing.

ScienceWriters magazine’s new look is a change that I can wholeheartedly celebrate as a point along the timeline of NASW’s growth. It was only ten years ago that our previous and long-time design firm Carol Kerr Graphic Design took us from a Manila paper newsletter to our first quarterly color magazine under the creative and watchful eye of **Lynne Friedmann**. This redesign is equally exciting.

“Like pretty much everything else in NASW, most of the words you see in these pages are written by volunteers.”

— Tinsley Davis

Member surveys in 2017-2018 revealed that while 63 percent of members desired the addition of a digital newsletter to NASW’s offerings, a healthy 37 percent preferred print and 60 percent opt in to postal delivery of the magazine. With the goal of increasing digital member communications and reducing NASW’s carbon footprint while still honoring your desire for print, we’ve added a monthly e-newsletter “**Desk Notes**,” moved to two annual issues of *ScienceWriters*, and rolled our print and digital editors into one role. Under the direction of editor **Sarah Nightingale** and Creative Externalities, the design firm of **Ben Young Landis**, two talented, enthusiastic and creative NASW members, we’ve responded to member feedback and tried to put forth a semiannual magazine that recasts your favorite columns and elements, like Regional Groups and Advance Copy, and adds new types of content, including more longform stories and a glimpse into our members’ workspaces.

I see change as one of many opportunities to express gratitude. To Lynne and designers **Carol Kerr** and **Jennifer Buckner**, thank you for your years of service, the heart you brought to the process, and the high standards you have set for *ScienceWriters*. To the board and communications subcommittee of **Siri Carpenter**, **Jennifer Cox**, **Kendall Powell**, **Matt Shipman**, and **John Travis** and led by **Kathryn Jepsen** that set the stage for this moment with intense brainstorming and planning sessions back in the spring of 2018, thank you for your vision and confidence. To Sarah and designers Ben Landis and Guy Rogers, thank you for your diligence, enthusiasm, and passionate devotion to not just the design but to NASW and all we hope to be. To the members who contributed content, thank you for giving your time and words so generously; like pretty much everything else in NASW, most of the words you see in these pages are written by volunteers. Finally, thank you to all the members who filled out surveys and contributed your ideas and who are reading now.

Tag us on social media **@ScienceWriters** and stay in touch with Sarah Nightingale via **editor@nasw.org**

Tinsley Davis has served as NASW executive director since 2009, after joining the leadership as associate executive director in 2007. An NASW Member since 2001, she has previously written for the St. Louis Post-Dispatch, PNAS, and the Museum of Science, Boston. Contact Tinsley at director@nasw.org

Get To Know: The PIO Committee

Each issue, we feature one of NASW's many volunteer-led committees as a refresher on their role and ongoing efforts on behalf of our member community. Here, we speak with **Kelly Tyrrell, co-chair of the PIO Committee.**

What does the PIO Committee do?

The PIO Committee supports public information officers across the U.S. — at universities, government agencies, journals, science foundations and more. We aim to provide professional resources, professional development opportunities, and community for NASW's PIO members. We teleconference throughout the year and, in collaboration with NASW leadership, work to address the needs and desires of PIOs.

What are some examples of your recent discussions and initiatives?

The PIO Committee is working to create more opportunities and resources for public information officers in NASW. We recently began offering to vet annual meeting proposals to help improve their quality and increase the number of PIO-relevant sessions offered each year. We helped create the Excellence in Institutional Writing Awards, now in their second year. And we are also working now to create Best Practices Guidelines for PIOs, to help provide a professional resource for members all over the country.

Who should volunteer for the PIO Committee, and why?

All PIOs in NASW are encouraged to volunteer for the committee, especially those with unique or underrepresented perspectives. We serve the broader PIO member community within the organization and want to provide all we can as volunteers. There is always work to do and the right volunteers are those willing to raise their hands and get to it. We welcome new ideas.



Kelly Tyrrell is co-chair of the NASW PIO Committee and a senior science writer at the University of Wisconsin-Madison. She has previously written for the Chicago Tribune, Philadelphia Inquirer, and The News Journal

(Delaware). Contact Kelly at kelly.tyrrell@wisc.edu, or reach her co-chair, Michael Newman, Johns Hopkins Medicine, at mnewma25@jhmi.edu

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Complete committee list and contact information
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MEMBER BENEFITS



Come Find Your Professional Community

Founded by science writers and governed by science writers, NASW exists to support its members through advancing their craft and careers. As NASW members, students and professionals can receive discounts for events and services, newsroom privileges, exclusive job listings, scientific journals access, and more. Most importantly, they join a wide network of 2,000-plus journalists, PIOs, writers, and other colleagues — each bringing their diverse talents and experiences to share with our community.

Benefit Updates

Several new discounts for NASW members have been announced since our last print edition. Access instructions here:

www.nasw.org/memberdiscounts
(Member log-in required).

Scrivener: NASW members can receive a discount of 20% on the purchase of a standard license for Scrivener for macOS or Windows.

JSTOR: NASW members can receive 25% off a yearly **JPASS**. Included is reading access to some 2,000 journals (full publication runs minus the most recent issues) and 120 PDF downloads within the year.

CUNY J+ Workshops: Discount registration for **J+** workshops at the **CUNY Newmark Graduate School of Journalism** are now available to NASW members.

Know Your Benefits

Get the most out of your membership. These extensive resources are the result of decades of effort and initiative on the part of NASW members who volunteer for committee service and board leadership.

Attend Our Annual Meeting: Connect with your peers at our yearly **ScienceWriters** conference with your discounted registration. Attend workshops, panel discussions, and pitch slams organized by your fellow NASW members. Celebrate successes with new friends and longtime colleagues — and network your way towards new careers and collaborations.

Secure Newsroom Registration: Your NASW Member Card may be accepted for credentialed access at select conferences, including the **AAAS Annual Meeting** (additional criteria may vary by event).

Scout New Talent: Meet promising undergraduate and graduate student science writers through our mentorship programs and internship fairs hosted at ScienceWriters and at AAAS Annual Meetings.

Search Jobs and Grants: Search our exclusive databases for staff jobs, freelance assignments, reporting grants, training fellowships, and awards for science writers.

Find Freelancer Resources: NASW members and committees curate resources created just for independent science writers and found nowhere else. Get insights on fair compensation via our tipsheet and freelancer survey report. Browse real contracts submitted by other writers in **The Fine Print** to improve your own. Read client reviews by freelancers via our **Words' Worth** forum.

Get Journal Access: Search journal databases and download scientific articles for free, including those published by **Elsevier ScienceDirect, Wiley Online Library, Annual Reviews, Cochrane Library, and American Physical Society.**

Access Discounts: NASW members can submit entries for our **Science in Society Awards** and **Excellence in Institutional Science Writing Awards** for free. NASW members also receive discounted access to the biennial **World Conference of Science Journalists** and discounted dues towards the **National Writers Union.**

QUICK LINKS TO MEMBER RESOURCES

MEMBER DIRECTORY

www.nasw.org/member-directory
New to town? Find colleagues in your area.

JOBS BANK

www.nasw.org/job
Find freelance and full-time opportunities.

WORDS' WORTH

www.nasw.org/words-worth
Freelancers share client experiences.

THE FINE PRINT

www.nasw.org/contracts
Browse examples of writing contracts.

FUNDING DATABASE

www.nasw.org/funding
Search for grants, fellowships, and awards.

MEMBER DISCOUNTS

www.nasw.org/memberdiscounts
Unlock savings for writing tools.

JOURNAL RESOURCES

www.nasw.org/journal-resources-nasw-members
Access and download scientific articles.

HOW TO JOIN

www.nasw.org/join
Help recruit new members.

NASW Email Alias Explained

Time flies.

It's been more than 24 years since NASW's internet presence was established. The NASW.org domain was registered on March 9, 1995.

A lot has changed since then. In 1995, Google did not exist. (It was founded Sept. 4, 1998.) Amazon was less than a year old and sold only books. And the online world was a more trusting place.

For one thing, junk email — spam — was rare. And defenses against it were minimal to nonexistent. So, way back then, when NASW decided to offer email aliases to its members, it's likely that no one imagined how complicated that could get.

Fast forward to now. Spam makes up about 45 percent of all email sent worldwide. Fortunately, most of it is silently discarded before it ever reaches its intended recipient. Unfortunately, some of that discard email might be mail you actually want to see. And that's a problem that can especially affect mail sent to your nasw.org alias.

The reason is something called DMARC, which stands for "Domain-based Message Authentication, Reporting & Conformance." You can read more at <https://dmarc.org/> but the essential point is this: In some cases, DMARC allows the sender of an email to block it from being forwarded.

Say your bank account sends you an email informing you that your monthly statement is now available, and that email includes a link to view your new statement.

How do you know whether that link actually goes to your bank's site? Well, if you're a careful internet user, you might notice that the link takes you to <https://www.chase.ua> instead of <https://www.chase.com> and not go any further. But if you don't notice the discrepancy, and the fake

site looks genuine, you might log in anyway. And suddenly, somebody, somewhere in the world has your Chase username and password.

DMARC is designed to head off exactly that kind of "phishing" attack. Chase has adopted it (see <https://bit.ly/2UYiqlD> for the evidence) and it works. If a mail purporting to be from chase.com doesn't come from a Chase server, Chase's DMARC record tells your email provider not to accept it.

So far so good. Now, what happens if Chase sends its notice to your nasw.org alias? Well, our server at nasw.org accepts it, and then re-sends it to your email provider. Your provider checks to see if Chase has a DMARC record. It does. It then checks to see if the mail was sent by a Chase server. But it wasn't. It was sent by the nasw.org server. So your email provider follows Chase's instructions and rejects it. And, more often than not, you'll never know that it happened.

The lesson is this: Be careful about using your nasw.org alias as the contact for any important institutional email. If you do, don't be surprised if you never get those emails.

Just another sign of how much has changed since 1995.

**SEND QUESTIONS ON EMAIL AND OTHER
NASW DIGITAL SERVICES TO RUSSELL
CLEMINGS AT CYBRARIAN@NASW.ORG**



Tax Tips for Driving and Dining on the Job

Freelancers need to be savvy about tax deductions if they're going to make a profit. Here, longtime ScienceWriters columnist Julian Block sheds some light on deductions NASW members can take when they drive or entertain on the job.

Internal Revenue Service auditors relax the rules when they scrutinize deductions for car expenses. They don't require taxpayers to substantiate their actual expenditures. Instead, auditors will accept write-offs based on standard mileage rates, provided taxpayers are able to provide evidence of the miles driven.

There are three kinds of rates. One is for business driving, as when NASW members drive to attend annual conferences or chapter programs or to meet with publishers. The other two are for individuals who drive to obtain medical care or to perform chores for charitable organizations like schools, churches and hospitals.

The per-mile rates for business and medical driving change each year. 2019's rates are 58 cents for business and 20 cents for medical, up from 2018's 54.5 for business and 18 for medical. There's no change in the rate of 14 cents for charitable driving. It's fixed by law.

I remind clients who do business, medical or charitable driving that it's important for them to keep glove-compartment diaries or other records that list the details of when, how far and why they went. Their deductible expenses also include outlays for parking and tolls.

The IRS does impose some restrictions on deductions for business driving. For instance, fees people pay to park their cars at their place of work are nondeductible commuting expenses. Another limitation is on deductions for costs incurred to travel between home and work. Such costs aren't converted from nondeductible commuting to deductible medical travel merely because illness or disability rules out using public transportation.

At the close of 2017, Congress passed and President Trump signed the Tax Cuts and Jobs Act. The legislation curtails or ends a lengthy list of long-cherished write-offs, including a provision that abolishes the 50 percent deduction for entertainment expenses, such as tickets to sporting events. But it kept the 50 percent deduction for business meals.

How does the Internal Revenue Service sort things out when those events include meals — for instance, drinks and sandwiches? It okay's write-offs for the meals, provided the charges for noshing are separately stated from the charges for tickets.

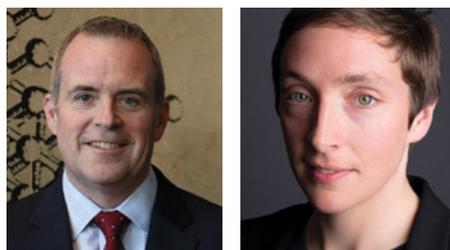
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Julian Block is an attorney and author based in Larchmont, NY. Information about his books is at julianblocktaxexpert.com. Disclaimer: This is provided for informational purposes only and is not intended to substitute for obtaining accounting, tax, or financial advice from a professional adviser with knowledge specific to your situation.

A Council for the Advancement of Science Writing

Established in 1960 as an independent, educational nonprofit organization, CASW develops and funds programs and awards to help writers produce accurate, informative stories with a goal of improving the quality and quantity of science news reaching the public. Together, NASW and CASW produce the annual ScienceWriters conference and support international activities through a joint International Program Fund, an offshoot of their successful cooperative hosting of the 10th World Conference of Science Journalists in 2017.



Sylvia Kantor



All photos courtesy of CASW

Top: Ros Reid and Alan Boyle honor Charlie Petit (center). **Middle:** New CASW Board Members Bill Kearney (left) and Celeste LeCompte. **Bottom:** Taylor/Blakeslee Fellows Susie Neilson (left) and Joshua Sokol.

CASW Elects New, Returning Board Members

Two newly elected members joined the CASW Board of Directors at its annual meeting April 12: Celeste LeCompte of ProPublica and Bill Kearney of the National Academies of Sciences, Engineering, and Medicine.

Re-elected as officers for 2019-20 were Alan Boyle, president; Robin Lloyd, vice president; Richard Harris, treasurer; and Betsy Mason, secretary.

Elected to new three-year terms were Thomas Lin, Tariq Malik, Robin Lloyd, Debbie Ponchner, Cristine Russell, Ken Trevett, and Dan Vergano.

Charlie Petit retired after 22 years on the board, including service as vice president, treasurer and secretary, and a member of the Organizing Committee for WCSJ2017.

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Paired Fellows Selected for Mentored Science Journalism Project Grants

Two recent Taylor/Blakeslee Graduate Fellows have been awarded CASW's first Taylor/Blakeslee Mentored Science Journalism Project Fellowships, small grants

for independent reporting projects that come with the support of a senior journalist — a previous Fellow — as mentor.

The grants are designed to help early-career science journalists gain important experience by organizing and executing freelance projects at a time when publishers are rarely able to cover the full cost of field reporting.

The 2019 Taylor/Blakeslee Mentored Project Fellows and their mentors are:

Susie Neilson, Project Fellow, and Phil McKenna, Mentor: Neilson, who earned her master's degree in journalism from the University of California, Berkeley in May, proposed an environmental investigative project called "A Toxic Bargain." The grant will cover a reporting trip to talk with experts and community members to develop online and magazine articles. Neilson's mentor is environment and energy reporter Phil McKenna, a 2005 Taylor/Blakeslee Fellow, now part of an investigative team at InsideClimate News in Boston.

Joshua Sokol, Project Fellow, and Bryn Nelson, Mentor: Sokol, who was a 2014 Taylor/Blakeslee Fellow at MIT, plans a trip to scientific fieldwork sites in tropical Africa for "Birth of a Parasite," a project exploring the evolution of a major infectious disease vector. His mentor will be Seattle-based freelance biology writer Bryn Nelson, a 1998 Taylor/Blakeslee Fellow.

2019-20 Taylor/Blakeslee Fellows Combine Passions for Science, Narrative, and a Better World

Six talented journalists with experience in research, writing and policy have been awarded prestigious Taylor/Blakeslee University Fellowships for 2019-20 from the Council for the Advancement of Science Writing (CASW) to support graduate training in science writing.

Four Fellows will each receive a \$5,000 academic year award. Two more will receive one-semester awards of \$2,500, bringing to 167 the number of science writers aided by CASW's graduate fellowships since 1981.

Chosen for full fellowships from the field of 27 outstanding applicants were:

Alexandra Matthews. After completing an undergraduate degree in sociology at UC Berkeley, and serving with the Peace Corps in Morocco, Matthews began reporting on politics for California's *Capitol Weekly*. Drawn to stories about science and health, she took on communications work for the Public Library of Science and data collection for a health study. She returned to Berkeley for a special dual degree program that combines public health and journalism, she said, because "I want my reporting to transcend the artificial boundaries between 'hard' and 'social' sciences."

Jeremiah Oetting is entering the master's program in science communication at the University of California, Santa Cruz, after six years of working for the U.S. Forest Service and National Park Service on a range of conservation-based research projects. He focused on ecology in his undergraduate studies at the University of Minnesota while pursuing his interest in reporting and writing at student newspapers. As a science journalist, Oetting hopes "to move the public discussion away from its current overriding binary of pro-science/anti-science" and to "positively contribute toward a science-literate and informed world."

Brett Simpson. When her father succumbed to a preventable infection in 2018, Simpson found herself powerfully motivated to pursue health and environmental journalism. Effective science journalism, she says, provides the explanations that help us understand our world and feel more responsibility for it. She will enter the narrative journalism master's program at UC Berkeley and report local science news as part of a small instructor-led cohort focusing on the intersections of public health and the environment. Simpson holds a bachelor's degree in English from Princeton. She has written for several California publications,

produced multimedia, and is a two-time winner of the Ferris Prize for Exceptional Journalism.

As **Jonathan Wosen** was completing the research for his Ph.D. in immunology at Stanford, he was struck by a realization that he didn't want to spend the rest of his life at the bench. A two-week mini-course on science communication strengthened an inner voice urging him to consider science journalism as a career. During a AAAS Mass Media Science and Engineering Fellowship at the Boston-based biomedical news site *STAT*, he realized that science and journalism shared the search for truth as a core value. Wosen will join the master's program in science communication at UC Santa Cruz after collecting his doctorate this June. "I always figured I'd have to choose science or journalism," he says. "I'm glad I was dead wrong."

Receiving half-fellowships for the final semester of their master's programs are:

Marcus Banks. Trained in library and information science, Banks reported on technology, libraries, and publishing issues between stints as a library manager and director. In 2018, he entered New York University's Science, Health and Environmental Reporting Program (SHERP) and faced the reality that much science coverage is shallow and lacking in critical reflection or distance. "I want to be a science writer who tells the story of science clearly and fully," he says, adding that science journalism "should always be grounded in real people." Banks is a graduate of Northwestern and earned his library science master's degree at Dominican University.

Dani Leviss. As an undergraduate chemistry major at Drew University, Leviss was editor-in-chief of the student newspaper and discovered a love of editing. Leviss, an NASW member, is enrolled in NYU SHERP, where she is taking an audio storytelling workshop and hopes to build a career that combines science editing and podcasting. Her passions are to be a science and policymaking watchdog, to tell the stories of minority scientists, and to provide the public with "well-reported, engaging stories about the science in their lives."

CASW's graduate fellowships are underwritten by a grant from The Brinson Foundation, a Chicago-based philanthropic organization. They honor the late Rennie Taylor and Alton Blakeslee, science writer and science editor respectively for the Associated Press.



From Top: Alexandra Matthews, University of California, Berkeley; Jeremiah Oetting, University of California, Santa Cruz; Brett Simpson, University of California, Berkeley; Jonathan Wosen, University of California, Santa Cruz; Marcus Banks, New York University; Dani Leviss, New York University.

All photos courtesy of CASW

REPORTING ON

CLIMATE CHANGE

THE GOOD, THE BAD, AND THE UGLY

By Ann Parson



*Heather Goldstone, who is stationed at NPR affiliate **WCAI** in Woods Hole, Mass., was our guest last December at New Bedford Science Café. She and her weekly radio show, **Living Lab Radio**, have a strong following, and there was standing room only for her discussion of “Climate Change in the Media: The Good, the Bad, and the Ugly.” In that talk, Heather spoke about the challenges of getting the American public on board with the scientific consensus regarding climate change.*

I caught up with Heather a few months later, on a rainy Monday in late April. On the drive over to Cape Cod, I tuned in to BBC, which began its news hour with two hard-hitting reports on the environment. One was that Indonesia had decided to move its capital to another location, on account of the bad flooding and sinking ground Jakarta was experiencing. A UN report followed, with the deeply disturbing news that one million species were at risk of extinction due largely to human activity. With those thoughts as a backdrop, we began our conversation.

—Ann Parson

AP: When you started the blog *Climatide* in 2010, you immersed yourself in climate change research. Talk a little bit about that.

HG: I had this moment of realizing that I thought I knew more than I actually did. I had done a story about climate and fisheries, and had gone into the interview with scientists at the Northeast Fisheries Science Center expecting to hear about anticipated future changes. Instead, they told me what had already changed over the past 45 years. They were looking at how populations of commercially exploited marine species had shifted, usually northward, in response to temperature changes, and they had found that already half of all commercially exploited marine species in New England waters had moved significantly over the past four or five decades. So that realization, that this was already a current problem and not a future problem, and that I was living in this intense science town, Woods Hole, and didn't realize that was the case, that was really eye-opening for me.

AP: So, the more you researched the state of climate, and saw a real and present danger, the more you wondered why the message wasn't getting through to the public. And you went looking for answers from psychologists and social scientists.

HG: I realized it wasn't so much the science that presented a stumbling block but how people took it in. I read many different studies, but there was one study in particular that stood out. Scientists at UC Berkeley had presented college students — typical psychology lab rats — with an article about climate change that ended with either a dire warning or a solutions-oriented message. A double-blind study. Then they measured belief in human-caused climate change and found that the dire message created skepticism, while the optimistic message boosted acceptance of the science. It was one small study, but very telling. There was something going on that had to do with emotions and psychology.

AP: At the science café, when you asked who had seen news of climate change in the last three weeks, every hand shot up. Then you asked how many had seen hopeful climate-change news, and only three hands went up. You believe a lot of the disconnect between the science and the public at large comes down to this same dichotomy.

HG: Obviously climate change is a problem — probably the biggest humanity has ever faced.

We don't want to brush it off and say it's no big deal. But we also know from psychology that emotions are unavoidable, and we can't ignore them as journalists. We have to remember that we are writing for human beings who will have emotional responses. In my experience, many journalists like to think that all we have to do is put the facts out there and not worry about something like messaging, or framing, or how people might respond to it. That feels like spin, and that's not our job.

The problem is that it really is. Because what the science shows is that if a story evokes certain emotions, it can actually impede a person's ability to absorb the facts, the information. Which emotions? Well, overwhelming fear is paralyzing, and the brain's response to that, a pretty adaptive response, is to shut it out and ignore it. But if you present the same facts framed with hope and empowerment, then acceptance of the underlying facts is more likely.

We have to remember that we are writing for human beings who will have emotional responses.

AP: It's often said that journalists are better at pointing out problems, even though negative news doesn't get absorbed as well as positive news and solutions.

HG: Journalists are way better at pointing out problems than highlighting solutions, in part because when we get to the solutions space we have to start questioning, "Am I still being objective? Am I telling people what to think? Am I picking a side politically? Is this really where I'm supposed to be as a journalist?" As a journalist, it's not my job to tell someone what they should do about climate change. But I can tell them about a huge range of options, and that can help them prioritize what they want to take on in respect to climate change. This is part of the whole new burgeoning field of solutions-based journalism.

AP: Journalists reporting breaking news often are caught in the trap of being bad-news messengers. Can that be avoided?

HG: Something I like to ask researchers who are the bearers of bad news is where they find hope or optimism. And I think that's useful in a couple of ways. First, if you're telling a story about that person and their research, you're keeping it in their character. This is where they find hope. And you can also ask them, is there anything we can do about this?

For example, Nathaniel Rich's "Losing Earth" piece in the *NY Times Magazine* last year was important and powerful. And everyone I talked to said it was really hard to read. We shouldn't avoid hard-to-take stories, but part of what they were expressing was the overwhelming fear and hopelessness the story evoked. Hope and empowerment are emotions that can open us back up, inspire and motivate. And so, along with that powerful "Losing Earth" narrative, I would love to have seen Part II, "Saving Earth." What can we still save? How? Because the only reason to pay attention to this problem of climate change — or any problem, really — is if there's something to be done about it. Finding those nuggets — what can be done about the problem — is so important.

AP: Your discussion last December was on "Climate Change in the Media; The Good, the Bad, and the Ugly." What does "The Ugly" refer to?

HG: To me, the truly ugly is when the science is distorted in the name of journalistic balance. I think that's been a shrinking part of the media landscape over the past decade or so. You saw a lot more of that in the early 2000s, where, if you were saying that scientists say climate change is humans' fault, you'd find one scientist willing to refute that. Today, journalists doing it best have found ways to acknowledge that dissenting views do exist but without giving them equal credibility with mainstream climate science.

"The Bad" is focusing only on the bad news story, trying to scare people into action. The psychologists say, a little bit of fear, maybe, but overwhelming fear — being hit over the head with the idea that our planet will be uninhabitable — is a level of fear that is paralyzing.

AP: Doesn't the public need to hear some urgency? On the drive over, BBC News reported that Indonesia was planning to move its capital city because of the flooding

going on in Jakarta. There was an urgency I personally responded to.

HG: Absolutely. I just think that it has to be done in a way that takes into account how readers respond to it. It's only urgent if there is something to be done; if a situation is totally hopeless, there's no urgency. So, the story of Jakarta is a perfect example. You aren't denying the direness of the situation, but telling a story of action. And the fact that somebody has taken action and has found a solution is, in and of itself, a story of empowerment for other people. We don't have to sit here and drown, we can do something!

AP: Your title also refers to "Good" aspects of media coverage. What examples come to mind?

HG: Journalists, I think, are increasingly working to find stories that connect people with their local environment, opening people's eyes. Because that's a different story than the globe becoming, on average, 1.5 degrees Celsius warmer than it used to be. As one climate scientist told me, no one lives a global average. We all live a local experience. And so, finding ways to translate that big picture of global science into everyday local impacts is an important challenge, and not just for journalists but also for scientists. That means telling climate stories about gardening, food, health, jobs, sports, travel ... all of it.

Also, I think some of the best journalism is finding the voices that break the stereotypes. On Living Lab Radio, we have talked with the president of the Reinsurance Association of America about how insurers are handling climate risks; a former naval admiral who undertook a study of climate change, and went from being a skeptic to being extremely concerned; the head of the Evangelical Environmental Network, who makes the case that pro-life Christian values demand climate action.

I recently heard an interview with a young conservative political activist who said, maybe in the older generations there's this partisan divide, but in my generation, we understand that climate change is happening, that it's our future. We aren't going to abandon our conservative values. We don't have to. But we want to debate solutions, not the science. That's a story that doesn't deny climate change, or the political reality in Washington, but it highlights that something different is possible.

AP: Do you think enough of the media are on the same page?

HG: I think we're moving in the right direction. Climate change is a huge problem that we have to keep talking about all the time, so we have to find different ways to talk about it. We have to be open to alternative approaches. I just wish we were further along.

AP: What do people believe about climate change. What don't they believe?

HG: I think that's really hard to know. Dan Kahan at Yale University studies "cultural cognition," the idea that we filter factual information through social and psychological lenses — trust, life experiences, beliefs in justice or independence. And, sometimes, that can lead to denial of factual information across the political spectrum. You tend to see more anti-vaccine sentiment among self-identified liberals, more anti-climate change sentiment among self-identified conservatives. It's a human brain phenomenon.

Anyway, Kahan, a few years ago at an AAAS meeting, said that at this point when you ask an American for their opinion about climate change or climate science, you no longer are asking them what they know, you are asking them who they are and to declare their allegiances. Again, going deep into human evolution, the who-are-you? and who-are-your-allies? is far more important than what-do-you-know? So, people who know the facts may or may not espouse those facts, if it feels like they are breaking with deeply held views or community norms.

AP: Climate change is so subtle, can't that be influencing what people believe, what they don't believe? If it was a matter of an asteroid speeding toward earth, and you could see the asteroid approaching with telescopes, no one would be questioning it.

HG: Yes, and I think, again, it comes back to psychology. We are much better as a species at recognizing a close and fast-moving threat — there's a predator there, and I have to deal with that. We're much better at dealing with something like that than with this amorphous and slow-moving invisible change — though climate scientists say it's moving really quickly. But a lot of us are adapting to it, right? Humans are good at getting used to a new normal.

AP: What are some of most noticeable signs of climate change you're seeing on the Cape?

HG: On the top of my mind, our beaches! And the rates of erosion from sea-level rise and more powerful storms on top of natural erosion. Ballston Beach where the dune has breached twice in the past several years: the dune is gone right now. A house was removed there, and another is going to have to be soon. Commercial Street in Provincetown looked like a river during the March storms last year. And Nantucket's Easy Street and its floods. They're having a workshop this summer to figure out how to keep historic Nantucket above water.

AP: I keep thinking that the record number of rainy days this April must be climate change; subtle but not so subtle?

To me, the truly ugly is when the science is distorted in the name of journalistic balance.

HG: But at least now scientists have the ability to look at individual events. It's called attribution science, the ability to say, yes, this event, this heat wave was hotter and longer because of climate change, this storm produced more rain because of climate change. They can run a computer weather model using current climate conditions and those a century ago, and compare the results.

Still, it's not about one rainy April. It's about the fact that the Northeast has seen a 70 percent increase in extreme precipitation events. It's the biggest change in extreme precipitation anywhere in the country. It takes time to see that in a certain place. Part of the challenge is that people relocate a lot, and if you're not connected to the natural environment, it's harder to see firsthand.

AP: Americans largely believe climate change is happening, but we keep driving fossil-fuel cars, eating meat, even buying oceanside properties. What other wake-up stories can we tell?

HG: There's a place for a great profile on a business or organization that's doing something innovative and positive. There's a place for stories about the latest findings about climate change, but we have to be mindful of how that information is packaged, so people take in the message. There are unexpected voices of concern and hope, there are scientists who make sacrifices and take personal risks to collect important climate data. There's room for meta-stories, like what you just raised — how can we know all this, and still not have acted? There should also be room for success stories, large or small. Susan Solomon, the renowned atmospheric scientist at MIT, makes the case that we need to remember and celebrate past successes — like dealing with the ozone hole — so that we remember what we're capable of doing.

There's no one right way to address stories about climate change. There's probably an infinite number of right ways. And we need to be telling all of them.

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Ann Parson is a freelance science journalist based in South Dartmouth, Mass. Reach her at abparson2@gmail.com

AMPLIFY THE SIGNAL

REDUCE THE NOISE

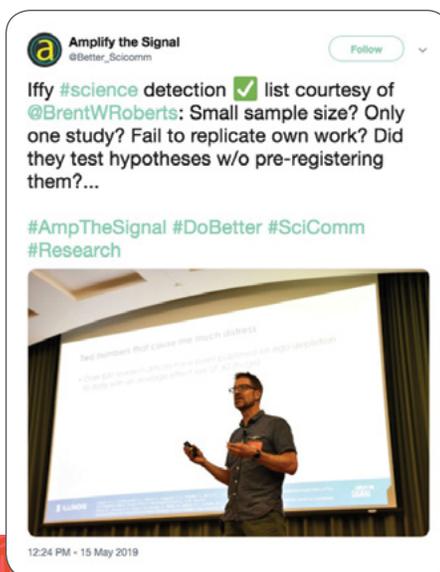
AMPLIFY THE SIGNAL:



Jodi Heckel



Jordan Goebig



University of Illinois

Many scicomm workshops focus on honing writing and editing skills — as they should — but **AMPLIFY THE SIGNAL** focused less on science storytelling and more on figuring out which science stories should be told.

The two-day workshop, funded in part with an NASW Peggy Girshman Idea Grant and held at the University of Illinois at Urbana-Champaign in mid-May, attracted about 200 graduate students, public information officers, faculty, researchers and journalists (pictured, middle left) from Illinois and elsewhere. Most were from the Midwest.

Daniel Simons, a University of Illinois psychology professor, was the first of several presenters to describe the kinds of “perverse incentives” that lead some to do “iffy science” and others to engage in “iffy science communication.”

“If your goal is only to get read, then you may as well go for clickbait, because that will get you read,” Simons told attendees. “If your goal is to get it right, the task is a lot harder ... because you need to question the assumptions about what counts as credible evidence.”

The broad goal of the workshop was to learn how to “avoid promoting claims that lack evidence, and to figure out which ones are worth promoting,” he said.

So, let’s get straight to some of the ideas shared to help scientists and science writers conduct and promote only the best research. Here are a few of them. For more in-depth information on these topics, watch Daniel Simons’ presentation along with those of Illinois psychology professors R. Chris Fraley and Brent Roberts.

Randomly assigning participants to your intervention and control conditions is key.

Without random assignment, it is not possible to control for all of the factors that might bias your conclusions.

Sample size matters. Studies involving only a few subjects are rarely reliable or replicable, and outcomes are most likely to reflect random variation between groups.

Look for/ask about a study’s statistical power. Was the study large enough to detect the expected effect most of the time (typically, at least 80 percent of the time if it’s true)? If you don’t see the power of the study mentioned, ask the researchers to tell you what it is.

Control groups should be identical to intervention groups, except for the single factor you’re testing. “No contact” or inactive control groups often differ in many ways from the intervention group. Without controlling for those differences, it is invalid to claim the treatment caused the benefit.

Don’t suggest studies in mice (or cells) are immediately relevant to human health. “In mice” should be in the headline and lede if the research was conducted in mice.

If a paper reports only one outcome from a large study involving many participants, ask the scientists, “What other outcomes did you measure?” In fact, do that for every study, large or small. Selective reporting of outcomes is a sign that researchers are cherry-picking the data they share.

ILLINOIS CONFERENCE FOCUSED ON REDUCING NOISE

By Diana Yates

Did the researchers pre-register their hypotheses? This is a best practice, especially for intervention research.

Did the scientists replicate — or fail to replicate — their own work?

Is the story too good to be true? Science is a messy business, a fact that sometimes complicates compelling storytelling. “The problem is that we find stories convincing, even when the evidence isn’t there,” Simons said.

Is the science writer focused on a single study, with no context or background? It’s misleading, at best, to draw broad conclusions from a single scientific finding.

Are all of the significant p-values in a study between 0.03 and 0.05? P-values greater than .01 do not provide strong evidence, and in some cases are more likely when there is no effect at all. A collection of such values in a single set of studies is highly implausible.

Do the researchers report effect sizes and interpret them for you?

In multi-study analyses, do the sample sizes vary widely for no obvious reason?

This could be a sign that scientists stopped collecting data as soon as they saw what they wanted to see.

Workshop organizers interspersed these nuts-and-bolts — but humorously shared — presentations with spectacular data visualizations from Donna Cox, the director of the Advanced Visualization Laboratory at the National Center for Supercomputing Applications, and insights into storytelling and audience-building through podcasts and social media (“This Podcast Will Kill You”). Nicole Cooke, University of Illinois information science professor, presented on understanding the difference between dis-, mis- and mal-information and how to avoid succumbing to fake science news. The first is simply false information, Cooke said. The second is intentionally false and the third is intentionally false information created with an intent to harm.

A science research ethicist, C.K. Gunsalus, gave participants a powerful message about the incentive structures that often contradict purported ethical values in academia. Illinois entomology professor May Berenbaum walked participants through the morass of bad science writing that focused on colony collapse disorder, the mysterious malady of honey bees; and science journalist Ed Yong (pictured, middle right) talked about storytelling — its amazing power to recruit new brains to science as well as its ability to mislead. Here is a quote from Yong that ties all of the elements of the workshop together:

“Stories can be really powerful, but I think one really crucial thing to remember — which we’ve heard a lot about today and which I’m going to talk about for the rest of this talk — is that stories can also powerfully mislead people. That means those of us who use storytelling and who think about these things have an incredible responsibility to use that power wisely and to think about what stories we’re telling.”

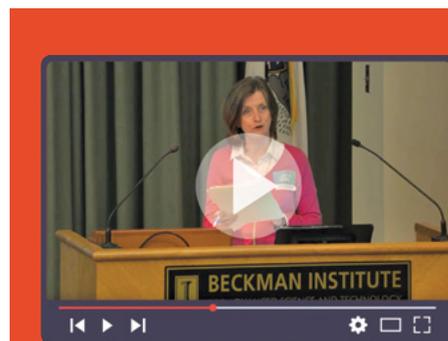
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Diana Yates is the life sciences editor at the University of Illinois Urbana-Champaign News Bureau. Contact her at diya@illinois.edu



Joan Meiners



Jordan Goebig



University of Illinois

- ▶ Watch recordings of all sessions: bit.ly/sw19sum16
- ▶ Browse the conference program: go.illinois.edu/signal



LOOKING AHEAD to

#SciWri19 at Penn State

Warm Welcomes and Frozen Treats from the Happy Valley

We are excited to welcome you to beautiful **State College**, located in the heart of Central Pennsylvania. State College is the third most populous city in Pennsylvania, after Pittsburgh and Philadelphia, and is surrounded by large tracts of farmland and an expanse of Appalachian Mountain ranges and forests. Our region enjoys national distinction having been recently recognized as one of the safest places for families, a best city for entrepreneurs, a top-rated location for young professionals, and one of the fastest-growing areas in the state. State College is the home of **Penn State's** University Park Campus.

Penn State, founded in 1855, is Pennsylvania's sole land-grant institution and its largest public university. Penn State is deeply connected to the community in many ways, and a tradition of community education

and involvement remains a large part of our mission.

Join us at **ScienceWriters2019** for an opening reception at the historic **Nittany Lion Inn**, combining landmark architecture, exquisite food, and an inviting atmosphere, and get ready to explore our world-class research facilities, which include a critical zone observatory, a mosquito insectary, a mushroom research center and more.

Throughout the conference, you'll hear from researchers who are at the forefront of their fields as varied as food and energy security, earth and atmospheric science, advanced materials and multi-messenger astronomy. There will be opportunities to have lunch with a scientist and partake in fascinating discussions in small group settings.

A visit to Penn State isn't complete without ice cream from the Berkey Creamery, a tradition for generations of Penn Staters and their guests. But there's more than meets the eye, or the mouth for that matter. Every cone of Coconut Chip or cup of Death by Chocolate begins with the cream provided by the cows at Penn State's dairy barns

only a short mile north of the Creamery Store. Creamery ice cream represents the university's agricultural roots and remains today a symbol of Penn State pride. From the Cow to the Cone!

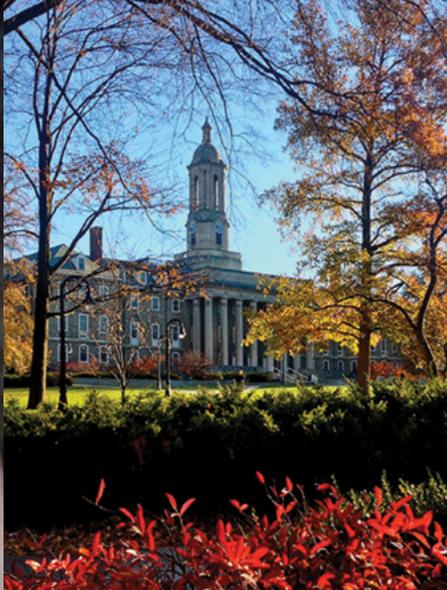
Whether you're a rival fan or a Penn State alumnus, we're looking forward to sharing the lighthearted spirit that gives Happy Valley its name! — **Erin Colbourn, Penn State PIO**

MARK YOUR CALENDARS

ScienceWriters2020
Oct. 9-13
Boulder, Colorado

ScienceWriters2021
Oct. 22-26
Seattle, Washington

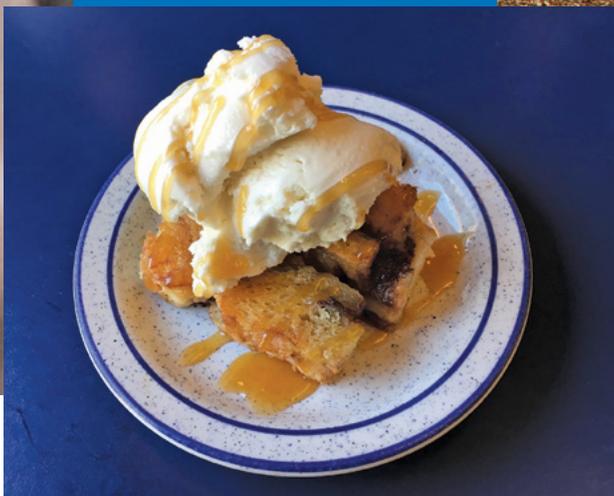
ScienceWriters2022
Dates TBD
Chicago, Illinois



Geoff Rushton/Penn State



Kate Dempsey/Penn State



Rosalind Reid

Left: The Nittany Lion is the famed mascot of Penn State. **Center Top:** First completed in 1867, Old Main Penn State's first building of major significance. **Center Bottom:** A warm "grilled stickie" topped with ice cream is an iconic State College treat. **Above:** Fall colors will be on display when ScienceWriters takes place in October.

This Year's Program

The days ahead of #SciWri19 will be busy with preconference events. The second #ComSciConSciWri event will bring graduate students interested in science writing to State College for a full-day workshop. Betsy Mason is organizing a pre-conference workshop on *Digital Map Making for Science Journalists: How and why to incorporate maps into your reporting and storytelling* and SciWriCongress will also return (**story, page 35**). For the first time this year, SciLine will offer a three-day boot camp for reporters about community-level environmental and health issues associated with oil and gas development.

This year's professional development sessions, selected by **NASW's Programs Committee** and organized by volunteers, will cover a range of topics of increasing importance to science writers. The program will open with the plenary session *How Can We Solve the Diversity Dearth in U.S. Science Writing?* to, in the words of organizers Ben Young Landis, Clinton Parks, and Kelly

Tyrrell, "foster healthy conversations about diversity, equity and inclusion in our craft and in our profession." Breakout sessions will further explore aspects of diversity and inclusion, address conflicts of interest, and provide new approaches to storytelling. Also back is the popular "Power Pitch" session, in which writers pitch story ideas directly to editors. Finally, this year we will be trying something new and celebrating our annual award winners with a luncheon on Saturday.

On Sunday and Monday, **CASW New Horizons in Science** sessions will take #SciWri19 attendees across the frontiers of research and delve into issues at the interface between science and science writing. The **2019 Patrusky Lecture** will be delivered by distinguished planetary scientist **Steven Squyres**. Squyres, the James A. Weeks Professor of physical sciences at Cornell University, is a seasoned explorer of our solar system, having headed several Mars missions and participated in missions to Jupiter, Saturn, Venus and the near-Earth asteroid Eros.

We'll also get the latest on collapsing ice sheets and rising seas, gravitational waves and black holes, strategies for mitigating climate change, and new clues to brain evolution. We'll learn about how resistance evolves in cancer, how fake news goes viral, and how accelerating losses of amphibians will affect ecosystems throughout the Americas.

In three "crossover" sessions, leading scientists and science writers will talk about this year's #CRISPRtwins story and debate hot questions: How can scientists and journalists combat misinformation on genetics and race? Should "statistical significance" be banned? How can science writers keep important stories from being hijacked by interest groups? — **Tinsley Davis, NASW executive director, Rosalind Reid, CASW executive director, and Jill Adams, NASW Programs Committee chair**

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View the full program online at www.sciencewriters2019.org and register beginning on August 1, 2019.

COMMUNICATING SCIENCE: Mind the “rGap”

By Stewart Wills

Often, to a scientist committed to action on key issues such as climate change, the facts seem crystal clear — and communicating them to “the other side” can feel like shouting across a chasm. To two U.S. professors of organizational behavior, the “gap” metaphor is indeed an apt one.

In a recently published paper from a late-2017 colloquium on “The Science of Science Communication,” Matthew Cronin of George Mason University and Laurie Weingart of Carnegie Mellon University explore the notion of representational gaps, or “rGaps” (*PNAS*, doi: 10.1073/pnas.1805866116). These gaps are incompatibilities in fundamental assumptions and perspectives that inevitably arise from the different experience and knowledge bases of the individuals involved.

Managing “rGap conflict,” according to Cronin and Weingart, is a prerequisite to effective communication — particularly in a specialized and potentially forbidding area such as “hard science.” And doing so rests on the hard work of building trust and respect.

Birth of an rGap

While the most pressing needs for effective scientific communication often seem to revolve around issues such as stemming global warming or battling the anti-vaccination movement, Cronin and Weingart first root their discussion in a homier example: The decision on whether to purchase a regular incandescent bulb or an energy-saving compact-fluorescent model. You may find the decision a no-brainer, based on the projected lifetime and energy cost of the fluorescent bulb. Your partner, however, may reach for

the incandescent one — fully understanding the energy trade-off, but motivated by other reasons totally unrelated to energy costs, such as light quality. *Voilà* — an rGap is born.

In the best of circumstances, the presence of such a gap in perception would lead to dialogue and discussion, and perhaps the development of a compromise solution, such as limiting incandescent lights only to the areas where they’re most needed. (While small in scale, such a solution, the authors point out, is not unlike the carbon-trading schemes sometimes proposed to help control atmospheric greenhouse gases.) But in general, on identifying such a gap in perception, we instead tend to assume simply that the other party lacks knowledge and understanding. And then we attempt to remedy that perceived shortcoming in the other party through explanations, lecturing and a data-dump of facts.

rGap conflicts

That’s a snare, Cronin and Weingart suggest, into which scientists, as keepers of sometimes arcane expert information, are particularly apt to fall. And it leads to what they call an “rGap conflict” — when individuals “take incompatible positions in response to information” and quickly fall into unproductive, sometimes intense personal argument, or its flip side, avoidant behavior or withdrawal.

“Each side believes they have good evidence, belief systems, and values,” Weingart said in a press release accompanying the research. “But rather than explore each other’s evidence, people try to defend their knowledge. As a

result, the conversation will escalate into arguments and attacks. It’s very hard to get back to the debate about what is evidence, what is factual.”

Bridging the gap

There are, unfortunately, no shortcuts to getting past this potential barrier to effective science communication, according to Cronin and Weingart.

Instead, their own research, and their analysis of the copious organizational-behavior literature in this area, suggests that effective communication must begin with managing rGap conflicts. And that, in turn, requires a genuine attempt to understand the other person’s or group’s values and perspectives and to build trust, respect and empathy — a process that Cronin and Weingart refer to as “affective integration.” Only after this process reduces the sense of personal threat and frustration can “cognitive integration” — the debate and discussion that leads to mutual understanding and new solutions — actually happen.

Developing such understanding, rather than assuming that the other party shares your perception and simply lacks “the facts,” is, Cronin and Weingart acknowledge, difficult work. Particularly in an age of the social-media “zinger” or one-liner, it’s often more immediately satisfying to meet different perspectives with derision than with a difficult effort to “bridge the rGap.”

Yet, for those genuinely interested in advancing public scientific understanding in the service of solving problems, the researchers believe the bridging is essential. “We need to be willing to learn from others,” according to Cronin. “This is why trust and respect matter. We listen to the people we trust and respect even when we disagree. And this must be a two-way street.”

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Stewart Wills is editor of *Optics & Photonics News*. ©2019 *The Optical Society*, reprinted with permission. Original appeared 16 April 2019 in *Optics & Photonics News*, www.osa-opn.org/news/mind-rgap.

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Career Updates

The NASW community celebrates the career milestones and continuing adventures of its professional and student members. Each issue, we share a roundup of awards, promotions, new jobs, travels, retirements, and other transitions of science writers in our community.

Andrew Fraknoi, an astronomy professor at the University of San Francisco, has received the 2019 Space Educator: Lifetime Achievement Award from the National Space Club. Andrew is the first astronomy educator ever to receive the award, which usually recognizes secondary school teachers but is sometimes given to others active in space education. According to the Club's media release, he is being lauded for his "career as an award-winning astronomy educator, innovator, author, and key link communicating our expanding knowledge of the universe." You can congratulate Andrew at fraknoiandrew@fhda.edu

Meanwhile, **Jan Lathrop**, a science writer at the University of Massachusetts, Amherst, received a campus-wide Chancellor's Citation Award in May. Jan, who has worked in the university's office of news and media relations since 2008, was recognized for her "brilliant writing and remarkable ability to translate complex scientific concepts into easily understandable prose," according to an email sent to the campus community by the university's vice chancellor for university relations. Contact her at jlathrop@admin.umass.edu

And **Sidney Perkowitz**, an emeritus professor of physics at Emory University, was happy to see his essay about the nature of time, "Time Examined and Time Experienced," picked by *Physics World* as one of its best articles from 2018. Email: perkowitzs@bellsouth.net

Rachel Nuwer's book *Poached: Inside the Dark World of Wildlife Trafficking* was awarded 2019 Outstanding General Non-fiction book by the American Society

of Journalists and Authors, as well as gold in the journalism category by the Nautilus Book Awards.

Last in the award category, **Julie Kiefer**, manager of science communications for University of Utah Health, writes to say that she was a producer of the unit's short film "One in a Million," about the search for an answer to a boy's undiagnosed disease. The film premiered at the Sundance Film Festival in February, and then went on to win two awards at the Las Vegas Film Festival. On top of that, the film helped pass a Utah state law for insurance to cover genome sequencing for children with undiagnosed diseases. Julie says that she and her colleagues are now planning another film. Get in touch at Julie.kiefer@hsc.utah.edu

In miscellaneous news, **Pakinam Amer**, chief editor of *Nature Middle East*, was chosen as one of 12 fellows in the 2019 Logan Science Journalism Program at the Marine Biological Laboratory in Woods Hole, Massachusetts; and **Nancy Shute**, editor-in-chief of the *Science News* Media Group, traveled to Beijing last September to deliver a plenary speech at the World Conference on Science Literacy. "Wow do I have a lot to learn about China," Nancy remarks, adding that "they have mastered the art of the traffic jam."

As usual, NASW members are always on the move, giving up old jobs for new jobs and engaging in new adventures. Here's the latest job news:

After 30 years as a federal government affairs officer and science writer, most of that with the National Institute of Standards and Technology, **Michael Newman** has joined the public relations team at Johns Hopkins Medicine in Baltimore. He will be promoting and communicating research at nine different divisions: hematology, infectious diseases, nephrology, otolaryngology (ear, nose, and throat, so you don't have to look it up as your columnist did), pathology, pediatrics, radiology, surgery, and urology. Contact Michael at newman25@jhmi.edu

A.J. Hostetler, who served as communications director for the Virginia Department for Aging and Rehabilitative Services for more than eight years, has now moved to Virginia Commonwealth University where she will be the first communications and outreach administrator for its Office of Research and Innovation. You can reach A.J. at hostetlera2@vcu.edu

Kristen Kusek writes to say that she has moved from Boston to St. Petersburg, Florida, where she is now the science communication strategist at the University of South Florida College of Marine Science. It's a homecoming for Kristen, who earned

**HAVE A CAREER UPDATE? SEND SUBMISSIONS TO
MICHAEL BALTER AT MICHAEL.BALTER@GMAIL.COM**



a dual masters in marine science and journalism at USF 21 years ago. “It’s crazy fun to be back to a place where I first learned to spread my professional wings,” she says. Email her at kkusek@mail.usf.edu

And **Alaina Levine** has become a columnist for *Science* magazine’s Science Careers. In her column, “Your Unicorn Career,” Alaina gives advice about “understanding your value and creating professional bliss,” things we all could use. Alaina will draw upon her experience as a professional speaker, STEM career consultant, and corporate comedian. Email her at alaina@alainalevine.com

Getting a new job can be very exciting — but so can retiring from one. And of course retirement doesn’t stop NASW members from keeping active.

Jennifer Jackson Cox retired from her position as director of communications at North Carolina State University last year, but plans to pursue “several writing projects that have been on the back burner for quite some time.” She will also continue to volunteer

for NASW, of course. **Kim McDonald** has retired as head research communications director at University of California, San Diego, and also as coach of the collegiate triathlon team. And **Roanne Weisman**, who has moved back to her home town of Montreal after 40 years in Boston, is “mostly retired” but will still do a few projects for her U.S. clients, including a new book on breast cancer. “It feels very good to be Canadian and using my French again,” Roanne adds.

Other Short Takes:

Noelle Swan has been promoted to deputy editor of the *Christian Science Monitor* but fortunately will continue to take the lead in the paper’s science, technology, and environmental coverage; **David Levine** received a travel grant to attend the Lindau Nobel Laureate Meetings, where he will moderate a panel; **Megha Satyanarayana**, senior editor of *C&EN*, was selected to be part of Poynter’s 2019 Leadership Academy for Women in Digital Media; and **Jodi Peterson**, a contributing editor at *High*

Country News, is now also the news and public affairs director for KVNF, a community radio station covering seven counties on Colorado’s Western Slope.

New and Returning Members

New and returning NASW members from December 2018 to May 2019

ALABAMA: Megan Rich*, University of Alabama Birmingham, Birmingham. **ARIZONA:** Anna C. Christensen, Freelance, Tucson • Sabine Galvis*, Arizona State University, Tempe. **CALIFORNIA:** Anna Aaronson*, Boston University, Petaluma • Ellen Airhart, Freelance, San Francisco • Josh Bowman*, California State University Monterey Bay, Marina • Dan Brubaker*, Johns Hopkins University, Arcata • Therese Cudworth*, Johns Hopkins University, Grass Valley • Christoph Droesser, Freelance, San Francisco • Theresa Duque, Lawrence Berkeley National Laboratory, Oakland • Alexander Fox, *Science*, Berkeley • Tiffany Fox, Moores Cancer Center at UC San Diego Health, Encinitas • Thomas Garlinghouse,

MEET A NEW MEMBER

Each month on nasw.org we profile a new member to get to know them, learn about their career and craft, and find out why they joined our professional community. Read the latest profiles at www.nasw.org/article/member-news.



Harrison Tasoff
Science Writer, UC Santa Barbara

“ I grow bonsai and inherited a pine that’s older than I am.”



Nicoletta Lanese
Freelance Science Journalist

“ I’ve often used science as inspiration for dance choreography.”



Ashley Hamer
Managing Editor, *Curiosity*

“ I’m a Boston-qualified marathon runner and I just ran my 10th marathon.”



Prabarna Ganguly
Science Writer, National Human Genome Research Institute (NHGRI)

“ I can do a highly convincing imitation of Shakira’s singing.”



Elizabeth Culotta
Deputy News Editor, *Science*

“ My rescue dog and cat assist in every story I write or edit, guarding my office and nudging me to get up and walk when they (and I) need it.”



Tim Bonfield
Senior Associate Marketing & Communications Cincinnati Children’s Hospital Medical Center

“ I had the great fortune to ride on NASA’s ‘Vomit Comet.’ A well-named experience!”

UC Santa Cruz, Felton • Dorsey Griffith, UC Davis Health, Sacramento • Thomas Hayden, Stanford University, San Francisco • Hope Henderson*, UC Berkeley, Berkeley • Chris Iovenko, Freelance, Los Angeles • Yoo Kim*, Stanford University, Menlo Park • Alison Koontz*, Caltech, Pasadena • Aliyah Kovner, Lawrence Berkeley National Laboratory, Sebastopol • So Hae (Irene) Park, Buck Institute, San Francisco • Kelly Quigley, Scripps Research, San Diego • Priyanka Runwal*, University of California, Santa Cruz, Santa Cruz • Helen Santoro*, UC Santa Cruz, Felton • Sydney Smith*, University of Rhode Island, Mill Valley • Barbara Tannenbaum, Freelance, San Rafael • Harrison Tasoff, UC Santa Barbara, West Hills • Joseph Taylor*, Johns Hopkins University, Burbank • Menaka Wilhelm, Freelance, San Luis Obispo. **COLORADO:** Roni Dengler, Freelance, Boulder • Gillian Dohrn*, Colorado College, Colorado Springs • Lindsay Fendt, Freelance, Denver • Max Levy*, University of Colorado Boulder, Boulder • Caitlin Looby, Freelance, Fort Collins • Sara Pratt, Freelance, BOULDER • Kelsey Simpkins, Future Earth, Boulder • Elizabeth Terhune*, University of Colorado Anschutz Medical Campus, Denver • Kate Zalzal, Freelance, Lyons. **DELAWARE:** Lindsay Townsend*, Johns Hopkins University, Dover. **DISTRICT OF COLUMBIA:** Adam Cohen, American Association for the Advancement of Science, Washington • Carolyn Gramling,

Science News, Washington • Samantha Jones, American Chemical Society, Washington • David Malakoff, *Science*, Washington • Melissa Suran, National Academy of Sciences, Washington. **FLORIDA:** Bethany Augliere, Freelance, Delray Beach • Hannah Brown*, University of Florida, Gainesville • Rebecca Burton, University of Florida Thompson Institute for Earth Systems at the Florida Museum of Natural History, Gainesville • Alisson Clark, University of Florida, Gainesville • Anessa Gower*, Johns Hopkins University, Ponte Vedra Beach • Mary-Elizabeth Jobson*, University of Florida, Palm Bay • Daniel King, The Mesothelioma Center at Asbestos.com, Winter Park • Doreen Lewis, Freelance, Hudson • Matt Mauney, The Mesothelioma Center at Asbestos.com, Orlando • Murphy McDonald*, Nova Southeastern University, Dania Beach • Michelle Whitmer, The Mesothelioma Center at Asbestos.com, Orlando • Rachel Wimmer*, University of Central Florida, Deltona • Lu Yang*, University of Florida, Gainesville. **ILLINOIS:** Deanna Bellandi, JAMA Network at the American Medical Association, Chicago • Stephanie Blaszczyk*, University of Wisconsin-Madison, South Beloit • Sheila Burt, Shirley Ryan AbilityLab, Chicago • Jordan Greer*, University of Chicago, Chicago • Ashley Hamer, Curiosity.com, Chicago • Mary Chris Jaklevic, Freelance, Oak Park • Brianna McKenna*, Illinois Institute of Technology, Frankfort • Jim

DO YOU KNOW YOUR NEW MEMBER BENEFITS?
FLIP TO PAGE 10 FOR A FULL LIST OF RESOURCES AND LINKS.

Michalski, *Journal of the American Medical Association*, Chicago • Grace Niewijk, Yale University, Oak Park • Andrea Poet, The Morton Arboretum, Chicago • Matt Reyer*, University of Chicago, Chicago • Lauren Robinson*, Northwestern University, Chicago • Laura Schmitt, University of Illinois at Urbana-Champaign Bioengineering Dept., Champaign • Alexander Taylor, Freelance, Chicago • Anna White*, Northwestern University Medill School of Journalism, Evanston • Carolyn Wilke, Freelance, Evanston. **INDIANA:** Julie Monroe*, Duquesne University, Brownsburg • Kayla Wiles, Purdue University, West Lafayette. **IOWA:** Niranjana Krishnan*, Iowa State University, Ames • David Navarrete, Sky Factory, Fairfield. **KENTUCKY:** Alicia Surrao, Untold Content, Taylor Mill. **MAINE:** Charlie Schmidt, Freelance, Portland. **MARYLAND:** Kyla Britson*, Johns Hopkins University School of Medicine, Baltimore • Joanne Cavanaugh Simpson, Johns Hopkins University, (Continued next page)

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Institute, Grand Rapids • Stephanie Hamilton*, University of Michigan, Ann Arbor • Natalie Pol*, Michigan State University, Lansing.

MINNESOTA: Cadence Bambenek, Freelance, Duluth • Mara Johnson-Groh, Freelance, Mankato • Marissa Spear*, University of Minnesota Duluth, Duluth. **MISSOURI:** Emily Adams*, University of Missouri, Columbia • Cullen Ecoffey*, University of Missouri, Columbia • Zeke Elkins*, University of Missouri, Columbia • Alison Gold*, Washington University in St. Louis, St. Louis • Libby Moeller*, University of Missouri, Wildwood • Danielle Pycior*, University of Missouri, Columbia • Colleen Wouters*, University of Missouri, Columbia • Emma Young*, University of Missouri - St. Louis, University City • Karina Zaiets*, University of Missouri, Columbia. **MONTANA:** Michael Coryell*, Montana State University, Bozeman • Berly McCoy, Freelance, Coram • Mary Morton, Freelance, Big Sky. **NEBRASKA:** Alison Stevens, Freelance, Lincoln. **NEVADA:** Kelsey Fitzgerald, Desert Research Institute, Reno. **NEW HAMPSHIRE:** Dillon Mulhern*, University of New Hampshire, Durham. **NEW JERSEY:** Jeanette Beebe, Freelance, Titusville • Abigail Meola*, Stevens Institute of Technology, Skillman • Patricia Quigley, Rowan University, Glassboro • Amanda Zahorik*, University of Delaware, Southampton. **NEW MEXICO:** Jenna Marshall, Santa Fe Institute, Santa Fe • Gretchen Reynolds, *The New York Times*, Santa Fe • Curtis Segarra*, Trinity University, Bosque Farms. **NEW YORK:** Meghan Bartels, New York University, New York • Annie Behr*, The New School, Rochester • Madeline Bender*, Yale University, New York • Renee Cho, Center for Climate and Life at Columbia University, New York • Laura Dattaro, Freelance, New York • Jonathan Fahey, Forbes, Brooklyn • Charles Graeber, Freelance, Brooklyn • Amy Harmon, *The New York Times*, New York • Randy Hecht, Aphra Communications, Brooklyn • Lucy Hicks, Freelance, Brooklyn • Joshua Krisch, Fatherly, Ithaca • Youngah Karen Kwon*, Columbia University, New York • Elizabeth Ladyzhets*, Barnard College, New York • Nicoletta Lanese, Freelance, New York • Meaghan McElroy*, Ithaca College, New Paltz • James Nordlinger, Freelance, Hastings-on-Hudson • Caitlin Shure, The Rockefeller University, New York • Marie Sweet*, NYU School of Medicine, Sackler Institute of Graduate Biomedical Sciences, New York • Bryan Walsh, Freelance, Brooklyn. **NORTH CAROLINA:** Kimberly Bourne*, Duke University, Durham • Alison Grey*, UNC Greensboro, Greensboro • Peggy Mullin*, UNC Chapel Hill, Chapel Hill • Meredith Schmehl*, Duke University, Durham. **OHIO:** Laura Arenschiold, The Ohio State University, Columbus • Timothy Bonfield, Cincinnati Children's Hospital Medical Center, Cincinnati • Lisa McDonald, The American Ceramic Society, Columbus • Leanna Rinehart*, Johns Hopkins University, Shaker Heights • Ling Xin*, Ohio University, Athens. **OKLAHOMA:** Heather Hollen*, Johns Hopkins University, Norman •

Denise Wirth*, The University of Tulsa, Tulsa. **OREGON:** Farron Brougher*, Freelance, Hood River • Suzanne Dixon, University of Michigan, Portland • Leto Sapunar, Freelance, McMinnville • Elizabeth Weinberg, NOAA Office of National Marine Sanctuaries / National Marine Sanctuary Foundation, Portland.

PENNSYLVANIA: Hiba Al-Ashtal*, University of Pittsburgh, Pittsburgh • Kelly Franklin*, Temple University, Lansdale • Erin Hare, UPMC, Pittsburgh • Erin Hendrick, Penn State, University Park • Asher Jones*, Penn State, State College • Brooke Kuei*, Penn State, State College • Alison McCook, Freelance, Wyncote • Teddy Rosenbluth*, University of California, Los Angeles, Swarthmore • Samuel Sander Effron*, University of Pennsylvania, Philadelphia • Jacob Williamson-Rea, Carnegie Mellon University, Pittsburgh • Edyta Zielinska, Thomas Jefferson University, Philadelphia. **RHODE ISLAND:** Molly Magid*, Brown University, Providence • Leonard Sprague*, Brown University, Providence. **SOUTH CAROLINA:** Sandra McVeary*, Johns Hopkins University, Clover • Chelsea Weidman Burke, Edward Via College of Osteopathic Medicine - Carolinas, Spartanburg. **SOUTH DAKOTA:** Afton Woodward*, Johns Hopkins University, Sioux Falls. **TENNESSEE:** Matthew Blois, Big Biology/Freelance, Brentwood • Paul Boisvert, Oak Ridge National Laboratory, Oak Ridge • Gregory Jones, Oak Ridge National Laboratory, Knoxville • Vanessa Moss*, Sewanee: The University of the South, Sewanee • Natalya Orotolano*, Vanderbilt University, Nashville • Shelby Whitehead*, University of Tennessee, Knoxville, Elizabethton. **TEXAS:** Ana Flores*, St. Edward's University, Del Valle • Maude Kauffman*, University of Iowa, Frisco • Madeline Patton*, Texas A&M University, College Station • Katie Regan, Children's Medical Center Research Institute at UT Southwestern, Dallas • Julissa Trevino, Freelance, Fort Worth. **VIRGINIA:** Rasha Aridi*, Virginia Tech, Blacksburg • Kevin Barry*, The Uniformed Services University of Health Sciences, Williamsburg • Callan Bentley, Freelance, Fort Valley • Adrienne Berard, College of William and Mary, Mattaponi • Victoria Stein, PBS NewsHour, Arlington • Christie Wagner, Freelance, Leesburg. **WASHINGTON:** Kelly Brenner, Freelance, Seattle • Amanda Foreman*, Washington State University, Pullman • Megan Watzke, Chandra X-ray Center, Seattle. **WISCONSIN:** Alejandra Canales*, University of Wisconsin-Madison, Madison • Rachael Lallensack, *Smithsonian*, Plymouth. **WYOMING:** Lisa Baril, Utah State University/Freelance, Mammoth. **AUSTRALIA:** Ellen Rykers, Australian Academy of Science/Freelance, Canberra. **CANADA:** Brittney Borowiec*, McMaster University, Mississauga • Anika Hazra, Freelance, Scarborough. **CHINA:** Cici Zhang, Freelance, Nanjing. **COLOMBIA:** Sean Mattson, International Center for Tropical Agriculture, Cali. **UNITED KINGDOM:** Nick Parkins, Freelance, Andover

*Student Members

We Remember

David Anthony “Tony” Fitzpatrick



David Anthony “Tony” Fitzpatrick passed away at his home in Webster Groves, Mo. on June 8, 2019.

Fitzpatrick was born in Beardstown, Ill. and was raised in the Aurora-Oswego area, which accounts for his life-long dedication to the Chicago Cubs. He moved to Champaign-Urbana to attend the University of Illinois, where he graduated with a degree in English education. He taught

high school and coached three sports in Genoa-Kingston, Ill. for two years before moving to Ohio to earn an MFA in creative writing at Bowling Green State University.

He returned to Champaign-Urbana to work at the University of Illinois as an assistant professor of ag communications in the College of Agriculture. In 1987, he moved his family to St. Louis for a position at Washington University’s public affairs department, where he worked as a science writer until his retirement in 2009.

Early in his tenure, Fitzpatrick attended two of CASW’s New Horizons in Science briefings and decided that WashU, often confused with the 21 other colleges or institutions with “Washington” in their titles, needed to do something to raise its profile among science writers. After bringing the event to St. Louis in 1993 and 2002, he recalled the “marvelous, though exhausted, feeling of having done the right thing for your school and your profession.”

A longtime NASW member, Fitzpatrick was a gifted writer and an award-winning author. His book *Signals from the Heartland* was published in 1993 and cited among the best books of creative nonfiction in the sciences by *Library Journal*. His fiction was focused on the themes of family relationships, the Cold War era, and the absurdity of the mundane in everyday life. Fitzpatrick’s love for music (specifically early R&B and early rock ’n’ roll) and writing inspired both of his children to continue to create.

Outside of work Fitzpatrick spent a good deal of his time coaching youth sports, particularly the softball, baseball, basketball, and soccer teams of his children. Additionally, his favorite aspect of his job at Washington University was mentoring young writers, both those new to the office and those in their undergraduate careers. He found great fulfillment in his genuine, natural talent of mentoring others.

After his retirement, Fitzpatrick continued to work as a freelance writer. Among his most rewarding post-retirement pastimes was substitute teaching in the Webster Groves School District, where he was known for his endless repertoire of jokes coupled with his deep kindness and sincere calling to help all students.

Peter Norman Calamai



Peter Norman Calamai, one of Canada’s most distinguished journalists, died on Jan. 22, 2019, at his home in Stratford, Ont. He was 75. His multitude of accolades include three National Newspaper Awards, a Governor-General’s Award, the Order of Canada for service to both journalism and adult literacy, and an honorary doctorate from McMaster University.

Calamai, who was born in Pennsylvania but moved to Brantford, Ont., as a child, earned a bachelor of science degree in physics at McMaster University before starting his professional career as a journalist, first at the *Brantford Expositor*, then with the *Hamilton Spectator*. After mastering several beats, he was promoted to the parent Southam News Service as a national and then foreign correspondent. He headed the Washington, European and African bureaus, covering more than a dozen armed conflicts as well as major political developments. He returned to newspapers as editorial page editor at *The Ottawa Citizen*, and ended his career as science writer for the *Toronto Star*.

Calamai, a longtime NASW member, was a founding member of the Canadian Science Writers’ Association in 1971 and founding director of the Science Media Centre of Canada in 2010. Through these and other organizations, he worked to promote accuracy in scientific reporting, to strengthen transparency and accountability in scientific agencies, and to improve Canadians’ understanding of science and technology. He was also an adjunct research professor at the Carleton University School of Journalism, teaching as a sessional instructor and supervising numerous theses.

Outside journalism, Calamai was an athlete who loved golf, tennis and curling. He was also a renowned expert on Sir Arthur Conan Doyle and his fictional detective, Sherlock Holmes.

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ScienceWriters has learned belatedly of the deaths of the following members:

Richard Magat, a journalist and director of communications for the Ford Foundation for 25 years, died March 13, 2017. He was 90.

Malcolm Manber, a science writer at the *Bayonne Times*, *The Newark Evening News*, *Medical World News* and *Physicians Weekly*, died January 23, 2016. He was 89.

Pat McCormack, whose journalism career spanned more than 50 years, much of it as a nationally published columnist and senior editor for United Press International (UPI), died July 26, 2017. She was 90.

John Troan, editor of *The Pittsburgh Press* from 1967-83, died Oct. 7, 2017. He was 99. A former president of NASW, his science writing career included step-by-step coverage of the Salk polio vaccine from its conception to its successful conclusion.

(Barnwell) Rhett Turnipseed, who served in the U.S. Army as a combat correspondent and later worked as a producer at Voice of America, died January 18, 2015.

Backstories on Books by NASW members

Each issue, NASW members share details of their latest books and insights into getting published. Authors report what they wish they'd known before they began working on their book, what they might do differently the next time, and what tips they can offer aspiring authors at www.nasw.org/article/advance-copy

Destination Moon: The Remarkable and Improbable Voyage of Apollo 11
Roaring Brook/Macmillan
By Richard Maurer*

From Jules Verne's novels in the 1860s to Disney's "Man in Space" TV series in the 1950s, popular culture often presciently described space travel. In *Destination Moon*, **Richard Maurer** focuses on six people plus co-workers who helped transform sci-fi into reality. Posters and photos round out the text.

Maurer writes, "I've been working on Apollo projects since 1976, so research was a matter of digging deeper into ground that was already well spaded by my chronic Apollo obsession. I enjoyed every minute of it, but I must say I had forgotten the standard advice I give to aspiring authors: calculate the maximum amount of time the book can possibly take, then multiply that number by ten."

 [Read the full article bit.ly/sw19sum18](http://bit.ly/sw19sum18)

Bitten: The Secret History of Lyme Disease and Biological Weapons
HarperCollins
By Kris Newby*

Having experienced persistent effects of a tick bite, **Kris Newby** helped create the 2009 Lyme disease documentary, *Under Our Skin*. In 2013, she learned scientist Willy Burgdorfer, who had identified the Lyme disease-causing bacterium, attributed Lyme's initial outbreak to a bioweapons release. Her book, *Bitten*, explores that astonishing claim.

Newby writes, "I spent five years digging through Burgdorfer's personal papers, visiting archives, and interviewing bioweapons experts and people the researcher knew. From the beginning, I tried to push boundaries of the narrative nonfiction genre, showing the emotional journey Burgdorfer went through as he moved from saving people from bug-borne diseases to turning bugs into weapons of war."

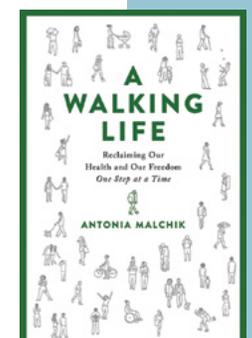
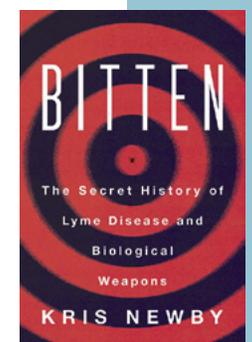
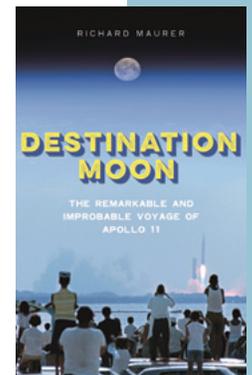
 [Read the full article bit.ly/sw19sum19](http://bit.ly/sw19sum19)

A Walking Life: Reclaiming Our Health and Our Freedom One Step at a Time
Da Capo Press Lifelong Books/Hachette Book Group
By Antonia Malchik*

Our car-centric culture has been designing walking out of our lives for nearly a hundred years, **Antonia Malchik** asserts. Forgoing walking has eroded our sense of community, made us more anxious about time, cut us off from nature, and boosted obesity and air pollution, she says. In *A Walking Life*, Malchik calls for a U-turn.

Malchik writes, "My agent and I spent about six months developing the book proposal together. I felt very strongly that I wanted a book for the everywalker, a kind of Michael Pollan-for-walking book, instead of the usual literary or intellectual history. That required venturing into unexpected subjects like robotics, disability, social capital, and infant brain development."

 [Read the full article bit.ly/sw19sum20](http://bit.ly/sw19sum20)



LYNNE LAMBERG, NASW BOOK EDITOR, WELCOMES NEW BOOK ANNOUNCEMENTS. FIND SUBMISSION GUIDELINES AT NASW.ORG/ADVANCE-COPY-SUBMISSIONS-GUIDELINES AND EMAIL LLAMBERG@NASW.ORG

*NASW Member



Explaining the Future: How to Research, Analyze, and Report on Emerging Technologies
Oxford University Press
By Sunny Bains*

If you're new to covering technology, where do you start? In *Explaining the Future*, **Sunny Bains** tells what to ask, where to find answers, how to assess experts' opinions, and how to organize and convey your conclusions.

Bains writes, "I was gearing up to teach a new class on tech journalism and started to look for a text on technology analysis. There were none. All of a sudden, something clicked in my brain: the world didn't need another book about writing (and certainly not one written by me!). What it did need was a book that taught all of the skills involved in science/tech journalism — research, analysis, and writing — in a way that showed the common philosophy between the three."

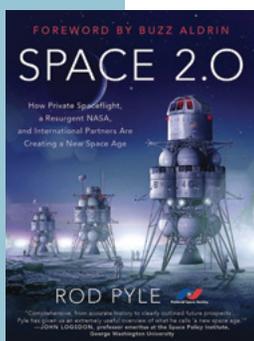
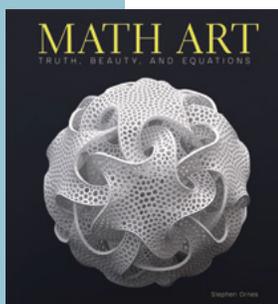
 [Read the full article bit.ly/sw19sum21](http://bit.ly/sw19sum21)

Math Art: Truth, Beauty, and Equations
Sterling
By Stephen Ornes*

A mathematician created 13 mathematical quilts providing visual representations of patterns in pi. A topologist worked out equations for inner and outer curves of seashells to sculpt shells from gypsum. A teacher crochets tangible models of the hyperbolic plane. In *Math Art*, **Stephen Ornes** explains the math and provides stunning examples of mathematical art.

Ornes writes, "My advice to aspiring book writers is to invest time at the beginning to think about the reading audience, develop a clear sense of the book's purpose, and map out the structure, even if you end up abandoning it."

 [Read the full article bit.ly/sw19sum22](http://bit.ly/sw19sum22)



Space 2.0: How Private Spaceflight, a Resurgent NASA, and International Partners Are Creating a New Space Age
BenBella Books
By Rod Pyle*, foreword by Buzz Aldrin

SpaceX sent a Crew Dragon spacecraft with cargo to the International Space Station in March. A planned Crew Dragon trip to ISS will put two NASA astronauts in space for the first time since 2011. In *Space 2.0*, **Rod Pyle** conveys the excitement of the next era of space exploration.

Pyle writes, "This book was a departure for me, as I previously had written books of a historical nature, not forward-looking, policy-driven products. I did about a year of research, and then interviewed 35 leaders in the field from NASA, international space agencies, and the commercial spaceflight sector. Gaining access to some of these folks was a challenge—parts of the commercial spaceflight sector are highly proprietary—but I found what I needed and wrote the book, exceeding my word count by about 40 percent. My editor, James Lowder, then entered the scene. Together we reshaped and pruned the manuscript, taking another year to arrive at a mutually agreeable text."

 [Read the full article bit.ly/sw19sum23](http://bit.ly/sw19sum23)

Good To Go: What the Athlete in All of Us Can Learn From the Strange Science of Recovery
W.W. Norton & Co.
By Christie Aschwanden*

Once seen as rest between workouts, recovery today is deemed an active extension of training. Techniques, foods, drinks, and other products that promise to speed recovery abound. Some help; some don't or even may cause harm. In *Good to Go*, **Christie Aschwanden** helps readers distinguish substance from hype.

Aschwanden writes, "I wrote my book in Scrivener, which allowed me to keep all of my research and writing in one (big) file where I could easily search, organize and arrange it. I kept a spreadsheet of the people I interviewed, and used Mendeley to organize the hundreds of scientific papers I read. I may use Zotero next time, but I'd say that the most important thing is to find a system for saving and searching your PDFs and stick to it. Mendeley allowed me to export bibliography notes with one click, which made things much easier when I was doing the notes section. Scrivener also allows you to create footnotes or endnotes, and these features saved me time during the fact-checking."

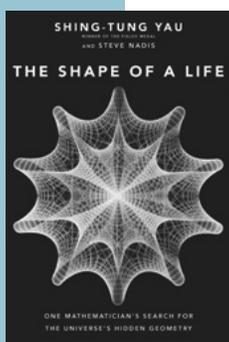
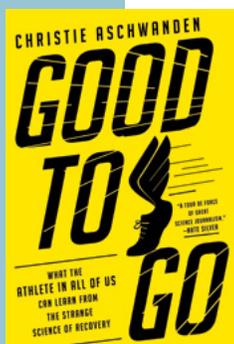
 [Read the full article bit.ly/sw19sum24](http://bit.ly/sw19sum24)

The Shape of a Life: One Mathematician's Search for the Universe's Hidden Geometry
Yale University Press
By Shing-Tung Yau and Steve Nadis*

Harvard geometer, Fields medalist, and MacArthur Fellow Shing-Tung Yau grew up in poverty in China and Hong Kong. A teacher's recommendation enabled him to pursue doctoral studies at the University of California, Berkeley. In *The Shape of a Life*, Yau and NASW member **Steve Nadis** tell Yau's engaging story and explore his work.

Nadis writes, "I met Yau for the first time in 2006. A friend of his, a Cornell physicist I knew from articles I'd previously written, told me that he was looking for someone with whom to coauthor a book. I was busy at the time and almost said no but then decided to meet with Yau since his office at Harvard was just a five-minute bike ride from my home in Cambridge. Looking back, I'm glad I made time for that conversation. *The Shape of a Life* is the fourth book we've written together. We're already making plans for a fifth."

 [Read the full article bit.ly/sw19sum25](http://bit.ly/sw19sum25)



Wild LA: Explore the Amazing Nature In and Around Los Angeles *Timber Press* By Lila Higgins, Gregory B. Pauly, Jason G. Goldman*, Charles Hood

In Los Angeles, the La Brea Tar Pits hold millions of Ice Age fossils, bobcats roam urban parks, and the world's northernmost resident sea turtle population swims in the San Gabriel River. In *Wild LA*, **Jason G. Goldman** and colleagues provide an informative guide to these and other attractions, with photos, maps, and directions.

Goldman writes, "Having covered urban nature in Los Angeles as a journalist, I already had done most of the research. Still, because of the roughly one-chapter-a-week pace necessary to meet the deadline, it was the most challenging assignment I'd taken on."

[Read the full article bit.ly/sw19sum26](https://bit.ly/sw19sum26)

Burning the Sky: Operation Argus and the Untold Story of the Cold War Nuclear Tests in Outer Space *Harry N. Abrams* by Mark Wolverton*

In the late 1950s, during the Cold War, the U.S. secretly conducted Operation Argus, a series of high-altitude atomic bomb tests that aimed to create a radiation shield to block incoming warheads. *New York Times* reporters pierced the veil of secrecy, raising safety and moral concerns relevant today, **Mark Wolverton** relates in *Burning the Sky*.

Wolverton writes, "It occurred to me that Argus could make a good book topic — an impression reinforced by the incredulous "They actually did THAT?" reaction I'd receive whenever I mentioned Argus to someone. I also realized that the Argus/space nuke story had renewed present-day relevance with the advent of new and hostile nuclear threats such as those from Iran and North Korea."

[Read the full article bit.ly/sw19sum27](https://bit.ly/sw19sum27)

Interplanetary Robots: True Stories of Space Exploration *Prometheus Books* By Rod Pyle*, foreword by James Green

From the first images of Mars Mariner 4 sent back to earth in 1965 to those of Pluto New Horizons captured in its 2015 flyby, the solar system has proved "far less friendly and hospitable than we had hoped, but more fascinating than we could have imagined," **Rod Pyle** writes. In *Interplanetary Robots*, Pyle recounts six decades of headline-making history.

Pyle writes, "Researching and writing *Interplanetary Robots* was a joy. I interviewed a number of people involved with the programs in the book, a task made easier by my proximity to and status as a contractor with NASA's Jet Propulsion Laboratory, just a few miles from my home.

The main challenge in researching the book was researching the variations that often occur in primary references. Spaceflight is a fast-moving business, and after many decades, archived records do not always match. Also, the memories of participants in those programs tend to vary many years later."

[Read the full article bit.ly/sw19sum28](https://bit.ly/sw19sum28)

Lasers, Death Rays, and the Long, Strange Quest for the Ultimate Weapon *Prometheus Books* By Jeff Hecht*

From Zeus' thunderbolts to sci-fi fiction, films, and comics, death rays rouse public interest. The Pentagon has explored the potential of the laser, invented in the late 1950s, to shoot down ballistic missiles and achieve other military aims. That involved many alluring but ultimately false starts, **Jeff Hecht** reports in *Lasers, Death Rays, and the Long, Strange Quest for the Ultimate Weapon*.

Hecht writes, "I did not have an agent, so I asked around. A friend recommended Laura

Wood at Fine Print Literary Management. I sent the proposal to Laura, who helped me turn it from a rather geeky and detailed semi-scholarly history into a more compact and marketable book aimed at the general reader.

She also pushed me to take a more narrative journalism approach in my sample chapter. I had a perfect story for that: how the Pentagon blew its chance to invent the laser by denying a security clearance to a visionary physicist who had been a communist."

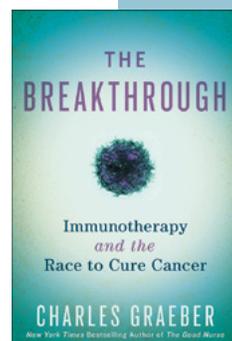
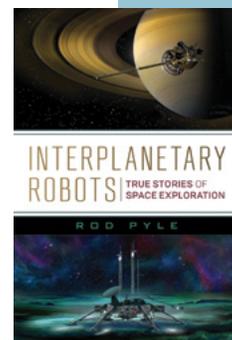
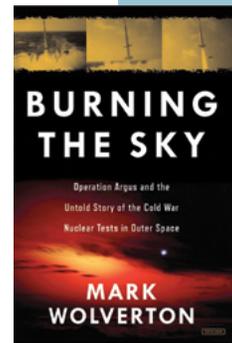
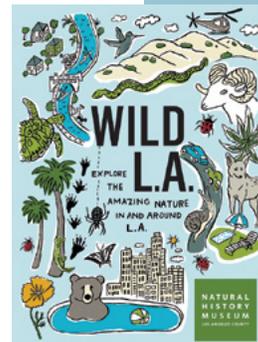
[Read the full article bit.ly/sw19sum29](https://bit.ly/sw19sum29)

The Breakthrough: Immunotherapy and the Race to Cure Cancer *Twelve Books/Hachette Book Group* By Charles Graeber*

Skeptical reporters usually avoid the word "breakthrough," but **Charles Graeber** deems it the right word for the Nobel Prize-winning scientific discoveries he describes in *The Breakthrough*. More than 3,000 clinical trials of immunotherapeutic drugs for cancer are in process. "Even oncologists, a cautious bunch," he writes, "are using the C word: cure."

Graeber writes, "*The Breakthrough* was incredibly difficult to report and write. I felt at times like I was trying to sketch a speeding bullet train. Before I could explain the science, I had to understand it — which only a handful of M.D./Ph.D.s truly did. The advance didn't cover the years of research as I struggled to find compelling personal stories that also captured the big picture, and cobble science into a flowing human narrative with a 'so what.' But of course, if it was easy or obvious, the book wouldn't even be necessary."

[Read the full article bit.ly/sw19sum30](https://bit.ly/sw19sum30)



*NASW Member

Communities Coast to Coast

ScienceWriters conferences may only happen once a year, but NASW members can find community in a regional science writers group all year round. These local professional networks — organized independently of NASW but often led by NASW members — provide exciting opportunities for bonding, learning, and sharing our common love for science writing.

Second Year of SciComm South Scores Success

A diverse crowd of about 75 gathered at Huston-Tillotson University in Austin on April 6 to network and discuss science communication at the second annual SciComm South.

In his keynote speech, **Thomas Hayden** (pictured, below), director of Stanford University's graduate program in environmental communication, reflected on the power of human collaboration. Hayden described a golden age of science communication, with new models of journalism and lower barriers to entry in the field. He also talked about the importance of avoiding isolation and seeking out connection in his career, saying that he found a close group of other science writers



Richard Cunningham

when he was just starting out. Topics covered included:

Exploring new funding models

A panel on new models of funding for publications featured Keith Campbell of the *Dallas Morning News*, Kiah Collier of the *Texas Tribune*, and Brendan Gibbons of San Antonio's *Rivard Report*. Campbell brought up a core struggle of the communication industry: quality journalism is valuable and expensive to make, so many publications find it difficult to justify giving audiences free access. Both Collier and Gibbons were in support of free access, and Gibbons said that the *Rivard Report* is working to diversify their revenue streams in order to achieve that goal. Collier attributed much of the *Texas Tribune's* success with nonprofit funding to an extremely passionate and hard-working staff who want to see journalism survive.

Better communication through improv

Nichole Bennett of STEMprov used improv to get attendees thinking about their approach to communication. In one exercise, participants were instructed to start each sentence with the first letter of their partner's last word. The goal was to get people listening, rather than focusing only on a pre-prepared response. The activity was a reminder that communication is not just about expressing one's own thoughts, but about being open to new ideas.

Communicating directly with the public

A panel on communicating directly with the public featured Monika Maeckle of the Texas Butterfly Ranch, Pamela Owen of the Texas Memorial Museum, and Audrey Stewart of the Animal Facts Club. Stewart said that while there is a certain element of



Liz Kruesi

risk in putting resources into public events, the potential to create deeper engagement in the audience is worth it. Maeckle agreed, saying the tangible experience of seeing science up close and personal is unparalleled. Maeckle also pointed out that approaching science on many levels allows diverse groups to connect with it, from art enthusiasts to technology geeks. Owen added that interacting with the public is an opportunity to get immediate feedback about the clarity and quality of communication, as well as a way to open oneself up to new ways of approaching a topic.

Connecting with your audiences

A panel featuring Mickey Delp of Dadageek, Thomas Hayden, and Bonnie Petrie of Texas Public Radio focused on

advice for navigating the field of science communication and connecting with audiences. Hayden reminded the audience that the field is always changing, and that lack of expertise won't hold back anyone who is motivated to learn. Petrie agreed, saying "don't ever have too much pride to ask a question." She also emphasized the importance of bringing excitement and curiosity to science communication. The kinds of things shared with a friend over coffee, Petrie said, are what will draw an audience and get them invested in a new topic. This kind of personal, conversational science could be the key to engaging millennials in science news. Delp explained that this demographic prefers discussion and interaction in the classroom, suggesting that this mindset may extend to their media consumption as well.

The role of solutions journalism

The second keynote speech was given by Sarah Gustavus, the Mountain West regional manager for the Solutions Journalism Network. Gustavus introduced solutions journalism as a useful method for telling science stories. The central question in this approach, Gustavus said, is "who's doing it better?" The idea is to ask what systemic processes are leading to positive outcomes and make audiences aware of them. Gustavus emphasized that the goal of solutions journalism is not to provide a neat resolution to every story but to remind audiences that large, complex problems, such as climate change, are "works in progress." She said that the hopeful message of solutions journalism results in more audience engagement in the long run. People are more willing to share these stories, and focus on the issues they cover, than the barrage of negative headlines.

The SciComm South conference aims to bolster the community of science communicators in the Southern Central United States. The first meeting, in 2018, was supported by a Peggy Girshman Idea Grant. The 2019 meeting was supported in part by sponsorships from Texas A&M University Press and Huston-Tillotson University, as well as many volunteer hours from meeting organizers **Juli Berwald**, **Marc Airhart**, **Melissa Gaskill**, **Viviane Callier**, and **Nichole Bennett**.

.....
Adrianna Acosta is an undergraduate student in biology at the University of Texas at Austin.



Courtesy of SWINY

Regional Updates

NEW ENGLAND SCIENCE WRITERS

(@NESCIWRITERS): Every other breath you take has been facilitated by phytoplankton.

That was just one of the many fascinating takeaway tidbits from a special half-day seminar co-hosted by New England Science Writers and The Metcalf Institute for Marine and Environmental Reporting.

More than two dozen area science writers piled into the community room at the Cambridge Public Library on Saturday, April 27 for Sea Change, a morning filled with researcher presentations, panels, and a networking lunch. Talks centered on the impacts of climate change on marine systems from the New England coast to the poles. This event was made possible by a National Science Foundation grant.

SCIENCE WRITERS IN NEW YORK

(@SWINY): SWINY had several events, including interviews with authors and a session on e-book self publishing.

David Levine, SWINY co-chair, interviewed two authors on their new books. On January 23, he interviewed *New York Times* contributor Abby Ellin, who discussed her latest book, *Duped: Double Lives, False Identities and the Con Man I Almost Married* and talked about what science says on why we can so easily be fooled. On April 3, he interviewed Gretchen Rubin on her new book *Outer Order, Inner Calm: Declutter and Organize to Make More Room for Happiness*. Gretchen spoke about her book as well as her thoughts on the epidemic of loneliness which she discussed on CBS This Morning in January. Both events drew about 50 people.

On April 24, SWINY and the Editorial Freelancers Association held a joint event where members could learn about

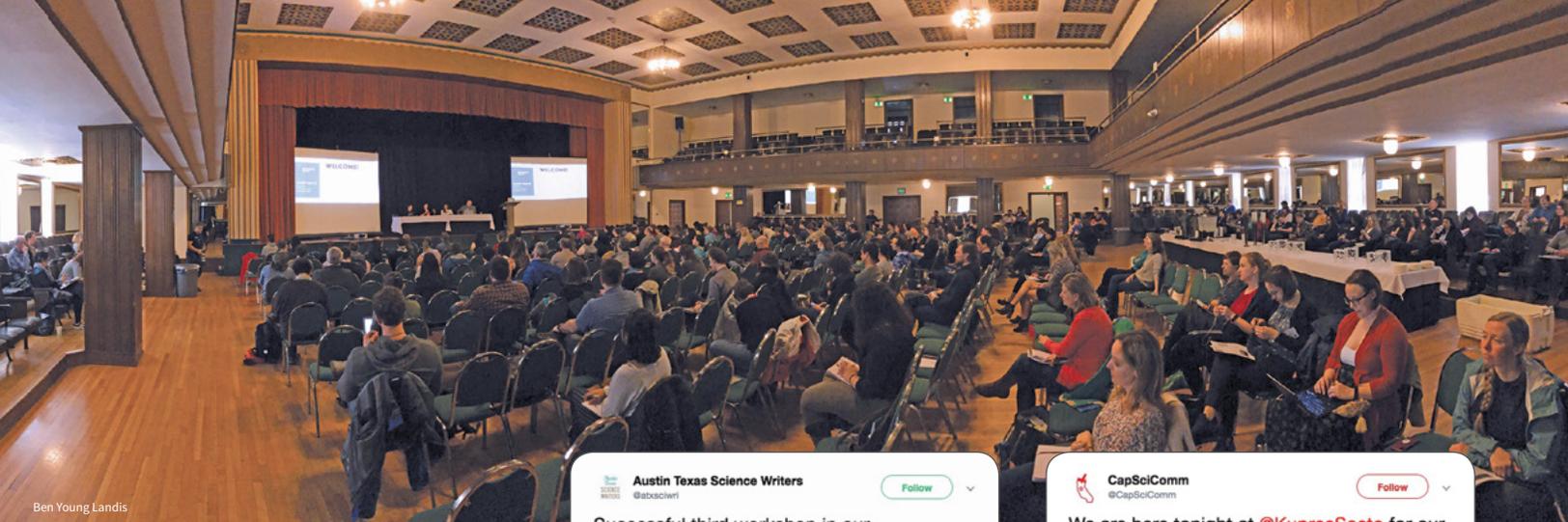


Courtesy of SWINY

PublishDrive, a major e-book self-publishing platform. Marketing consultant Phyllis Azar spoke on how PublishDrive helps authors turn their book ideas into reality and helps editors ease into working with e-books. Thanks to SWINY board member **Rita Baron-Faust** for coordinating this event.

On May 20, SWINY held its annual party at historic Pete's Tavern — "the tavern O. Henry made famous" — in Union Square in the private Speakeasy Room. Approximately 40 people enjoyed the food, beverages and raffle prizes, which included signed books by **Carl Zimmer**, **Randi Hutter Epstein**, **Abby Ellin** and **Gretchen Rubin**, all who took part in SWINY book events. Many thanks to SWINY board member and treasurer **Sheila Sperber Haas** for coordinating this event.

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Ben Young Landis



Courtesy of SCONC

SCIENCE COMMUNICATORS OF NORTH CAROLINA (@SCONC): SCONC continued to cosponsor a popular series of monthly pizza lunches featuring scientific talks. Recent events have focused on the not-so-secret lives of single atoms, epigenetics in human health and disease, and applying precision medicine to perinatal depression. During the winter, SCONC hosted its annual holiday party at the NC Museum of Natural Sciences in Raleigh, where members noshed on candy canes and played reindeer games. In January, it organized a private tour for its membership of “The Art of Science and Innovation,” a special exhibit at the NC Museum of Art.

In April, SCONC hosted the latest installment of its Science in the Movies series; this one focused on natural disaster films. The event was held at the NC Museum of Natural Sciences and was recognized as a signature event by the NC Science Festival. SCONC board member Jory Weintraub served as organizer and emcee, and panelists included film scholar Marsha Gordon from NC State University, meteorologist Elizabeth Gardner from WRAL-TV, and climate change expert Jessica Whitehead from NC Sea Grant. Other events included a dinner at the NC Museum of Natural Sciences with SCONC member Scott Huler, author of the new book *A Delicious*



Austin Science Writers

Country, and a joyous reunion at the Players’ Retreat in Raleigh with former SCONC board member **Holly Menninger**, who now works for the Bell Museum in St. Paul, Minn.

Every spring, graduate students in the Triangle put together a conference, ComSciCon Triangle, that provides science communication training for local graduate students in the sciences. This year, SCONC board members **Marla Broadfoot**, Tamara Poles, Jory Weintraub and **Fenella Saunders** sat on panels and/or served as mentors or expert reviewers at this professional development event. Tamara Poles also played a huge part in the enormously successful NC Science Festival, which featured more than 400 events throughout North Carolina in April.

Board member **Jennifer Cox**, who recently retired from NC State, is on the communications committee for the World Conference of Science Journalists that was held in Lausanne, Switzerland, in July. Also, SCONC Founder **Russ Campbell** of the Burroughs Wellcome Fund moderated a panel on “Building Trust in the Fake News Era” at Science Talk 2019, an annual science communication conference that took place in Portland, Ore., in April.



Capital Science Communicators

Previous Page: SWINY members socialize; SWINY board member Alan Brown giving out the raffle prizes with guest Debbie Irwin. **Top:** Russ Campbell of SCONC and Kelly Tyrrell of Badger Science Writers present at the Science Talk 2019 conference in Portland, Ore. **Above Left:** SCONC President Marla Vacek Broadfoot gathers colleagues in Raleigh, N.C. **Above Middle:** Austin Science Writers (@atxsciwr) hosted a professional workshop series in spring 2019 with Idea Grant funds. **Above Right:** Capital Science Communicators (@CapSciComm) members celebrate their sixth year of operation in Sacramento, Calif.

Other member news: NC State graduate student **Bradley Alf** finished a mini-documentary about sound pollution; **Julie Leibach**, a science writer/digital content specialist for NC Sea Grant, was nominated for a 2019 Award for Excellence by NC State’s Office of Research and Innovation; Yen Duong, a freelance math and science writer, was a plenary speaker at the University of Chicago’s Women in STEM Symposium; and **DeLene Beeland** started a new contract position writing for the Emerging Pathogens Institute at the University of Florida.

NORTHERN CALIFORNIA SCIENCE WRITERS ASSOCIATION (@NCSWA):

At NCSWA's December holiday dinner meeting, Stanford biologist Deborah Gordon shared insights from her research on the collective behavior of harvester ants and how they maintain their networks without a plan or central control. She has shown how their seemingly tightly controlled organization emerges from rules that individual ants follow. She finds that the human immune system and ant colonies use similar distributed defense strategies to fight off intruders.

January offered a tour — and a sampling of the products — at St. George's Spirits, a distillery on the former Naval Air Station in Alameda, near Oakland. Attendees learned how luxury liquors are produced, getting a close look at the copper stills and other equipment that turns out their craft brandy, vodka, gin, and flavored liqueurs. The tour concluded with a guided tasting of up to six of their spirits, from Green Chile Vodka and American Whiskey to Raspberry Brandy and Spiced Pear Liqueur.

At a spring dinner meeting, writers learned how smartphones have been transformed into diagnostic devices by coupling their sophisticated imaging capabilities with lenses and software for examining the retina. Berkeley bioengineer Daniel Fletcher described how his lab has developed a hand-held, user-friendly version of the eye doctor's ophthalmoscope and is working with clinical partners to detect retinal disease caused by diabetes. His team is now working on a project to tackle river blindness in West Africa using a portable smartphone-based microscope that can determine in a pinprick of blood if a drug for the disease can be safely given to patients.

To celebrate Earth Day, about a dozen NCSWA members volunteered to restore Codornices Creek in Berkeley, working with a group that mobilizes locals to restore watersheds from North Berkeley to Richmond. The creek is home to steelhead/ rainbow trout and an urban oasis for birds, insects, and other local wildlife.

SOCAL SCIENCE WRITING (@SCIWRITESOCAL) AND SAN DIEGO SCIENCE WRITERS ASSOCIATION (@SANDSWA2):

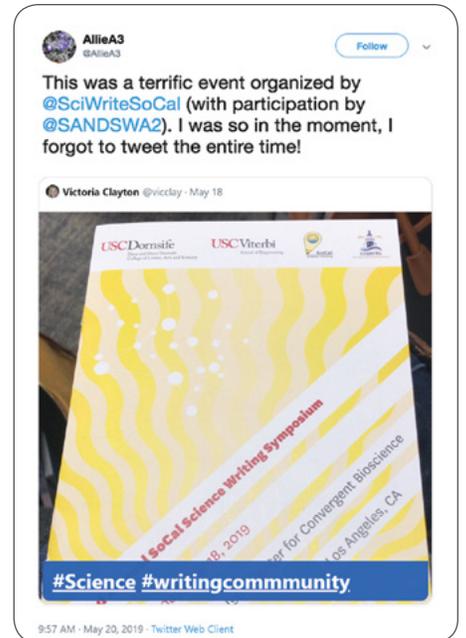
Southern California science writers had more than the Game of Thrones finale to look forward to on the third weekend in May. Eighty communicators gathered at the University of Southern California on May 18 for the second annual **SoCal Science Writing Symposium** (pictured, upper right), organized by SoCal Science Writing and San Diego Science Writers Association (SANDSWA) with support from USC's Dornsife College of Letters, Arts



Amber Dance



Stephani Sutherland



Allie Akmal

and Sciences, Viterbi School of Engineering, and Office of the Provost.

Held at USC's new Michelson Center for Convergent Biosciences, the day started with a plenary session on science video featuring Derek Muller, creator of the 5-million-plus subscriber YouTube channel Veritasium; Jess Phoenix, a volcanologist and founder of Blueprint Earth; Megan Chao, a documentary filmmaker and adjunct professor at USC; and Kyle McClary, cofounder of Bridge Art + Science Alliance (BASA) at USC.

The speakers gave tips about writing for video formats, finding the entertainment value in science stories, using new formats like VR, and making a profit on YouTube. Other sessions covered investigative reporting, reporting fellowships, climate change, and data journalism. The afternoon featured several lab tours, including a look

at the USC Viterbi Interaction Lab, which develops socially assistive robots to help the elderly and people with special needs. The afternoon wrapped up with an editor meet-and-greet for freelancers and a happy hour. A field trip to Santa Catalina Island, originally scheduled for Sunday, May 19, was postponed owing to (unseasonable!) storms in the region.

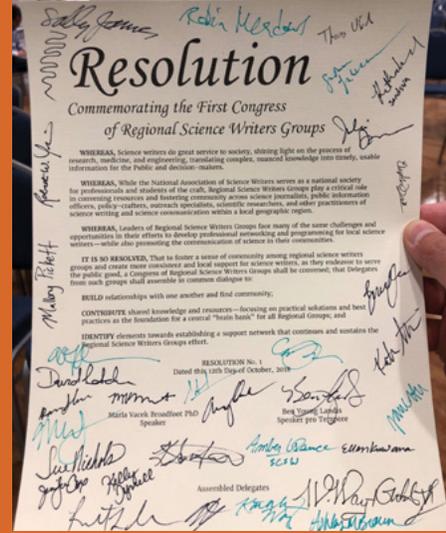
Special thanks to the following people for organizing the event: SoCal Science Writing steering committee members **Amber Dance, Kate Gammon, Linda Marsa, Mallory Pickett, Jessie Hendricks, Ingrid Lobet and Casey Rentz**; SANDSWA board members **Ramin Skibba, Steve Murray, and Allie Akmal**; and **Emily Gersema**, associate director of communications at USC's Dornsife College.

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Second SciWriCongress Convening at Penn State

Marla Broadfoot (president, Science Communicators of North Carolina) and Ben Young Landis (executive co-chair, Capital Science Communicators) are happy to report that they are convening another gathering of regional groups at the NASW meeting in the fall. **SciWriCongress 2019: The Second Congress of Regional Science Writers Groups** will take place on Friday, October 25th. This year will feature more time for problem-solving and discussions, and a whole new patriotic mix tape. All NASW members are welcome, whether you are already a leader of a regional group or interested in starting one of your own. If you would like more information, email speaker@sciwricongress.org.



All photos: Ben Young Landis

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The Green Place

Independent journalist **Wudan Yan (@wudanyan)** juggles field reporting from Myanmar and other global locales with writing and fact-checking assignments from her home office in Seattle.

Since I split my time heavily between my home office and somewhere on the road, I keep items around that bring me extra comfort and joy.

On the road, I bring as little with me as possible but also have creature comforts — packable TRX straps for a quick workout and a Theraband to stretch out sore muscles. But I also need to keep organized. One of my favorite pieces of travel gear is an electronic accessories organizer. It keeps my charging cables, outlet converter, Kindle, camera battery charger, headphones, a pouch for SIM and SD cards, all in one place.

And I don't leave my home without my trusty backpack (not pictured). At 40 liters, it is enough for a quick weekend trip, good for rainy season in tropical countries I travel to

— and keeps my laptop and other gear dry when I'm biking around town.

At home, my office is replete with an external monitor, USB mouse, and paper shredder. My printer is in the other room: I edit my stories by hand — print out the stories and mark them up with colored pens — so having something for small print jobs is indispensable. My soft-cover notebook keeps me organized for day-to-day tasks; my USB mouse helps keep the carpal tunnel at bay; and my external monitor is essential for story research.

But the most essential part of being at home for me is actually being surrounded by greenery. My plants are essential for my sanity — and offer a much needed small green space as I work. — **Wudan Yan**

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Adam Piore
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ONLINE/MULTIMEDIA
Caroline Chen and Riley Wong
ProPublica and STAT News

ONLINE/MULTIMEDIA
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TELEVISION
A.J. Lagoe and Jeff Kummer
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