

Spring - Fall 2023

NEWSLETTER

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SPOTLIGHT

Please join us in welcoming our newest Board member, Dr. Benjamin Gerstner. He is a Visiting Assistant Teaching Professor at Pennsylvania State University, Erie – The Behrend College and has a background in Evolutionary Ecology.

MARK YOUR CALENDARS



FEB 15-17 - AAAS Annual Meeting

All new relevant links and our social media can be found at our link aggregator here:

linktr.ee/outtoinnovate



ABOUT US

Out to Innovate is NOGLSTP doing business as “Out to Innovate.” We are a 501(c)(3) educational organization and professional society of gay, lesbian, bi-sexual, transgender, asexual, queer people, and allies employed or interested in science, technology, engineering, or mathematics (STEM) fields. Out to Innovate empowers LGBTQ+ individuals in STEM by providing education, advocacy, professional development, networking, and peer support. Out to Innovate educates all communities regarding scientific, technological, and medical concerns of LGBTQ+ people.



2023 AWARD CEREMONY AND TOWN HALL

On September 9 the Programs Committee hosted an annual awards ceremony, and the Membership Committee hosted a member town hall. The awards ceremony celebrated the accomplishments of this year's fellowship and scholarship winners, with several in attendance. The three recognition award winners were introduced and spoke to the group. Barbara Belmont also presented on Dr. Carolyn Bertozzi's recent Nobel Prize in Chemistry because Bertozzi was a previous OTI recognition award winner.

At the town hall, Luca Caputo shared the purpose and activities of the OTI committees, all of which welcome member volunteer's support. Caputo then opened the floor for questions from the membership. The group discussed the ongoing efforts to have government agencies collect sexual and gender orientation data to support an improved understanding of the LGBTQ+ experience in STEM. The group discussed the challenges that have been created by several U.S. states enacting discriminatory laws around gender identity and public accommodations. Members shared their concerns and their strategies for continuing to advance their career in the face of these challenges.

2023 LGBTQ+ EDUCATOR OF THE YEAR: PROF. RAMÓN S. BARTHÉLEMY, PH.D.

The LGBTQ+ Educator of the Year award recognizes an educator who has significantly impacted STEM students through teaching, counseling, advocacy, and role modeling. Dr. Barthélemy is an Assistant Professor of Physics and Astronomy at the University of Utah. Before joining the faculty at Utah, Dr. Barthélemy was a Fulbright Fellow at the



Ramón Barthélemy, PhD

University of Jyväskylä, Finland, and an AAAS Science Policy Fellow. As a Fulbright Fellow, Dr. Barthélemy researched university physics education in Finland. As an AAAS Fellow, he focused on STEM education policies and helped support equity in STEM education. His current position focuses on physics education research, with a broad range of interests from student learning in the classroom to policies that govern the physics community and impact physics careers. His current research focuses on understanding the social network development of Ph.D. physicists who identify as women and/or as part of the LGBTQ+ community. This unique project focuses on Ph.D. scientists beyond academia and includes the government and private sectors. This work aims to better understand how these groups build their professional networks and navigate them to find their definition of career-related success.

When asked how his life experiences have shaped his perspective as an educator, Dr. Barthélemy believes, "...being queer has impacted how I think about binaries. I do not see the world as a place where there is one

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incorrect and one correct answer. Rather I see a very complex world in which multiple kinds of explanations and models can be used to understand our lives and the world around us. As a scientist, this dips into ideas of philosophy of science and how we are not necessarily claiming to have a [capital] T truth, but instead are working to develop and refine models that help us explain and predict the natural world.”

His nominators noted, “...he combines stellar graduate work in physics education research with some of the deepest and most significant work on gender and LGBTQ+ issues in Physics that has so far been written.” When asked what advice he would give his younger self and scientists just beginning their adventures in physics, Barthélemy said “...would tell a younger version of me to trust myself and to build a community of people who support one another and want to see each other succeed.”

2023 LGBTQ+ ENGINEER OF THE YEAR: DR. E. DAVID JANSING, PH.D.



David E. Jansing, PhD

The LGBTQ+ Engineer of the Year Award recognizes someone who has made outstanding contributions to their field and recognizes the awardee for sustained contributions in design, production, management, or research. Dr. Jansing is a Principal Remote Sensing Scientist at the Johns Hopkins University Applied Physics Laboratory.

Jansing is a remote sensing expert focused on synthetic aperture radar and hyperspectral imaging (particularly in the longwave infrared region of the spectrum). He uses the data collected from remote sensors to extract actionable information from the signal.

In a recent project, Jansing worked on using remotely sensed commercial satellite data to identify regions prone to wildfire. His work resulted in 20+ publications, conference proceedings, a textbook, and a patent. Jansing is particularly proud of his textbook *Introduction to Synthetic Aperture Radar: Concepts and Practice*, which is a comprehensive but concise overview of synthetic radar and how it works. This text is a culmination of many years of teaching the subject, for which there was no textbook to draw from.

His letters of support identified Jansing as a scholar, passionate about research and teaching. One letter noted, “...during his time at the Applied Physics Laboratory, David has had a remarkable impact on our work in remote sensing, advancing our capabilities and contributions...and helping to develop the next generation of talent.” Another noted that his development of a novel 1-dimensional Convolution Neural Network (CNN) could distinguish signals often overlooked due to their similarity to the background. The results of this new data processing method “improved the detection of chemical leaks without the usual number of false alarms” and has greatly improved hyperspectral imaging for detecting chemical leaks in environmental monitoring and post-disaster recovery.

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The advice he would give his younger self: "It's a marathon, not a sprint. Take a deep breath, slow down a little, and be patient." He also noted that age has made him realize that "I don't care if others approve of me being gay. It is just one aspect of a much bigger, richer life."

2023 LGBTQ+ SCIENTIST OF THE YEAR: PROF. VICTORIA ORPHAN, PH.D.



Victoria Orphan, PhD

The LGBTQ+ Scientist of the Year Award recognizes an individual who has made outstanding contributions to their field through design, research, or management. This year's award winner is Dr. Victoria Orphan, the James Irvine Professor of Environmental Science and Geobiology in the Environmental Science and Engineering Department at Caltech. Orphan is also the Allen V. C. Davis and Lenabelle Davis Leadership Chair in the Center for Environmental Microbial Interactions and the Director of the Center for Environmental Microbial Interactions.

Dr. Orphan focuses on molecular microbial

ecology, developing new molecular and isotopic tools to determine how communities of anaerobic bacteria cycle carbon and sulfur in the environment and ocean. Through the integrated application of environmental 'omics, the Orphan lab provides new insight into interspecies interactions in oxygen-poor environments, such as methane seeps and vents along the floor of the deep ocean and in the sediment of seagrasses. She has published over 140 peer-reviewed publications. Orphan was inducted as an AAAS Fellow in 2020, elected an American Geophysical Union and Academy of Microbiology Fellow in 2015 and 2021, and received a MacArthur grant in 2016. She has also been recognized for her scholarship, mentorship to 40+ graduate students and postdocs, and diversity-related efforts, including the Dr. Fred Shair Award for Programming Diversity at Caltech.

Letters of support highlighted the creativity Orphan brings to her research. "She is a renaissance woman, expertly combining tools and techniques not often found in the same laboratory or field. Victoria is providing rich datasets of microbial communication that combines imaging (optical, electron microscopies, synchrotron-based methods) with whole genome and proteome datasets." Another letter writer emphasized the "unflinching support of DEI locally at Caltech and globally."

When asked what advice she has for future LGBTQ+ scientists interested in research in this world and beyond, she offered: "Use your passions in science and life as a guide for your future career and, as much as possible, keep that sense of wonderment and curiosity alive. Working with and learning from diverse scientists with different backgrounds and scientific expertise has enriched my life, and I believe is the sweet spot for new discoveries and innovation."

2023 CAREER DEVELOPMENT FELLOWSHIP AWARDEES

Out to Innovate is proud to announce the winners for the 2023 Out to Innovate Career Development Fellowship for Trans and Non-Binary People in STEM, formerly known as the Ben Barres Fellowship. This merit-based fellowship provides awards, up to \$5000, to support professional development of trans, intersex, and non-binary graduate students and post-doctoral scholars in science, technology, engineering, and mathematics (STEM) fields.

Eleven trans, intersex, and non-binary early career researchers have been awarded amounts ranging from \$2,300 to \$5,000. This year's fellows are in the fields of ecology, aging, astrophysics, math and physics education, biomedical sciences, and statistics at universities in the US, UK, and Canada. This is a merit-based award, and the funds support the recipient's professional development. These awards are funded by a generous anonymous donor. The majority of the funds are supporting equipment, supplies, training courses, and conference attendance. The winners of this year's awards are:

Dr. Matilda Brown is a postdoctoral scholar at the Royal Botanic Gardens, Kew where they model plant extinction in an effort to improve endangered species classifications.

"This fellowship means an incredible amount to me. As well as allowing me to share my research at a global forum of conservation researchers, it feels great to be celebrated for being non-binary."



Winston Cuddleston

Winston Cuddleston is a graduate student of Biomedical Sciences at the Icahn School of Medicine at Mount Sinai. His work helps identify novel molecular and cellular mechanisms of Alzheimer's disease as potential therapeutic targets.

"I am extremely grateful to be recognized as an Out to Innovate Career Development Fellow. This award provides support for me to present my research and establish connections with my colleagues that will promote success in my career."

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Matilda Brown, PhD

Dr. Adrianna Kępińska is a postdoctoral scholar at the Icahn School of Medicine at Mount Sinai where they study the genetics of postpartum psychosis.

"I am honoured to be awarded the OTI Fellowship. Professionally, it will enable me to continue my research and to complete extra training in statistical genetics, allowing me to further refine my scientific skill set. The Fellowship will fund access to data on postpartum psychosis, which, as a both very severe and very rare disorder impacting parents and children, has been exceedingly difficult to research and treat. Given the current scarcity of findings, it is very important to me to deliver studies on this topic, which are carefully conducted and produce high quality results. I am grateful that the Fellowship will enable me to this important end. Personally, I am delighted for this recognition. In my academic field of psychiatric genetics, there are still relatively few role models who identify as non-binary, like I do. I hope that this award can be proof to fellow early-career queer academics that there are successful futures, professional possibilities, and wider recognition available to us."



Adrianna Kępińska, PhD

Josie Meyer is a graduate student at the University of Colorado-Boulder in Physics Education Research where she develops evidence-based teaching practices for Quantum Information Sciences.



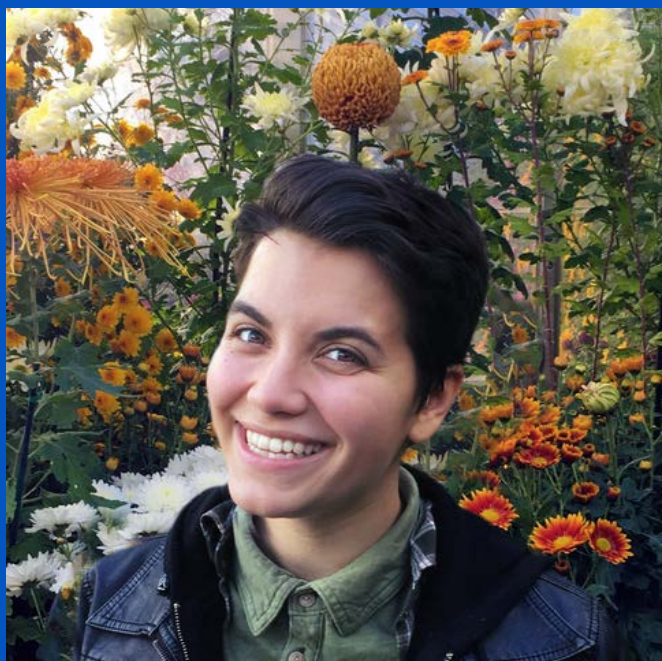
Josie Meyer

"For those of us trying to change the system of STEM from within, particularly in the STEM education research community, it can be particularly difficult to access the very professional development funds we need to be most effective in our mission. Thanks to the Out to Innovate fellowship, I will have the opportunity to present my research beyond the education research community to reach the audiences who may be able to benefit the most from hearing it."

Taz Mueller is a graduate student in Ecology, Evolution, and Behavior at the University of Minnesota, Twin Cities. Their work studying fungal microbes in plant leaves will help dissect the interconnected effects on the host plant.

"I am thrilled and honored to be a recipient of the Out to Innovate Career Development Fellowship. It can be both rewarding and isolating to visibly represent non-binary..."

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Taz Mueller

"...scientists in the field of Ecology & Evolution, but the existence of this fellowship is a testament to the incredible power of the queer community and the remarkable progress that has been made in STEM fields and academia. To go from often being the only openly trans voice in a room to being able to accept a fellowship that explicitly celebrates and supports queer and trans scientists is incredibly meaningful to me. Additionally, the financial support that the OTI Career Development Fellowship provides in covering my research expenses is crucial to the completion of my PhD, and it will facilitate my ability to continue working towards inclusion and equity for the queer community in STEM."

Jenn Paik is a graduate student at the University of Michigan developing a multifunctional organohydrogel material which has possible applications as a transparent, skin-adhesive strain sensor for motion monitoring in biomedical applications.

"I express my identity as a non-binary person primarily through visual art and writing while hiding it in science & engineering environments. In my personal statement, I drew a parallel

between art and soft materials development, describing my science as a creative art that benefits from the ideas that percolate throughout a diverse social sphere. In both materials development and art, the starting materials provide the parameters for creativity. By expanding the social sphere in which science is performed, we can broaden the parameters of creativity, and therefore I need to acknowledge my identity as a LGBTQ+ person of color and be the representation I wish to see in the field. This fellowship is the first time I have been able to publicly acknowledge my identity in such a significant way."



Jenn Paik

Clara Qin is a graduate student at the University of California, Santa Cruz. She uses computational methods to understand the macroecology of soil microorganisms in unmanaged and agricultural systems with applications for organic crop disease control.

"I am honored to be the recipient of an OTI Career Development Fellowship. To me, this fellowship means that trans and queer people deserve to be recognized not only for their mere presence in the sciences but also for..."

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Clara Qin

"... their professional achievements and their attentiveness to science's broader societal impacts. The funding provided to me will be used to advance an interdisciplinary understanding of soil microbial macroecology in managed and unmanaged systems with applications for organic crop disease control. Through this research, I hope to demonstrate that even my fairly abstract field has the potential to create exciting new possibilities for just and sustainable food systems."



Sophia Sosa

Sophia Sosa Fiscella is an Astrophysics graduate student at the Rochester Institute of Technology developing methods for using pulsar timing to detect gravitational waves.

"In an academic world that, more often than not, has been historically characterized by segregation and exclusion, the Out to Innovate Career Development Fellowship serves as a beacon of hope. I remain incredibly thankful and filled with gratitude for this recognition, not only because it represents an extraordinary opportunity to advance my research and my career but also on a personal level because it reaffirms my belief that LGBTQ+ people belong in the scientific community."



Dylan Spicker, PhD

Dr. Dylan Spicker is a postdoctoral scholar at McGill University where they develop novel statistical techniques for personalized medicine and public health applications.

"The OTI Fellowship will provide crucial, material support for my research, removing barriers and inefficiencies which I presently face. More saliently than the financial component is the visibility and recognition stemming from the fellowship. By affirming

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the important work that trans*, intersex, and non-binary individuals are conducting in STEM, the fellowship helps to lend credibility to the viability of this career path for people who may otherwise not see themselves represented here. I am appreciative that, with the assistance of this fellowship, I may be able to make the field of Statistics more inviting in ways that would have eased my journey to this point.”



Bennett Van Camp

Bennett Van Camp is a graduate student in the Biology of Aging Doctoral Program at the University of Southern California.

“I am extremely honored to have received the Out to Innovate Career Development Fellowship. With these funds, I will be able to attend one of the most prestigious conferences in my field, which will not only greatly increase the visibility of my work but also better connect me to the international field of geroscience. Additionally, this fellowship will give me the opportunity to create a network of support within the queer academic community as we push for equitable representation in the highest levels of our fields.”

In addition to the winners announced here, we are proud to support one fellow who wishes to remain anonymous.

OUT TO INNOVATE’S STATEMENT ON U.S. SUPREME COURT’S BAN ON AFFIRMATIVE ACTION

The U.S. Supreme Court has ruled that race-conscious admissions practices used by Harvard University and the University of North Carolina are unconstitutional. This decision overturns decades of precedent that has held that higher education institutions may consider race among other factors in admissions processes. And the decision comes at a time of disquieting and coordinated efforts by states, local school boards, and others to stifle diversity, equity, inclusion, and accessibility (DEIA) efforts at colleges, schools, government agencies, and businesses.

Out to Innovate strongly believes that diversity is key to the success of outcomes in science, technology engineering, and mathematics (STEM) endeavors. Different perspectives that are informed by life experiences generate new ideas in research and development. Open exchange of ideas in an inclusive environment leads to scientific insights and improved outcomes (<https://hbr.org/2013/12/how-diversity-can-drive-innovation>). Out to Innovate is committed to cultivating a diverse and inclusive environment for all people, including marginalized and underrepresented minorities, members of the LGBTQ+ community, people with disabilities, and veterans. This is central to the mission of our organization, American democracy, our STEM-driven economy, and our ability to improve the future for all of humanity.

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Out to Innovate believes that higher education institutions have a responsibility to foster environments that both support and reflect the diversity of the United States and to increase representation of not only all underrepresented students but also faculty and staff. The key to success in this is to increase mentorship, formulate pedagogical initiatives, adopt equitable and accessible practices, and build supportive climates that value DEIA of all underrepresented people on campus, in business, and across society.

We call upon the leaders of academic institutions and industry to stand up for their students, faculty, employees, and others who may feel unsupported in the face of political, media, and social torrents. We support prioritization of academic endeavors in scientific and technological advancement and oppose intolerant agendas that remove funding for DEIA initiatives, close DEIA offices, end DEIA training, and restrain curricula regarding diversity-related concepts. We need all people to contribute to our future success in order for that success to extend to everyone, and Out to Innovate will continue to work toward that goal.

-The Out to Innovate Board

ROMANTIC RELATIONSHIP DISCLOSURE AT WORK STUDY

You are invited to participate in a research study on the unique work-family experiences of LGBTQ+ people!

Earn up to \$20 in Amazon Gift Codes and advance the scientific understanding of how organizational factors relate to the identity disclosure decisions of LGBTQ+ workers. Participation will consist of providing information about yourself and your work experiences across three short surveys that will take under 30 minutes total (and no more than 15 minutes at one time) to complete.

To participate, you must be 18 years old, work 30 hours per week for pay in the United States, work in-person for at least 20% of your typical workweek, and not be self-employed.

Please follow this link to the informed consent if you are interested in participation or want more information:

<https://tinyurl.com/ycxfv9sr>

LOOKING FOR WAYS TO GET INVOLVED WITH OUT TO INNOVATE'S WORK?

The Programs, Communications, and Membership committees are looking for volunteers! The Programs committee focuses primarily on scholarships, recognition awards, and fellowships as well as events like the biennial Out to Innovate Summit. The Communications committee handles social media, branding, press releases, website content, this quarterly newsletter, and more. And finally, the Membership committee is currently analyzing member data and looking for ways to better serve you, our members! Whether you have prior experience and relevant skills or are just interested in these opportunities, all are welcome to join. If you're interested, please contact:

Membership - Penn Hutchinson (ph-board@noglstp.org)

Communications - Dane Samilo (ds-board@noglstp.org)

Programs - Christine Bland (rcb-board@noglstp.org)

MEMBER SERVICES

The Out to Innovate member services site allows for self-serve member update and automated renewal notices. Visit our website at: <https://oti.memberclicks.net/membership> and log in to explore or update your profile, or to renew your annual dues. Of course, you're welcome to renew or join the old-fashioned way with pen, paper, and check by filling out a downloadable form from our website. We're happy to have your support any way you want to give it!

AFFILIATES

- 500 Queer Scientists
- American Astronomical Society (AAS) Committee for Sexual Orientation and Gender Minorities in Astronomy (SGMA)
- American Institute of Chemical Engineers (AIChE)
- CSUN QueerSTEM
- gAyGU (American Geophysical Union)
- L'GASP: Lesbian, Gay, Bisexual Audiologists and Speech-Language Pathologists
- LAGLS: Los Angeles Gay and Lesbian Scientists
- LGBTQ Chemists and Allies (ACS PROF Gay and Transgender Chemists and Allies)
- NOGLSTP at Oklahoma State University
- NOGLSTP at Purdue
- NOGLSTP at University of Nebraska - Lincoln
- Diversity and Inclusion in American Nuclear Society Committee (formerly NuclearPride)
- LBGTQ STEM at Oklahoma State University
- PrideSTEM at Texas Tech
- QSTEM of Lake Nona High School
- Queer Science (University of Minnesota)
- Queer Science Society
- Spectra: The Association for LGBT Mathematicians

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SUBMISSIONS

The **Out to Innovate Bulletin** is published quarterly, most of the time. Contributed articles are welcome and encouraged and may be emailed as plain text to editor@noglstp.org. The next publication deadline (for the winter newsletter) is **February 28, 2024**. Please acknowledge the Out to Innovate Bulletin as your source if you choose to reproduce any of these articles.

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