

# What's in a Seminar?

Graduate students at the University of Massachusetts Amherst redesigned their departmental seminar series to increase diversity, equity, and inclusion, and other institutions could do the same.



Nyeema Harris of the University of Michigan gives a BRiDGE2Impacts presentation entitled “The Fierce Urgency of Now to Redefine Impact in Academia” at the University of Massachusetts Amherst in October 2018. Credit: Benjamin Keisling

By [Benjamin Keisling](#), Raquel Bryant, Nadia Fernandez, Mariela Garcia Arredondo, and Nigel Golden   
9 April 2020

In a hallway in the Department of Geosciences at the University of Massachusetts (UMass) Amherst hang posters advertising all the scientists who have participated as invited speakers in the department's weekly seminar series over the past few years. These individuals represent an impressive range of geoscience disciplines, and the posters serve to announce that this department values a variety of research specialties. Yet for underrepresented students (<https://eos.org/articles/geosciences-make-modest-gains-but-still-struggle-with-diversity>), who have not always felt seen, welcomed, or a sense of belonging in the department or in the field at large, these posters are also a reminder that most of the scientists our seminar series celebrates are senior, white, and male.

When we volunteered to coordinate the Geosciences Lecture Series for the 2017–2018 academic year, we knew we wanted to do something different. We set clear, concrete goals that we considered achievable within 1 year: At least 50% of the roughly 20 speakers would be women (up from an average of 40% over the previous 4 years), and more than one speaker would be a person of color. We solicited nominations from the entire geoscience faculty via email, but of the 40 nominations we received, only eight were women, and few were nonwhite. We knew it would be difficult to meet our goals from that pool, so we followed up with a specific request for more nominations of white women and people of color, which yielded three additional names. Given that we needed to balance representation of different research disciplines and respect scheduling constraints of invited speakers and faculty hosts, this didn't give us much flexibility to meet our goals.

## **Making Geosciences Antiracist** (<https://eos.org/special-topics#antiracism>).

- [Geoscience Commits to Racial Justice. Now We've Got Work to Do](https://eos.org/articles/geoscience-commits-to-racial-justice-now-weve-got-work-to-do) (<https://eos.org/articles/geoscience-commits-to-racial-justice-now-weve-got-work-to-do>).
- [Deep Biases Prevent Diverse Talent from Advancing](https://eos.org/articles/deep-biases-prevent-diverse-talent-from-advancing) (<https://eos.org/articles/deep-biases-prevent-diverse-talent-from-advancing>).
- [What's in a Seminar?](https://eos.org/opinions/whats-in-a-seminar) (<https://eos.org/opinions/whats-in-a-seminar>).
- [Scientific Meetings for All](https://eos.org/opinions/scientific-meetings-for-all) (<https://eos.org/opinions/scientific-meetings-for-all>).
- [Promoting Racial Diversity in Geoscience Through Transparency](https://eos.org/opinions/promoting-racial-diversity-in-geoscience-through-transparency) (<https://eos.org/opinions/promoting-racial-diversity-in-geoscience-through-transparency>).
- [Laying Proper Foundations for Diversity in the Geosciences](https://eos.org/opinions/laying-proper-foundations-for-diversity-in-the-geosciences) (<https://eos.org/opinions/laying-proper-foundations-for-diversity-in-the-geosciences>).
- [#GeoGRExit: Why Geosciences Programs Are Dropping the GRE](https://eos.org/opinions/geogrexit-why-geosciences-programs-are-dropping-the-gre) (<https://eos.org/opinions/geogrexit-why-geosciences-programs-are-dropping-the-gre>).
- [AGU's Bridge Program Creates Opportunities for Underrepresented Students](https://eos.org/agu-news/agus-bridge-program-creates-opportunities-for-underrepresented-students) (<https://eos.org/agu-news/agus-bridge-program-creates-opportunities-for-underrepresented-students>).

We brainstormed solutions to diversify the nomination pool. First, we encouraged faculty to nominate a former student or current postdoc of the senior scientist they had nominated. But faculty often preferred their original nominee for a variety of reasons, including that the person was a collaborator or they “didn’t know” the senior scientist’s students or postdocs. Second, we tried providing our own speaker suggestions and asking faculty to nominate them. However, we were then asked to vouch for these individuals’ speaking abilities, or we were told that faculty were uncomfortable inviting someone they didn’t know or that there wasn’t enough funding to bring speakers from far afield.

With these constraints, we did our best to put together a series for the year that met our goals. In the process, we learned that the challenges we faced in diversifying the seminar series were not unique to our own department, nor are they unique to the geosciences (<https://www.pnas.org/content/115/1/104.abstract>). This made us wonder: What would our ideal seminar series look like?

## **Building a BRIDGE**

While coordinating the Geosciences Lecture Series, we learned why seminars matter to the members of our community. For our faculty, seminars provide an opportunity to bring established colleagues and collaborators to campus. For invited speakers, visits spark new ideas for projects and collaborations while also filling out the “invited talks” section of their curricula vitae. Seminars expose postdocs and students, some of whom have had few opportunities to attend conferences, to research topics and methods not represented in their departments and help them identify next steps for their own research or careers.

A poster describing the BRiDGE program hangs in the Department of Geosciences at the University of Massachusetts Amherst beside flyers announcing invited speakers who participated in the department's weekly seminar series. Credit: Benjamin Keisling

Through our efforts to organize the series, we also identified other potential seminar benefits that we wanted to cultivate. For example, we had valuable conversations with early-career faculty (<https://eos.org/science-updates/helping-early-career-researchers-succeed>), visitors about navigating the academic job market, and we wanted more students to have access to those kinds of discussions. We also considered how creating space to highlight the broader impacts of the speakers' research and how it intersects or engages with communities that they serve could increase audience engagement.

We decided our ideal seminar series would involve speakers from underrepresented communities and would provide a platform for these scholars to share experiences and perspectives that inform their research, including about the communities their work serves or the professional and personal obstacles they overcame. It would also provide opportunities for underrepresented students to see early-career scholars who may share their identities or experiences in science, technology, engineering, and mathematics (STEM) and who could provide career advice that is tailored toward students from diverse backgrounds. Above all, we realized that every time we invited a seminar speaker into our community—

through invited seminar series that are held in departments across the university—we had the opportunity to meet these needs.

Through this coalition with graduate students in other departments who shared our vision, we conceived BRiDGE, a first of its kind, multifaceted seminar series.

Beginning in 2018, we built a coalition with graduate students in other departments who shared our vision. Through this coalition, we conceived BRiDGE (<http://www.blogs.umass.edu/bridge>), a first of its kind, graduate student–led, multifaceted seminar series. After successfully applying for a seed grant through a campus-wide diversity initiative (<https://www.umass.edu/diversity/initiatives/campus-climate-grants>), the School of Earth and Sustainability (<https://www.umass.edu/ses/>) and the College of Natural Sciences (<https://www.cns.umass.edu/>) at UMass Amherst recognized the ongoing and potential future impacts of our initiative and provided additional support.

BRiDGE encompasses three types of speaker presentations—called BRiDGE2Science, BRiDGE2Impacts, and BRiDGE2Students—that each support our mission. BRiDGE2Science presentations are traditional science talks that are cosponsored by a hosting academic department and embedded into that department's regularly scheduled seminar series. BRiDGE2Impacts presentations are events such as talks, workshops, or panels in which the invited speaker, or BRiDGE Scholar, chooses the topic and structure for their discussion and shares how they use science to make an impact in their community. BRiDGE2Impacts events have sparked conversations about racial justice in affordable housing, navigating academia as a single parent (<https://blogs.umass.edu/bridge/2018/11/18/when-i-grow-up-an-unexpected-path-into-science-academia-and-single-parenting/>), supporting underrepresented undergraduate students in research programs, identifying our hidden privileges, and other topics. BRiDGE2Students events involve a mentoring lunch that connects underrepresented postdocs and graduate students from different disciplines with successful scientists who share some of their identities and experiences. BRiDGE2Impacts and BRiDGE2Students events have been widely attended by members of many different departments and programs.

We are conscious of “cultural taxation,” which is the unique burden placed on faculty from marginalized groups at predominantly white institutions of doing excess (often unrewarded) work to promote diversity and inclusion [*Padilla* (<https://doi.org/10.2307/1176259>), 1994], so we provide BRiDGE Scholars with additional professional development benefits. In designing these benefits, we considered some of the reasons that early-career and minoritized scientists are not invited to speak in seminar series, including their “speaking ability” being unknown to faculty nominators. In response, we offer visiting scholars the opportunity to have their science talk filmed and put online to provide an example of their speaking ability. In addition, BRiDGE Scholars have the option to be featured on student podcasts, and students

write summaries and reflections (<http://www.blogs.umass.edu/bridge/posts>) of each BRiDGE2Impacts presentation for our website, so the extra effort put in by the scholar is celebrated, documented, and searchable.

Through our efforts, BRiDGE has become a recognized brand on campus, and with 14 scholar visits completed and several more planned, we are creating prestige around the title of “BRiDGE Scholar” within our wider community.

## Encouraging Broader Change

We have been developing ways to measure the impact of the program at UMass Amherst. The first barrier to this effort was a lack of existing data with which to compare our results—obtained through surveys of BRiDGE Scholars and seminar attendees—because our departments do not collect data about impacts of their seminars. This year, however, a university-approved plan created by BRiDGE committee members to quantify the impacts of BRiDGE Scholar visits is under way. We are also continuing to collect quantitative survey data about the program.

Considering the success of BRiDGE so far, we believe that other departments and programs could undertake similar initiatives to better serve the next generation of geoscientists.

The response from students who have attended BRiDGE seminars has been positive. One anonymous respondent wrote, “It was such an empowering and rejuvenating experience to hear the BRiDGE lecturer discuss her personal experience with developing her career as a researcher. It really helped me to put my personal growth as a scientist in perspective.... As a woman in science, I felt like a lot of [the] personal struggles of the lecturer and the students resonated with me, but I think anyone, regardless of background, would benefit a lot from discussions like this.”

Considering the success of BRiDGE so far, we believe that other departments and programs could undertake similar initiatives to increase diversity, equity, and inclusion (DEI) and better serve the next generation of geoscientists. In fact, one past BRiDGE Scholar, Paula Welander, a microbiologist and associate professor of Earth system science at Stanford University, has since started a similar program there. “By inviting early-career, minoritized faculty to give both a departmental seminar and a broader impacts seminar, we are able to highlight the scientific and societal impacts diverse scientists can bring to the table,” Welander said. “And because invited departmental seminars are often viewed as an honor or privilege, we send a very important message to our community about who we value as scientists and experts in our field.”

Here are five ways to improve your program’s seminar series:

1. Look at who is invited to give seminars and set goals for increasing diversity. These goals should be guided by demographic data about your department and about its invited speakers and by considering how students and early-career scientists in your department could benefit from exposure to scientists who reflect parts of their identity and experience.
2. Broaden the networks you rely on to identify candidate speakers. Professional networks often comprise individuals with similar academic and career trajectories. In the geosciences, most networks of faculty and professional researchers are overwhelmingly white and male. Allowing students to nominate speakers they want to hear from is a way to tap into different networks. Another way to broaden and diversify scientific networks is to form meaningful relationships with affinity organizations, such as the National Association of Black Geoscientists, the Society for Advancement of Chicanos/Hispanics and Native Americans in Science, the National Organization of Gay and Lesbian Scientists and Technical Professionals, the International Association for Geoscience Diversity, and the Earth Science Women's Network.
3. Invite diverse speakers to your seminar series. In our experience, members of underrepresented groups continue to be overlooked as potential seminar speakers because no one has previously taken the initiative to invite them. Break this cycle by committing your department to inviting seminar speakers who claim one or more marginalized identities.
4. Such opportunities are especially important for underrepresented students to get career advice, recommendations, and feedback from people who have faced personal and professional obstacles relevant to their own experiences.

Provide dedicated spaces and times for students to engage in conversations with visiting scholars. Such opportunities are especially important for underrepresented students, who are unlikely to see their identities or experiences reflected in the faculty of their own department, to get career advice, recommendations, and feedback from people who have faced personal and professional obstacles relevant to their own experiences. Furthermore, early-career scholars often bring different institutional and experiential perspectives that can help students navigate challenges they face at their home institutions.

5. Encourage seminar speakers to spend 5–10 minutes during their presentation to discuss how their science affects communities they serve. In a time when many scientists are increasingly seen as untrustworthy ([https://www.pewresearch.org/science/wp-content/uploads/sites/16/2019/08/PS\\_o8.02.19\\_trust.in\\_scientists\\_FULLREPORT-1.pdf](https://www.pewresearch.org/science/wp-content/uploads/sites/16/2019/08/PS_o8.02.19_trust.in_scientists_FULLREPORT-1.pdf)), by large segments of the U.S. population, it is important for scientists to explain how their work benefits society. Such discussions also help people understand the underlying purposes of a scientist's research and help to engage people from different disciplines during seminar talks.

Many institutions today are declaring commitments to improving DEI. Yet despite their good intentions, acting on those commitments remains challenging. We believe we were successful in developing BRiDGE because we acted on our values and focused on making small changes with big impacts. We challenge all members of the geoscience community to be proactive, intentional, and creative when thinking about the roles they can play in supporting and advancing DEI goals. Instead of waiting for solutions to come from someone else, why not take a chance at building something tailored to your program's needs?

## References

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Padilla, A. M. (1994), Ethnic minority scholars, research, and mentoring: Current and future issues, *Educ. Res.*, 23(4), 24–27, <https://doi.org/10.2307/1176259> (<https://doi.org/10.2307/1176259>).

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**Citation:** Keisling, B., R. Bryant, N. Fernandez, M. G. Arredondo, and N. Golden (2020), What's in a seminar?, *Eos*, 101, <https://doi.org/10.1029/2020EO142460>. Published on 09 April 2020.

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