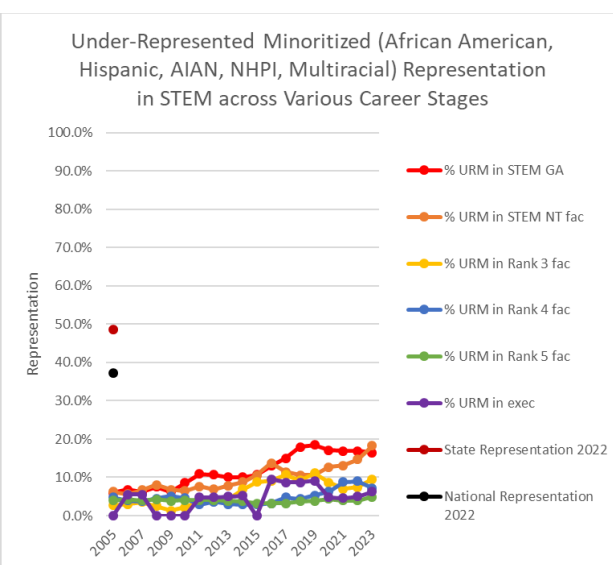
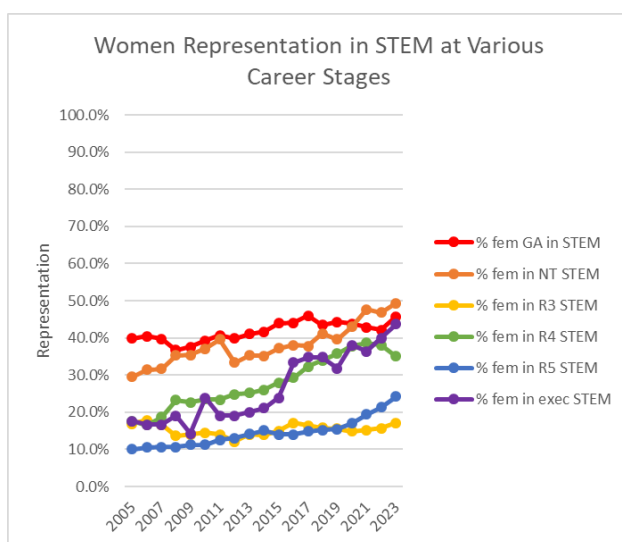


I am incredibly interested in tracking the state of our profession and ensuring the technological progress of our society is driven by diverse perspectives, as diverse perspectives lead to better solutions and a better bottom line [Hong, BCG Global]. I also feel this moral obligation to ensure that professionals are not hindered in their careers due to their identity (visible or not). Ultimately, I love science and I want to make science as accessible as possible to ensure that anyone who wants to engage in science has the opportunities to reach the highest echelons of the scientific community unhindered by non-meritocratic factors. I have an extensive history in advocacy and outreach pertaining to Diversity, Equity, Inclusion, and Justice.

Advocacy

We as an academic community and industry are posing questions and pursuing missions that push the frontiers of humanity into outer space. Yet, our field does not involve a representative sample of humanity's perspectives in these pursuits, noticeably lacking women and under-represented minorities (URM) in the Black, Hispanic, American Indian and Alaskan Native, and Native Hawaiian and other Pacific Islander communities. Currently at University of Hawaii's Manoa's College of Engineering, women consist of less than 20% of the undergraduate student population and less than 8% of the faculty population. Native Hawaiians consist of 10% of the state population yet represent 5% of full professors at UH Manoa. Granted, other STEM colleges across the university have better women representation but I always come back to the question: "Why?" In our past, the question is easily answered with "women were not allowed at universities" or "Native Hawaiians were segregated to attend separate schools" but the answers today are much more nuanced.

I believe in data-driven DEI policies and so I am a co-PI on a [gender equity in STEM Catalyst grant from the NSF ADVANCE program](#), which has expanded to include URM academics. The purpose of a Catalyst grant is to investigate systemic barriers at my particular institution that prevent participation of women and URM. My particular role in the project is to collect institutional demographic data from the University of Hawaii at Manoa Institutional Research Office and to analyze demographic trends across time and across career stage based on gender, ethnicity, and academic discipline. I compared gender and URM demographic trends in all disciplines to just STEM colleges, such as Engineering, Natural Sciences, Ocean and Earth Science and Technologies.



Unfortunately, my plots show that the STEM disciplines exacerbate under-representation of women and minority groups and as power increases, women and URM representation decreases. These plots are only a very flat projection representing the diversity of our community. My team turned to focus group interviews and survey data to answer questions of equity (i.e. “are women and URM academics given the necessary resources to progress their careers?”) and inclusion (i.e. “do women and URM feel safe to bring their full selves to their workplace?”). We have uncovered clear barriers that hinder the success of any professional, but disproportionately women and URM professionals: lack of paid family leave, dual career policy, and unclear or conflicting policies and procedures on university/college/department websites. We are now drafting a strategic plan at the university level to remove these barriers and include policies that promote the success of all individuals regardless of identity, which we will submit to the Provost’s office and to NSF for an ADVANCE Institutional Transformations grant. I’m particularly curious in expanding our work to investigate the impact of professional success based on invisible identities, such as socioeconomic class, sexuality, ability, religious affiliation, political affiliation, which are currently not measured by our institutional research office.

While the Catalyst grant targets the university level, I’ve also contributed to DEI efforts at the school level, such as serving in the search committee of my school’s Director of Diversity Initiatives search in 2023. This position is unprecedented at the university level and will set an example for future DEI leadership positions. At the unit and department levels, I’ve held facilitated discussions about sexism, racism, and being a Native Hawaiian academic/professional. I’ve served on my unit’s Tenure and Promotion Review Committee and the Earth Science department’s Justice, Equity, Diversity, and Inclusion committee. I’m a faculty mentor of [Huliāmahi](#), an Earth Science and Hawaii Institute of Geophysics and Planetology graduate student/faculty group promoting DEI within my school. We’ve brought about all-gender restrooms, collectively finished an Unlearning Racism in the Geosciences curriculum and deliverables, hosted speed mentoring events, and investigated department demographics and culture through a climate survey. We’ve published about our efforts at the American Geophysical Union in 2021 [Janiszewski]. Within my research group, I speak out about DEI issues and offer added mentorship to women and URM students. At the national level, I serve as the co-lead for the DEI committee of the NSF AI Institute for Dynamic Systems (>100 academics).

Outreach

While advocacy can address systemic barriers within my institution, I also tirelessly dedicate myself on the separate front of outreach to increase the applicant pool from which we draw our next generation of scientists and engineers.

I’ve given talks to the following organizations as a part of my [outreach](#) efforts:

- Singapore Space Challenge (>200 high school and university students)
- Ochanomizu High School in Japan (>200 high school students)
- SOEST to IfA First Year Student Research talks (>30 graduate students)
- Hawai‘i Data Science Institute (>50 graduate and undergraduate students)
- Hawai‘i Women in Data Science (Keynote 2022) (>100 women professionals)
- VEX Robotics Keynote (>200 middle and high school students)
- Various department seminars (>200 academics)
- College of Engineering Wahine (women) Connect (>20 women undergraduate students)
- Institute for Astronomy’s Science Café (>30 community members)

I helped our university secure funded graduate fellowships in:

- Planetary science by presenting my work to the Peg51 institute

- Indigenous scholarship by reaching out to the Sloan Foundation

I have served on many public mentorship panels for:

- Cornell's Future Professors Institute (>60 underrepresented graduate students)
- UH's Society of Women Engineers (>30 women undergraduate students)

My Why

I've personally felt the impact of my identity negatively feeding back into my professional success, likely because of my visible gender compounded by my age and ethnicity. I see myself as a researcher, a scientist, an engineer; I don't see myself as a woman researcher until someone imposes this [identity](#) on me by sexually harassing me or imposing a sexist comment. The [culmination of gender discrimination and sexual harassment](#) (even assault) has taken a heavy emotional toll on me throughout my career. I channel my emotions into productive energy to read studies about identity in the workplace, collect and analyze demographic data, [speak publicly on my experiences](#), [help others work through discrimination](#), and offer reasoned suggestions to change our culture such that the wrongs imposed on me will likely not happen to anyone else. Data and policy are my armor.

References

- BCG Global. "How Diverse Leadership Teams Boost Innovation," July 17, 2020. <https://www.bcg.com/publications/2018/how-diverse-leadership-teams-boost-innovation>.
- Hong, Lu, and Scott E. Page. "Groups of diverse problem solvers can outperform groups of high-ability problem solvers." Proceedings of the National Academy of Sciences of the United States of America 101.46 (2004): 16385-16389.
- Janiszewski, H., Caplan, C., Chertok, M., Coats, S., McKenzie, T., Okuhata, B., Pietruszka, A., Ravanis, E., Shea, T., Tachera, D., Zhu, F., "Huliāmahi: Overflowing of JEDI Efforts in the Earth Sciences at University of Hawai'i at Mānoa". American Geophysical Union (AGU) Fall 2021 Meeting.