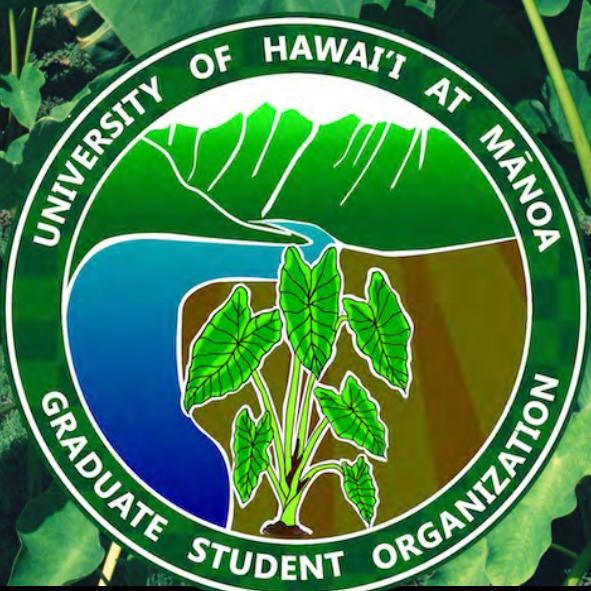


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MERIT BASED AWARDS REPORT



19



ABOUT

History

In order to promote outstanding graduate student work at the University of Hawai'i at Mānoa, the Graduate Student Organization (GSO) announced the first annual Merit Based Awards in 2019 to recognize graduate student excellence in Diversity, Mentorship, Research, Service and Outreach, and Teaching.

These awards funded two (2) students in each category for a total of ten (10) awards, each in the amount of \$5,000.

Funding Source

The University of Hawai'i at Mānoa Office of Research allocated \$58,000 to fund the first annual Merit Based Awards for graduate students. Of which, \$50,000 was distributed as cash awards to winners.



2019 APPLICATIONS

134

*Total
Applications*



21 PEER REVIEWERS



MERIT BASED AWARD RESEARCH

Description

The Graduate Student Organization aims to support graduate students in timely completion of their course of study at the University of Hawai'i at Mānoa through encouraging excellence in research. In order to support this aim, GSO Merit Based Awards in Research will be awarded to one (1) Master's level student completing their Master's Thesis, and one (1) Doctoral level student completing their dissertation. Successful candidates will demonstrate a history of scholarly contributions and commitment to research.

MERIT BASED AWARD RESEARCH - DOCTORATE



Trista McKenzie

My Ph.D. and GSO Merit Award application focus on water pollution by developing novel ways of tracing wastewater in the environment as well as studying how sea level rise impacts water quality on Pacific Islands. This research is important not only to Hawai'i, but also the broader Pacific Island community, which will be disproportionately impacted by sea level rise. My goals with this project are to provide valuable information for community leaders, governments, and land managers in preparation for higher sea levels. Wastewater pollution to streams and coastal waters is a significant issue for Hawai'i because many areas of the islands do not have access to proper wastewater infrastructure. To make matters worse, the islands are disproportionately developed along the coast, offering a direct and rapid pathway for wastewater to reach beaches and recreational waters. Further complicating remediation, wastewater pollution is often difficult to trace and source in the environment because there are numerous potential sources, and not all are human-sourced. Sea level rise will further impair water quality, particularly on Pacific Islands. Sea level is projected to increase by 0.3 to 1 m in the next 100 years, which will result in flooding of coastal wastewater infrastructure and may threaten drinking water supplies, amongst other negative impacts. One way I study future sea level rise impacts is by conducting fieldwork during king tides (very high tides that can cause flooding) as a proxy for future sea levels. The funding from the GSO Merit Award will go toward increasing the number of locations studied, allowing for a more comprehensive treatment of how sea level rise will impact Hawai'i.

MERIT BASED AWARD RESEARCH - MASTERS

Steven A. Heisey

My Master's research at the University of Hawai'i at Mānoa has focused on studying plant and soil microbes. As part of the Nguyen Lab of Soil Microbial Ecology in the Department of Tropical Plant and Soil Sciences, we address fundamental questions in soil microbiology and apply our knowledge to help address issues in agriculture that apply to the extremely diverse soils in Hawai'i and the rest of the tropical world. My research over the last two years has investigated how we can use organic and biological-based soil amendments to improve agricultural productivity in low-fertility soils, and how these alternative nitrogen fertilizer inputs impact the soil microbial community. To achieve this, I designed a greenhouse experiment that looked at how plants respond to single additions of either a synthetic nitrogen fertilizer, a compost, or a microbial "biofertilizer", that is, a product containing cultures of plant beneficial microbes. I took yield measurements and sequenced the soil microbial community using cutting-edge molecular tools. Results of the study revealed that this particular "biofertilizer" did not improve plant growth or alter established soil microbial community structure. The compost acted as an extended release fertilizer and introduced new nutrient-cycling microbes that established themselves in the soil system and were detectable 200 days later. In addition, compost amendments can increase microbial interactions, creating a resilient microbial network. In contrast, synthetic fertilizers could decrease interactions among microbes. Fertilizer type can influence interaction patterns of specific microbes and some of the organisms introduced by the compost were highly interactive. This gives us insight into possible mechanisms for gain or loss of microbial ecosystem services in response to fertilization strategy and will help to move the field forward as we develop more detailed microbial indicators for soil health and fertility.





MERIT BASED AWARD DIVERSITY

Description

The Merit Based Awards in Diversity are designed to recognize outstanding graduate student work related to diversity or diverse populations. The Graduate Student Organization defines diversity broadly to include race and ethnicity, national origin, indigenous heritage, gender, sexual orientation, age, developmental or acquired disabilities, socioeconomic status, and other human attributes with significant implications for social identity and historical experience.

MERIT BASED AWARD

DIVERSITY

Michelle Kawelau Wright



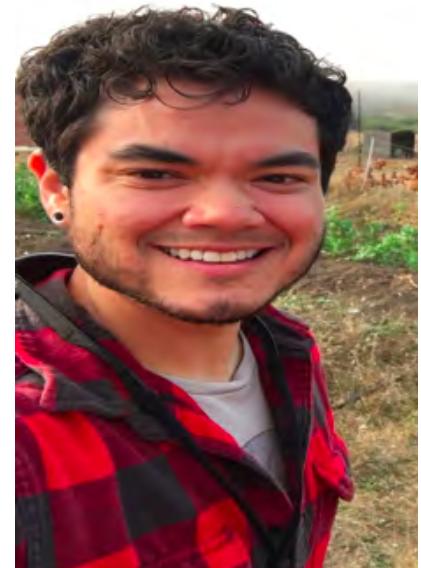
Receiving this GSO Diversity Merit Scholarship is pivotal for me to continue researching the land law and tenure changes in the transition from the Hawaiian Kingdom through Hawaii's territorial period in order to expose how racial constructs supported by land law changes disenfranchised some while supporting others. To date, very little has been written about this time period in Hawai'i, which has created a unique challenge for me conducting research. It has necessitated hundreds of archival research hours at the Hawai'i State Archives, Hawai'i Bureau of Conveyances as well as other archives in San Francisco, Maryland, and New Zealand to bring the details of this time period to light. This award will enable me to travel to Washington DC and Kew, London to continue my research at their respective National archives, looking for correspondence between America and Hawai'i during the years 1893–1959. I have looked at their finding aids online and have been able to verify that they have a lot of documents in my subject area. When I started graduate school, I realized that Native Hawaiian graduate students from across the campus had few mechanisms to network and support each other. While obtaining an MA degree in Hawaiian Studies, I was fortunate to be surrounded by other indigenous students and faculty, unlike many of my Native Hawaiian graduate student counterparts in other disciplines. I heard over and over again how difficult it was to be in departments with a small (or nonexistent) number of indigenous students and faculty. In response to this, I started an RIO and ran numerous writing retreats to support Native Hawaiian students in many disciplines.

MERIT BASED AWARD

DIVERSITY

Shayle Matsuda

Shayle Matsuda is a 4th year doctoral candidate of Marine Biology at the Hawaii Institute of Marine Biology, where he conducts research on the impacts of climate change on reef-building corals and their associated microbes. His own struggles with discrimination have deeply influenced his decision advocate for diversity, equity, and inclusion in STEM. As a research scientist, his professional and educational background uniquely prepares him to recognize and respond to the needs of diverse populations as a mentor, educator, and role model. He focuses his work on diversity and advocacy in three key areas of impact: 1) increasing visibility of LGBTQ+ people in STEM, 2) educating students and professionals, to increase retention of LGBTQ+ students in STEM, 3) using his skills as a science communicator and organizer to affect public and institutional perspectives on diversity. His efforts to make STEM a more welcoming and inclusive place for LGBTQ+ and all marginalized people has manifested in many ways: mentorship, resource generation, community and conference organizing, public speaking and workshop facilitation. Shayle is a member of the Diversity and Inclusion Team at oSTEM (ostem.org), a co-organizer of “Inclusive SciComm A symposium on advancing inclusive public engagement with science”, the first science communication symposium to focus solely on diversity, equity, and inclusion, and is a member of the Broadening Participation Committee for the Society of Integrative and Comparative Biology (SICB). He continues to be driven by social and environmental justice goals and as he strives for excellence in a career in research, he remains committed to working to make the institution of scientific research a more diverse and welcoming place.





MERIT BASED AWARD TEACHING

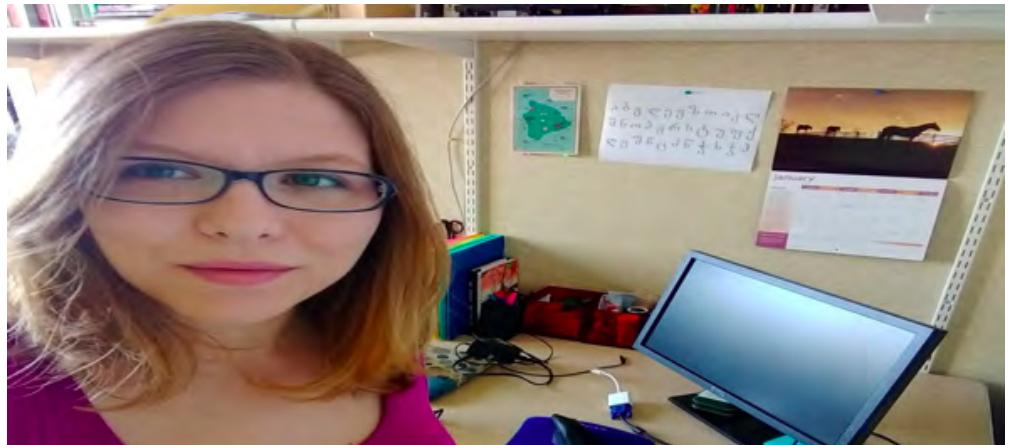
Description

The Graduate Student Organization aims to celebrate and honor exemplary teaching by currently enrolled graduate students who are engaged in teaching undergraduate or graduate students. The Merit Based Award in Teaching is important because it honors outstanding graduate students, reminds the campus that teaching is a central part of the university's mission, and can inspire students and professors to give increased attention to the educational process.

30

*Total
Applications*

MERIT BASED AWARD TEACHING



Bryn Hauk

I applied to the GSO Merit-Based Award in Teaching, because I have worked hard to develop a teaching philosophy that I hope serves my students meaningfully and effectively. There are three cornerstones to my philosophy. First, I adapt my teaching to prioritize my students' goals. I am a linguist, but my students belong to other fields and have different goals in mind. Therefore, I use my linguistic training as a unique tool for mentoring student writing for their chosen profession. As part of our coursework, I guide students in linguistic analyses of scholarly articles to discover patterns of what does and does not occur in academic prose, identifying a target for successful writing to practice throughout the semester.

Second, I adhere to the principle that every student deserves equal consideration. It can be tempting to believe that students who fall behind in coursework are simply not trying and therefore deserve the holes they dig themselves into. However, by reaching out to each student who appears to be struggling, I have learned that it is not out of laziness or arrogance that students skip class and miss assignments, but often because of serious personal crises. By remaining flexible, I have had success in helping would-be failing students reverse course.

Finally, I believe that my development as an educator is never complete. A good teacher must remain humble and earnest about improving their methods. Therefore, I constantly seek mentorship, and I routinely mentor my junior colleagues in their first semester teaching, because this role keeps me vigilantly critical of myself as a teacher. I am perpetually in awe of what a great responsibility it is to be a guide for students as well as colleagues, and I strive at every turn to be worthy of their trust.

MERIT BASED AWARD TEACHING

Alanna Tseng



I am truly honored and humbled to be a recipient of the 2019 GSO Merit Award in Teaching! My experience as a Biology teaching assistant (TA) over the last five years have given me the invaluable opportunity to learn how to promote scientific curiosity inside and outside the classroom. I have taught a diverse range of laboratory courses including Introductory Biology, Animal Physiology, Cell & Molecular Biology and Genetics. In addition to my required TA duties, I designed a series of tutorials and worksheets that showed freshman Biology majors how to navigate the university library system and formulate effective thesis statements. I also rewrote a lab manual so that all students taking Introductory Biology could experience a new hands-on squid dissection to learn more effectively about the anatomy of Mollusks. By focusing on my students' interests, I was able to build an individualized environment where students could openly share with me what piqued their curiosity about biology. Outside of the classroom, my success as a teacher is undoubtedly measured by the achievements of my students. I have helped my previous students find lab positions on campus and write them recommendation letters for summer research programs. I have also helped high school and undergraduate students complete small research projects and graduate with honors. My role as a TA is multi-faceted: a teacher to students, an advisor to undergraduate teaching instructors, a mentor to incoming Tas and an assistant to the lab coordinator. Despite attending graduate school to conduct molecular biology research, my experiences as a TA have ignited my joy for teaching and has enabled me to consider a career as an educator. I am extremely grateful for this award which has encouraged me to pursue teaching in my home state of Hawaii and inspire students to explore careers in STEM.



MERIT BASED AWARD MENTORSHIP

Description

The Graduate Student Organization recognizes the importance of encouraging graduate student mentorship of undergraduates at the University of Hawai‘i at Mānoa as a means of fostering a positive academic climate and promoting professional development. For this award, mentoring is defined as a professional relationship in which an experienced person (the mentor) assists another (the mentee) to develop specific skills and knowledge that will enhance the less-experienced person’s professional and personal growth.

MERIT BASED AWARD MENTORSHIP



Joy Agner

I am incredibly honored to receive the GSO Merit Award for Mentorship! As a first-generation college student from a rural logging and fishing community in Oregon, I often reflect on how I ended up in a doctoral program. From kindergarten through college, I cannot overstate the power of mentorship in shaping my path. Because of my love and gratitude for my own mentors, working with students inspires me, and I have mentored a wide diversity of students at high schools, middle schools, and now at the University of Hawai`i. As I consider what has made my mentees thrive, and my most influential mentors successful, I believe the most important aspect is caring about mentees as individuals. Although we rarely use the word “love” in academia, I truly believe we need to know our mentors love us. Mentees need to be confident that their personal welfare is more important than any task or accomplishment. The second key element to effective mentorship is breaking down limitations based on fear, imposter syndrome, and lack of belonging. Feelings of inadequacy often fall along lines of race, class, ability, gender and sexual orientation, but they can stem from myriad factors which are often invisible to outsiders. By knowing students well on a personal level, mentors can help identify negative self-perceptions and break them down through attentiveness, actively imagining their full potential, and the third element of effective mentorship: skill development. In addition to recognizing and growing individual strengths, I help students address weaknesses without identifying with them. In sum, what I aim to achieve is transformational education, rooted in lasting relationships, mutual respect, and care. I love expanding students’ vision of their capability. This is what fostered my success, and is the motivation for what I hope to achieve as a teacher and a scholar.

MERIT BASED AWARD MENTORSHIP



Ariana Huffmyer

I am a graduate student at the Hawai'i Institute of Marine Biology (HIMB) and the University of Hawai'i at Mānoa (UHM) pursuing a blended PhD in coral biology and science education. The success of both my coral biology and science education research is dependent on fostering productive and collaborative mentoring partnerships with students across all stages of their undergraduate education. During my graduate studies, I have been the primary mentor for ten undergraduate students in independent research projects with six of these students enrolled in community college campuses on O'ahu. In each mentorship relationship, I aim to provide a productive, challenging, and enjoyable experience for students, helping them produce formal research products while gaining confidence, self-efficacy, and knowledge of the scientific process and their future career goals. I feel a strong commitment to invest significant quality time and energy towards providing valuable experiences for my mentees and a formal recognition of this effort through the GSO Merit Based Award in Mentorship is extremely meaningful to me on a personal and professional level. Following my graduate studies, I will pursue a career that blends scientific research and outreach education to advance conservation of marine ecosystems. My ability to mentor, teach, and communicate with others will be an important consideration in my future career applications and validation of these skills through this award will assist me in pursuit of my goals. As previous mentorship had shaped my personal experience in science, I am excited and humbled to be able to continue providing positive experiences for other students.



MERIT BASED AWARD SERVICE & OUTREACH

Description

The Rachael Wade Merit Based Award for Service and Outreach: The Graduate Student Organization recognizes the importance of promoting graduate student service to the University and outreach to the community at large. This category is broadly defined to include student-led projects/programs and/or student work experience that benefit and enrich the university, local, and/or global community. Successful applicants will demonstrate a history of beneficence.

MERIT BASED AWARD SERVICE & OUTREACH

Kanoe'ulalani Morishige



Hawai'i's marine ecosystems are faced with a complex set of social, cultural, and ecological challenges that threaten the future holistic health of 'āina, which encompasses lands, oceans, and communities. One of the major challenges in linking research to support community movements to address these issues lies in building capacity of local researchers who can coordinate and facilitate research partnerships between local, NGO, state, and federal agencies. I am a Native Hawaiian woman Ph.D. candidate in Marine Biology who works closely with communities across Hawai'i to provide a pathway forward to overcome these challenges. As a co-founder of a Native Hawaiian non-profit organization, Nā Maka o apahānaumokuākea, I assist with implementing the Nā Kilo 'Āina (NKA) Program, a series of initiatives to implement biocultural community-based marine monitoring, long-term community engagement, and local youth leadership building. Through a shared long-term commitment to the communities we serve, NKA empowers community-driven discussions that address the behavioral shifts needed to support 'āina momona, a state of healthy and productive people and places. As part of the NKA program, my dissertation research serves community-based approaches to resource management by identify major environmental biophysical drivers of eproductive performance of hā'uke'uke (*Colobocentrotus atratus*) and intertidal communities across Hawai'i. The goal is to identify which populations will produce high-quality eggs that can potentially support higher larval survival and recruitment. In collaboration with NKA programs over the past ten years, we will develop solutions for place-based sustainable management of intertidal ecosystems. Furthermore, I support efforts to build capacity of local professionals, undergraduate, and high school students who are committed to supporting the collective health and well-being of their communities.

MERIT BASED AWARD SERVICE & OUTREACH



Clarisse Sullivan

I am Clarisse Eleanor S. Sullivan and I am a third-year master's candidate and international student in the Oceanography Department at the University of Hawai'i at Manoa. I am also a graduate research assistant in the Rappé Lab at the Hawai'i Institute of Marine Biology where I study the relationship between marine microbial metabolism and biogeochemical processes in subsurface environments. As a recipient of the Rachel Wade Merit Based Award for Service and Outreach I plan to fund outreach initiatives such as developing a deep-sea discovery lab for elementary school kids. The goals of this outreach would be to teach about the importance of deep-sea ecosystems and the technologies needed to study them, to recreate the joy of ocean exploration through hands-on activity and virtual media utilization and to foster interest in STEM education, particularly from underrepresented groups at two Honolulu-area public elementary schools, Manoa and Noelani. I also hope to expand this deep-sea discovery initiative as a public presentation by participating in outreach opportunities in the School of Ocean and Earth Science and Technology (SOEST) Outreach Office and Graduate Women in Science (GWIS) to ignite enthusiasm and support for STEM education and oceanographic research efforts at UH Manoa. These proposed activities would create learning opportunities for me to hone my communication skills and to share and broaden my perspectives on key environmental issues such as ocean preservation and climate change. Ultimately, these conversations with the public are necessary to inspire the next generation of STEM scientists and for scientific innovation to progress thereby benefiting society as a whole.



THANK YOU