



Dr. Paul Bienfang



Dr. Lorenz Magaard

In Memory Of

The GES program and the Department of Oceanography are deeply saddened by the recent passing of two Emeriti faculty, Dr. Paul Bienfang and Dr. Lorenz Magaard.

Dr. Bienfang was an alumnus of the department. His research specialties included ciguatera fish poisoning, environmental water quality, and phytoplankton ecology issues, and his research laboratory was part of the Pacific Center for Research in Marine Biomedicine, one of four U. S. centers for oceans and human health. Dr. Bienfang's desserts, particularly his cheesecake, were legendary among those who had the good fortune to enjoy them.

Dr. Magaard moved to Honolulu, Hawaii, from Wallsbüll, Germany, in 1975 and joined the department as a professor. He specialized in ocean waves, oceanic turbulence, oceanography of Hawaiian waters, and climate and society, and made essential contributions to the theory of ocean waves. More significantly, Dr. Magaard was instrumental in the founding and development of SOEST, an accomplishment of which he was most proud.

They will both be missed by their Oceanography and SOEST 'ohana.

The University of Hawai'i at Mānoa Department of Oceanography presents SUMMER 2020



GLOBAL ENVIRONMENTAL SCIENCE

Friday, August 7, 2020

10:30am - 12:00pm

Via Zoom

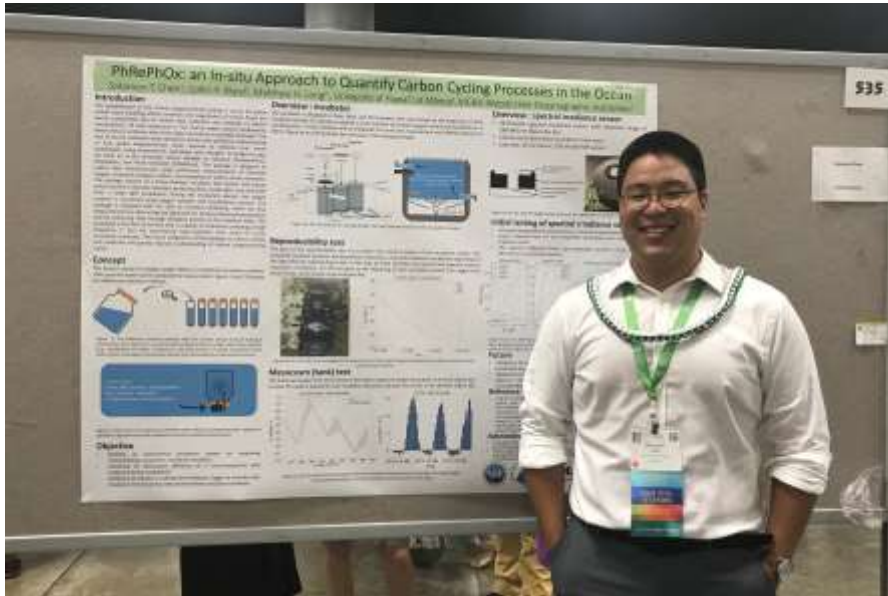


Photo courtesy of Solomon Chen. Solomon presenting his summer research at the 2019 SACNAS National Diversity in STEM Conference in Honolulu, HI. (Photo credit: Amanda Wong)



Photo courtesy of Zoe Curley. Zoe collecting X-ray fluorescence readings to investigate heavy metals in soils. Her internship is focused on the DOE project of assessing heavy metals and organochlorine pesticides in soils of all Oahu and Hawai'i Island elementary schools. (Photo credit: Zoe Curley)



Photo courtesy of Shaun Wriston. Shaun servicing a Sea-Bird Electronics CTD sensor along O'ahu's south shore for the PacIOOS Nearshore Sensor Group. (Photo credit: Gordon Walker)

Supporting Undergraduate Research

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About GES

The Department of Oceanography launched the undergraduate Global Environmental Science (GES) program in 1998 with the generous support of the Pauley Foundation. The vision and brainchild of Emeritus Oceanography Professor Dr. Fred Mackenzie, the GES program is known for its rigorous math and science foundation, integrated study of environmental- and sustainability-related issues, and faculty-mentored research thesis requirement. This research experience results in every GES graduate having completed a faculty-mentored research project, written a thesis, and presented their research results in a public forum. As a result of the challenging curriculum and research thesis requirements, GES graduates are well-prepared to enter the workforce in environmental science-related fields and industries or continue on to graduate studies in many different subjects in the sciences, social sciences, law, medicine, and engineering.

Contact GES

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GES Symposium

GES students presenting at this symposium conducted basic research, analyzed their results, and compiled their findings into a thesis format. Many theses are converted into peer-reviewed journal publications; a feat usually accomplished by students once in graduate school. The GES Symposium is a celebration and culmination of undergraduate research efforts and experiences, so join us in supporting, engaging, and applauding today's presenters.

Agenda

10:30 Welcome

10:35 Solomon Chen

Strategic Monitoring and Resilience Training in the Ala Wai Watershed, Oahu: Seasonal and Episodic Variability
Mentor: Brian Glazer (Oceanography)

10:50 Zoe Curley

An Investigation of Environmental Drivers of Crown-of-Thorns Starfish Outbreaks on Guam
Mentor: James Potemra (Hawai'i Institute of Geophysics and Planetology)

11:05 Diana Lopera

Understanding Change: Examining the Effect of Ahupua'a Restoration Efforts on Water Circulation in Loko i'a o He'eia, a Native Hawaiian Fishpond
Mentors: Yoshimi Rii (Hawai'i Institute of Marine Biology) and Margaret McManus (Oceanography)

11:20 Shaun Wriston

Trends in Coastal Ocean Conditions on O'ahu, Hawai'i's Urban Shores
Mentor: Margaret McManus (Oceanography)

Biographies



Solomon Chen

Mentor: Brian Glazer

Solomon was introduced to the environmental sciences by accident. He took interest in oceanography and technology developments after taking classes in environmental monitoring and sustainability. He participated in the SMART Ala Wai project, which turned into his thesis research on water quality and estuary monitoring.

Mentored by Dr. Brian Glazer, he took a step forward in the direction of applied engineering and technology development in oceanography research. He was a summer student fellow at the Woods Hole Oceanographic Institution in 2019. He will be continuing his education as a Ph.D. student in the MIT-WHOI Joint Program, focusing on chemical oceanography and sensor development. There, he will keep exploring the endless possibilities of environmental sciences and innovative technologies. Solomon was born in Taipei, Taiwan, and raised in many places around the world.



Diana Lopera

Mentors: Yoshimi Rii and Margaret McManus

Diana knew she wanted to pursue a career in STEM, but was unsure of what options were available to her. Although college got off with a rocky start, switching majors from Biology to GES was one of the best decisions she made in her undergraduate career. The guidance and support she received from faculty and peers provided her

various opportunities to delve into various STEM focuses, from studying tropical lizards in southern Costa Rica to reaching out to communities about King Tides in Hawai'i and Pacific Islands. Known as the "Queen of Internships" within the GES 'ohana, Diana has spent the past five summers immersed in national and international research internships across various STEM fields and has presented her work in conferences across the nation. Diana is a constant dean's lister and recipient of a multitude of scholarships and awards, such as the SOEST Undergraduate Award for Service and Leadership and the highly competitive NOAA Ernest F. Hollings Scholarship, which led to her GES project on looking into how restoration efforts affect water circulation in *Loko i'a o He'eia*, a Native Hawaiian Fishpond. Diana was born and raised on the island of Saipan and is the first in her family to receive a college degree.



Zoe Curley

Mentor: James Potemra

Zoe grew up spending most of her time in the water and developed a deep appreciation for the life and dynamics of the ocean. She wished to understand more about the ocean and environmental processes so upon hearing about the GES program, Zoe immediately jumped at the chance to expand her environmental

knowledge. Zoe had always heard about the destruction Crown-of-Thorns Starfish (COTS) have on coral reefs but after her travels to Fiji and a discussion with Dr. James Potemra about the ongoing crown of thorns starfish research there, she was inspired to research COTS in Guam. With the help of Dr. Potemra, she developed her thesis project in the hopes of helping Guam coral reef managers gain better insight into the environmental drivers of COTS outbreaks. Zoe desires to continue working in the environmental consulting field and traveling the world to visit and learn about diverse ecosystems. Zoe was born in San Diego, CA, and raised in Santa Rita, Guam.



Shaun Wriston

Mentor: Margaret McManus

As a non-traditional student, Shaun struggled to stay motivated in his academics. During his time at Kapiolani Community College, he found himself lucky to be a part of a Summer Bridge program, which toured SOEST, showed him GES, and ultimately pushed him to continue in academia. Since then, Shaun has realized that

one's time in school is only as valuable as the opportunities one takes. When a job was presented through his Maile Mentor, Gordon Walker, to work in the McManus Oceanography lab, he decided to apply. This opportunity has given him experience and opened many other doors. He has participated in multiple REU internship programs, presented at national and international conferences, completed his thesis project involving the PacOOS Nearshore Sensors, and attained graduate positions. Most importantly, Shaun realized that it is possible to combine passion and work while making a positive impact. Shaun plans to continue working in the field of oceanography and hopes to incorporate his graduate studies in Urban and Regional Planning to integrate science and policy in Hawai'i. Shaun was born in Hilo, HI, and raised in Honolulu, HI.