

## 2023 BANQUET SPEAKER, SAM GILLIE



Sam Gillie, 1993 HCES past president, will give the keynote address.

Sam has served as past presidents of American Society of Mechanical Engineers (ASME), American Society of Heating, Refrigeration and Air Conditioning Engineers (ASHRAE) and the Engineers and Architects of Hawaii (eaH). Sam is currently the Secretary of eaH Hawaii's oldest professional association celebrating its 121st anniversary this February. Sam maintains eaH's YouTube channel earning revenue through the Partner program. He is also a Distinguished Toastmaster.

Sam is originally from Butte, Montana and started as a Mechanical Engineer with the Navy in 1975 refueling Nuclear Submarines at Mare Island Naval Shipyard in Vallejo Ca. From there he worked overseas in Japan, Australia, Brazil, London, and Texas while working to develop and deploy offshore oil platforms.

He arrived in Honolulu in 1987 to work as a consulting mechanical engineer with the former GMP associates working on air conditioning, water, and wastewater projects. He joined Hawaiian Electric in 1996 as a project engineer working on energy conservation and renewable energy. He was hired by Dave Waller, who was awarded the Lifetime Achievement Award in 2021. Sam retired from Hawaiian Electric in 2019 as a Senior Technical Engineer.

During Sam's over 30 years working in Hawaii he has interacted with a number of past HCES & HSPE awardees, Alan Lloyd, Sam Dannaway, Stanford Yuen, Fred Kohloss, Ed Chang, Bill Bonnet, Owen Miyamoto, Ken Morikami, Wesley Segawa, and Charles Kinoshita.

As part of eaH's 120th anniversary last year, Sam researched the early history of eaH, discovering five previously unknown Presidents between 1902 and 1905. He also discovered Hawaii's connection with the Country's oldest engineering association the Engineering Club of Philadelphia formed in 1877. Many of eaH's presidents were the charter members for ASCE, HPES, ASME, IEEE, ASHRAE and AIA.

Sam will provide some background history on Hawaii's prominent engineers, architects and scientists from the last century leading up to the founding of HCES in 1965.

See HCES website to register for banquet.

## SOCIETY OF AMERICAN MILITARY ENGINEERS

**ENGINEERS WEEK KICK-OFF LUNCHEON  
HALE KOA HOTEL  
February 21, 2023**

Two presenters will summarize the Shipyard Infrastructure Optimization Program (SIOP), a holistic plan that integrates all infrastructure and industrial plant equipment investments at the Navy's four public ship yards to meet nuclear fleet maintenance requirements. SIOP will also improve Navy maintenance capabilities by expanding shipyard capability and optimizing shipyard configuration. The program is committed to applying lessons learned and industry best practices. SIOP focuses on three lines of effort:

1. Constructing and recapitalizing dry docks.
2. Recapitalizing and reconfiguring infrastructure.
3. Modernizing industrial plant equipment.

The presenters include Ms. Joanna Victorino and CAPT. Stephen Padhi.



**CAPT. Stephen Padhi, Prospective Commanding Officer, OICC Pearl Harbor Naval Shipyard**

CAPT Padhi graduated from the United States Naval Academy with a Bachelor of Science degree in Ocean Engineering and was commissioned into the Civil Engineer Corps. He earned a Master of Science degree in Civil Engineering from Rutgers University in 2010. Padhi is a qualified Seabee Combat Warfare

*continued on page 3*

## FALL 2022 FRANCIS RHODES MONTGOMERY DESIGN COMPETITION

The Fall 2022 ASME Hawaii Francis Rhodes Montgomery Design Competition (FRMDC) was held on Wednesday, December 7, 2022 at the University of Hawaii at Manoa, Holmes Hall Room 309. This event is in its 35th year and cosponsored by the University of Hawaii, Department of Mechanical Engineering, and the ASME Hawaii Francis R. Montgomery Foundation.

The design competition consisted of 5 project teams from the ME 481/482 design course. Teams performed a timed presentation in which they conveyed their project goals, design challenges, specific areas where their learned engineering principles were applied, and their project results. Upon conclusion of the presentations, the competition moved outside of the lecture room where the teams were able to demonstrate their projects and answer more detailed questions from the judges.

Judges had the difficult job of determining team awards having been presented with 5 very well-done projects. Following the ASME/FRMDC scoring rubric, the judge ranked the first, second, and third place teams as follows: First place and \$500 was awarded to Team Slicinator 3000. In second place and receiving \$300 was Team Magma. And in third place, receiving \$200 was Team Super Sensor Drone.

Thanks to the efforts of Professor Dr. John Allen, the student project coordination and competition were completed with great success. Dr Allen has been the instructor for

*continued on page 5*



**Slicinator 3000**

*Jenaiah Faavi & Julia Hargis*



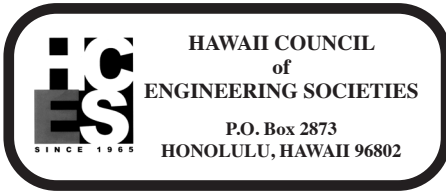
Published monthly by:

HAWAII COUNCIL OF ENGINEERING SOCIETIES  
SERVICE PRINTERS, INC.

1829 Dillingham Boulevard • Honolulu, HI 96819  
Telephone: (808) 841-7644 • Fax: (808) 847-1487  
ADDRESS ARTICLES FOR PUBLICATION TO:  
WARREN YAMAMOTO  
1526-C Pukele Avenue • Honolulu, HI 96816  
Telephone: 732-5216

**WILIKI MAILING LIST**

Additions and/or corrections to the Wiliki mailing list should indicate the proper society, institution or association. Corrections to email addresses should be submitted to your society coordinator.



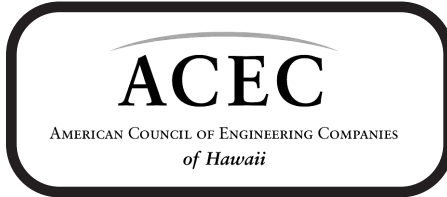
**HAWAII COUNCIL  
of  
ENGINEERING SOCIETIES**  
P.O. Box 2873  
HONOLULU, HAWAII 96802

HOME PAGE: [hceshawaii.org](http://hceshawaii.org)  
EMAIL: [hcesorg@gmail.com](mailto:hcesorg@gmail.com)

**2022-2023 OFFICERS**

Chair:	Jay Stone
Vice-Chair:	Kristen Yoshida
Secretary:	Kathleen Chu
Treasurer:	Lindsay Nakashima
<b>SOC Representative</b>	<b>Alternate</b>
AACE	C. Baze
ACECH	T. Goshi
APWA	R. Char
ASCE	E. Arakawa
ASHRAE	D. Kishi
ASME	A. Siu Ho
EAH	S. Gillie
FALEA	M. Stevenson
HSPE	M. Kamaka
HWEA	R. Babcock
IEEE	E. Chang
ITE	W. Yamamoto
SAME	L. Wong
SEAOH	K. Hashimoto
SFPE	S. Dannaway
SWE	K. Yoshida
UHM CoE	S.K. Choi

S. Nakamura  
D. Sato  
  
K. Kunemine  
  
J. Thomas



**ACEC Hawaii**

Website: [www.acechawaii.org](http://www.acechawaii.org)

**2022-2023 Board of Directors**

President: Nimr Tamimi, P.E.  
Engineering Partners, Inc.  
Pres.– Elect: Kyle Kaneshiro, P.E.  
The Limtiaco Consulting Group  
Shannon Holman, P.E.  
Treasurer: Orion Engineers & Associates  
Charles Jury, P.E.  
Secretary: Okahara and Associates, Inc.  
Garret Masuda, P.E.  
National Dir.: InSynergy Engineering, Inc.  
Derek Mukai, P.E.  
Past Pres.: Community Planning and Engineering, Inc.  
Ross Kaneko, P.E.  
Director: Jacobs Engineering Group  
Timothy Goshi, P.E.  
Director: KAI Hawaii, Inc.  
Stacey Miyamoto, PMP  
SSFM International

**CONGRATULATIONS TO ACECH EMERGING LEADERS PROGRAM COHORT #3 GRADUATES!**

The ACECH Emerging Leaders Program (ELP) just wrapped up its third cohort with a graduation ceremony recognizing its 18 students on December 15. Congratulations to these emerging leaders who are on track to become the next generation of engineering leaders in Hawaii: Eric Arakawa, Troy Ching, Owen Crabtree, Jessica Galacgac, Ryan Ishikawa, Lureen Komoda, Gregg Kuwahara, Kamu Lacerdo, Bryan Lum, Susan Mukai, Gregg Nakamura, Lindsay Nakashima, Mikki Slentz, Mason Suga, Alicia Suzuki, Brandon Uejo, John Uno and Kahealani Winchester.

The program's fourth cohort is slated to start in February.



[www.asme-hi.com](http://www.asme-hi.com)

**ASME-HI 2022-2023 Officers**

Chairperson: Derek Sato  
[derek.sato@HawaiiElectric.com](mailto:derek.sato@HawaiiElectric.com)  
Vice-Chair: Abel Siu  
[abel.siuho@hawaiiElectric.com](mailto:abel.siuho@hawaiiElectric.com)  
Secretary: Raymond Liu  
Treasurer: Kevin Dang  
[dangk001@hawaii.rr.com](mailto:dangk001@hawaii.rr.com)  
Member-at Large: Shaun Ildefonso  
Ed Chang  
Justin Souza  
Student Advisor: Dr. Woonchul Lee

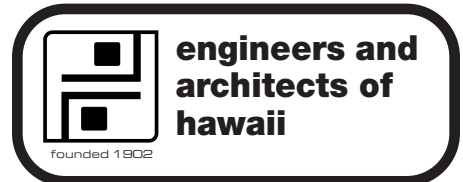
**November 18, 2022 GENERAL MEMBERSHIP MEETING NOTES**

Our November Zoom Virtual meeting was arranged by Chairperson Derek Sato with the following discussed:

- The Fall Francis R. Montgomery Design Competition is scheduled in December 7, 2022. Information on teams competing was requested. Request for judges was sent to Hawaiian Electric Engineers. Thank you items for judges was discussed for future competitions.
- ASME Hawaii on notice to remove ASME-HI.com web-site by June 2023 and considering other ways to distribute Wiliki to members.
- Richard A. Hernandez presentation was postponed instead he talked about his work experience.

**Request for Speakers**

ASME is asking for guest speakers to present any topic during our general meetings. If anyone is interested in presenting, please contact ASME.



**PO. Box 1901, Honolulu, HI 96805-1901**  
**An association for Hawaii's Engineers and Architects**

WEB address: [www.eahawaii.org](http://www.eahawaii.org)

**EAH 2022-2023 Officers**

President	Canaan Shon	(808) 845-3900
Past Pres.	Phil Blackman	(808) 282-7948
Treasurer	Aaron Erickson	(808) 591-2728
Secretary	Sam Gillie	
Director	Martin McMorrow	(808) 256-4713
Director	George Coates	(808) 234-5659
Director	Howard Wiig	(808) 587-3811
Director	Joe Feind	
Director	Dave Martin	(808) 543-4504

eah January 2023 Program Chair BOD

**Friday Jan 6**

Speaker: Ned Murphy, FRGS, Consulting Geochemist, Central Planet Repair LLC.

Topic: Think Like Bacteria

Ned's talk is about assessing, designing, and building applied bacterial treatment systems, generally underground but they are applicable in water bodies, and above ground treatment systems as well.

**Friday Jan 20**

Speaker to be announced.



**ACECH ELP Cohort 3**



# IEEE Electron Device Society Brings Energy Equity to Native Hawaiian Homesteaders on Molokai Living Without Access to Grid Electricity

By John Borland, IEEE

The IEEE Electron Device Society (EDS) recently approved funding a humanitarian project to bring Energy Equity to Native Hawaiian Homesteaders on Molokai living without access to electricity from the Grid. The \$25K grant will be used as part of the 6-month phase-1 pilot project administered by IEEE Smart Village (ISV). Three homestead sites with 2 to 5 multi-generational family dwellings have been selected. John Nelson President of ISV and John Borland chair of the IEEE Hawaii EDS chapter traveled to Molokai on Dec 15th and met with each Homestead family representative to discuss the project. Everyday life on Molokai involves using 5gallon propane tanks for heating hot water and cooking but one family was using wood and charcoal for cooking. Gasoline is \$6.35/gallon and they use 5gallon gasoline containers to fill and power several electric generators. We noted the various gasoline nozzles in use to reduce spilling and the toxic odor when handling. One Homestead site had a propane tank gas leak fire in July that destroyed their bus-home (see Figure 1). Another homestead family uses ice

depending on fossil fuel usage. Replacing dirty fuel usage (propane and gasoline) with 100% clean energy from the Sun (light & heat) will not only create a healthier environment but also reduce Energy Burden for Energy Equity and improve Quality of Life, never having to take a cold shower. We will install Island Nano-Grid and Nano-Grid Clusters using Solar + Wind + Storage (battery and thermal hot water) systems with energy sharing between each family dwelling. Energy efficient household appliances will also be installed including heat pump hot water, heat pump washer/dryer, Energy Star refrigerator/freezer, LED lighting and other energy saving household appliances (microwave oven, toaster oven, etc.). Each homesteader will have access to internet connection for smart home energy digitization to monitor, control and balance energy usage to maximize savings. After phase-1 completion, phase-2 would be a 2-3year project to expand Energy Equity to the remaining 126+ Native Hawaiian Homesteaders living without grid access. Molokai is an island of ~7,500 residents relying on tourism and government subsidies, reducing the need for each homestead family to generate ~\$500/month (\$6,000/year) reduces the need for Molokai to generate cash inflow of \$774K/year! Residential Island Nano-Grid systems getting 100% energy from the Sun will create a source of cash inflow for Molokai from **Passive Renewable Energy** rather than from tourism and government subsidies. A long time resident of Molokai says, "a dollar saved is a dollar earned" on Molokai. This project is "bringing electricity, a better quality of life, hot water, refrigeration and saving them money, you are reducing air pollution and stemming the outflow of money from Molokai to the oil companies."



Figure 1: July 2022 Homestead #1 propane gas fire.

boxes requiring ice for refrigeration, gasoline generator for electricity, propane for cooking on their livestock and agriculture farm (see Figure 2). They try to live off the land but end up

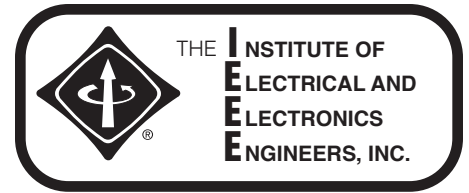


Figure 2: Homestead #3 ice box & gasoline generator.

polluting the air. Total monthly costs for fuel and ice for each family varies from \$400-\$800/month

To bring Energy Equity to all on Molokai including the remaining ~1,250 households with grid access but no access to rooftop solar including renters and low to moderate income (LMI) households, another future IEEE humanitarian project will look at "Battery Only or Battery + Portable/Mobile-Solar" systems as reported by Borland in his IEEE-PVSC June 2022 paper. Energy Burden reduction by 43-87% by lowering the schedule R rate 57¢/kWh (Aug 2022) to daytime Time-of-Use (TOU) rate which is ~31% lower on Molokai compared to >40% lower on Oahu (see Table 1 energy burden analysis for Molokai and Oahu). But the new federal Inflation Reduction Act (IRA) falls short to reverse Energy Divide by not providing direct cash rebates/incentives to LMI households. Solar Builder reported that 4 in 10 Americans do not pay any taxes and 7 in 10 do not have enough tax liability to receive full income tax credit benefits. Running the same numbers as above, there are ~1250 renters/LMI households without residential solar, saving \$100/month (\$1,200/year) reduces the need for Molokai to generate cash inflow of

\$1.5M/year. Combined with the Homesteaders that totals ~\$2.27M less in needed tourism and government subsidies creating a new industry from **Passive Renewable Energy**.



## IEEE Hawaii Section

### 2022 Officers

Chair: Roxanne Birch  
 Treasurer: Wayne Layugan  
 Student Activities: Aaron Ohta  
 Student Rep: Gwyneth Raquepo  
 HCSE Liaison: Eugene Chang

### SEMINAR ANNOUNCEMENT FOR IEEE AND ASCE

The Hawaii Section of IEEE is presenting a free seminar on "Practical Instruction on Ufer Grounds" at the Entrepreneurs Sandbox Tuesday, January 10, at 5:30 pm. This seminar is especially interesting to young electrical and civil engineers. The speaker, James Mercier, P.E. (ASCE Life Member, IEEE Life Senior Member), is an expert of the practical issues and IEEE Standard 142-2007 (the Green Book) and the National Electrical Code (NEC).

For more information see <https://events.vtools.ieee.org/m/323897>. Please register so that we manage the size of the meeting space. FREE!!

### SAME, from Page 1

Officer and a registered Professional Engineer in the State of Connecticut. He is a member of the Acquisition Professional Community and is a Certified Energy Manager. His personal awards include fore Meritorious Service Medals, two Navy Commendation Medals, the Navy Achievement Medal and various unit awards. In addition, he was the 2016 NAVFAC Mid-Atlantic Military Engineer of the Year.



**Joanna T.S. Victorino, Shipyard Infrastructure Optimization Program (SIOP) Department Director, Pearl Harbor Naval Shipyard, PMO 555, Navan Facilities Engineering Systems Command**

Ms. Victorino is from Northern California and received her Bachelor of Science in Civil Engineering from the University of California, Los Angeles. She is a registered Professional Engineer in the State of Hawaii and a member of Chi Epsilon, the Civil Engineering Honor Society. Ms. Victorino is a graduate of the NAVFAC Leadership Development Program (LDP) and her personal awards include NAVFAC Pacific Environmental Restoration Employee of the Year, and NAVFAC Pacific Engineer of the Year, and Honolulu-Pacific Federal Executive Board Supervisor of the Year. Ms Victorino has served as the Director for the SIOP Department at Pearl Harbor Naval Shipyard (PHNSY) since 2020. As the first SIOP Department Director for PHNSY, she represents the Program Management Office (PMO) 555 at PHNSY and supports the Shipyard Commanding Officer for SIOP.

See SAME website for more registration information.

Energy Burden	Access to Rooftop Solar				No Access to Rooftop Solar			
	HI No Solar	HI NEM	HI CGS+	HI CSS	HI Battery Only	HI Battery + Portable-Solar	HI Community Solar/Battery	HI Community Solar/Battery
Family Energy Usage								
Low Usage = 325kWh/month	/(Savings)	/(Savings)	/(Savings)	/(Savings)	/(Savings)	/(Savings)	/(10% Savings)	/(25% Savings)
High Usage = 1250kWh/month					TOU= (-26-33% Savings)			
Affluent Low Usage (Molokai)	2.4%/(0%)	0.3%/(87%)	0.3%/(87%)	0.3%/(87%)	1.3%/(43%)	1-0.3%/(55-87%)	2.10%	1.80%
Affluent High Usage (Oahu)	6.6%/(0%)	0.3%/(95%)	0.3%/(95%)	0.3%/(95%)	3.3%/(49%)	2.7-0.3%/(58-95%)	5.90%	4.90%
LMI Low Usage (Molokai)	9.9%/(0%)	1.3%/(87%)	1.3%/(87%)	1.3%/(87%)	5.6%/(43%)	4.3-1.3%/(55-87%)	8.90%	7.40%
LMI High Usage (Oahu)	27.5%/(0%)	1.3%/(95%)	1.3%/(95%)	1.3%/(95%)	13.9%/(49%)	11.5-1.3%/(58-95%)	24.70%	20.60%

Table 1: Energy Burden percent reduction comparison between Affluent and LMI households on Oahu and Molokai for various solar programs.



**2022-2023 ASCE Hawaii Section Officers**

President: Reyn Hashiro, P.E.  
 email: rhashiro@ascehawaii.org  
 Pres.-Elect: Eric Tomishima, P.E.  
 email: etomishima@ascehawaii.org  
 Vice Pres.: Sheila Uyeoka, P.E.  
 email: suyeoka@ascehawaii.org  
 Treasurer: Steven Doo, P.E.  
 email: sdoo@ascehawaii.org  
 Secretary: Amanda Tanaka, P.E.  
 email: atanaka@ascehawaii.org  
 Past Pres.: Clifford Lum, P.E.  
 email: clum@ascehawaii.org  
 YMF Pres.: Brandon Uejo, P.E.  
 email: president.ascehawaiiyfm@gmail.com

**EXECUTIVE COMMITTEE MEETING**

Last held: December 13, 2022

Next meeting: January 10, 2023

**ASCE HAWAII SECTION DINNER MEETING**

We will keep you informed via e-blasts and/or notices posted on our website at [ascehawaii.org](http://ascehawaii.org) with the November meeting information and schedule.

Cost: (RSVP via Eventbrite)

**ASCE's COVID-19 RESOURCES PAGE**

<https://collaborate.asce.org/covid-19/home>

Reminder that ASCE has launched a COVID-19 resources page with online tools and tips in one convenient place. The page includes links to free programs, training, and resources, the results of COVID-19 industry impact surveys, and relevant online discussions with fellow members. The page also offers several ways to work more effectively while at home and activities to take advantage of in the down time you may have – even fun things to do with the keiki! And don't forget that all members have 10 free PDHs! Now may be a good time to catch up on some of those technical on-demand webinars.

**COMMITTEE POSITIONS**

ASCE Hawaii is looking for volunteers for various committee positions, including Advocacy Captain, Report Card Committee Members, and Water Resources Chairperson. If you are interested or have questions on any of these positions, please contact President Reyn Hashiro, [rhashiro@ascehawaii.org](mailto:rhashiro@ascehawaii.org).

**MEMBERSHIP**

If you haven't already done so, please renew your ASCE membership, which includes 10 free PDHs. You can renew your membership at [www.asce.org](http://www.asce.org).

**ASCE HAWAII SECTION STUDENT SCHOLARSHIPS**

Please help us increase our scholarship endowment so that we can recognize deserving students. We continue to accept tax-deductible donations with the goal of increasing the annual scholarships. Make your check payable to 'ASCE Hawaii Section' and include the note 'Walter Lum Scholarship Fund' and mail to: ASCE Hawaii Section, P.O. Box 917, Honolulu, HI 96808-0917. If you have any questions, please contact Steven Doo at [sdoo@ascehawaii.org](mailto:sdoo@ascehawaii.org).

**ASCE GOLF TOURNAMENT**

Save the date for this year's tournament, currently planned to be on Friday, August 4, 2023.

**ASCE JOB LISTINGS**

The following job listings are currently posted on the ASCE Hawaii Section website:

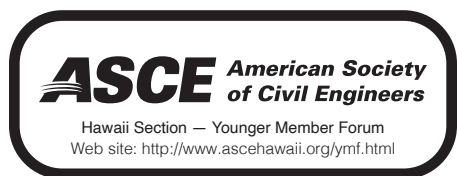
- **Bowers & Kubota** (Civil Designer I, Civil Designer II, Civil Designer III, Civil Engineer)

For further information, please visit

<http://www.ascehawaii.org/job-listings.html>

**IEEE SEMINAR**

IEEE is inviting ASCE members to a seminar on Ufer Grounds. See page 3.



**2022-2023 YMF Officers**

Brandon Uejo, President  
[president.ascehawaiiyfm@gmail.com](mailto:president.ascehawaiiyfm@gmail.com)  
 Lance Lam, Vice President  
[vicepresident.ascehawaiiyfm@gmail.com](mailto:vicepresident.ascehawaiiyfm@gmail.com)  
 Rebecca Pitts, Treasurer  
[treasurer.ascehawaiiyfm@gmail.com](mailto:treasurer.ascehawaiiyfm@gmail.com)  
 John Kim, Secretary  
[secretary.ascehawaiiyfm@gmail.com](mailto:secretary.ascehawaiiyfm@gmail.com)  
 Claire Fukuoka, Past President  
[pastpresident.ascehawaiiyfm@gmail.com](mailto:pastpresident.ascehawaiiyfm@gmail.com)

**YMF General Meeting**

The next YMF general meetings will be in-person on Wednesday, January 11, 2023, at 6:00 PM and Wednesday, February 1, 2023, at 6:00 PM. Please check our website, social media channels, or weekly eblast for the latest information on our upcoming general meetings and events. If you are interested in attending and learning more about the various professional, social, and service opportunities available through YMF, please contact YMF at [yfm.hawaii@gmail.com](mailto:yfm.hawaii@gmail.com).

**Girl Scouts STEM Fest**

By Kristin Hamaguchi, Daniel Koge, and Nick Kam, Outreach Chairs

On Friday, November 11, 2022, five(5) ASCE YMF Members attended the Girl Scout STEM Fest 2022. Volunteers helped the Girl Scouts learn about structural engineering and the engineering design process through building index card towers. The towers weren't only tall, they could also hold the weight of a bunch of pennies! Some of the towers were so strong, there weren't enough pennies to go around!



**ASCE YMF Job Shadow Program**

The Job Shadow Program is looking for students and industry professionals interested in becoming a mentee/mentor. Your interest and participation in this program will provide a valuable experience that will help guide students toward a successful path beyond

graduation! If you have any questions and/or want to sign up\*, please email the Job Shadow Program directly at [yfmhawaii.jobshadow@gmail.com](mailto:yfmhawaii.jobshadow@gmail.com)

\*Note: Information collected will help the Job Shadow Program pair mentor(s) and mentee(s) up based on their experience and interest.

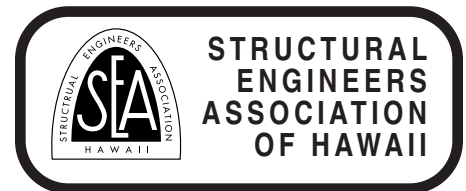
**2023 PE Exam Update**

The PE Exam is now computer-based, with appointments available year-round at Pearson VUE test centers. Information about how to register for the exam and purchase study materials can be found on the YMF website:

<https://ascehawaiiyfm.org/pe-exam-information>

**Online PE Refresher Course**

The Hawaii YMF has partnered with Pathceed, an online PE Exam refresher course that covers the breadth portion of the civil engineering exam. This course features 12-hours of on-demand course materials that may be accessed for a 6-month period and a one-time free access should you not pass the exam. Curious, but want a sample of the course? You can check out a free 1-hour lesson before committing to the program! The course cost is \$289, and we offer ASCE Hawaii YMF members a \$40 discount when registering. If you are interested in signing up for this course, please contact us at [yfm808.pecourse@gmail.com](mailto:yfm808.pecourse@gmail.com) for more information.



PO BOX 3348, HONOLULU, HI 96801  
 Web Page URL <http://www.seaoh.org>

**2023 BOARD OF DIRECTORS OFFICERS AND DIRECTORS**

President: Michael Greer  
[mgreer@wje.com](mailto:mgreer@wje.com)  
 Vice President: Timothy Goshi  
[tgoshi@kaihawaii.com](mailto:tgoshi@kaihawaii.com)  
 Secretary: Logan Lee  
[logan@mkellc.com](mailto:logan@mkellc.com)  
 Treasurer: Ryan Hobson  
[rhobson@kaihawaii.com](mailto:rhobson@kaihawaii.com)  
 Director (Yr 2): Erik Christensen  
[Christensen.erik@us.sika.com](mailto:Christensen.erik@us.sika.com)  
 Director (Yr 2): Brian Lott  
[brian@kaihawaii.com](mailto:brian@kaihawaii.com)  
 Director (Yr 1): Colin Kodama  
[colin.kodama@coffman.com](mailto:colin.kodama@coffman.com)  
 Director (Yr 1): Mark Geoghegan  
[markgeoghegan@gmail.com](mailto:markgeoghegan@gmail.com)  
 Past President: Craig Meierhoffer  
[cmeierhoffer@baseengr.com](mailto:cmeierhoffer@baseengr.com)

**PREVIOUS BOD MEETING**

December 7, 2022

**General Membership Meetings/Technical Seminars/Events**

For all events see [seaoh.org](http://seaoh.org). Look for email flyer for registration of upcoming events.

- SEAHO Installation Banquet – January 11, 2023 at The Pacific Club. Details forthcoming.

**Membership**

O Kimm Miyahira of Wiss, Janney, Elstner Associates Inc. has been approved as an Associate Member.

O Mark Geoghegan of Downstream, Inc. has been approved as an Associate Member.

O Sean Lee of i3NGINEERING, Inc. has been approved as an Associate Member.

*continued on page 5*



**Fall 2022 FRMDC, from Page 1**

the Senior Design ME 481/482 courses for 2022.

**Team Project Descriptions:**

**First Place: Slicinator 3000: The Design, Development, and Prototyping of an Industrial Tomato Slicer**

The goal of this project is to design and develop a functional prototype for a safer, more efficient, and more cost effective manually operated tomato and vegetable slicer. The price range for the slicer was not to exceed \$130. This was a student inspired, entrepreneurial project, seeking a decrease or overall elimination of injury in the kitchen, due to bulky, exposed blades on industrial slicing devices. The team tested multiple slicer models in efficiency, quality of production, and pricing to design, 3D model and machine into fruition.

**Second Place: Team: Magma: Lava Viscosity and Thermal Measurement Devices**

Team Magma's mission is to design an improved instrument in terms of functional areas such as portability, handling, personnel, and data collection, to accurately measure active lava viscosity and temperature. Effectively measuring lava viscosity can reveal critical information about the lava flow such as composition and travel speed. Mitigating the devastating impact of a volcanic eruption is feasible by providing a time estimate to safely evacuate houses and determining potential flow paths.

**Third Place: Super Sensor Drone Group: Unmanned Aerial Vehicles for Marine Environmental Monitoring**

The goal is to integrate sensors onto a waterproof drone for

temperature, salinity, and acoustic real-time measurements to access environmental impact and monitor coral reef health. A novel aspect is the incorporation of ambient acoustic measurements as levels of snapping shrimp sounds have been related to overall coral health. We integrate acoustic recorders and a combined salinity and temperature sensor and mount it onto a water-proof UAV. A complementary infrared (IR) drone will be used to preliminarily scan temperature anomalies on the ocean surface and coordinate with the water-proof drone for locations in which more accurate measurements are needed.

**Team Dead Water: Effects of Stratified Flow on Vessels**

The decrease in velocity of vessels and the internal wave velocities generated due to dead water were analyzed on surface and submerged vessels in stratified fluid. Different designs of vessels were tested in three ratios of freshwater to saltwater to measure the velocity of the vessels and internal wave amplitudes. The dead water effects were more prominent for fishing boat vessels compared to other designs tested. Therefore, possible mitigation efforts can be analyzed for surface and submerged vessels to be applied in real world applications.

**Team Sports Science/Water Entry: Analysis of Hydrodynamic Water Entry with Acoustic Measurements**

The goal is to create an analytical system to record video, audio, and acceleration of a high diver to break down and make adjustments to improve competitive performance. The objective is to revolutionize data collection in sports science by finding ways to improve athletic performance through acoustic recordings. These types of tests are commonly done by the military to study the water entry of metal objects such as torpedoes. Very few of these tests show any background information into how the acoustics of this data can be used to better improve the performances of such tests, especially with bodies of a more elastic or buoyant nature.

**Acknowledgements:**

ASME Hawaii would like to thank Professor Dr. John Allen along with the UHM Department of Mechanical Engineering for organizing the Fall 2022 Francis Rhodes Montgomery Design Competition and for helping to perpetuate this mechanical engineering annual event. Thanks to all the Senior Design Course participants who presented their mechanical engineering projects. Thank you to the judges Nick Paslay, Matthew Asada, and Jonathan Taketa all from Hawaiian Electric Company where Francis R. Montgomery worked. Finally, appreciation for Raymond Liu (ASME-HI Secretary) who donated his time to host the event.



**Hawaii Section 2022-2023 OFFICERS**

[www.aacehawaii.com](http://www.aacehawaii.com)

President	Christopher Baze
Vice Pres.	Mario Flores
Secretary	Vinson Hiraoka, CCP, AIA
Treasurer	Jeanette Roberts
Social Media	Yong Shi, CCP
Past Pres.	Will Sparks, PSP

On December 16th, AAACE held a webinar event – What Non-Schedulers Should Know About Scheduling presented by Mr. Mario C. Flores. Mr. Flores walked through the basic concepts and key takeaways of scheduling which it would benefit the role within a project even as a non-scheduler – whether you manage cost or risks, as a contractor or an owner. Or any of the other important aspects of successful project management. The record of webinar will be posted in our local website.

The local section, AAACE Hawaii, was originally established in 1973. It achieved both the Platinum and Gold Award for seven consecutive years 2014-2021. Our local area continues to achieve CCP, CEP, CST and PSP certifications. For more information, please visit <http://web.aacei.org/certification> and our local website [www.aacehawaii.com](http://www.aacehawaii.com).

**SEAOH, from Page 4**

**SEAOH Younger Member Group**

All young members (under the age of 35) are invited to participate in social activities, educational outreach, community service, and professional development. Please contact Justin at [seaoh.ymg@gmail.com](mailto:seaoh.ymg@gmail.com) for more information on upcoming events.

**Next Meeting** on Wednesday, February 1, 2023. For information, contact SEAOH President Mike Greer at [mgreer@wje.com](mailto:mgreer@wje.com).



**Professional Directory**

<p><b>Tim Waite, P.E.</b> Sr. Territory Manager Mobile: 808-479-1216 Email: <a href="mailto:twait@strongtie.com">twait@strongtie.com</a> <b>Simpson Strong-Tie Co., Inc.</b></p>	<p><b>SSFM</b> INTERNATIONAL <a href="http://www.ssfm.com">www.ssfm.com</a></p>	<p><b>WPT</b> WALTER P. THOMPSON, INC. SURVEYING &amp; MAPPING 720 IWILEI ROAD SUITE 425 P.O. Box 3351 HONOLULU, HI 96801 PHONE: (808) 536-2705 FAX: (808) 599-4032</p>	<p><b>R. M. TOWILL CORPORATION</b> SINCE 1930 Civil Engineering   Wastewater Engineering   Surveying &amp; Mapping Planning   Construction Management   Project Management</p>
<p><b>JUNO &amp; ASSOCIATES</b> CONSTRUCTION COST CONSULTANTS 1210 Ward Avenue, Suite 204 Honolulu, Hawaii 96814 Phone: (808) 947-6855 <a href="mailto:info@j-uno-associates.com">info@j-uno-associates.com</a></p>	<p><b>WALKER INDUSTRIES, LTD.</b> Precast Concrete Products <b>CONSPAN</b> BRIDGE SYSTEMS Michael Villanueva P.O. Box 1568 Kahului, Hawaii 96733 Phone (808) 877-3430 Fax (808) 871-7282</p>	<p><b>WILSON OKAMOTO CORPORATION</b> INNOVATORS · PLANNERS · ENGINEERS <a href="http://www.wilsonokamoto.com">www.wilsonokamoto.com</a></p>	<p><b>WJE</b> 808.591.2728 <a href="http://www.wje.com">www.wje.com</a> Engineers   Architects   Materials Scientists Serving Hawaii and the Pacific Since 1979</p>
<p><b>YOUR AD COULD APPEAR HERE FOR \$235 A YEAR</b></p>	<p><b>wsp</b> Question the ordinary Imagine the extraordinary Create the enduring <a href="mailto:honolulu@wsp.com">honolulu@wsp.com</a> <a href="http://wsp.com/usa">wsp.com/usa</a> 808-536-1737</p>	<p><b>YKE</b> YOGI KWONG ENGINEERS ALWAYS DIGGING DEEPER Geotechnical &amp; Trenchless Engineering Construction Management   Laboratory Testing</p>	<p><b>YOUR AD COULD APPEAR HERE FOR \$235 A YEAR</b></p>

HAWAII COUNCIL OF  
ENGINEERING SOCIETIES  
P.O. Box 2873  
Honolulu, Hawaii 96802

RETURN SERVICE REQUESTED

# Professional Directory

<p><b>AECOM</b> 1001 Bishop Street, Suite 1600 Honolulu, HI 96813 tel: 808.521.3051 www.aecom.com</p>	<p><b>Austin Tsutsumi &amp; Associates, Inc.</b> Civil   Traffic   Environmental   Surveying Branch Offices in Wailuku, Maui and Hilo, Hawaii www.atahawaii.com</p>	<p><b>BOWERS + KUBOTA CONSULTING</b> • Project Management • Planning • • Architectural/Engineering Design • Construction Management • 94-408 Akoki Street, Suite 201-A • Waipahu, Hawaii 96797 Phone: 808.836.7787 • Telefax: 808.834.4833</p>	<p>YOUR AD COULD APPEAR HERE FOR \$235 A YEAR</p>
<p><b>Brown AND Caldwell</b> Environmental Engineers &amp; Consultants Maui - Honolulu brownandcaldwell.com</p>	<p><b>COFFMAN ENGINEERS</b> www.coffman.com</p>	<p><b>ControlPoint Surveying, Inc.</b> Oahu: 615 Piikoi Street, Suite 700 Honolulu, Hawaii 96814 Ph: (808) 591-2022, Fax: (808) 591-8333 Email: surveying@cpshawaii.net Maui: 1129 Lower Main Street, Suite 102 Wailuku, Hawaii 96793 Ph: (808) 242-9641 Email: cpsmaui@cpshawaii.net</p>	<p><b>CUMMING</b> Building Value Through Expertise Cost + Project Management 808-947-4525 ccorpusa.com</p>
<p><b>Y. Ebisu &amp; Associates</b> Acoustical and Electronic Engineers 1126 12th Avenue, Room 305 Honolulu, Hawaii 96816 (808) 735-1634</p>	<p><b>Engineering Concepts, Inc.</b> Civil/Environmental/Sanitary Engineers 1150 South King Street, Suite 700 • Honolulu, Hawaii 96814 Phone: (808) 591-8820 • Fax (808) 591-9010 Email: eci@echawaii.com</p>	<p><b>ESH</b> 1320 N SCHOOL ST., STE 1 HONOLULU, HAWAII 96817 Phone: 591-8116 ENGINEERS-SURVEYORS HAWAII, INC. (FORMERLY WILLIAM HEE &amp; ASSOCIATES, INC.)</p>	<p><b>MASA FUJIOKA &amp; ASSOCIATES</b> GEOTECHNICAL ENVIRONMENTAL HYDROGEOLOGICAL CONSULTANTS (808) 484-5366 www.masafujioka.com</p>
<p><b>FUKUNAGA &amp; ASSOCIATES, INC.</b> CONSULTING ENGINEERS WWW.FUKUNAGAENGINEERS.COM CELEBRATING OUR 50TH ANNIVERSARY</p>	<p><b>GEOLABS, INC.</b> Geotechnical Engineering and Drilling Services 94-429 Koaki Street, Suite 200 Waipahu, HI 96797 Phone: (808) 841-5064</p>	<p><b>Gray · Hong · Nojima &amp; Associates, Inc.</b> CONSULTING ENGINEERS 201 Merchant Street, Suite 1900 Honolulu, Hawaii 96813 Telephone: (808) 521-0306 Fax: (808) 531-8018 email@grayhongnojima.com www.grayhongnojima.com</p>	<p><b>HARTCROWSER</b> Geotechnical, Environmental, and Natural Resources Consulting janice.marsters@hartcrowser.com www.hartcrowser.com</p>
<p><b>total POWER SOLUTION</b> <b>HAWTHORNE CAT</b> 94-025 Farrington Hwy. Waipahu, Hawaii 96797 808/676-0205 Hawthorne Power Systems</p>	<p><b>HCD</b> ROCK SOLID SINCE 1908 www.hcdhawaii.com • sales@hcdhawaii.com</p>	<p><b>HDR</b> Honolulu 808.697.6200 Wailuku 808.359.2518 Hilo 808.202.6528 hdrinc.com</p>	<p><b>HIDA, OKAMOTO &amp; ASSOCIATES, INC.</b> CONSULTING CIVIL ENGINEERS PACIFIC GUARDIAN TOWER 1440 KAPIOLANI BOULEVARD, SUITE 1120 HONOLULU, HAWAII 96814 PHONE: (808) 942-0066 FAX: (808) 947-7546</p>
<p><b>Hirata &amp; Associates, Inc.</b> Geotechnical Engineering 808.486.0787 www.hirata-hawaii.com</p>	<p><b>SAM O. HIROTA, INC.</b> Engineers &amp; Surveyors 864 S. Beretania Street Honolulu, Hawaii 96813 Telephone: 537-9971</p>	<p><b>HonoSiMu</b> For: Manufacturing Product Testing Failure Analysis Researching info@honosimu.com</p>	<p><b>ISLAND GEOTECHNICAL ENGINEERING, INC.</b> Geotechnical Consultants 330 Ohukai Road, Suite 119 Kihei, Hawaii 96753 Phone: (808) 875-7355 Fax: (808) 875-7122 Email: ige@igehawaii.com</p>
<p><b>KAI HAWAII</b> STRUCTURAL &amp; FORENSIC ENGINEERS 50 S. Beretania Street, #C-119C • Honolulu, HI 96813</p>	<p><b>Kennedy/Jenks Consultants</b> Engineers &amp; Scientists The BLOCK Honolulu 707 Richards Street   Suite 528 Honolulu   Hawaii   96813 P: 808.218.6030   F: 808.488.3776 Direct: 808.218.6042</p>	<p><b>THE LIMTIACO CONSULTING GROUP</b> CIVIL ENGINEERING AND ENVIRONMENTAL CONSULTANTS 1622 Kanakalanui Street • Honolulu, Hawaii 96817 (808) 598-7790 • tlcg.hawaii.com</p>	<p><b>MCE INTERNATIONAL, INC.</b> MECHANICAL CONSULTING ENGINEERS 1360 S. Beretania Street, Suite 400, Honolulu, HI 96814 Phone: (808) 941-0955 Fax: (808) 550-8167 E-mail: mcehilo@mceinternational.com Website: www.mceinternational.com</p>
<p>Creative People. Practical Solutions.® <b>mn</b> <b>moftatt &amp; nichol</b> Marine &amp; Transportation Planners and Engineers 808.533.7000 www.moftattnichol.com</p>	<p><b>NAGAMINE OKAWA ENGINEERS INC.</b> CONSULTING STRUCTURAL ENGINEERS 1003 Bishop Street • Suite 2025 Honolulu, Hawaii 96813 Phone: (808) 536-2626 • FAX: (808) 536-3926</p>	<p><b>oceanit</b> www.oceanit.com</p>	<p><b>Okahara and Associates, Inc.</b> ENGINEERS AND LANDSCAPE ARCHITECTS Civil - Mechanical Engineers Hilo: (808) 961-5527 • hilo@okahara.com Oahu: (808) 524-1224 • oahu@okahara.com www.okahara.com Small Business</p>
<p><b>PGE Pacific Geotechnical Engineers, Inc.</b> Soils &amp; Foundation Engineering Consultants 94-417 Akoki Street Waipahu, Hawaii 96797 (808) 678-8024 FAX (808) 678-8722 E-mail: pge@pacificgeotechnical.com</p>	<p><b>ParEn, Inc.</b> SUITE 1500, PACIFIC PARK PLAZA 711 KAPIOLANI BOULEVARD HONOLULU, HAWAII 96813 TELEPHONE: (808) 593-1676 FAX: (808) 593-1607 EMAIL: paren@pareninc.com dba park engineering Engineers, Surveyors, Planners</p>	<p><b>Sato &amp; Associates, Inc.</b> Consulting Civil Engineers since 1969 2046 So. King Street Honolulu, Hawaii 96826 Phone: 808-955-4441 mailto:box@satoandassociates.com</p>	<p><b>SHIMABUKURO, ENDO &amp; YOSHIZAKI, INC.</b> Civil, Environmental &amp; Structural Engineers 1126 12th Avenue, #309 Honolulu, Hawaii 96816-3715 Phone: (808) 737-1875 Fax: (808) 734-5516 Email: seyeng@seyeng.com</p>