

## THE 2014 ASME FRANCIS RHODES MONTGOMERY DESIGN COMPETITION

The ASME Hawaii Francis Rhodes Montgomery Design Competition was held May 9, 2014 in Hawaii Institute of Geophysics HIG 110 auditorium on the University of Hawaii at Manoa Campus. This annual event is cosponsored by the Department of Mechanical Engineering (DME), University of Hawaii at Manoa, and the ASME Hawaii Francis R. Montgomery Foundation. This year, the design competition consisted of six project teams from the ME 482 Senior Design course. First place and \$500 went to the SAE Micro Aero Design team, in second place and receiving \$300 was the UH Formula Racing Vehicle (Rainbow Racing 1) team, and third place and \$200 to the UH RoboBoat team. All competing 44 mechanical engineering students demonstrated application of their cumulative engineering knowledge very well making final scores extremely competitive.

Since 1987, ASME Hawaii has worked with the DME, to host the Francis Rhodes Montgomery Design Competition for the ME 481/482 Senior Design Courses. This is a two sequence mechanical engineering design course starting with ME 481 and completion through the ME 482 course with the students demonstrating not only their engineering knowledge, but the execution of project management skills.

The projects have and continue to be supported and funded by various organizations such as the Office of Naval Research, Boeing Co., Ltd., Hawaii Space Flight Laboratory, and the UHM DME.

The student project teams compete before a panel of practicing mechanical engineer judges in an oral project presentation and demonstration judged on the basis of technical content, originality of concept and resolution of design problems, and effectiveness of the prototype. Besides helping to recognize and reward innovative design efforts and the practicality of the design, the competition encourages the students to practice communicational skills to develop the ability to present a design project in a clear and understandable manner later in their professional careers.

As for accomplishing Accreditation Board for Engineering and Technology (ABET) accreditation requirements, the competition provides the DME third-party (practicing engineer judges) verification documents showing effectiveness of the DME program.

The judges this year included Mechanical Engineers Stanford B.C. Yuen, Seibert L. Murphy, and Andrew Crossland. Stanford Yuen is the 2014 recipient of the HCES Lifetime Achievement Award. He is currently the princi-

pal engineer of SLC Consulting and a new member of the UH Board of Regents. Seibert L. Murphy is the President of Guide Star Engineering, LLC. Guide Star is an engineering services company that specializes in engineering design, research and development, testing and systems integration. Andrew Crossland is a mechanical engineer with WSP, Honolulu performing HVAC design and specification.

The following are synopses of the design projects. The project abstracts can be found at the ASME Hawaii website at <http://asme-hi.com/frmdc.html>.

**FIRST PLACE TEAM** – The SAE Micro Aero UH MICRO Warrior design team received the \$500 first place award. Team members included Colin Chikamoto, Rob Grimmatt, Yang Li,

and Nicholas Mathern. Their goal was to develop a remotely controlled model plane that could achieve stable flight while carrying the maximum payload. The design and flight was extremely successful and in the 2014 SAE Aero Design competition held near Fort Worth, Texas, the weekend of March 27-31, achieved an overall ranking of 1st in the Nation and 5th in the world.

**SECOND PLACE TEAM** – The UH Formula Racing Vehicle (Rainbow Racing 1) team received the \$300 second place award. Team members included Albert Carter, Matthew Scarfone, Scott Sunada, Klayton Lou, Frankie Chan, Anadil Chowdhury, Kathryn Hu, Jeffery Oshiro, Cameron Yee, Rylen Kuboyama, Chester Lee Coloma, Jason Frifeldt, Mason Kawaguchi, Micah Kawaguchi, Yong Oh Yoon, Alex Macadamia, Russell Chang, Jr., Hienie Davis, George Vierra, and Aaron Dyogi. Their project goal was to design a single-rider, open wheel, rear-wheel drive vehicle capable of producing upwards of 100HP, accelerating from 0-60 MPH in less than 4 seconds and attaining a potential total weight of less than 500 lbs. In order to achieve this level of performance, the components had to be designed and analyzed employing all aspects of mechanical engineering. They will compete in the 2014 Formula SAE competition in Lincoln, Nebraska June 18-21. The team successfully fundraised \$70,000 for the vehicle and shipping and travel expenses.

*continued on page 7*



**First Place SAE Micro Aero team, L-R: Nicholas Mathern, Colin Chikamoto, Yang Li, Robert Grimmatt**



**Second Place UH Formula Racing Vehicle team, L-R: Back Row: Rylen Kuboyama, Mason Kawaguchi, George Vierra, Klayton Lou, Jeffery Oshiro, Albert Carter, Scott Sunada, Aaron Dyogi, Russell Chang, Alex Macadamia, Micah Kawaguchi, Frankie Chan Front Row: Kathryn Hu, Matthew Scarfone, Hienie Buck Davis, Chester Lee Coloma, Anadil Chowdhury, Cameron Yee. Not pictured: Yong Oh Yoon, Jason Frifeldt**



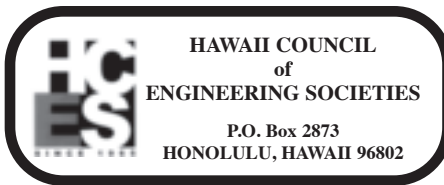
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**WILIKI MAILING LIST**

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.



HOME PAGE: <http://hces.us>

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Director	Paul Morimoto	486-0787, ext. 105

**HIGHLIGHTS FROM THE ACEC SPRING CONVENTION**

The ACEC Spring Convention was held in Washington, D.C. on April 26-30. ACEC reported a record turnout of over 1,300 registrants. Six states (including Hawaii) were recognized for meeting their ACEC/PAC goals for 2014. Representing ACECH at the convention were David Bills (PAC Champion), Bill Bow (President-Elect), Beverly Ishii-Nakayama (President), John Katahira, Norman Kawachika, Janice Marsters, June Nakamura, Jon Nishimura, Lennox Nishimura, and Sheryl Nojima (National Director). The Spring Convention also provided an opportune time for ACEC and ACECH to promote the upcoming Fall Convention in Waikoloa on October 22 - 25. Many of our mainland colleagues have already made their hotel and flight reservations!

Each year a key component of the Spring Convention involves our participation in ACEC's "citizen lobbyist" effort on Capitol Hill. This year we were very fortunate to meet personally with each of Hawaii's Congressional members. One of the two major issues we promoted was the Water Resources Development Act (WRDA). WRDA will authorize new Army Corps of Engineers water projects with reforms that will move projects forward more efficiently. Thus, ACECH urged our Congressional members' support of the upcoming WRDA reauthorization report.

Our second major concern is the expiration of MAP-21 which authorizes funding of federal surface transportation programs through September 2014. Some states could encounter shutdown of projects as early as July 2014. With major funding cuts projected for FY 15, highway and transit funding continue to diminish. Thus, ACEC is pushing for long-term fiscal stability of the Highway Trust Fund (HTF) through predictable user fees to support transportation infrastructure investments. Options include sales tax on fuel and mileage-based fees.

The AACE Hawaii Section is holding local elections for the 2014-15 AACE Hawaii Section Board of Directors. New officers will be inducted at the June Board of Directors Meeting. AACE/CMAA will hold a joint Happy Hour Event (Thursday, June 26, 2014 at 4:30 PM, Bar 35). We look forward to your continued interest and support.

For more information, please visit our website [www.aacehawaii.org](http://www.aacehawaii.org).

**WORKSHOP & FORUM ANNOUNCEMENTS**

**June 5, 2014 (Thursday)**  
**Design Claims Conciliation Panel Workshop**

Please check our website ([www.acechawaii.org](http://www.acechawaii.org)) or send an email to [gwright@acechawaii.org](mailto:gwright@acechawaii.org) for more information.

**July 1, 2014 (Tuesday)**  
**2014 Hawaii Congressional Race Forum**

Time: 5:30 – 8:30 p.m.  
Location: Japanese Cultural Center, Manoa Grand Ballroom  
Cost: \$45.00

Hawaii Congressional candidates confirmed for this event include: Ikaika Anderson, Stanley Chang, Charles Djou, Will Espero, Donna Mercado Kim and K. Mark Takai.

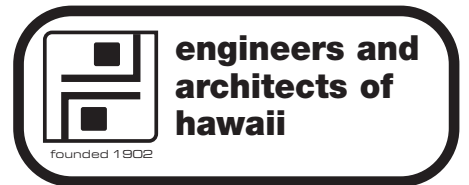
Please email [gwright@acechawaii.org](mailto:gwright@acechawaii.org) to register or obtain more information.

**50th anniversary Trivia Question of the Month**

To help celebrate our 50th anniversary in 2014, an ACECH trivia question will appear in each of this year's issues of the Wiliki. The answers to the questions and background information will appear in the subsequent issues.

This month's question: *What was the most recent year that ACECH played host to the ACEC National Convention (held that particular year on Maui)?*

Answer to last month's question: *Parsons Brinckerhoff won ACECH's Engineering Excellence Competition's Grand Conceptor Award 3 years in a row (1997, 1998 and 1999).*



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

**EAH 2013- 2014 Officers**

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Secretary	Gary Yamamoto	485-2777
Past Pres	Howard Wiig	587-3811
Director	Dave Martin	543-4504
Director	Michael Albright	
Director	Andy Keane	531-3017

EAH's new meeting location is at the Mango Grill in the Topa Tower (Ewa tower on Fort Street ) in the Topa Financial Center (Old AMFAC Bldg). Parking is available (enter from Nimitz). The WEB site has been updated to provide directions and a Map. If you have questions please call Sam Gillie (543-4739).

Meetings are held every Friday (except Holidays).

Meetings start at NOON and have ended PROMPTLY at 1:00 pm for 70 Years.

Program schedule may be adjusted, call Sam Gillie to confirm speaker 543-4739 Fax 203-1335.

\$10.00 Members, \$12.00 Guest (All Welcome), Students Free, Bring Your Own Lunches Welcome, Drink Refreshments are complimentary. A \$2.00 donation is very gratefully appreciated!!



### 2013-2014 ASCE HAWAII SECTION OFFICERS

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YMF President:	Jason Sugibayashi, P.E. email: <a href="mailto:jsugibayashi@ascehawaiiymf.org">jsugibayashi@ascehawaiiymf.org</a>	237-3218

### JUNE DINNER MEETING

**Topic:** Hawaii Airports Modernization Program

**Speaker:** Guy Ichinotsubo – Design Engineer, State of Hawaii, Airports Division

**Program:** This presentation will address the \$2.3 billion dollar Hawaii Airports Modernization Program which was developed to enhance the environmental, social and cultural elements of Hawaii's airports.

**Date:** Thursday, June 19th, 2014

**Place:** Location: Dave and Busters

**Time:** 5:30 p.m. - Social Time  
6:30 p.m. - Dinner  
7:00 p.m. - Program

**Menu:** Multi-entree buffet

**Cost:** \$30.00 for ASCE Hawaii Section members  
\$35.00 for Non-ASCE Hawaii Section members and Guests  
\$20.00 for University of Hawaii Student Chapter members

**Reservations:** Please make checks payable to ASCE-Hawaii Section and mail to Lara Karamatsu, ASCE Hawaii Section Treasurer, Parsons Brinckerhoff, American Savings Bank Tower, 1001 Bishop Street, Suite 2400, Honolulu, Hawaii 96813. Please send reservations for the dinner meeting to Lara Karamatsu by Monday, June 9th, 2014, by phone at 566-2227 or email at [karamatsu@pbworld.com](mailto:karamatsu@pbworld.com). No shows will be billed. For sponsorship opportunities, please contact Ben Rasa at 497-6209 or [ben@tapestrypartners.net](mailto:ben@tapestrypartners.net).

### 12th ANNUAL ASCE HAWAII GOLF TOURNAMENT

The 12th annual ASCE Hawaii Golf Tournament in honor of Steve Fong will be held on Friday, August 8th 2014 at the Pearl Country Club. Please visit our website for more details <http://ascehawaii.org>.

### ASCE HAWAII SECTION PROJECT AWARDS AND OUTSTANDING CIVIL ENGINEERING ACHIEVEMENT AWARDS (OCEA) NOMINEES NEEDED!

ASCE Hawaii Section will be having our annual awards banquet on September 27th, 2014 (location TBD). In addition to honoring the traditional OCEA Award Winning project, the ASCE Hawaii Section would like to honor and provide accolades to numerous other projects

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### 2013-2014 YMF Officers

President Jason Sugibayashi, P.E. 537-9971  
[jsugibayashi@ascehawaiiymf.org](mailto:jsugibayashi@ascehawaiiymf.org)  
Vice-President Puna Kaneakua, P.E.  
[pkaneakua@ascehawaiiymf.org](mailto:pkaneakua@ascehawaiiymf.org)  
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[knagamine@ascehawaiiymf.org](mailto:knagamine@ascehawaiiymf.org)  
Student Chapter President Michelle Chinen,  
[asce@hawaii.edu](mailto:asce@hawaii.edu)

### YMF General Meeting

The next YMF general meeting is scheduled for Wednesday, June 4, 6:00 p.m. at Underdogs Sports Bar & Grill. If you are interested in attending to find out what the YMF is all about, contact YMF at [ymf.hawaii@gmail.com](mailto:ymf.hawaii@gmail.com).

### Koko Head Trail Hike By Austin Wong and Emily Dong, Social Chairs

On Saturday, April 19, 2014, ASCE YMF Hawaii hosted a social hike at Koko Head Trail. Five brave YMF members decided to take the challenge on. Water and trail mix bars were provided. The trail is a straight hike to the top of Koko Head Crater. The steps are made from wooden slats and old railroad tracks. As we ascended, the incline of the trail increases making his hike a real workout. At the top, beautiful views of Hawaii Kai, the eastern shore, Hanauma Bay, Diamond Head, Kahala, and parts of Waikiki were enjoyed along with the Koolau Mountain Range. The winds acted as welcomed natural AC after summiting to the top. After the descent down the members were able to refresh and regroup. Thanks for all who came out!



*Though small, the driven group was able to cross the bridge, dodge other hikers and make it to the top to enjoy the breeze.*

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## KNOW YOUR ASCE HISTORY

by C.S. Papacostas

### Cyclomere Lake

After he read one of my recent articles, Goro Suljiroadikusumo wrote "Just read your great article on bikes as I've been away in Patagonia," and he referred me to a book by David Herlihy titled "The Lost Cyclist: The Epic Tale of an American Adventurer and His Mysterious Disappearance" about German-American Frank Lenz who rode his bicycle around the globe. While in Honolulu in 1892, "Lenz called on George Paris, a former resident of San Francisco and the local agent of Columbia wheels. The two wheeled up Punchbowl Hill, taking in a magnificent panoramic view of the surrounding islands. In the distance, Lenz spotted his vessel, bobbing like a toy in a tub. In the city center, Lenz photographed himself and his bicycle before the Iolani Palace."

Four months ago, in February 2014, I had discovered and reported that the Pacific Wheelmen, who organized in 1891, had plans to complete a bicycle track, "level as a billiard table," in Pearl City, but I was unable to determine whether the facility was ever completed. At that time, bicycle racing was organized along King Street. The "silent steed" also invaded the horse racing track at Kapiolani Park, "the beautiful suburban resort," as the Daily Bulletin [DB 12/16/1894] put it. By 1897, "cycling [had] taken the lead of all other sports" in Honolulu [Hawaiian Star, HS, 2/16/1897].

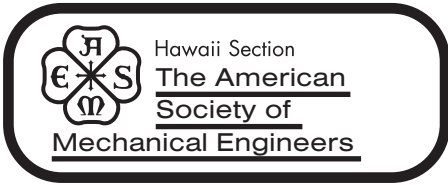
Considering the explosion in the use of the safety bicycle, it was inevitable that attempts to construct a bicycle track in accordance with scientific principles (e.g., super-elevated curves) would follow, as it had been the case in other cities. This must have been the talk of the town for in a short span between the end of March and the middle of September, 1896, not one but three proposals were advanced.

On March 25, 1896 the HS described a proposal advanced by Tommy King of the Hawaiian Hardware Co. (importer of the Tribune bicycle) to modify the then existing Makiki baseball grounds by adding a half-mile race track and a quarter-mile bicycle track, with a baseball ground in the center.

According to many sources, an earlier baseball diamond at the Makiki Recreation Grounds (also referred to as the Parade Grounds) was the first in Hawai'i. It was laid out in 1852 by Alexander Joy Cartwright, the "father of modern baseball" who came to Hawai'i a year earlier. This field, bounded by Ke'eaumoku, Lunalilo, Makiki and Kinau Streets, became the venue for baseball, cricket, football, association football (soccer), field games, military exercises and other events such as "balloon ascension by skilled aeronauts [DB 11/23/1888]." The athletic event participants included local teams and teams from civilian and naval ships visiting the harbor. In 1938 the 2.96 acre place was given its modern name, Cartwright Field, in recognition of Alexander Joy's induction into the Baseball Hall of Fame.

Tommy King's 1896 proposed plan would have modified the area west of the Cartwright Field and "bounded by Lunalilo Street on the North, Keamaku [Ke'eaumoku] on the East, Kinau on the South and Piikoi on the West." The 1897 Map of Honolulu by M. D. Monsarrat designates this area as "Baseball Field" and the Cartwright Field as "Parade Grounds." With an entrance at Piikoi Street, the private baseball field was built by a "Base Ball League" and had its inaugural game on Nov. 17, 1890, when a

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

**ASME-HI 2013-2014 Officers**

Chairperson	Kory Ikeda <i>kory.isamu@gmail.com</i>	628-1231
Vice-Chair	Derick Kam <i>kam@thermaleng.com</i>	848-6966
Secretary	Derek Sato <i>Derek.sato@heco.com</i>	543-4108
Treasurer	Kevin Dang <i>dangk001@hawaii.rr.com</i>	737-1708
Past-Chair	Derek Sato <i>derek.sato@heco.com</i>	543-4108
HCES Rep:	Derick Kam	
Alternate:	John Ahern	

**NEXT ASME-HAWAII SECTION EXECUTIVE COMMITTEE MEETING**

Date: June 18, 2014 Tentative  
 Time: 5:30 pm to 7:00 pm  
 Place: HECO Ward Ave Cafeteria Conference Room

Agenda: Discuss Executive Committee and Support Committee Chairs and the Schedule of Annual Events.

Although this is an Executive Committee meeting, members are invited. There will be free pizza and soft drinks, as usual. Please contact Chairman Kory Ikeda or Secretary Derek Sato for directions and for more information, such as parking.

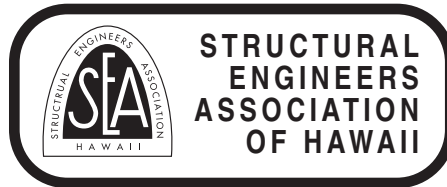
**APRIL 23 GENERAL MEMBERSHIP MEETING HIGHLIGHTS**

Meeting was held in the Hawaiian Electric Company Ward Avenue cafeteria conference room. Attending were 17 including ASME-HI officers; Student Section officers; Dr. A. Zachary Trimble, UHM Department of Mechanical Engineering (DME); Brennan Yamamoto, UHM Graduate Assistant; Perry Nakaoka, NAVFAC; and Andrew Crossland, WSP Honolulu.

- Student Section report: Completed a Podium Raceway event on April 27. Their Professional Networking Dinner is planned for May 3 in the UHM Campus Center Executive Dining Room. Local engineers were invited to meet the students and share their professional experiences.
- UHM DME report: Currently DME is the largest engineering discipline. This has resulted in labs and courses taught by Teaching Assistants. Castle Northrup retired from the machine shop after 41 years. A replacement has not been found. Holmes Hall renovation design funds to be voted on by the State Legislature on April 25. The Industry Advisory Board (IAB) meeting is scheduled for May 3. Several ASME-HI members are on the board providing feedback as needed for ABET requirements.
- 2014 ASME-HI Ballot & Survey: SurveyMonkey.com ballot deadline was April 30. All candidates listed received 100% of the votes casted. The 2014-2015 Officers & Directors are Chairman Derek Sato, Vice-Chair Derick Kam, Treasurer Kevin Dang, Secretary Kory Ikeda, and Directors Ed Chang, Ronald Flegal, and Raymond Liu.
- 2014 planned for June 7: The tour is of the Kiewit Precast facility in Campbell Industrial Park. It is scheduled from 0800 to 0900 hours. There is a specific dress code for safety requirements.
- 2014 Francis Rhodes Montgomery Design

Competition is scheduled for May 9 from 1200 to 1800 hours in Hawaii Institute of Geophysics (HIG) Room 110 (auditorium). Judges are Andrew Crossland, WSP, Honolulu; Seibert L. Murphy, Guide Star Engineering, LLC; and Stanford B.C. Yuen, 2014 HCES Lifetime Achievement Award recipient and UH Board of Regent.

- ASME-HI PE Refresher Course feedback: Raymond Liu asked Andrew Crossland to share his course and exam experiences. Crossland mentioned that a big benefit was that the class allowed problems to be discussed with other students as compared to an online course. He appreciated the class being done at no cost to the participants.



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

**2014 BOD OFFICERS AND DIRECTORS**

Position	Officer	Phone
President	Ethan Okuna	945-0198 x103
Vice Pres.	Fernando Frontera	781-2802
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Treasurer	Jimmy Lam	223-3638
Dir. (Yr 2)	Paul Kane III	537-2811
Dir. (Yr 2)	Tim Waite	479-1216
Dir. (Yr 1)	Rodney Haraga	782-8661
Dir. (Yr 1)	Michael Kasamoto	589-1170
Past Pres.	Brian Kung	488-7579

**HIGHLIGHTS OF BOD MEETING**

May 8, 2014

**Committee Reports**

General Membership Meetings/Technical Seminars/Events

- June 5: 2nd General Membership Meeting. BrueBar, 5:30pm-7:30pm. Contact Fernando Frontera for more info, 748-7028.
- June 26: PT Design Seminar by the Post Tensioning Institute. Pagoda Hotel, 7:30am-4:00pm.
- August 22-23: SEAHO Annual Convention at Aulani. Features a half-day technical session on Friday, Friday night dinner, and a Saturday golf event. Registration forms and additional information available on the SEAHO website.

**SEAHO Scholarship Opportunities:**

Look out! SEAHO will be announcing scholarship opportunities soon.

**New Member**

- Philip Boultinghouse (Coffman Engineers) and Mark Hirschi (Baldrige and Associates) have been accepted for the grade of Member.
- Jillian Sumitomo (MKE Associates) has been accepted for the grade of Allied Member.

**Missing Members**

Please contact Membership Chairperson, Jiabao Chen (Ph: 791-3945 or email [jchen@kaihawaii.com](mailto:jchen@kaihawaii.com)), or any of the SEAHO Officers if you have a new mailing and/or email address.

**Next Meeting**

The next SEAHO Board of Directors and Officers meeting will be held on Wednesday, June 4, 2014. Contact SEAHO President Ethan Okuna (945-0198 x103, [eokuna@cshengineers.com](mailto:eokuna@cshengineers.com)) for more information.



**Hawaii Section 2013-2014 Officers**

[www.ite-hawaii.org](http://www.ite-hawaii.org)

President:	Michael Packard <i>mpackard@ssfm.com</i>
Vice President:	Brian Gibson <i>brian.gibson@oahumpo.org</i>
Secretary:	Sara Toyama <i>sara.t.toyama@hawaii.gov</i>
Treasurer:	Robert Nehmad <i>rnehmad@mmm.com</i>
Director:	Steven Yoshida <i>steven.yoshida@hawaii.org</i>

**Section Meeting Summary**

On Wednesday, April 30, 2014, two distinguished members were honored with the ITE Life Member Award. Wes Frysztacki and Warren Yamamoto were presented a certificate and lifetime membership for being an ITE member for over 25 years and reaching the age of 65 years old. The Hawaii Section is honored to have these two dedicated engineers as new lifetime members. Congratulations to Wes and Warren on their achievements!

Western District Secretary-Treasurer Cathy Leong announced that District Elections are coming up, and ballots will be emailed to members. Vice-President Gibson introduced speakers Brian Lock (Engineer, Wilson Okamoto), Eric Matsumoto (Structural Engineer, KSF, Inc.), and Laura Mau (Planner, Wilson Okamoto), to speak about this bridge he saw and wondered, why does it look upside-down?

Brian Lock spoke about the Honoapiilani Highway Realignment, Phase 1A as being a Design-Build project intending to alleviate traffic congestion along the Highway associated with the Lahainaluna school complex.

Lauren talked about the unexpected archaeological sites that were discovered just prior to construction, and shared the lessons learned from the community consultation. She found that the consultation process drove the project direction, that transparency of the DOT/FHWA participation was important, and even though she was reluctant at first, she found personal perspective in human equity from the passion of the community for stewarding.

Eric explained the design of the 360-foot Kahoma Bridge, a post-tension, inverted arch design structure that is under the travel-way and therefore does not obstruct the views. This design utilized friction pendulum into foundation bearings, and enabled the spanning of the stream with minimal impact, and included a 1200' radius curve.



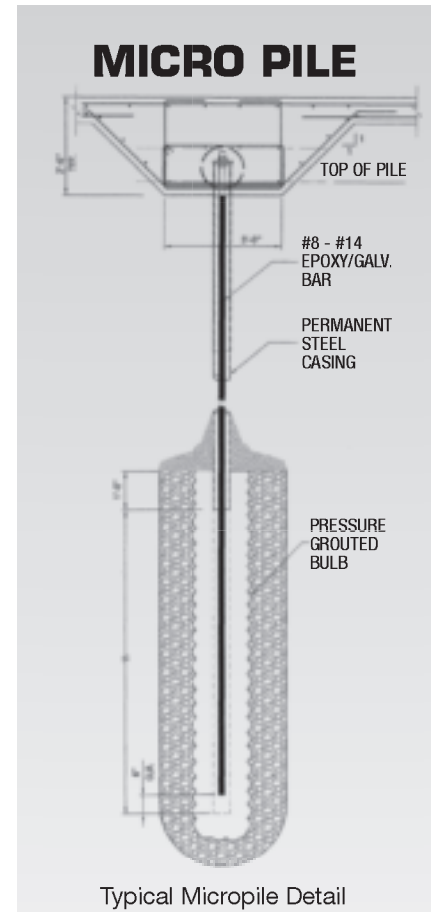
**President Mike Packard presents Wes Frysztacki and Warren Yamamoto with the ITE Life Member Award.**



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**MICRO PILES** As defined in FHWA-RD-96-016 “Micro-piles are small diameter drilled and grouted reinforced piles used for both structural support and insitu earth reinforcement.” Typically less than 10” in diameter, allowable design capacities frequently exceed 100 kips and our crews have performed testing in excess of 225 kips or over 100 tons. Micro-piles are frequently used where a deep foundation system is required in difficult substrata conditions, or where driven piles or large diameter systems are impractical due to subsurface obstructions, or limitations presented by existing buildings at or adjacent to the project site.



## Capabilities, Benefits & Advantages

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- Cased or Un-cased Systems
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- Foundation Releveling
- Load Transfer
- Soil Nails, Gunite
- Slope Stabilization
- Compaction Grouting
- Uretex, Slab Releveling

### Low-overhead Equipment



### Underpinning System



### New Construction, Maui

**Since 1985 in Hawaii, Structural Systems** and its allied company Kelikai have compiled decades of experience installing deep foundation systems. Our experience includes a range of piling systems for bearing support, and a selection of differing anchor systems for tension applications. Additionally, we are authorized installers of the Atlas and Chance brands of pre-engineered foundation systems for both new construction and remedial/underpinning applications. Hawaii has widely variable and difficult subsurface conditions. With their experience, our staff and field crews are peerless in their ability to address all the differing geotechnical conditions unique to Hawaii.



**STRUCTURAL SYSTEMS, INC.**

General Engineering

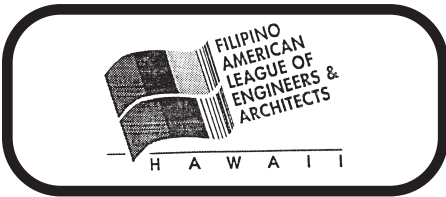
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**MAY BOARD MEETING: FALEA BOWLING TOURNAMENT** – Gene's "final" update: This FALEA FOUNDATION scholarship fundraising event will be held on July 21, 2014. As had been previously discussed, this new venue could serve as a harbinger for greater participation by members, their families and others. As you read this article, flyers for this event will have been sent out. All officers and members of the Board of Directors as well as other members are expected to help out in looking for donations for prizes, foods (pupus) and drinks to serve the 24 5-person teams. As an incentive, the Officer/BOD who secures the most teams will be awarded dinner and drink of their choice by the rest of the Officers/BODs. Jeoff, our President has guaranteed he'll have AT LEAST one team. By the way, if you see Kris Namoca, give this new Member a pat in the back for his help in securing the venue for our upcoming tournament.

"HAPPY FATHER'S DAY" folks! Have a great & safe Month!



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**News:**  
 On May 1st, The CMAA Hawaii Chapter welcomed the Hawaii Chapter of American Association of Cost Engineering (AACE) to join us at our quarterly happy hour at Bar 35. The event was well attended and new friends/contacts were made. We look forward to partnering with AACE on more events.

On May 21st, The Chapter held its 3rd annual mini conference at Hale Ikena. Over 60 participants took in presentations about the CCM application, trends in the construction industry, Sketch up, Safety Liability for CM Firms, and upcoming City and County of Honolulu DDC

projects. We'd like to thank Mark Yonamine, Kevin Mitchell, Norman Takeya, Tracy Lawson, and Nick Soto for speaking at the conference. The chapter hosted pupus for the social hour after the conference.

**Upcoming events for May include:**

- Order your 2014 CMAA Hawaii Chapter Drift Polo Shirt. If you don't receive the order form and are interested, please contact the chapter at the email below.
  - The Professional Construction Management Class is coming to Honolulu again the fall on August 11-13.
- If you have any questions, would like to get involved with the CMAA Hawaii Chapter or simply be added to our email list, please contact one of our board members or email us at [Hawaii.cmaa@gmail.com](mailto:Hawaii.cmaa@gmail.com).



Sample of CMAA drift polo shirt logo.

**ASCE, from page 3**

that would be selected for the following categories:

- Large Project (>\$10M)
- Medium Project (<\$10 M but >\$2M)
- Small Project (<\$2M)
- Green Building
- Transportation
- Water/Wastewater/Environmental
- Building/Structural/ Systems
- Studies and Research
- Special Projects
- Humanitarian Project
- International Project

**Nominations will be due Friday, August 1st 2014.** Please visit our website [www.asce-hawaii.org](http://www.asce-hawaii.org) to download an application form and for further details or contact Ben Rasa at 497-6209 or [ben@tapestrypartners.net](mailto:ben@tapestrypartners.net).

**EXECUTIVE COMMITTEE MEETING**

Last held: May 6th, 2014  
 Next meeting: June 3rd, 2014

**CONTINUING EDUCATION**

ASCE National holds more than 275 seminars and computer workshops each year on a wide variety of technical, management, and regulatory topics. These seminars are held in more than 45 cities across the U.S. In addition, ASCE offers customized on-site training and many distance learning programs, including live interactive web/teleconference seminars, online courses and courses on CD, videotape, and audiotape. Please visit <http://ascehawaii.org> for complete details.

**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 mail to: ASCE Scholarship Committee, P.O. Box 917, Honolulu, HI 96808. If you have any questions,

please contact Ian Arakaki at 596-7790, or [ian@tlcgohawaii.com](mailto:ian@tlcgohawaii.com).

**ASCE JOB LISTINGS**

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

- Civil Engineer VI – City and County of Honolulu
- Civil Engineer IV – City and County of Honolulu
- Civil Engineer V – City and County of Honolulu
- Mechanical Engineer IV – City and County of Honolulu
- Civil Engineer – Group 70
- Civil Designer – Group 70

For further information on these job openings or to find out how you can post job openings in your company on this website, please visit <http://www.ascehawaii.org/jobs.htm>.

**ASCE YMF, from page 3**

**Golf Outing  
 By Daniel Shin, Golf Activities**

On Saturday, April 26, 2014, eight YMF members enjoyed a round of golf at the Pali Golf Course, a picturesque and challenging hillside course. Everyone participated in a friendly game of closest to the pin which added excitement and competition to the day. Following the round, pupus were provided at the Fatboy's Fairway Bistro located at the clubhouse. Overall, everyone had a great time playing golf, socializing, and networking with other engineers.



<http://www.hawaiispe.org/>

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**Design Competition, from page 1**

**THIRD PLACE TEAM** – UH RoboBoat team received the \$200 third place award, Team members included Francis Cheng, Sam Lewis, Zackary Main, Sheryl Matsuo, Scott Miyashiro, Kevin Shin, Josh Shigemitsu, and Yenmy Truong. Their project goal was to design a fully autonomous surface vehicle that could identify target goals and successfully maneuver through a series of gates. This project incorporated both mechanical and electrical engineering disciplines to design and build the water craft. They plan to compete in the 2014 Association for Unmanned Vehicle Systems International (AUVSI) RoboBoat competition in Virginia Beach, Virginia.



**Third Place UH RoboBoat team, L-R: going counterclockwise, Yenmy Truong, Kiu Chor (Francis) Cheng, Sam Lewis, Zachary Main, Scott Miyashiro, Joshua Shigemitsu, Kevin Shin, Sheryl Matsuo**

The other projects included the following:

**SAE Regular Aero (Manoa Aero).** Manoa Aero team members included Evan Akuna, Sehun Nakama, Yingsen Tang, Jonathan Lam, Jacob Koo, and Chang-Hoon Noh.

**Electromagnetic Torque Rods to Control a Small Satellite for Hawaii Space Flight Lab.** Team members included Devin Kamita, Morgan Roman, and Cody Smith.

**ALP Cooler.** Team members included Tappy Andrews, Karen Lee, and Jasten Pascual.

**Acknowledgements**

The Francis Rhodes Montgomery Design Competition was established in 1987 in memory of Francis Rhodes Montgomery, retired Hawaiian Electric Company, Inc. Vice-President of Engineering, to further the field of

Mechanical Engineering. The Hawaii Section is grateful to the DME for helping to perpetuate this competition. Coordinating this event for the DME were Dr. Mehrdad Ghasemi Nejad, DME Chair and UHM DME ABET Chair, and Dr. A. Zachary Trimble, ASME Faculty Advisor. Both professors shared in instructing the ME 482 classes, and in a way were competing with each other through their teams.

**ASCE History, from page 3**

local team lost to a California team 12-1. Unlike previous free games at the public recreational grounds, the league charged admission of 50 cents with a 25-cent extra fee for a reserved seat in the 1200-seat grand stand [DB 11/28/1890].

A second proposal for a bicycle track was announced on Sept. 10, 1896: "Bruce Waring & Co. will present to the H.A.A.C. [Honolulu Amateur Athletic Club] a proposal to make a bicycle track and sporting ground on the tract at Kewalo." As I mentioned in Dec. 2013, this was a real estate company that employed entrepreneur Charles S. Desky, the developer of the Model/Progress Building, among other ventures. The reclamation and subdivision of the Kewalo tract was one of the company's projects that included the construction of a pond to receive the area's drainage. Targeting the \$200 lots for "people of moderate means [Hawaiian Gazette, HG, 1/5/1897]" the company had solicited first-come, first-serve "applications for lots in the Kewalo tract just back of the Kawaiahao church [HS 9/8/1896]."

Notice of the third bicycle track proposal came in the Evening Bulletin [EB 9/14/1896]: "A proposition is afoot to the establishment of a quarter mile bicycle track around the ball grounds, for which there is plenty of room. Messrs. Fisher, Allen, Spencer and others are looking up the matter."

To advance his company's plans, Desky "was met at the Hawaiian Hotel Wednesday evening by about two dozen members of the H.A.A.C. and members of the new Honolulu Road Club [that I discussed in March 2014], to whom he submitted his proposal regarding the much talked of bicycle track at Kewalo near the old head of Kawaiahao Lane. The proposition in a nutshell was: To lease the seven acres for fifty years at a rental of \$1, the cyclists to keep

up the property, pay the taxes, etc.; or to sell the property in fee simple for one-third the cost of constructing the drain pond and reclaiming a plot of twenty acres. The latter proposal would contemplate an outlay of about \$2,000 before actual work on the track begins. Then there will be a track or tracks to lay out and grand stand and fence to be built, which will bring the cost to several more thousands. The drain pond will be five acres and oval shaped. This will leave a space fifty feet all round for the tracks and will afford a fourth mile wheel course [HS Thursday 10/1/1896]."

A committee of five was appointed to follow up and "plans of raising the money had been suggested."

In a letter to the HG on the next day, Lorrin A. Thurston, leader of the Hawaiian Kingdom's overthrow and annexationist, proposed to organize a stock company to raise the funds for the procurement of the land, track and buildings.

About the same time, the real estate company's marketing campaign declared a contest "to the person who selects the most appropriate name for the lake now in construction inside of the bicycle track at Kewalo will receive a deed to one of the [50x100] building lots." Whereas I was not able to discover the winner's name, perhaps because of a desired anonymity, the name of the artificial lake appeared in the Hawaiian Gazette of Feb. 23, 1897: Cyclomere Lake (see attached map excerpt).

Do you know of a civil engineering accomplishment or event that your fellow ASCE members might find interesting? Please send a brief description to C.S. Papacostas (fax 956-5014, email [csp@willki.eng.hawaii.edu](mailto:csp@willki.eng.hawaii.edu)). Previous articles in the series may be found at the Section's web site. Just point your browser to <http://www.ascehawaii.org>.



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