

College extends helping hand to industry



Engineering faculty members inspect a generator at Hawaiian Electric Company's Waiau Power Plant.

As election races heat up across the nation, one particular campaign has managed to elude the spotlight. Until now.

The College's unheralded campaign efforts have consisted of visits by its faculty to Hawaiian Electric Company and Bank of Hawaii. Its campaign pledge? Extend more of a helping hand to local industry.

"This is part of our overall effort to get more interaction with the local industry," said Sheryl Nojima, external relations specialist. "We're beginning to step out of our comfort zone and step into the shoes of these engineers. We hope that through these visits we can determine mutual areas of interest in research."

Edward Hirata, HECO vice president of planning and a 1956 CE alumnus, said the College has much to gain from its outreach to the community.

"It exposes the College to the practicing engineer," Hirata said. "It also gives the professors a better feel for the needs of the industry."

According to HECO's Alva Nakamura, manager of systems planning, the College could lend its expertise in areas such as corrosion control and upgrading its control systems and decision-making software.

"These are areas that our people don't have the expertise or the time to devote themselves to," he said. "But someone in academia could spend the time doing research that would be beneficial for us."

One such faculty member is mechanical engineering assistant professor Llyod Hihara, whose forte is corrosion prevention.

"One of their presentations was the different types of corrosion at their

(see Faculty page 2)

"I've been working at Hawaiian Electric for over 25 years and this is the first time I've seen the College extending a helping hand to industry. I think it's a tremendous thing but it should have been done a lot sooner."

Alva Nakamura, HECO manager of systems planning.

Kim establishes endowment for students

When Donald Kim presented the College with a \$100,000 gift and designated it for students activities, he may have been thinking of his undergraduate days at the university.

"I don't recall having any extracurricular activities or programs while I was a student," said Kim, President and Chief Executive Officer of R.M. Towill Corp. "We just went to school and came home.

"Student activities are a vital part of college life and the future growth of students. I thought it was important for the College to have a certain amount of money at their disposal for student activities which cannot be funded through the Legislature."

Kim's gift was used to establish the Donald C.W. Kim Endowment for Engineering Student Activities.

Interim Dean Reginald Young said the endowment will help offset the im-

(see Endowment page 3)

THE QUADRANGLE



A Newsletter
for Alumni
and Friends

College of
Engineering

University
of Hawaii
at Manoa

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Faculty visit HECO, Bank of Hawaii

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power plants," Hihara said. "I'm working on a proposal to build a finite element technique on the computer and then run experiments in the lab to verify the model. If it is verified, I hope to apply it to some real problems that HECO might have."

In May, the College faculty also met with representatives from Bank of Hawaii, the state's largest financial institution.

David Chang, Bankoh vice president of telecommunications, said the College could lend its expertise in such areas as expert systems, software reliability, computer communication network and network architecture.

"I'm really excited with this opportunity," said Chang, who is also a 1978 electrical engineering alumnus. "It gives the Bank a chance

to make use of the obvious research and talent available at the university. It also gives the university a chance to apply some theory and a chance to observe real world situations."

EE assistant professor Anthony Kuh, who was one of several faculty who visited Bankoh in May, is looking forward to possible work with the Bank.

"My areas are in neural networks and signal processing. If they eventually need my services, I would be more than willing to help them out," he said.

Kuh cautioned that it may take time to iron out details.

"It's sometimes difficult finding common areas of interest with banks," Kuh said. "In terms of providing technology, they want finished products while we're a little further removed because we're

doing research. But eventually, we could provide some expertise in a few of those areas."

EE department chair Shu Lin, who is looking forward to collaborating with the two companies, praised the professionalism of both staffs.

"They have first-rate technical staff and management," he said. "What struck me the most was their (desire) to constantly improve themselves and be second to none. They want to work with us and ultimately serve the community."

Representatives from HECO toured the College's facilities last April. Bankoh executives are scheduled to visit the College in Spring 1993.

Young, Nojima reach out and touch Mainland alumni

The College hit the campaign trail last June, sending two representatives to contact alumni residing in the Pacific Northwest.

Interim dean Reginald Young and external relations specialist Sheryl Nojima hosted a reception for about 30 alumni in Tukwilla, Washington. The program included a presentation of the College, a question-and-answer session and door prizes.

Their trip marked the first time that the College has sent representatives on a goodwill trip to the Mainland. Last June, Young and Nojima visited alumni on Maui and the Big Island of Hawaii.

The purpose of the trip, Young said, was to acquaint themselves with the alumni, find out what needs they had and whether the College could lend technical assistance.

"We wanted to hear about current engineering problems and issues they face in the practice and what they would like the College do for them," he said.

Nojima suggested sending faculty to the area to conduct special refresher courses, seminars and other means of service.

While in the area, Young and Nojima were invited by Boeing to tour the company's enormous production centers for the B-2 and the 747s and 777s.

"It's supposedly the largest building in the world and I believe it now after seeing it," Nojima said.

"Seeing it really gives you an appreciation for that industry."

They were also given a demonstration of the Computer Assisted Three Dimensional Interactive (CATIA) system, the latest computer drafting software program.

An overall positive response from the alumni has prompted Nojima to plan for a second trip sometime next year.

"It was so successful that we'd like to go back and meet more of our alumni and help them start up an association so they have a means of getting together," she said.

Nojima firmly believes the effort spent contacting alumni will be worthwhile.

"We heard both good and bad comments from our alumni about the College which in turn will help us improve our academic programs," she said. "In order for us to produce top engineers, we need to keep in touch with the professional community and that includes our alumni."

According to the College's records, a total of 138 UH engineering alumni reside in Seattle, Washington, most of whom work at the Boeing Company.



Interim Dean Reginald Young (middle) gets acquainted with UH alumni Patrick Leong (EE 73) (l) and Clifford Komoto (EE 73).

Ameron HC & D gives new meaning to 'good neighbor'

Ameron HC & D is a major supplier of concrete and construction materials. Lately, however, the company has been helping to build the careers of four promising civil engineering students.

The students are Steve Galiciano, Sherwin Gervacio, Randy Lacuesta and Edmund Pascual. They were each awarded \$1,000 scholarships in conjunction with Ameron's "service first" business philosophy.

The four are graduates of Waiialua High School. Ameron applied for permits to operate a small regional quarry in the Waiialua area, and the scholarships are a way of establishing friendly relations with its neighbors-to-be.

And one of the best ways of doing this, said an Ameron executive, is to support its young people's education.

"Quite frankly, we couldn't think of a better way to contribute to the community's welfare than make it possible for young engineers who will in the future play an important part in the community," said Charles Asao, vice president of marketing.

College Interim Dean Reginald Young said he was encouraged by the company's initiative.

"It's encouraging to see that the industry is interested in our students and their development. We thank Ameron for supporting our program and our students," he said.



Dr. Young (far left), Ameron president Tom Bastis (second from right) and CE chairman Harold Hamada (far right) present Sherwin Gervacio, Randy Lacuesta, Edmund Pascual and Steve Galiciano with Ameron scholarships.

Ameron also sponsors an alcohol-free prom night for Waiialua students, participates in the Waiialua High School scholarships awards program and conducts a "job shadowing" program to help junior and senior students decide the right career for them.

"For example, if they want to be a heavy equipment operator, we let them come out and drive a bulldozer under the supervision of an operator. By participating they get a taste of what the job is really like and can decide whether or not it's for them," said Tom Bastis, Ameron president.

The company was founded in 1908. HC & D stands for "Honolulu Construction and Drayage."

According to Bastis, a drayage was a horse-drawn cart that was used at the turn of the century to pick up barrels of food and flowers from the Honolulu waterfront area and haul it away.

"We were one of the primary movers of material from the waterfront to various warehouses in the area," he said.

The company is headquartered at Sand Island and has quarries at Kapaa and Maui and a pipe plant at Campbell Industrial Park.

"If you live next door to someone, it makes good business sense to be on a good relationship with him. We try to be a contributing member of the community. We want to earn that reputation but we don't want it to be just lip service."

Tom Bastis, Ameron president

Endowment a boost for students

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pacts that state budget freezes may have on the following annual student activities:

- **Career Night:** Students learn about the job market and the engineering profession via one-on-one meetings with representatives from various local and Mainland companies and government agencies. The approximate budget is \$500.

- **Engineering Expo:** The talents of engineers are showcased to high schoolers, the university and the general public through displays, contests and engineering student projects. Budget is \$3,500.

- **ASCE Concrete Canoe competition:** Students apply theory and work together to build a concrete canoe from conception to design and construction. Funds are needed for materials, transportation and travel expenses for the eight member team. The budget \$8,000.

- **Engineering Honor Society Pledge Projects:** Chi Epsilon and HKN pledges volunteer to design and construct a project of practical benefit to the College university or community. Funds are needed for materials. Costs vary annual but a typical budget is approximately \$1,000.

Kim is not only a long-time supporter of the College but of the



Donald Kim (middle) is recognized for his contribution by Dr. Young and Paul Yuen, UH interim president.

University as well. He is currently second-vice president of the UH Alumni Association Board of Directors and has been active with the Board for three years.

He is also a trustee of the UH Foundation. In 1990, he was honored by the University

of Hawaii Alumni Association with a Distinguished Alumni Award.

R.M. Towill Corp. established two previous endowments in the form of scholarships – the Roswell and Jeanie M. Towill Scholarship, and the Richard M. Towill Scholarship.

New karate scoring system packs a punch

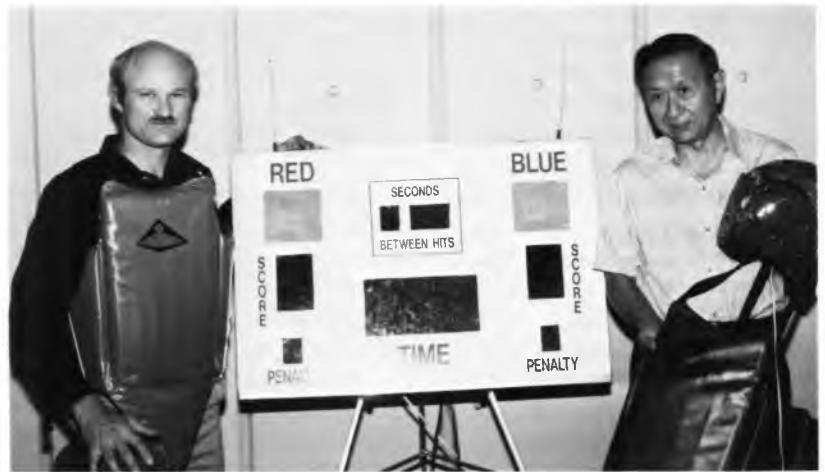
Karate, the ancient martial art of Japan, is getting a dose of modern day technology.

Electrical engineering professor Frank Koide and undergraduate student Raymond Aldridge have developed an electronic karate point scoring system that does everything from awarding points to keeping time and divvying up penalties.

The system packs a punch because it is able to determine which *karateist* hit first, which is often difficult, if not impossible, for even the most seasoned of judges.

"In a full-contact sport such as karate, the first blow is the one that counts," Koide said. "It (the system) can differentiate the time between two near simultaneous hits to within 1/100th of a second."

The system works this way: *karateists* don protective vests and head gear which are laced with pressure-sensitive switches. The switches detect blows landed to the vest or head gear and relay a signal to a receiver. That signal is then picked up by a microprocessor housed within a scoreboard.



Raymond Aldridge (l) and Dr. Frank Koide display their karate point scoring system.

The project is part of EE 496, a senior electrical engineering design course. Aldridge, who spent 20-30 hours a week on the project, said that the the system and its capabilities are finally ready for the spotlight.

"Now that the engineering part is done, we have to begin worrying about the marketing part," he said. "For me, it was a feeling of relief and a little bit of joy mixed in after working on a project for that long."

A patent is already in the process for the system, which debuted at a local karate tournament held at Koko Head Park in October 1991.

Koide said the device has already caught the eye of a few Japan karate clubs.

"Karate clubs from Japan have expressed an interest in the device," he said. "We plan to make it available to them as soon as we can."

EE researchers break ground in coding techniques

They have known each other for nearly 30 years and have built reputations as two of the world's foremost researchers in coding theory and coding techniques for reliable data communications.

Today, EE department chairman Shu Lin and co-researcher Tadao Kasami, dean of Japan's Advanced Institute of Sciences and Technology and their affiliated groups, are on the threshold of devising new coding techniques for high speed satellite communications.

NASA scientists and engineers are keeping a close watch on their research efforts which may play a role in communications services for NASA's next generation of near-earth space missions.

Lin said these missions will need communication services that are capable of high-speed computer

global networking, multiplexing of various types of data, and supporting time constraint data required by telepresence and robotic servicing.

The problem with these communication services is limited bandwidth space. To achieve high reliability but still conserve bandwidth, future space and satellite systems have to employ efficient coding techniques, Lin said.

"A number of bandwidth efficient coding schemes are currently being studied by NASA for their high speed space satellite communications," Lin said. "Bandwidth efficient coding can be achieved by combining coding and modulation, known as coded modulation."

But Lin and Kasami's research goes a step further and uses coded modulation in conjunction with concatenation. Their concatenated

coded modulation scheme can achieve large coding gain, high error performance and good bandwidth efficiency with reduced decoding complexity.

"This combination of coded modulation and concatenation really offers a way of achieving the best of four worlds – reliability, coding gain, bandwidth efficiency, and decoding complexity," Lin said. "We have proposed several specific concatenated coded modulation error control schemes for consideration as the new NASA bandwidth efficient coding standard."

A key objective of their research is to reduce the number of transmission errors.

"Many years ago, one bit in error out of one million was good enough

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"The project exemplifies the excellent work Raymond Aldridge did in the electronics circuit program as well as our involvement with the business community."

Frank Koide

Dr. Lin and Dr. Kasami's research has led to an agreement for cooperation and collaboration between the UH College of Engineering and Osaka University's School of Engineering Science.

Holmes Hall art piece praised, criticized

What's 30 feet tall, bright orange, looks like sliced sausages and sits outside Holmes Hall? Hmm. No idea?

The object in question, a cylindrical piece called the Gateway of Hope, has been either an eyesore or an eye-catching sight for faculty, staff and scores of students since its unveiling in 1972.

The sculpture's cylinders are made from three-eighths of an inch thick steel plates that were cut, rolled and welded together. The state Foundation for Culture & the Arts paid its artist – Alexander Liberman – \$50,000 for the work.

When we asked people's opinions of the object, we found the old adage to be true – beauty is *definitely* in the eyes of the beholder.

"I guess it looks okay," said EE junior Steven Ikeda. "It's something nice to look at."

Rey Dalmacio, a recent ME graduate, had quite a different opinion. He said that the sculpture "seems out of place" compared to the buildings along Dole Street.

"I don't like it. It's a big contrast from (Holmes Hall) and the environment. It definitely stands out," he said.



The Gateway of Hope art piece has been a familiar landmark for Holmes Hall.

Retired UH art professor, Duane Preble, agreed. For him, the sculpture doesn't "come together very well." And perhaps it was named the Gateway of Hope, Preble said, because of its proximity to the East-West Center and Holmes Hall, two institutions at the forefront of new discoveries and changes. But he also felt the Gateway of Hope was inappropriately named.

"It doesn't resemble a gate nor is it very hopeful," he quipped.

UH art professor Mamoru Sato disagreed and said the art piece is "artistically appealing."

"It works well in the space provided for it in terms of size and color," he said. "For a sculpture to be appealing, it must be interesting from all different angles and directions and it does exactly that."

Like it or leave it, the Gateway of Hope is good for one thing, though.

"It's a good landmark for people who want to know where Holmes Hall is," said Fay Horie, secretary to the Dean, who perhaps best summed up its purpose.

source *Building a Rainbow*, UH Press, 1983

"It doesn't strike a chord for me. It (the pieces) piles up and just sits there. If I graded it as a student design project, I'd give it a 'C.'"

Duane Preble, retired UH art professor



EE department chairman Shu Lin (l) and co-researcher Tadao Kasami.

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but today we send hundreds of millions of bits per second," he said. "One out of one million means you have 100 or more error bits per second which is intolerable," Lin said.

Co-researcher Kasami said he has no qualms about sharing information with Lin and his colleagues.

"We compete with each other but we collaborate as well," Kasami said. "Researchers in the U.S., Japan and the former Soviet Union exchange information, unlike industry where it is hidden."

Kasami, who is also a leading authority on computer language theory and cryptography, earned his PhD in communication engineering from Osaka University. He first came to the UH engineering faculty as a visiting professor in 1965 and met Lin, who at that time was a research associate.

Kasami does his share of the research in Osaka and flies to Hawaii once a year to update his findings with Lin. He does not mind the long-distance research efforts.

"This is the only place I'm willing to visit," he said. "I like Hawaii very much and I hope I will be able to continue this research."

Lin anticipates continued support from NASA.

"I think they have been very impressed with our work. These grants are based on our credentials and records and Dr. Kasami is one of the top coding theorists in the world. I think that as long as we produce, they will support us."

SPEBE introduces high schoolers to engineering

It was quite a summer for both the U.S. Olympic Basketball "Dream Team" and a small group of high school students.

While the "Dream Team" was busy squashing its basketball opponents, the students were wrestling with homework problems and studying for exams.

These students were part of the six-week Summer Program for the Enhancement of Basic Education (SPEBE)-Engineering, which introduced young people to the academic rigors of college life.

A typical live-long day for team SPEBE began with an 8:30 - 11:30 a.m. lecture. After lunch, the day resumed with an afternoon lab which lasted until 4 p.m. It was then back to the dorms for dinner, free time and a few hours of study.

The material presented to the students, though somewhat basic, was difficult for most of them.

"They said from the beginning that they would push us," said Kahuku High School senior Juneko Jackson. "It was fast-paced but I could handle it. You just have to know how to budget your time."

Jackson said she spent about one-and-a-half hours studying per night but studied more if there was a test or quiz the next day.

Though they earned no medals, lab assistant Conan Liu was impressed with the students' efforts.

"We had a good bunch of kids this summer," said Liu, a 1989 SPEBE alumnus and now a junior EE student. "They worked really hard and gave a lot of effort. I think most of them go away with a good feeling about the program."

Liu said the material will help them later in college, should they choose engineering as a career.

"When I was in SPEBE I didn't understand everything that was taught," he said. "I'd come across it again in my classes but because I had seen it before in SPEBE, it would click a bit faster."

Fortunately for the students, there was time for fun and games. For many of them, dorm life was the unanimous highlight of the summer.

"It's fun because you get to live with a whole bunch of people you

"It challenged me because a lot of the stuff I had not learned before. It made me work a lot harder."

Marney Furoyama, SPEBE participant, commenting on the rigorous assigned homework and exams. The Aiea High School senior maintains a 3.7 GPA and is considering an engineering career.



SPEBE students touring the Wahiawa Wastewater Treatment Plant. They are inspecting a primary clarifier, a sedimentary tank that removes floatable, settleable solids.

don't know," said Gordon Chan, Roosevelt High School senior.

Another student, Marney Furoyama, liked the idea of being away from home for a while.

"It's exciting to be on your own and get away from regular life," said

the Aiea High School senior. "I'll miss the dorm life and freedom and the friends I've made."

SPEBE-Engineering has been funded each summer since 1985 by the state Department of Education.

Case study opens SPEBEers' eyes

Imagine you're a City engineer faced with the following situation:

Pollution has dirtied a popular swimming area. Environmental groups blame sewage spills and demand that new sewer connections be stopped.

But the culprit, say UH scientists who are hired by the City, is *non-point* pollution: run-off from streets with toxic residue and soil pesticides that enter the ocean during storms.

Unsatisfied, the environmentalists accuse the scientists of siding with the City. Its politicians say they are awaiting further studies from its engineers. Keep in mind that it is election year for the Mayor and contractors stand to lose millions of dollars in project revenues.

What's an engineer to do?

Luckily, this frighteningly-real scenario was only a case study presented to SPEBE students, who were divided into four teams representing city engineers, environmentalists, UH scientists and politicians.

After mulling over the problem, the city engineers reached a compromise. Their solution, which called for stricter regulation of streams and rivers and the repair of aging sewer lines, brought satisfaction to all parties.

Sheryl Nojima, case study moderator and College external relations specialist, said students need to be exposed to such situations early on in their careers.

"It alerted them to real-world engineering situations and problems," she said. "As they progress in their careers as engineers, they will have to make more and more presentations to classmates, their supervisors and finally to the public."

For the students, it was a peek into the changing and challenging role of engineers.

"It was a first-hand (experience) at problems in engineering," said student Gordon Chan. "My group learned how to work with each other and that communication skills are important, along with problem-solving and dealing with the public."

Former musician scores big in engineering

Sing us a song, you're the piano man, sing us a song tonight. Well we're all in the mood for a melody and you got us feeling all right.
- Billy Joel

When talk turns to piano-playing, Billy Joel may come to mind. But in the engineering community, the piano man is Ronald N.S. Ho.

"I enjoy playing the piano," he said. "I used to play in a band as a part-time job during College. I don't do it anymore except for when people ask me to at parties and other functions."

Ho traced his love for the piano back to music lessons during his childhood years. By age 16 he was the piano man at an old bar in Nuuanu.

"It was my first job," he recalled. "I had a choice of playing in the bar or working at the cannery. I earned \$13 a night working 9 p.m. to 2:30 a.m., which was better pay than working at the cannery."

Ho's musical talents do not end at the piano. He also plays "a little bit" of the ukulele, saxophone, guitar and vibraphone. Musical talent runs deep in the Ho family — his three daughters are also musicians.

But soon after graduating from the university, Ho decided to trade in his musical talents for a full-time career as an electrical engineer. It's a decision Ho does not regret.

"I wanted to live a normal life," Ho said. "Musicians work nights and sleep days, which is not a conducive life for a family. And there aren't many musicians who make it to the top."

With BS and MS degrees in hand, Ho founded his company in 1978 and today is a self-taught businessman.

He remembers those early business years as an uphill battle.

"It was difficult period because we came in at a time when many of the other firms in town were already established," he said. "But we were able to convince our clients that we could provide good service

for them. We pride ourselves on honesty and integrity. If you're honest with everyone and treat them well, it comes back to you."

Words of wisdom for a young engineer-businessman. That philosophy has accounted for the company's growth and success. Among its clientele are state and city agencies, architects and other engineering firms.

Shu Lin, chairman of the Department of Electrical Engineering, remembers Ho as one of his better students.

"He was one of my master degree students in the first few years that I taught at the College," he said. "When a young professor starts his career, he wants to have high-quality students and he was one of them."

Lin said that a good solid engineering background from the Col-

lege has contributed to Ho's successful career.

"I'm not at all surprised that he's successful," he said. "We're a good department. We provide first-rate education for our students and so we expect all of them to be successful, especially those who are diligent."

Ho has the task of heading the corporate committee for the College's 1992 fund drive. He is confident of topping last year's total of \$190,000.

"I'm positive we're going to beat it," he said as a matter-of-fact. "We have the momentum now and it's just a matter of keeping it going."

"I have a lot to be thankful for and being involved with the fund drive is a way for me to give back to the school. Overall, I'd like the public to realize that we have a good school and that it compares well to a lot of Mainland colleges."



Ronald N.S. Ho

"People in the industry should support the College as a way of perpetuating their own careers. Alumni who don't support the College fail to realize that the College provides new blood that we need. Without them, our industry dies."

Ron Ho

Freshmen orientation & seminar



Assistant EE professor Vassilis Syrmos (in black) demonstrates to incoming EE freshmen the basic concepts of electrical engineering using a Macintosh. Approximately 40 freshmen attended the orientation session, which was sponsored by the IEEE student chapter. The orientation included a tour of the College's laboratories and facilities.

Alumni tee off at Honolulu Country Club

The Engineering Alumni Association's ever popular golf tournament provided the perfect opportunity for engineers to take the day off, get out in the sun and mingle with their peers.

"I enjoy the game," said Sam Callejo, 1965 CE alumnus and vice president & chief engineer at Community Planning, Inc.

"For the past couple of years, I've gotten a lot closer to the College. I've come to know the faculty, alumni and supporters a lot better and I felt this was something I should participate in."

The cost, which included green and cart fees and a buffet dinner, was \$65 for association members and \$75 for non-members. The price was indeed right for the 180 golfers, who proceeded to bogey, birdie and eagle their way through 18 holes of golf at the Honolulu Country Club under the sponsorship of Donald Kim.

The winners were announced after dinner. The following are some of the winners:

- Class of 1963: Herbert Inouye (net 63), Henry Morita (net 60) and James Sakata (net 64) were awarded with the President Fujio Matsuda Perpetual Trophy, which is given to the class with the lowest aggregate net score.

- Mike Chun (net 55) was presented the Dean's Perpetual Award for the overall low net score.

- Harry Munemasa won a round trip for two to Japan.

- Lloyd Hihara, David Ishigo, David Lindsey, Leighton Lum and Ernest Shoji won neighbor island trips.

The Alumni Association thanks the following donors and sponsors of the tournament: Ameron HC & D; Amfac/JMB Hawaii; CCPI; Y. Ebisu and Associates; EDP Hawaii Inc.; Engineering Concepts Inc.; First Hawaiian Bank; Fukunaga and Associates Inc.; Gray, Hong, Bills and Associates Inc.; Hawaii Pacific Engineers; Hawaiian Airlines; Hawaiian Pacific Resorts; Ralph Hayashi; Hyatt Resorts; Ralph S. Inouye Co. Ltd.; Gordon Kamimura; Calvin Kim and Associates Inc.; Donald Kim; Edward Kuba; Kukui (Molokai) Inc.; Kyotaru; Japan Airlines; Mark Development Inc.; MidPac Lumber Co. Ltd.; Randolph Murayama and Associates; Nishimura, Katayama, Oki and Santo Inc.; Outrigger Hotels Hawaii; Rendezvous Tours; Richard Sato and Associates Inc.; Servo Pacific Inc., Automotive Group; Shimabukuro, Endo and Yoshizaki Inc.; Ben Taguchi; Tower Construction Inc.; R.M. Towill Corp.; Urban Engineering Consultants, Inc.; Nathan Yoshioka, Pro Am Golf Shop.

"You get to see people you normally don't see for months at end or once a year. When you have all of these engineering professionals in a nonworking, relaxed atmosphere, you can get to know the people a lot better."

Sam Callejo, 1965 CE alumnus



Mike Chun displays the Dean's Perpetual Award.



Randolph Murayama checking in before the tournament begins.

UHAA weekend warriors plan Nov. 13-15 bash in San Diego

Join the UH Alumni Association for the 3rd Annual Alumni and Friends Weekend from November 13-15. The event gives alumni an opportunity to meet fellow alumni and friends and learn more about UH while supporting the Rainbows at the Hawaii vs. San Diego State football game. The weekend promises lots of food, fun and football for participants.

The College of Engineering is also inviting alumni to attend an 11 a.m. brunch at the Hanalei Hotel on November 14. Cost of the brunch, which is scheduled on the morning of the football game, is \$11 per person. Please RSVP by Friday, November 6 by calling Sheryl Nojima at (808) 956-7426.



Class of 1963 members James Sakata (left) and Herbert Inouye capture the Fujio Matsuda Perpetual Trophy. Missing: Henry Morita.

1991-92 Scholarship & Award Recipients

Ameron HC & D Scholarship

Steve Galiciano
Sherwin Gervacio
Randy Lacuesta
Edmund Pascual

ARCS Foundation Scholarship

Tung T. Le
Christian L. Schoen

ASHRAE Award of Excellence

Kristi L. Fukami

ASHRAE Jack Lindsay Award

Peter C. Len

ASHRAE Nels Solderholm Award

Andrew S. Iwane

ASHRAE Presidential Award

Tyler B. Fujiyama

Everett E. and Ruth E. Black Scholarship

Clinton J. Ambrose
Wesley L.C. Aping
David S. Arakaki
Keith M. Asato
Ying Hao Cai
Wing Hong Chan
Jimen Ching
John C.H. Chung
Stephanie A. Dodge
Carolyn M. Endo
Micah B. Ewing
Kristi L. Fukami

Vidyasagar Ganesan
Brandon H. Hee
Wendy M. Higashihara
Sae Uck Hong
Steven N. Ikeda
Glenn B. Isidro
Andrew S. Iwane
Ferdinand L. Jaramilla
Loreena Johnsson
Darryl K. Kanno
Todd T. Kohagura
Darren J. Kwock
Tony C.G. Lau
Gregory A. Lee
Peter C. Len
Zi Jian Lin
Brian A. Lock
Bernice M. Lum
Cy M. Masatsugu
Jadine Matsuda
Kevin B.K. McMorrow
Hayley T. Miyagi
Gail A. Miyamoto
Craig S. Naito
Kristie Nguyen
Takamasa Ogasawara
Grant A. Oka
Eric R. Okamura
Jo Ann M. Okinaga
Kevin K. Oyama
Julie A. Sakasegawa
Andrew K. Sekioka
Handojo G. Sie
Allan G. Simeon
Kathie L. Takai
Clayton S. Takamoto
Eric H. Tamashiro
Darrin M. Tanaka
Reid S. Tokuhara
Wesley T. Toyota

Pamela R. Tsugawa
Craig S. Ueda
Chad K. Uyehara
Uriel S.P. Wong
Colin A. Wright
Xiaocun Xu
Ricky Y. Yamato
Tie Yu
Holly A. Yuen

The Boeing Company Scholarship

Lisa K. Koshimizu
Chun Y. Lau

Chi Epsilon Alumni Scholarship

Ligaya F. Cabigon

Lorenzo C. Fruto Memorial Scholarship

Kristie R. Lum
Katherine Woodward

GTE Hawaiian Tel Engineering Employees Scholarship

Thai V. Cao
Jason T. Doan
Kevin T. Kamisugi
Liana N. Lee
Christopher S. Luanglat
Steve Nguyen
Lo L. Thiphavong

Hawaiian Cement Intern Scholarship

Eric Y. Matsumoto

Hawaiian Electric Industries Scholarship

Eddie T. Tran

Hawaiian Intergovernment Information Processing Council

Timothy N. Newsham

Harold J. Heide Scholarship

Robert K. Fujikawa
Jill Z.Y. Lee
Wing Sze Leung

Wilfred J. Holmes Memorial Scholarship

Deborah F. Arakaki

Ralph B. Hubbard, Jr. Scholarship

Brandon Hee
Sherri Sakihara

Robert Edwin Hughes Award (1991)

Wade L. Nakanishi

Kiewit Pacific Co. Scholarship

Pamela R. Tsugawa

Frederick M. Kresser ARCS Scholarship

Diane S. Nakamura

Patrick L. MacDonald Memorial Scholarship

Gregory A. Forbes

National Association of Women in Construction Scholarship

Julie A. Sakasegawa
Jadine Y. Matsuda

Steel Industry of Hawaii Scholarship

Rod H. Oshiro
Eric I. Sugiyama

Richard M. Towill Scholarship

Stephanie Ann Dodge

Roswell M. & Jeanie Towill Scholarship

Lorene C. Inouye

Chi Epsilon Outstanding Freshman Award

Joy Ishigo

Eta Kappa Nu Outstanding Sophomore Award

Colin A. Wright

Pi Tau Sigma Outstanding Junior Award

Catherine L.B. Liew

Civil Engineering Outstanding Senior Award

Ron E. Iwamoto

Electrical Engineering Outstanding Senior Award

Deborah F. Arakaki

Mechanical Engineering Outstanding Senior Award

Kristi L. Fukami

Dean's List (3.5 and higher GPA for Spring 1992 semester)

Bryan M. Amano
Chi Shing Au
Robin K.S. Au
Rolfe G. Banas
Diahn M. Bulosan
Cameron P. Camera
Edward V. Castanares
Chun Sing Chan
Kenneth T.C. Chan
Karen M.G. Chang
Michael J. Chang
Xiaoliang Chen
Joseph Cheng
Carl S.P. Chun
Silas H. Collier
Michael D. Domian
Lynn Ann Elsemore
Noreen M. Endo
Mary Ann Esteban

Micah B. Ewing
Kevin K.W. Fong
Travis K. Fonseca
Fooney E. Freestone
Lynn N. Fujimoto
Brian A. Funai
Yuri Robert Gagarin
Aleksandr F. Graham
Ross I. Hamaishi
Kelly Y. Hara
Neil S. Hasegawa
Linda H.L. Hu
Gavin T. Hubbard
Karen M. Ikeda
Grant R. Imamura
Kurt Y. Inaba
Lorene C. Inouye
Darren M. Ishimura
Layne K. Jakahi

Loreena Johnsson
Jerrean Kaikaina
Kevin T. Kamisugi
Todd A. Kanja
Randall S. Karl
Robin A. Kasamoto
Jay M. Katano
Ayaka Kawabata
Randy A. Kawamura
Hye Jin Kim
James M. Kimoto
Su Jong Kio
Lisa K. Koshimizu
Roland H.K. Lam
Michael R. Lambert
Arlene S. Lardizabal
Chung Yiu Lau
Gregory A. Lee
Jung Woo Lee

Die Ren Li
Zi Jian Lin
Conan C. Liu
Gaudencia C. Lopez
Albert G.W. Lum
Wen Hua Ma
David W.L. Mar
Ken M. Matsushige
Matthew S. Morita
Joy M. Murayama
Clay J. Naito
Marian N. Nakama
Lance S. Nakamura
Pamela K. Nakanishi
Mark S. Nakasone
Timothy N. Newsham
Kristie T. Nguyen
Gregory N. Nishihara
Ryan M. Ogasawara

Eric T. Ogata
Scott M. Ojiri
Grant A. Oka
Todd S. Okasaki
Joann M. Okinaga
Scott T. Okinaga
Michael T. Onuma
Guy D. Pacarra
Neil T. Rapues
Michael P. Shimko
Mary C. Shinoda
Allan G. Simeon
Chun Yip Siu
Tracy R. Smith
Mark A. Sora
Richard J. Sullivan
Steve N. Tagupa
Shawn Tasaka
Lee M. Tokuda

Roland K. Tokumi
Randall S. Toma
Charles S. Tomlinson
Wilbert C. Torricer
Amanda Tse
Wayne T. Tuulima
Brian H. Tyau
Glen S. Uehara
Anthony C. Uy
Cory K. Waki
Jimmy Z.Q. Wang
Colin A. Wright
Yang Xiao
Ryan S.W. Yamauchi
Sou Yin Yee
Bryce E. Yoshimori
Christine K.L. Young

Faculty and staff highlights

The College is pleased to welcome seven new faculty members. The Summer '92 issue of the *Quadrangle* reported nine new faculty but a lack of funds have put two positions on hold. In addition, three new staff members brings the total number of College faculty and support staff to more than 90.

New appointments

Dr. Tim Brown

After spending five months in Thailand doing AIDS research, Dr. Tim Brown joins the computer facilities office as an educational specialist. He was previously an assistant professor of electrical engineering. In his spare time, he does AIDS research.

Dr. Beei-Huan Chao

The first of two new mechanical engineering faculty is Dr. Beei-Huan Chao. He earned his MS and PhD from Northwestern University. Dr. Chao's research interests are in thermal science combustion and analytical and computational study of chemically reacting flows. He was born in Taiwan. He lists stamp and coin collecting among his hobbies. An assistant professor, Dr. Chao is teaching ME 360 *Computer Methods in Engineering*.

Dr. Linda Hihara-Endo

Dr. Hihara-Endo, an assistant professor of civil engineering, obtained her MS and PhD from the University of California-Berkeley. Her dissertation was entitled "A Numerical Model for Calcite Scale Formation in Water Distribution Systems." She is a graduate of Pearl City High School and a 1978 UHM civil engineering alumnus. Dr. Hihara-Endo is teaching CE 330 *Environmental Engineering* and CE 635 *Water Quality Chemistry*.

Dr. Joy Laskar

Dr. Laskar, an assistant professor of electrical engineering, earned his MS and PhD from the University of Illinois at Urbana-Champaign. His areas of expertise are in microwave characterization, semiconductor device physics, semiconductor material growth and processing. He was born in India and grew up in South Carolina. He enjoys playing basketball, soccer and racquetball. Dr. Laskar is teaching EE 671 *Electromagnetic Theory & Applications*.

Dr. Patrick E. Phelan

Dr. Phelan, an assistant professor of mechanical engineering, received an MS from Massachusetts Institute of Technology and a PhD from the University of California-Berkeley. His



Dr. Brown



Dr. Chao



Dr. Hihara-Endo



Dr. Laskar



Dr. Phelan



Ms. Pires



Dr. Robertson



Dr. Sasaki

research interests are in analytical and experimental thermal science, thermal phenomena of superconductors, alternative energy, electronics, bioengineering and space applications. He spent two years as a Japan Society for the Promotion of Science (JSPS) Post Doctorate Fellow at Tokyo Institute of Technology. His hobbies include hiking and fishing. Dr. Phelan is teaching ME 400 *Mechanical Engineering Experimentation*.

Ms. Fawn Pires

Joining the EE department staff as a Clerk Typist II is Ms. Fawn Pires. She was previously a clerk typist at Child Protective Services, state Department of Human Services. Her hobbies include playing slack key guitar and volleyball and attending arts and crafts fairs.

Dr. Ian Robertson

Dr. Robertson, an assistant professor of civil engineering, holds a PhD from Rice University, where he specialized in structural engineering. His dissertation was entitled "Behavior of Reinforced Concrete Slab-to-Column Connections Subjected to Seismic Loading." The best thing about Hawaii, he says, is its warm climate, which is similar to his native South Africa. He enjoys sailing, biking and hiking. Dr. Robertson is teaching CE 487 *Prestressed Concrete*.

Dr. Galen Sasaki

Dr. Sasaki, an associate professor of electrical engineering, obtained his MS and PhD from the University of Illinois at Urbana-Champaign. His research interests include communication



Dr. Teng



Ms. Ueda

networks, optimization algorithms and performance evaluation. He is a 1981 UHM EE alumnus and a 1989 National Science Foundation Presidential Young Investigator (PVI) recipient. In his spare time, he enjoys jogging. Dr. Sasaki is teaching EE 669 *Computer Communication Networks*.

Dr. Michelle Teng

The College has offered Dr. Teng an assistant professor of civil engineering position. Her status is pending approval of her visa. Dr. Teng received her PhD from California Institute of Technology. Her areas of research interest are in ocean and coastal engineering, environmental fluid mechanics and computational fluid dynamics. She was born in Mainland China. Her hobbies include reading and writing.

Ms. Colleen Ueda

Colleen Ueda is the new secretary to Dr. Deane Kihara, assistant dean. Her duties include managing and updating student records. She had been a clerk at the UH Admissions and

(continued next page)

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Records Office. She enjoys reading, cross-stitching and going to the beach.

Faculty achievements

Dr. Edmond D.H. Cheng

The National Science Foundation (NSF) awarded Dr. Cheng, civil engineering professor, a grant for his work "A Study of Extreme Wind Regionalization."

Dr. Arthur N.L. Chiu

The Agency for International Development awarded Dr. Chiu, civil engineering professor, a travel grant to attend the 2nd U.S.-Asia Conference on Engineering for Mitigating Natural Hazards Damage.

Dr. Gordon L. Dugan

The state Department of Health awarded Dr. Dugan, civil engineering professor, a grant for his research "Nonpoint Source Pollution Study for the Kaiaka-Waiialua Bay Hydrologic Unit."

Dr. Yu-Si Fok

A professor of civil engineering, Dr. Fok received a grant from the National Geographic Society for a project entitled "Prospects for 21st Century Water Management."

Dr. Eun Sok Kim

An assistant professor of electrical engineering, Dr. Kim was awarded a grant from the National Science Foundation for his work "Characterization of Low Pressure Chemical Vapor Deposition System."

Dr. Shu Lin

The National Aeronautics & Space Administration (NASA) awarded Dr. Lin a grant for his research "Coding and Coded Modulation Techniques for Reliable Satellite and Space Communications." He was also nominated to serve as a Distinguished Speaker for the IEEE Communications Society and is expected to deliver up to five lectures over a two-year period at national and international IEEE conferences. Dr. Lin also attended the International Symposium on Advanced Science and Technology, held at Nara, Japan, where he delivered the keynote speech "Error Control Coding for Satellite and Space Communications."

Dr. Peter G. Nicholson

A civil engineering assistant professor, Dr. Nicholson received two research grants from the Hawaii State Department of Transportation. The research projects are entitled "Long Term Creep Effects of Some Residual Tropical Soils" and "An Investigation of the Li-

quefaction Potential of Calcareous Materials." He also spoke on the topic "Consideration of Soil Improvement with Lime and Fly-Ash Admixtures" to the Structural Engineers Association of Hawaii 1992 Convention on Kauai.

Dr. H. Ronald Riggs

The American Society of Civil Engineers (ASCE) presented Dr. Riggs, associate civil engineering professor, and the UH ASCE student chapter with a 1992 Letter of Honorable Mention. The ASCE's Board of Direction presented the College with a certificate noting the chapter's fine performance, hard work and enthusiasm of the students and Dr. Riggs' guidance as faculty advisor.

Dr. Michael J.S. Smith

An electrical engineering associate professor, Dr. Smith received continued funding from the National Science Foundation for his "Computer-Aided Analog Integrated Circuit (IC) Design."

Dr. Junku Yuh

A mechanical engineering associate professor, Dr. Yuh received continued funding from the National Science Foundation (NSF) for his research work entitled "Underwater Robotics."

College of Engineering alumni news

1950

Ivan Fujinaka (CE 50) is retired. He resides in Honolulu. ● Mae Nishioka (CE 50) is retired. She lives in Manoa. ● Edward I. Sakamoto (CE 51) is a civil engineer for the City & County of Honolulu, Department of Public Works. He makes his home in Honolulu. ● William B.C. Hee (CE 56) is president of Engineers Surveyors Hawaii, Inc. He makes his home in Honolulu. ● George Masatsugu (CE 56) is a civil engineer for the Hawaii State Department of Transportation, Highways Division, Materials Testing & Research Lab. He makes his home in Aiea. ● Robert M. Hosaka (CE 57) is retired. He resides in Pearl City. ● Harold H. Furukawa (CE 58) is retired. He lives in Honolulu.

1960

Stanley Osada (CE 60) is senior vice president at Hawaiian Dredging and Construction Co. He resides in Honolulu. ● Kenneth Yonamine (CE 60) is land administrator for the Board of Water Supply. He lives in Honolulu. ● Modesto Gaborno (EE 61) is executive director of Fletcher Pacific. He was elected for a two-year term to the Board of Directors of the General Contractors Association of Hawaii (GCA) and served as a past president of the GCA. His son, Grant, is a senior civil engineering student at UHM. He resides in Honolulu. ● Yoshie H. Fujinaka (CE 62) is retired. She lives in Honolulu. ● Noel Lee Haas (CE 67) is retired. He traveled five years ago to Mexico, where he met and married a Mexican woman. ● Dennis T. Kanemura (EE 67) is vice president of operations at Radix Technologies. He resides in Aptos, California. ● Rodney M. Kawamura (CE 67) is president of Hilo Engineering, Inc. He makes his home in Hilo. ● Wesley Takemori (ME 68) is a mechanical engineer at Pearl Harbor Naval Shipyard. He makes his home in Pearl City. ● Michael A. Yamasaki (CE 68) is an associate

(continued next page)

ENGINEERING ALUMNI UPDATE

Name _____

Address _____ Phone Bus (_____) _____

City _____ State _____ Zip Code _____ Res (_____) _____

Employer/Company _____

Job Title/Description _____

Year Graduated (BS) _____ Major (CE, ME, EE?) _____ Graduate degrees _____

News about children, marriages, promotions, hobbies, travel, etc.

Please share what you are doing with your classmates. Send your news to: Newsletter Editor, College of Engineering, 2540 Dole St., Holmes Hall 240, Honolulu, HI 96822

If you would like to join the Engineering Alumni Association or pay your 1992 dues, please use the above form. Annual membership rates are as follows: Oahu: New Graduate - \$25, Single - \$35, Couple - \$45. Mainland/Neighbor Islands: Single - \$20, Couple - \$30. Rates for Single and Couple Life Members are \$500 and \$800, respectively. \$10 of whatever category you choose will go to the Engineering Alumni Association for dual membership. Make your check payable to Engineering Alumni Association and mail to P.O. Box 12204, Honolulu, HI 96828.

College of Engineering alumni news

(continued from page 11)

at Dames & Moore. He makes his home in Honolulu. ● **Wallace T. Oki** (EE 69) is president of Wallace T. Oki, P.E., Inc. He makes his home in Hilo. ● **Norman L. Sakamoto** (CE 69) is president of SC Pacific Corp. He lives in Honolulu. ● **Warren T. Sato** (CE 69) is a principal at Pacific Planning & Engineering, Inc. He lives in Kailua. ● **Dan S. Takai** (EE 69) is a staff engineer for Hughes Aircraft. He lives in Redondo Beach, California.

1970

Inder Mirchandani (ME 71) is executive vice president/mechanical engineer for Ferris & Hamig Hawaii, Inc. He lives in Honolulu. ● **Hiram Young** (CE 72) is a project management engineer for the Department of Land and Natural Resources, Division of Water Resource Management. He lives in Honolulu. ● **Cleighton Goo** (CE 73) is chief engineer for the Hawaii Community Development Authority. He resides in Honolulu. ● **Glenn Okada** (CE 77) is a civil engineer at the County of Hawaii, Department of Public Works. He is married and has a 3-year old son. He makes his home in Hilo. ● **George Kuo** (CE 78) is a Civil Engineer V for the Honolulu Board of Water Supply, Long-range Planning. He resides in Honolulu. ● **Irene (Arakaki) Muranaka** (ME 79) is an environ-

mental engineer with the Pacific Naval Facilities Engineering Command, Pearl Harbor. She makes her home in Mililani. ● **Charlene S. Shibuya** (CE 79) is a traffic engineering for the County of Maui Department of Public Works, Engineering Division. She resides in Kula, Maui.

1980

Dwayne B.F. Wong (CE 80) is a project engineer for Atelier Builders Inc. He resides in Mililani. **Mark S. Tomomitsu** (CE 82) is an environmental engineer with the Hawaii State Department of Health. He lives in Honolulu. ● **Lisa (Aizawa) Chan** (CE 87) is project manager, management & finance division at BSI Consultants, Inc. She married **George C.S. Chan** (CE 87) in August 1991. George is an associate engineer for Nolte & Associates. They both received their California Registration in August. Lisa and George reside in Poway, California. ● **Gerald Iseri, Jr.** (EE 88) is a Software Engineer II at Motorola. He makes his home in Scottsdale, Arizona. ● **Brian P. Low** (CE 88) is a civil engineer at Caltrans. He lives in San Francisco, California. ● **Leon R. Roose** (EE 88) is enrolled at the UHM Richardson School of Law and is expected to graduate in May 1993. He recently worked as a summer associate at the law firm of Damon Key Bocken Leong Kupchak. He resides in Honolulu. ● **David S.**

Miller (CE 89) is a PhD candidate at Johns Hopkins University, Department of Geography & Environmental Engineering. He resides in Baltimore, Maryland. ● **Tanay Panalal** (EE 89) is an engineer-OSP for GTE Hawaiian Tel. He lives in Honolulu. ● **Tammy Uedoi** (ME 89) is a project engineer at Continental Mechanical of the Pacific. She makes her home in Honolulu. ● **Michael F. Wong** (CE 89) is a hydrologist for the U.S. Geological Survey. He received his master's degree in civil engineering from UHM in December 1991. He resides in Ewa Beach.

1990

Steven Hironaka (ME 90) is a mechanical engineer at the Pacific Missile Range Facility, Barking Sands. He lives in Lawai, Kauai. ● **Wilfred Kiyotoki** (CE 90) is a Civil Engineer II for the City & County of Honolulu, Department of Public Works, Division of Engineering. He was last promoted in June 1991 and is now temporarily assigned as Civil Engineer III. He lives in Waipahu. ● **Vincent Lao** (EE 90) is an estimator for Amfac Distribution, Hawaii. He makes his home in Honolulu. ● **Sheri K. Yoshioka** (ME 90) is a mechanical engineer at Prepose Engineering Systems Inc. She lives in Honolulu.

ENGINEERING ALUMNI ASSOCIATION OFFICERS

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546-4840

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682-8282

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Director Glenn Yee
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Director & UHAA Representative Neal Fukumoto
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524-0594

Past President Rudy Mina
Trans Pacific Land Corp.
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