

EE alumnus adds to endowment



(From left to right) Dean Paul Yuen, Ronald Ho, and electrical engineering Professor Shu Lin. Ho is shown here holding a special gift of appreciation from the College, presented to him in recognition of his support over the years.

The Ronald N.S. Ho General Aid Endowment in Support of Electrical Engineering Students has grown thanks to a recent added contribution made by EE alumnus Ronald Ho.

Established in late 1992, the endowment supports the academic and extracurricular development of EE students, as well as engineering events such as the Engineering Expo and the Career Fair. Specifically, income generated from the endowment covers expenses for EE senior student design projects, which enable students to apply classroom theories to real-world engineering problems. It also provides support for the pledge and service projects of EE student societies such as IEEE and Eta Kappa Nu.

With his latest contribution, Ho becomes a member of the UH Founder's Club, which honors a distinguished group of alumni and friends who have provided extraordinary support to the University.

"Every university, including a public one like ours, depends on the generosity of the community, its alumni and public-spirited businesses and organizations for much of the support it needs to fulfill its three missions of teaching, research and

community service," said Carol Eastman, UH Senior Vice President and Executive Vice Chancellor.

Eastman says that Ho symbolizes the spirit of service to the University and the community.

"He cares deeply about our university and works hard on its behalf," she said.

Dean Paul Yuen concurs that Ho has been one of the College's most dependable and loyal friends.

"With the support of industry leaders like Ron Ho, the College can continue to prepare our engineering students to meet the demands of a technologically changing world," Yuen said.

To express its appreciation to Ho for his continued support, the College hosted a luncheon in honor of him this past February. EE student Colan Kwock, who attended the luncheon on behalf of his classmates, thanked Ho for supporting the EE program. Dean Yuen also expressed the College's sincerest gratitude to Ho's tireless efforts in rallying support for the College.

"We are very, very grateful to him for his commitment and support," Yuen said.

EE alumnus Ronald Ho has been a long-time supporter of the College of Engineering. In 1992, he established the Ronald N.S. Ho General Aid Endowment in Support of Electrical Engineering Students. The endowment has grown recently, thanks to an added contribution made by Ho.

Please see Ron Ho, next page

THE QUADRANGLE



A Newsletter
for Alumni
and Friends

College of
Engineering

University
of Hawaii
at Manoa

Spring 1996

EE professor wins prestigious award

Ron Ho

continued from front page



Dr. Shu Lin

Electrical engineering Professor Shu Lin is an expert in coding theory and its application to telecommunications. One of the coding techniques developed by him was used in NASA's Pioneer 9 solar orbit space mission in 1968.

Electrical engineering Professor Shu Lin won a prestigious science award that will enable him to undertake a year of research in Munich, Germany.

Lin was one of 89 American scientists nominated for the 1995 Humboldt Research Award for Senior U.S. Scientists, an award granted by the Alexander von Humboldt Foundation of Germany. Fifty-six of the 89 nominees received awards, with only 10 awardees coming from the field of engineering.

Recipients of the research award are nominated by eminent German scientists. Selection criteria for the award include outstanding scientific performance and internationally recognized past achievements in research. Lin was nominated by Dr. Joachim Hagenauer, who heads the department of communication engineering at the Technical University of Munich. Both Lin and Hagenauer are experts in error control coding for reliable electronic data transmission and satellite communications.

Hagenauer said that he nominated Lin because Lin is renowned internationally in the field of information theory and technology.

"Many of our young scientists in Germany are eager to work with him, having learned of his accomplishments and ideas through his books and publications," said Hagenauer.

Valued at DM 110,000, Lin's award will allow him to spend a year in Munich as a guest researcher. During his sabbatical leave, he intends to learn about and conduct research in areas such as wireless communications, mobile communications, satellite communications, digital video broadcasting, and error control coding for reliable data transmissions. He will be working closely with the professors, scientists and engineers led by Hagenauer.

"[The sabbatical leave] will allow me to catch up on recent developments in communication technology and to broaden the scope of my knowledge," said Lin.

Besides conducting research in telecommunications, Lin also has other plans for his sabbatical leave. He will be working on the second edition of his book entitled *Error Control Coding: Fundamentals and Applications*. In addition, he will collaborate with Hagenauer to plan and organize the 1997 International Symposium on Information Theory, to be held in Ulm, Germany.

"It is with a great deal of pleasure that I humbly accept the Humboldt Research Award," said Lin. "I look forward to a strong cooperative research relationship with my German counterpart."

The Humboldt Foundation was established in 1860 to promote international scholarly cooperation by offering research opportunities to scientists worldwide. It is a privately chartered foundation funded by the German Federal Government.

As one of the state's most prominent engineers, Ho serves as an excellent role model for the engineering students. He presently heads Ronald N.S. Ho and Associates Inc., a company that provides electrical engineering services for projects involving electrical distribution, controls and instrumentation, and interior/exterior lighting for institutional and commercial buildings, as well as for residential developments. The company also provides services for various communications/signal systems

Recently, Ho's company has been involved with notable projects including the planning and design of electrical infrastructure improvements at UH Manoa, the electrical infrastructure for Kapolei, and improvements at the Honolulu International Airport.

Andy Miyasato, friend and partner of Ho, describes Ho as a talented engineer and businessman who cares deeply about his employees.

"I personally feel very proud to be associated with Ron and feel very fortunate to have him as my employer," Miyasato said.

Ho received his bachelor's and master's degrees in electrical engineering from the College in 1967 and 1968, respectively.

ME courses give taste of real-life engineering

The rigorous curricula of two ME courses give students a taste of real-life engineering.

Students enrolled in ME 481 *Design Methodology* and ME 482 *Design Project* conceptualize and build mechanical devices for practical uses. They begin by researching the market need. Then they go through steps such as designing, prototyping/modeling, cost estimation, shop drawing, component manufacturing, client evaluation, and design modifications, before constructing the final product.

At the end of each semester, ME 482 students enter their final projects in the Francis Rhodes Montgomery Competition, established in 1987 in memory of Montgomery to further the field of mechanical engineering. Montgomery was one of the founders of the Hawaii Section of the American Society of Mechanical Engineers (ASME).

For the past semester, first-place went to *Smart Composite Structure*, a project by Michael Lambert, Jason Miura, Rafael Rivera and Lucy Wong. The four students designed and manufactured a prototype intelligent structure, which has the ability to sense and respond to the environment, and to integrate precision positioning and active vibration suppression. The use of composite materials makes the prototype lightweight, with increased structural stability and a load bearing capability of 250 lbs.

The competition included projects from five other student groups.

Based on the current platform of today's bodyboards, the *Advanced Bodyboard* features a wide nose and a narrow tail for superb projection speed. A single channel bottom directs the flow of water beneath the board for better stability and maneuverability. The use of a fiber reinforced composite in the construction of the board enhances its speed and durability.

The *Automatic Can Opener* allows individuals with limited dexterity and/or strength to take full advantage of the convenience of

canned foods. It features a support arm mechanism with spring hinges to hold the can in place while opening, and an extended base to add stability to the whole system.

The *Automatic Door Opener* makes opening doors as easy as pushing a button. The system includes a battery-powered remote transmitter, a receiver and an actuator motor linked to the door. It has an override function in case of power failure. Also, the actuator arm linkage can be disengaged from the door with the removal of a pin, which then allows the door to swing freely on its hinges.

The *Hydraulic Lift Transfer System* makes it easy to lift and transport a disabled patient to a specific destination such as the toilet or the shower. First, the patient's legs and torso are strapped onto a platform. The platform is then pivoted about its supports, then lifted by a hydraulic piston/cylinder actuating mechanism. Made from aluminum box tubing, the device is

lightweight and capable of supporting a maximum load of 250 lbs.

The *Motorized Wheelchair Umbrella* protects wheelchair users from blistering sun rays and unexpected showers. A flip of a switch opens the umbrella, which is both lightweight and unobtrusive. It consists of two vertical tracts, with overhead coverage powered by a motor and springs. A retractable steel wire causes a bowing effect on the roof, which adds stability and water repellency.

Guy Pasco, chairman of the Hawaii Section of ASME was one of the judges for the competition. He said the judges had a difficult time picking the winner.

"Every project was excellent," he said. "We wish we could give a prize to every group, everyone worked hard."

The winning design in the Fall 1995 Francis Rhodes Montgomery Competition went to *Smart Composite Structure*, a prototype intelligent structure with abilities to sense and respond to the environment.

Engineering Expo '96

... Discover Engineering

Where: University of Hawaii at Manoa
College of Engineering - Holmes Hall
2540 Dole Street

When: Thursday, April 4, 1996

Schedule:

9 -10:30 a.m.	Laboratory Open House/Short Seminars
9 a.m.- Noon	Student Project Displays Engineering Project Exhibits
10 a.m.-1 p.m.	Design Olympics Competition
1 -2 p.m.	Laboratory Open House/Short Seminars

Live entertainment by Deja Voodoo

Everyone is invited to attend Expo '96!

Lambert honored as student engineer of the year

Engineering student Michael Lambert was voted Student Engineer of the Year by the Hawaii Society of Professional Engineers (HSPE). He was recognized at the 1996 Engineers' Week Banquet, along with the Engineer and the Young Engineer of the Year.

Lambert, a senior in mechanical engineering, was one of several engineering students nominated for the award. According to Assistant Dean Sheryl Nojima, Lambert won the award because of his academic achievements as well as his involvement in extracurricular activities.

"The HSPE State Board felt that he is an extremely well-rounded student and that he will probably make a great engineering leader someday," said Nojima.

Lambert maintains a 3.58 GPA and is no stranger to academic awards and honors. He was a Presidential Scholar at the University of Hawaii from 1993 to 1995 and was named Outstanding Freshman of the Year by the College in 1992. He has been on the Dean's List throughout his college career and is the winner of prestigious scholarships such as the International Gas Turbine Institute Scholarship

and the Harold J. Heide Scholarship for Mechanical Engineering.

During the past year, Lambert conducted a research project as a NASA Space Grant Research Fellow.

Along with three other ME students, he designed, manufactured and tested a piezo-electric linear actuator prototype for a precision positioning device. The project won first place in the 1995 Francis Rhodes Montgomery Senior Design Competition.

Besides pursuing academic excellence, Lambert also finds time for extracurricular activities. For example, he was actively involved in the Human Powered Vehicle (HPV) project by the UH Student Section of the American Society of Mechanical Engineers. His first-place finish in the sprint race category of the 1995 HPV Region IX Championship helped launch the UH HPV team to national victory.

In his free time, Lambert enjoys flying airplanes, bicycling and swimming. He has a private pilot license and is working on obtaining a commercial license so that he can fly with a high level of proficiency and safety.



Mike Lambert

Lambert says that he became interested in mechanical engineering through an earlier work experience on board a ship, where he worked with machinery in the engine room.

"I was fascinated with learning how things work," he said. "I chose mechanical engineering because it covers a broader range of engineering topics."

Lambert plans to graduate this spring and looks forward to working as a mechanical engineer in the aerospace industry.

ME student Michael Lambert was named Student Engineer of the Year because of his academic achievements and also his active involvement in extracurricular activities.

CE students collect data for national publication

Members of the UH Student Chapter of the Institute of Transportation Engineers (ITE) recently completed a project to provide data for ITE's Trip Generation Manual.

An important source of reference for transportation engineering, the manual helps engineers determine the potential impact of a new structure on the existing traffic patterns. In specific, it contains graphs that can be used to obtain the number of trips to be generated by a structure being built or modified. If a lot of trips are anticipated, the existing roads will then be widened or

retimed to accommodate the increase in traffic.

The manual provides traffic data for a variety of structures, among which is the movie theater. In response to a call from the national ITE for data on trips generated by a movie theater, the UH Student Chapter of ITE kept track of the number of cars going in and out of the lots at theaters in Waikiki and Kapolei on two separate days.

"The project helped us to learn data collection methods and is relevant to the transportation courses offered by the CE department," said Cathy Koga, president of the UH Student Chapter of ITE.

According to Koga, data collected from the Waikiki and Kapolei theaters will be integrated with data from across the nation to produce a graph. Transportation engineers can then utilize such a graph to generate traffic impact statements for movie theaters to be built in the future.

The UH student Chapter of ITE was established in 1994. It aims to promote interest in transportation and traffic engineering, and to strengthen the University's program in transportation engineering.

Congratulations Fall 1995 engineering graduates

DOCTOR OF PHILOSOPHY Mechanical Engineering

Song K. Choi

MASTER OF SCIENCE Civil Engineering

John H. Katahira

Kevin T. Mori

Dyvette P.S. Ting

Cary T. Watanabe

BACHELOR OF SCIENCE Civil Engineering

Christopher K. Asano

Leonard K.Y. Asano, Jr.

Charles G. Borromeo

Christina C.H. Cheng

Todd P. Dwight

Carl D. Ericksen

Travis S. Hamada

Jerry V.B. Junsay

Ivy K. Katano

Ayako Kawabata

Blake M. Kawakami

James M. Kimoto

Darin K.M. Leong

Kevin B.K. McMorrow

Todd S. Okasaki

Hisato K. Oshiro

Shawn E.K. Tasaka

Kam Dat D. Tom

Lyle M. Urasaki

Paul W.C. Wong

Tzuoh-Chyuan Wu

Melvin D. Yagin

Chiu Wang Yeung

Electrical Engineering

Wing Keung Chan

Boon Ling Chew

Brandon K. Gushiken

Michelle T. Harada

Shin Yee Lau

Su Weng Leong

Kesi Li

Hiu Lim

Ricardo E. Luevanos

Mitchell M. Miyoshi

Mark F. Odani

Milton Y. Oka

Neil T. Rapues

Chi Ting Shum

Dening Sun

Art G.S. Tubera

Kevin K.M. Waltjen

Sai Tak Wong

Mechanical Engineering

Kyle M. Arakaki

Robert K. Fujikawa

Thuan T. Giang

Kenn K. Kato

Dominic J. Lagmay

Mang-Fung Lee

Jerry M. Matsunaka

Bryant A. Medeiros

Eric M.H.H. Osaki

Philip Panquites I

Rafael A. Rivera

Lucy P.Y. Wong

Russell C. Youth

Ceremony acknowledges engineering graduates

A ceremony held on December 16 recognized Fall 1995 engineering graduates for their years of hard work at the College.

Dean Paul Yuen opened the ceremony by extending the College's welcome to the friends and families of the 65 graduates. His remarks were followed by an inspirational speech from Ryokichi Higashionna, president of Engineering Concepts, Inc.

While addressing the graduates, Higashionna emphasized the importance of being able to locate a problem before finding a solution.

"If you do not understand a problem, how can you solve it?" he asked.

He reminded the graduates to apply their technical knowledge as well as their common sense during decision-making. In addition, he urged the graduates to learn to work with others.

"Engineering is team work," he said. "You need to be able to communicate and sell your ideas."



EE class representative Hiu Lim receives a congratulatory handshake from Dean Paul Yuen during the graduation convocation ceremony.

Following Higashionna's address, graduating class representatives from the three departments shared their thoughts with fellow graduates.

"The College taught us how to think and how to learn," said Christopher Asano, who represented the CE graduates.

Asano's sentiments were echoed in the speeches of the other two class representatives.

"If we don't know how to think, it doesn't matter what degrees we have," said Hiu Lim, EE class representative.

Please see ceremony, next page

College hosts TEAMS competition

High school students from around the state had a chance to go head to head in an engineering competition hosted by the College this past February.

Sponsored by the Junior Engineering Technical Society (JETS), the TEAMS competition measures the aptitude of high school students who are interested in studying engineering later in college. TEAMS stands for Tests of Engineering Aptitude, Mathematics and Science. The competition encourages academic rigor, application of knowledge, higher-order thinking, team work and cooperative learning, as well as leadership and management skills.

This three-hour, two-part competition challenges even the most academically talented students. It requires students to apply classroom theories to real-life engineering problems. Part I consists of 100 multiple choice questions related to math, biology, chemistry, physics, computers, and visual interpretation of information. For Part II, students are asked to describe and defend their solutions to in-depth and open-ended engineering problems. Students are allowed to use any reference material and self-powered calculators, as well as to discuss the problems among team members.

A total of 15 teams from 13 high schools took part in this year's competition. The teams competed in different divisions, determined by the school's senior class size and admission policy (open vs. selective). McKinley's Team B claimed overall victory and was also winner of its division. Mid-Pacific and Seabury Hall won their respective divisions.

The uniqueness of TEAMS at the University of Hawaii competition is that the competing teams are sponsored by local engineering firms and professional engineering societies. Engineers from these organizations assist the teachers in coaching the students.

"The fact that each team is mentored by practicing engineers gives students the opportunity to find out first-hand about the engineering profession in the real world," said Assistant Dean Sheryl Nojima.

This is the second time that the College hosted the TEAMS competition. The College plans to continue the TEAMS competitions in the future.

"The TEAMS competition is a good way to expose high school students to what engineering is all about," said Nojima. "Students who participate in this event refine their academic skills and gain valuable team-building experiences, which play an important role in today's engineering work environment."

Ceremony

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"We gained the ability to solve problems," said ME class representative Lucy Wong. "But learning has just begun. . . set goals to help you get somewhere."

Each of the 65 graduates received individual certificates in recognition of their academic achievement. In addition, three graduates received outstanding graduating senior awards. They are:

- Ayako Kawabata — CE Outstanding Graduating Senior
- Ricardo Luevanos — EE Outstanding Graduating Senior
- Lucy Wong — ME Outstanding Graduating Senior

The College would like to congratulate the graduates once again and to wish them success in the future.



(First and second rows) Proud members of McKinley's Team B, overall competition champion, pictured here with (back row, left to right) Justin Mew, Department of Education's Educational Specialist for Science, Dean Paul Yuen and Vice President for Student Affairs Doris Ching.

EE alumnus named Technical Fellow at TRW

Aaron Oki (EE 83) was one of three employees named 1996 Technical Fellows at TRW's Space & Electronics Group (S&EG). The Technical Fellow Program recognizes outstanding employees who have made significant scientific and technical contributions in their areas of expertise.

"Being named a Technical Fellow is an exceptional honor and I commend these accomplished individuals," said Tim Hannemann, S&EG's executive vice president and general manager.

Selection criteria for the program include record of past performance, technical accomplishment and authorship, potential for future contributions to technological innovation, proven ability to solve complex technical problems, and demonstration of technical and professional leadership.

Oki, who currently heads the Section of Heterojunction Bipolar Transistor (HBT) Products in the Electronics Systems & Technology Division (ES&TD), was honored by the Technical Fellow Program for his leadership and future promise in the development of HBT technology. An integrated circuit technology, the

HBT provides unique cost and performance advantages for telecommunication products such as wireless telephones and local area networks. It is the basis for almost all of the more than four million electronic components sold by TRW last year.

"Aaron has played a key role in making TRW a world-class leader in HBT technology," said ES&TD's Radio Frequency Products Center Manager Bill Shanney, who nominated Oki for the Technical Fellows Program.

Indeed, it was Oki who developed TRW's first HBT and integrated circuits. Not long ago, he and another Technical Fellow co-developed a method to fabricate high reliability HBT material, which is crucial to the use of HBTs for long-life space applications. This patented method makes TRW the only company capable of fabricating reliable HBTs. Last year, the patent received the Charlie Stephens Memorial Patent Award, S&EG's highest award for patents.

"I count heavily on Aaron to push the frontiers of these technologies," Shanney added.

According to Oki, developing the high reliability HBT material has

been the highlight of his career at TRW to date. He maintains that the best part, however, is working with the talented people at TRW.

"I've been fortunate to work with the best people in the industry, and they deserve much of the credit for where we are today in HBT technology," said Oki.

Oki first joined TRW in 1985, after receiving his master's degree in electrical engineering from the University of California at Berkeley.

A long list of honors attest to his outstanding accomplishments at TRW. He is a three-time winner of the TRW Chairman's Award for Innovation and a seven-time winner of TRW Independent Research and Development Honor Roll awards. In addition, he has developed four patents, with seven patent applications pending. Add on to all that his co-authorship of more than a hundred technical papers, it comes as no surprise that Oki should be honored as a prestigious Technical Fellow by TRW.

Career Opportunities

On a space available basis, the College of Engineering will occasionally publish job listings as a service to our alumni and students. Publication of these listing is not intended as an endorsement by the College of these companies who are solely responsible for the notices.

● Based in Honolulu, Adtech is currently hiring engineers with experiences across a broad spectrum. The development engineering department has openings for hardware engineers who have design experience with FPGAs and microprocessors, and software engineers who have experience with windows programming and C++. Knowledge of telecommunication protocols would be helpful for both types of positions. The systems engineering department is looking for an engineer with experience in telecommunications networks. In addition, the sales department has openings for product support engineers and a national sales manager. For more information, please contact Geri at (808)734-3300.

● Located in Redondo Beach, Calif., TRW's Space & Electronics Group is actively recruiting engineering graduates in electrical engineering, computer science, manufacturing engineering, material science, aerospace engineering, physics and math. A minimum GPA of 3.0 is preferred. Applicants may need to show proof of U.S. citizenship. For more information, please contact:

Frank Yamada
TRW ES&TD
MS D1/1050E
One Space Park
Redondo Beach, CA 90278
Fax (310) 814-4448

Faculty Highlights

RESEARCH ACTIVITIES

Dr. M. Ghasemi Nejhad

Assistant Professor of mechanical engineering Mehrdad Ghasemi Nejhad received continued funding from the Allied-Signal Aerospace Company, in support of his project entitled "Application of Composite and Smart Materials to Space Structures." The objective of his research is to develop a predominately composite smart truss structure for use in a space satellite, using a total system design/manufacturing approach. This approach will greatly enhance mission performance by fine-tuning attitude control and by eliminating the non-operational period of the satellite during its maneuver.

Dr. Lloyd Hihara

Mechanical engineering Assistant Professor Lloyd Hihara received continued funding from the TRW Inc. for his project entitled "Aluminum/Silicon Composite Corrosion Studies." Hihara is studying the effect of silicon on the corrosion behavior of aluminum to determine corrosion protection strategies required for a silicon/aluminum metal-matrix composite (MMC). He uses a scanning, vibrating electrode to measure localized corrosion currents over corroding microstructures, in order to predict and relate the corrosion behavior of MMCs to their microstructures.

Dr. Eun Sok Kim

TRW Inc. awarded continued funding to Assistant Professor of electrical engineering Eun Sok Kim, for his project called "Lateral Field Excitation (LFE) Semiconductor Bulk Acoustic Resonator (SBAR)." Kim is studying current device issues of the SBAR, such as developing quick and easy techniques to determine the quality of piezoelectric films on a wafer, reducing the spurious signal of the SBAR, and improving its temperature stability. His project also includes the fabrication of a novel LFE with a performance superior to that of previously reported LFE devices. In other news, Kim

received a grant from the National Science Foundation (NSF) for a related research project in piezoelectric microelectromechanical systems. The grant is part of NSF's Faculty Early Development (CAREER) Program, which encourages scientists and engineers to integrate their research and education efforts early in their careers.

Dr. Ronald Knapp

Professor of mechanical engineering Ronald Knapp received continued funding from the National Science Foundation for his project entitled "Student Rehabilitation Engineering Projects." The project supports the development of adaptive devices for the disabled by integrating design elements into ME 481/482 courses. Students taking these courses develop a design project from concept to prototype in a period of two semesters. A competition at the end judges the functionality and commercialization potential of the prototype devices developed.

Dr. Shu Lin

Dr. Greg Uehara

Electrical engineering Professor Shu Lin and EE Assistant Professor Greg Uehara received funding from NASA for their joint project entitled "Architecture and Implementation Considerations of a High-Speed Viterbi Decoder for a Reed-Muller (RM) Subcode." Lin and Uehara will investigate the architecture and feasibility of very large scale integrated (VLSI) implementation of a high-speed Viterbi decoder for a subcode of the third-order RM code, which has been proposed to NASA for high-speed satellite communications.

Dr. Clark Liu

The National Science Foundation awarded civil engineering Professor Clark Liu a research grant to conduct a phase II investigation on artificial upwelling and mixing (AUMIX). This investigation will develop an engineering system of AUMIX to draw nutrient-rich deep ocean water to the ocean surface for a commercially-viable,

open-ocean mariculture. Part of a larger research effort of the University of Hawaii led by Dr. Paul Yuen, Liu's research has involved international cooperation from researchers in Japan and Taiwan.

Dr. Kazutoshi Najita

Professor of electrical engineering Kazutoshi Najita received continued funding from TRW Space & Electronics Group for a project entitled "Study of Transport in Heterostructure Devices and Applications." The goal of this project is to characterize heterostructure devices such as high electron mobility transistors (HEMT) and heterojunction bipolar transistors (HBT). One of the tasks is to extract electrical circuit parameters from scattering matrix measurements in the 40 to 100 billion cycles per second range. Najita has replaced Dr. Joy Laskar as principal investigator for this project, due to Laskar's unexpected departure from the College.

Dr. C. S. Papacostas

Professor of civil engineering C.S. Papacostas presented a paper entitled "GIS Application to the Monitoring of Bus Operations" at the 65th Annual Meeting of the Institute of Transportation Engineers (ITE). He was the featured speaker at the ITE Hawaii Section's November meeting, during which he discussed "Transportation Resources on the World Wide Web." In addition, he was invited to speak at "City Views: A Colloquium Series," an event co-sponsored by the UH Center for Arts & Humanities, the Department of Urban and Regional Planning, and the School of Architecture. His presentation on "Urban Transportation" traced the history of and presented a future outlook on Honolulu's public transportation systems.

Dr. Ronald Riggs

NASA has awarded civil engineering Associate Professor Ronald Riggs continued funding for his project entitled "Improved Stress Recovery and Error Estima-

tion in Finite Element Analysis." Riggs is developing an improved procedure for the recovery of finite element stresses as well as an error estimator that can be used in automated, adaptive finite element analysis.

Dr. Vassilis Syrmos

Electrical engineering Assistant Professor Vassilis Syrmos received an A.D. Welliver Summer Faculty Fellowship from the Boeing Company. The fellowship will allow him to visit a Boeing facility for eight weeks during the summer. The fellowship program exposes young, tenured faculty to the practice of engineering at Boeing and to key elements of the industrial competitiveness that Boeing faces today. Boeing hopes that the faculty who participate in this program will help shape engineering education to better prepare tomorrow's engineering graduates. The program begins with a workshop centered around the theme "Industrial Competitiveness and The Practice of Engineering." The workshop will be followed by a sequence of custom-tailored "shadowing assignments," for which each fellow will observe engineering professionals at work. The program then concludes with another workshop to capture and crystallize an understanding of the practice of engineering and the attributes that would best prepare engineering graduates for a rewarding and productive career.

Dr. Greg Uehara

Electrical engineering Assistant Professor Greg Uehara received funding from Silicon Systems, Inc. and Hitachi Micro Systems Inc., for his research entitled "Passive Sampling Transconductor-Based Discrete-Time Analog Programmable and Adaptive Equalizers." He is developing integrated circuit (IC) techniques that will allow for the implementation of analog discrete-time equalizers, which help to increase circuit speed. Uehara also received a CAREER grant from the National Science Foundation

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Faculty Highlights

Alumni News

the National Science Foundation for a project on "Research and Education in Integrated Circuit Design for Communication and Magnetic Storage Systems." In this research, he examines algorithms and architectures that have important applications in various communication devices. He will then develop IC design techniques to improve key performance measures such as speed, power and cost. In another grant, Uehara will develop high speed, electronically programmable equalizers for such devices in a separate project funded by TRW Space and Electronics Group, entitled "Advanced III-V Analog and Digital Design."



Dr. Michael DeLisio

level microwaves and antennas courses. In addition, he worked for the radiation laboratory at the University of Michigan. DeLisio is currently teaching EE 673 *Advanced Microwave Electronics*.

Dr. Jae-Woo Park

New to the civil engineering department is Assistant Professor Jae-Woo Park, a specialist in the remediation of soil and water contaminated with toxic chemicals, using physical and chemical phenomena. Park holds a doctorate from Princeton University. His dissertation is entitled "Engineering Applications of



Dr. Jae-Woo Park

Organo-Oxides for the Removal of Nonionic Organic Contaminants from Water and Soil." Previously, he worked as a research associate at the department of crop and soil science at Michigan State University. He also spent four months at Kangwon National University in Korea, as a visiting scientist in the department of environmental science. Originally from Korea, Park likes to play tennis, swim or jog during his spare time. He is currently teaching CE 696 *Sorption and Transport Phenomena of Toxic Chemicals*.

NEW APPOINTMENTS

Dr. Michael DeLisio

The electrical engineering department welcomes Assistant Professor Michael DeLisio. DeLisio received his doctorate from the California Institute of Technology. His dissertation was entitled "Millimeter-Wave Quasi-Optical Grids." Prior to joining the College, DeLisio was a research assistant for Caltech's MMIC Group and taught graduate-

1960s

●Dennis Kanemura (EE 66), vice president of Operations for Radix Technologies, lives in Aptos, California. ●Keith Higuchi (CE 67) works for Richard Hiatt Contracting, Inc. as manager of the Hawaii District. He lives in Mililani. ●Bernard Takano (EE 67) works for the Defense Information Systems Agency, Pacific Area, as chief of the Transmission Networks Division. He lives in Mililani. ●Frederick Nakahara (ME 68) is a project manager at the U.S. Army Corps of Engineers, Pacific Ocean Division. ●Alvin Hornaga (EE 69) is a senior research engineer for Lockheed Martin Corporation. He lives in Campbell, Calif. ●Norman Sakamoto (CE 69) is president of SC Pacific Corp. He and his wife have three children: David, 18, Gregory, 16, and Katherine, 12.

1970s

●Maurice Kaya (CE 70) and wife Shelley (Sakai) Kaya (EE 71), reside in Kailua. Maurice works for the Hawaii DBEDT as energy program administrator. Shelley works as facilities manager at the Pearl Harbor Naval Shipyard. ●Carl Shimazu (CE 73) is a program manager for the Pacific Division of the Naval Facilities Engineering Command. He resides in Aiea. ●Roy Tsutsui (CE 74) lives in Honolulu and is vice president/manager of the Department of Engineering at the R.M. Towill Corporation. ●Ken Perreira (EE 74) supervises the Utilities Energy Branch of the Navy Public Works Center at Pearl Harbor. He is a certified energy manager and professional engineer. He lives in Kaneohe. ●Keith Kaneshige (ME 77) lives in Aiea and works for the Department of Defense, Pearl Harbor Naval Shipyard as a nuclear engineer. ●Glenn Okada (CE 77) works for the County of Hawaii as a civil engineer at the Department of Public Works. He and his wife Gail live in Hilo. ●Stephen Masutani (ME 77) works as a researcher for the Hawaii National Energy Institute (HNEI) at the University of Hawaii. This past

ENGINEERING ALUMNI UPDATE

Name _____

Address _____ Phone Bus () _____

City _____ State _____ Zip Code _____ Res () _____

Employer/Company _____

Job Title/Description _____

Year Graduated (BS) _____ Major (CE, EE, ME?) _____ 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 Street, Holmes Hall 240, Honolulu, Hi 96822.

If you want to join the Engineering Alumni Association or pay your 1996 dues, you may also use this form. Annual membership rate is \$10/year. Annual membership rates for the University of Hawaii Alumni Association are as follows: OAHU: 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 Association for dual membership. Contact any of the officers listed on the last page of this newsletter for further information.

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Alumni News

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September, he received a \$300,000 grant from the U.S. Department of Energy to study the feasibility of reducing atmospheric carbon dioxide, by pumping it into the deep ocean. Scientists theorize that carbon dioxide produced from fossil-fuel burning can be captured, liquefied and transported by submerged pipeline to undersea locations about 1,500 feet below the surface, where the gas can then be released and absorbed naturally by sea water. Part of Masutani's research includes an investigation of potential environmental damage that can be caused by implementing such a technology, since the process of injecting carbon dioxide into water acidifies the liquid. Besides working for HNEI, Masutani serves as an adjunct faculty member of the College's mechanical engineering department. He has taught thermodynamics for the past three years and plans to teach a new class on pollutants and toxins. ●Randall Torigoe (CE 77) works as a planning engineer officer for the U.S. Navy Public Works Center in Yokosuka, Japan. ●Ranold Fujioka Jr. (CE 78) works for the Navy Public Works Center as a supervisory environmental engineer.

1980s

●Eric Yamashige (CE 80) works for Ronald M. Fukumoto Engineering, Inc. as a vice president/projects manager. He resides in Wailuku. ●Lawrence Ornellas (EE 81) is a supervisor with Honolulu Resource Recovery Venture and makes his home in Waipahu. ●Mark Nagamatsu (CE 83) is a structural engineer at Greene Engineering Co. He lives in Renton, Washington. ●Lynn (Tamashiro) Tanaka (ME 85) is a mechanical engineer at the Naval Submarine Base. She lives with her husband Grant (EE 78) in Mililani. ●Wayne Shiroma (EE 86) is a research assistant/doctoral candidate at the University of Colorado at Boulder. ●Dawn Kobayashi (EE 87) works for GTE California as a network design engineer. She resides in Thousand Oaks, Calif. ●Robyn (Takabayashi) Tabata (ME 88) is a project engineering with Randolph Murayama & Associates. Robyn and her husband Kyle are the parents of a daughter, Megan, born in May of 1995. ●Cheryl Kimura (EE 89) works as an electronic engineer for the Department of Navy, Pacific Missile Range Facility. She lives in Waimea.

1990s

●Stephen Ueda (ME 91) works for Ford Motor Co. as a product engineer in the Automotive Components Division. He lives in Brentwood, Essex, a town about 30 miles outside of central London. ●Tony Lau (CE 92) won ASCE's Top Recruiter Award for the 1994 membership drive. He received round-trip airfare to ASCE's annual convention along with four nights hotel accommodations, registration to the convention, a trophy awarded before his peers and recognition in ASCE publications. Bringing in a total of 14 new members to the ASCE, Lau says that recruiting new members gives him the pleasure of helping a fellow engineer advance his or her professional career. ●Jadine Matsuda (CE 92) is a project engineer with RWC Hawaii dba Ray Wilson Company. ●Deanna Higuchi (CE 95) is pursuing a master's degree in environmental engineering at the University of Colorado at Boulder.

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