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Kenneth P. Mortimer

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## UH comes of age

The years counting down to UH's centennial celebration can be viewed as a rite of passage, a coming of age. As an educational institution, we are demonstrating signs of maturity as we—

- set the stage for a comprehensive fundraising campaign that will build independent resources to support student scholarships and faculty initiatives.
- take charge of our own affairs in response to legislation that grants us greater flexibility in fiscal and administrative matters.
- build our alumni association and celebrate 2000 as the Year of the Alumni to express pride in the important contributions made by our many remarkable graduates.
- continue, in partnership with community supporters, to refine the town-gown relationship.



**President Mortimer with UHM freshman Ryan Shriver**

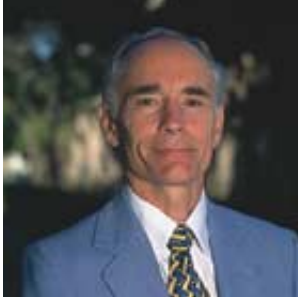
Emerging from adolescence

involves some growing pains, of course. Rapid growth and exuberance for every new venture must give way to thoughtful decisions about our future. We have defined our direction in our strategic plan, which focuses our energies on our areas of strength—the sciences where we have the advantage of natural physical and diverse human laboratories and the studies of things Asian and Pacific. Still, it is with sadness that we set aside some of our dreams, such as maintaining a separate vibrant public health school, in the knowledge that we can't be or do it all.

It is with sober confidence that we compete in the big leagues. Our growing reputation makes us a target for institutions that will try to recruit our talented faculty (Rockefeller University's successful wooing of cloning star Teruhiko Wakayama is a recent example), but it also makes us a magnet. We can and do attract people like Yale's Edwin Cadman and Purdue's Wai-Fah Chen to head our medical and engineering schools and scientists John Madey from Duke University and Hitoshi Yamamoto from Harvard. With such people on board, ours is a wonderful journey, as rich in promise as it will be rewarding in fulfillment.

*Kenneth P. Mortimer*

# CONTENTS



## FEATURES

### **Here to Heal.....7**

Physician-scientist Edwin Cadman inspires optimism and enthusiasm as the new dean of the John A. Burns School of Medicine

### **Natural and Good .....9**

Research by UH scientists saves Honolulu's drinking water from unnecessary chlorination

### **Voices from Our Past .....11**

Words from determined dreamers behind some of UH's remarkable programs

### **Eyes on the Future.....13**

As UH enters a new century, faculty experts share musings and prognostications about what lies ahead

### **Planning to Do Good .....28**

Estate planning can help you and the University

## DEPARTMENTS

### **Front Page .....3**

Nūhou/news, Kū'i'o/facts, Mo'o Iono/reports, Po'e/people

### **Alumni News .....22**

Class Notes, Chapters, Profiles



On the cover: Illustrator Christine Joy Pratt offers a fanciful depiction of UH at the dawning of a new millennium, eyeing the future, interconnected in a comprehensive lei of education and extending services via technology. More future-views begin on page 13.

## Fast food is no problem for mathematicians

**W**anting to cook up an applied problem for his calculus students, UH Mānoa's Lawrence J. Wallen enlisted colleague David Bleecker to determine the optimal taco shell. They calculated the precise cross-sectional curve a shell must have to hold the most stuff without "running beyond the border."

A hefty (2 feet in diameter) tortilla, molded along their curve, envelopes .8300305 cubic feet of filling. The same tortilla following a typical industry-standard curve holds only 57 percent as much.

A resulting article, "The World's Biggest Taco," published in *The College Mathematics Journal*, earned the pair the Mathematical Association of America's George Pólya Award for expository excellence, with accompanying citation and cash prize. —Emily White

Illustration by Kip Aoki

## If you thrill to grill, wait and marinate

**M**arinating foods prior to cooking appears to reduce the production of cancer-causing agents that develop during grilling. High-protein foods—including beef, pork, chicken and fish—cooked at high temperatures form carcinogenic heterocyclic amines, or HCAs.

Research by Pratibha Nerurkar, of the University's Cancer Research Center of Hawai'i, suggests marinades lower carcinogen formation by two-thirds.

The high water content of marinades may be the reason; teriyaki and an Indian turmeric-garlic marinade both reduce HCA formation, Nerurkar found. Other tips: lower the heat and avoid charring meat.

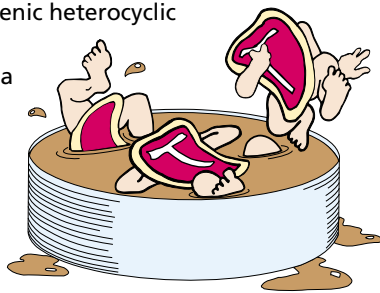


Illustration by Billie Ikeda

## Lecture series to focus on time

**W**indward CC continues its year-long free millennium lecture series this spring. Lectures are scheduled at 7 p.m. on the Windward O'ahu campus. Artists will discuss their work for *In Search of the Century: Art of Our Time* on Jan. 18 at Gallery 'Iolani. Additional lectures, scheduled in Hale Kuhina, include historian Phil Hagstrom's comparison of millennial celebrations in

"Time and the New Millennium: Back to the Present" on Feb. 8; a panel of distinguished kumu hula discussing "Hula for All Time: The Past, Present and Future of Hawai'i's National Dance" on March 14; and Associate Professor Gloria Moore's reflection of a society in "Marking Time with Music" on April 11. Call 235-7454.

## UH brings drama to conventions

**M**ānoa's Department of Theatre and Dance is offering Asian theater as an activity for Hawai'i-bound conventioners. Planners can choose a full-length stage production on campus, complete with backstage tour and reception, or shorter programs for hotel or Hawai'i Convention Center venues. Zonta International, an organization of executive women, has reserved Kennedy Theatre to see



*Summer Festival: Mirror of Osaka* during July. The kabuki play is available May through July. "Highlights of Chinese Theatre," "Highlights of Kabuki Theater" and featured speakers are available year-round. Contact James Brandon, (808) 956-5333, or visit [www.hawaii.edu/theatre/ASIAN/convention.htm](http://www.hawaii.edu/theatre/ASIAN/convention.htm).

## Forest-friendly lei-making promoted

**A**fter *The Honolulu Advertiser* documented the toll that lei-making, particularly for hula competitions, takes on fragile island environments, a diverse coalition joined forces to lessen pressures on the forests. Their book, *Eighty-five Plants for Hawaiian Lei Gardens: A Production and Business Guide*, teaches homeowners, hālau and businesses how to grow their own plants and encourages entrepreneurs to provide starter plants and pre-cut lei-making materials. The accompanying *Hawai'i Plant Source Guide 1998-1999* lists sources for plants. Project coordinator Jim Hollyer, a UHM College of Tropical Agriculture and Human Resources assistant specialist, attributes the book's quality and depth to the three dozen botanists, lei makers, cultural experts, growers and other contributors. The U.S. Department of Agriculture and Office of Hawaiian Affairs sponsored the book, available from CTAHR and bookstores; call (808) 956-7036.



Photo by Jim Hollyer

**It's astronomical**



Institute for Astronomy building in Mānoa, completed in 1975.



First UH astronomy facility, built in 1910 in Kaimuki.



Each Keck mirror contains 36 hexagonal segments weighing 880 pounds each.



29,000 feet high, Mauna Kea averages 248 clear nights and just 5.5 inches of precipitation per year.

Established in 1967, the Institute for Astronomy (IfA) employs 204 people, helps teach about 800 students each semester and operates Hawai'i's only snowplow.

The first Hawai'i telescope observatory was a tent set up by Captain Cook's crew at Kealakekua Bay; the first mountain telescope was the Mees Solar Observatory on Haleakalā in 1964.

With \$5 million in federal funding, IfA's adaptive optics team has created systems that can produce sharper infrared images than those from the Hubble space telescope.

Nearly 70,000 people stop at the Mauna Kea Visitor Information Station each year; many enjoy the free public star-gazing program offered four nights per week.

King Kalākaua wrote of Hawai'i's need for an observatory in 1880.

For more information, visit [www.ifa.hawaii.edu](http://www.ifa.hawaii.edu).

Kaimukī observatory from UH photo archives; other photos by Richard Wainscoat

**AWARDED** A three-year Ford Foundation grant of \$350,000 for the **"Remaking Asia/Pacific Studies: Moving Cultures"** project of the UHM School of Hawaiian, Asian and Pacific Studies.



An expanded grant of \$465,000 to work on **crisis management computer models** that customize map views according to user tasks from the Office of Naval Research for the UHM Department of Information and Computer Sciences.

A \$1.2 million grant to prepare **technology-proficient teachers** under a three-year federally funded LEI Aloha (Learning Enhancement through Innovations) project involving the UHM College of Education.



A **server system from Sun Microsystems** to support research and technology transfer of Java-based systems.

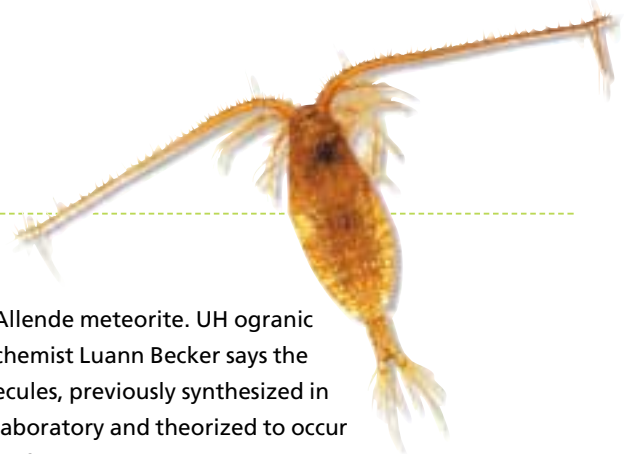
A pledge of **\$8 million worth of software** support for a semiconductor design student lab from Avant! Corporation to the UHM College of Engineering and Department of Information and Computer Sciences.

**ESTABLISHED** The **Art Rutledge Endowment in Labor Studies** at UH West O'ahu's Center for Labor Education and Research, with an inaugural donation of \$250,000 to support labor studies and fund a lecturer position named in honor of the labor leader and Unity House founder. Additional funding was raised during a luncheon for former Polish President **Lech Walesa**, who was presented with a UH honorary degree.

An academic subject **certificate in Philippine studies** at Leeward CC, the campus with the state's highest population of Filipino students, and a **certificate in substance abuse and addiction studies** at UH West O'ahu to help prepare counselors for state certification.

**RELEASED** Results of last year's national registry examination in radiologic technology—all **21 of Kapi'olani CC's graduates passed**, with a mean score of 88, well above the required minimum of 75.

**HOSTED** **World Peoples' Conference on Education** at UH Hilo and the International Conference on **Counseling and Treating People of Color**, co-hosted in Honolulu by



the UHM School of Social Work.

**PUBLISHED** *Handbook on Ethical Issues in Aging*, edited by UHM sociologist Tanya Fusco Johnson (Greenwood Publishing Group).

**Love in a Dead Language**, a novel by Lee Siegel, UHM religion professor (University of Chicago Press).

*Meaning of a Disability: The Lived Experience of Paralysis*, a book based on personal experience by Albert "Britt" Robillard, UHM professor of sociology and Pacific Islands studies and senior researcher at the Social Science Research Institute (Temple University Press).

**The Pacific Islands: Environment and Society**, explorations of Pacific environment, history, culture, population and economy edited by UH-trained geographer Moshe Rapaport (Bess Press).

**Sacred Sites**, by UH Press, of photographs and text describing heiau on O'ahu, compiled by photographers Jan Becket, of Kamehameha Schools, and Joseph Singer,

of the UHM Department of Anthropology (University of Hawai'i Press).

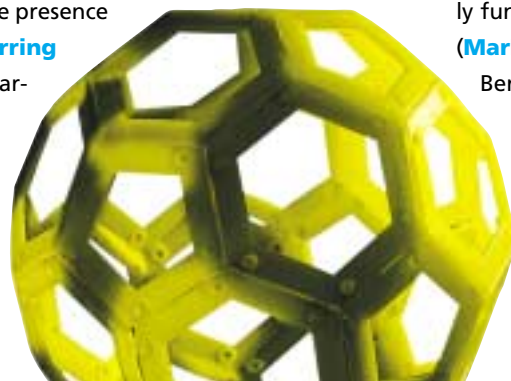
**OPENED** Maui CC **Moloka'i Education Center** in

Kaunakakai, a \$4.1 million center offering UH courses through distance education technologies and on-site instruction.

**Agricultural Sciences**, a new four-story \$27 million College of Tropical Agriculture and Human Resources building housing animal science, food science, biotechnology and soil management laboratories and classrooms.

**Donald Chang Won Kim Multimedia Computer Laboratory**, with a \$1 million endowment from the Board of Regents chair, UH alumnus and R. M. Towill company chief executive officer for whom the UHM College of Engineering teaching facility is named.

**DISCOVERED** The presence of **naturally occurring fullerenes**, pure carbon molecules in soccer-ball shaped structures, in the 4.6-billion-year-



old Allende meteorite. UH organic geochemist Luann Becker says the molecules, previously synthesized in the laboratory and theorized to occur in star formation, can entrap gasses, which can provide clues about the early solar nebula and perhaps even delivery of elements essential to the origin of life on Earth.

Evidence that **myelin coats the nerve cells** of calanoid copepods, perhaps explaining why the insect-like ocean-dwelling zooplankton exhibit particularly speedy response to stimulus. Researcher Petra Lenz says the discovery "rewrites the biology textbooks," which have held that myelin is a feature virtually exclusive to vertebrates.

A body of liquid water the size of **Lake Ontario under the Antarctic ice**, conditions that may approximate those on the frozen Jupiter moon Europa. UH oceanographer David Karl is among the international scientists exploring whether the lake is home to previously unknown microbes or contains a record of ancient climate conditions in lake-bottom sediments.

**SELECTED** Scientific stowaways both real and virtual—Hawai'i Mapping Research Group Director Margo Edwards to be the first woman to sail aboard a Navy nuclear sub during an **expedition to map the Arctic seafloor**; UHM Astronomer David Tholen as one of a half-dozen U.S. scientists collaborating with Japanese colleagues on the MUSES-C **robotic mission to collect samples from asteroid Nereus**; planetary geoscience faculty to use remote sensing data from NASA Earth Observing System satellites to monitor **volcanic eruptions, wildfires and thermal output** related to human development.

UH Mānoa, to be one of six campuses in the nation participating in a Centers for Disease Control-sponsored study of **social norms** related to student decisions about sexual practices and alcohol use.

**SIGNED ON** Big Island biotechnology firm Cyanotech Corporation as the **first industry partner** in the federally funded Marine Bioproducts Engineering Center (**MarBEC**) operated by UH and University of California, Berkeley.

Aichi University and Aichi University Junior College and Hiroshima University, bringing the number of UH's **international exchange partners** to 135.



Violet Harada



Farzad Mashayek



Patrick Takahashi



Majid Tehranian



Ronaele Whittington

**HONORED** Associate Professor of Information and Computer Sciences **Violet Harada**, recipient of the American Association of School Librarians Highsmith Research Grant for innovative research on the impact of school library media programs on learning; Assistant Professor of Mechanical Engineering **Farzad Mashayek**, named one of 21 Young Investigators in the nation for his work on dispersion of fuel droplets in propulsion system combustion; Associate Professor of Library and Information Science **Larry Osborne**, with the Armed Forces Libraries Round Table Certificate of Merit for philanthropic contributions to military libraries under the Pacific Command; Hawai'i Natural Energy Institute Director **Patrick Takahashi**, with the Stephen D. Bechtel Jr. Energy Award from the American Society of Civil Engineers; Professor of Communication **Majid Tehranian**, with an honorary doctorate from Soka University in Tokyo; Kapi'olani CC Respiratory Care Program Director **Stephen Wehrman**, with the American Lung Association 1999 Volunteer Excellence Award for innovative projects involving his students; Lecturer in Family Resources **Ronaele Whittington**, awarded a Fulbright Award to study in Kyrgyzstan.

**ELECTED** Geographer and Associate Dean **Nancy Davis Lewis**, of the UHM College of Social Sciences, to a four-year term as secretary general of the Pacific Science Association; Head Baseball Coach **Les Murakami**, into the American Baseball Coaches Association Hall of Fame.

**APPOINTED** Purdue University civil engineer **Wai-Fah Chen** to be dean of the UHM College of Engineering; Writer/teacher **Albert Wendt** was UHM Arthur Lynn Andrews Distinguished Visiting Professor of Asian and Pacific Studies during the fall, followed by author **Sia Figel**; Massachusetts administrator **John Whittaker** to be UHH vice chancellor for administrative affairs.

## Regents' Medal Recipients for 1999



### Excellence in Teaching

#### UH Mānoa

Kenneth Chambers, associate astronomer, Institute for Astronomy  
Rahul Chattergy, professor of electrical engineering, College of Engineering  
Karen Gebbia Pinetti, associate professor, William S. Richardson School of Law  
Harvey Gochros, professor, School of Social Work  
Karen Jolly, associate professor of history, College of Arts and Humanities  
Julie Rosenheimer, assistant professor of anatomy, John A. Burns School of Medicine

#### UH Community Colleges

Linda Fujikawa, instructor in Japanese, Kapi'olani CC  
Sang Lee, assistant professor of mathematics, Leeward CC  
Marshall Mock, professor of physical science, Kaua'i CC  
Paul Nash, assistant professor of art and ceramics, Windward CC  
Allan Okuda, associate professor in food services, Hawai'i CC  
Elizabeth Waite, assistant professor of nursing, Maui CC  
Clifford Yamashiro, associate professor in automotive mechanics technology, Honolulu CC

#### UH Hilo

William Wilson, professor of Hawaiian language and Hawaiian studies

#### UH West O'ahu

Gary Helfand, professor of public administration

### Excellence in Research

John Learned, professor of physics and astronomy, College of Natural Sciences, UH Mānoa  
Rosemary Gillespie, associate researcher, Pacific Biomedical Research Center, UH Mānoa  
Yadong Luo, associate professor of management and industrial relations, College of Business Administration, UH Mānoa

### University Service Awards

Kem Lowry, professor of urban and regional planning, College of Social Sciences, UH Mānoa, Robert W. Clopton Award  
Antoinette Martin, assistant professor of art and coordinator of Gallery 'Iolani at Windward CC, and Daniel Boylan, professor of history at UH West O'ahu, Hung Wo and Elizabeth Lau Ching Award  
Michael Tamaru, publications manager, University and Community Relations, Willard Wilson Award

Assuming leadership of a program that faces daunting challenges, UH's new medical school dean is also generating optimism and enthusiasm. Edwin Cadman is

# Here to heal

by Cheryl Ernst

**M**aking his first public appearance after being named dean of the John A. Burns School of Medicine, Edwin Cadman greeted onlookers with an "Aloha" every bit as hearty as UH President Kenneth P. Mortimer's. "I will learn all your customs in short order ... and your language, too," he pledged. The Yale physician, scientist, educator and hospital administrator approaches faculty, student and community groups in the same vein, admitting he doesn't have all the answers, promising to be a quick study, announcing an ambitious agenda, vowing to involve faculty and students.

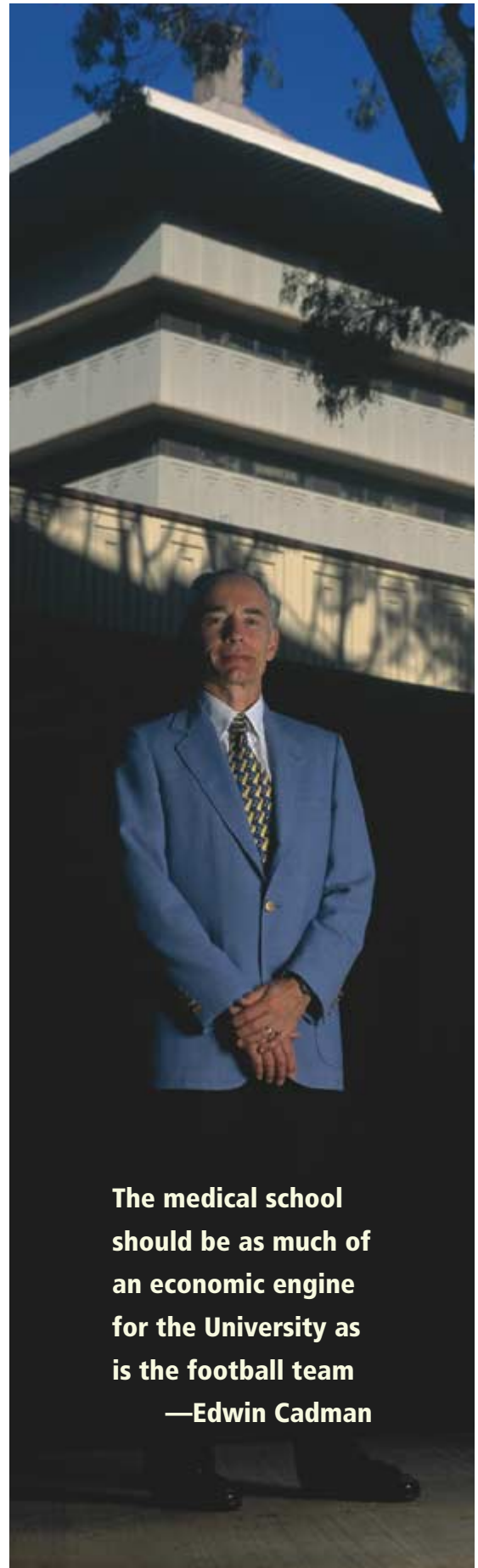
"The first thing I'm going to do is listen," he says. Second? "We need to develop a strategic plan, from which a business plan will come." It will capitalize on the medical school's strengths, proclaim the school's leadership in problem-based learning, leverage federal and private funding and increase opportunities for students to pursue research or other interests.

It's a tall order. The school has been without permanent leadership since the end of 1996. It has been subjected to budget cuts and the subject of a critical audit. Some lawmakers and two UH faculty committees recommended closing the school.

"I read all the same articles you did," Cadman confided to faculty members during a get-acquainted session. "My wife told me, 'If we go to Hawai'i we're not going to buy a house.'" Amid predictions of the school's demise, Cadman turned down the dean's position when it was first offered to him. Six months later he accepted the job because, he says, he became convinced that the University, state administration and community were committed to seeing the school grow and develop. "Simple things this University has done assure me that they're serious," he says. Assignment of a development officer to pursue private support, renovation of facilities and the promise of 30 new faculty positions impressed him. So did the high caliber of personnel and equipment and budding research focus of Hawai'i hospitals.

Cadman fuels an optimism in the medical community akin to the enthusiasm that the public bestowed on UH Football Coach June Jones. Like Jones, Cadman will draw a salary that is high by UH standards (paid in part from private sources) but less than he could command elsewhere. Like Jones, he's attracted by UH's potential.

"There is nothing I would rather do than be the dean of your medical school," he has told both faculty and students. "This is where Washington,



**The medical school should be as much of an economic engine for the University as is the football team**  
—Edwin Cadman

Oregon and the University of California at San Francisco were 25 years ago—they weren't the medical schools they are now. They built their reputation by creating research specialties and recruiting faculty who could pay their own way or part of it." Plenty of promising young physician-scientists and basic-science investigators (and even talented mid-career people tired of the hassles) are eager to have even a quarter of their salaries guaranteed while they pursue their share of the growing pot of federal money reserved for biomedical research, Cadman insists. In doing so, they will free up resources that will allow the medical school to turn 30 new positions into 60.

"Each faculty member who annually brings in \$200,000 to \$500,000 employs between two and five people, lives here and makes purchases, boosting the state economy," he says. Even clinical teaching faculty—and the primary role of a medical school is to educate, he emphasizes—can secure federal dollars for clinical research related to specific health problems if the school makes it easy for them to apply for grants.

Federal funding is also available to extend schooling for the one in 10 students who wants to add research expertise to his or her medical training through graduate training and MD/PhD education grants.

A significant measure of a medical school's success is the quality of its students. Cadman wants UH to talk about, write about and build on the success of its clinically intensive, problem-based approach to preparing doctors. Success and the resulting prestige will attract support from foundations and philanthropic organizations, a critical third leg that, together with state funding and federal research dollars, creates financial stability.

The medical school should be as much of an economic engine for the University as is the football team, he

insists. To win, it must build on existing strengths, recruiting players who complement existing team members.

Athletic metaphors come easily to the runner and self-admitted sports fan who plans to be in the Rainbow stands for football, volleyball and basketball. He traces his roots to a small town in southwestern Oregon and still enjoys vacationing in the state. All three of his sons are drawn to the Pacific Northwest. One just finished his MBA, one is applying to medical school, and one is considering an MD/PhD program of the type Cadman envisions for Hawai'i.


The physician-scientist has distinct advantages, speaking the language of both medicine and research, he explains. "You can't understand what cystic fibrosis is until you've seen patients. If you spend four years studying human disease, you will be a better scientist."

Cadman welcomes suggestions to link the University's Cancer Research Center of Hawai'i and Pacific Biomedical Research Center to the medical school. "We should all be a happy family working together. There should be an infrastructure to enhance us all." He likewise pledges to incorporate the responsibility for public health education handed to him when the Board of Regents de-

cidated to make the UHM School of Public Health a program within the medical school.

We must separate what public health is in the mind of the public from the administrative structure of a school, he says. "A medical school should be concerned with issues that affect the public's health, such as disease prevention. We have got to talk about smoking cessation, cancer prevention, heart disease, diet and exercise and early detection of disease." A medical school should also provide opportunities for students to pursue a background in management or public policy along with medical training. "We need more physicians involved in health-care policy," he says.

He will begin by ensuring that Hawai'i's medical school remains viable. "I'm not here to bring my personal agenda," Cadman concludes. "I'm here to lead. I view my role as an instigator, an idea maker, determining what Hawai'i wants to be known for and is willing to invest in and then bringing people together to do it."

He's committed to his new role. In fact, he and his wife have bought a house. 

Cheryl Ernst is communications director for the University of Hawai'i and *Mālamalama* editor



**Following groundbreaking this fall for the Institute for Biogenesis Research at the UH Mānoa School of Medicine, Professor Ryuzo Yanagimachi, right, whose own groundbreaking work contributed to in vitro fertilization and cloning technologies, discusses plans for his future facilities with UH President Kenneth P. Mortimer, Lt. Gov. Mazie Hirono and Board of Regents Chair Donald C. W. Kim.**





UH Professor Roger Fujioka examines a culture (inset above) for signs of pathogens in O'ahu's water supply

# Natural and Good

## UH researchers save Honolulu's drinking water from unnecessary chlorination

by Jennifer Crites

**T**he green metallic strips wink like a hologram as Geeta Rijal gently rocks the petri dish in her hand. "This one indicates total coliform bacteria," she explains. "These tests are useful if you're looking for a specific target colony." As a researcher at UH's Water Resources Research Center (WRRC), Rijal checks for exactly that—colonies of bacteria and viruses that might be contaminating O'ahu's drinking water.

Such tests, conducted over the past five years, were crucial in determining whether chlorine would be added to O'ahu's drinking water, says Roger Fujioka, UH professor of public health and a member of the graduate faculty in microbiology. "If we had found a significant number of pathogens, Honolulu's Board of Water Supply would have been forced to maintain 0.2 milligrams of chlorine per liter of water in the county's water supply. At that level, you can definitely taste and smell chlorine, and there's a greater chance of producing disinfection by-

products that are carcinogenic. Our bodies have not figured out a way to metabolize the chlorine bond," he adds. "That's why chlorine is used in pesticides such as PCB. Insects can't metabolize it either, and it lasts a long time—in the soil and in our bodies."

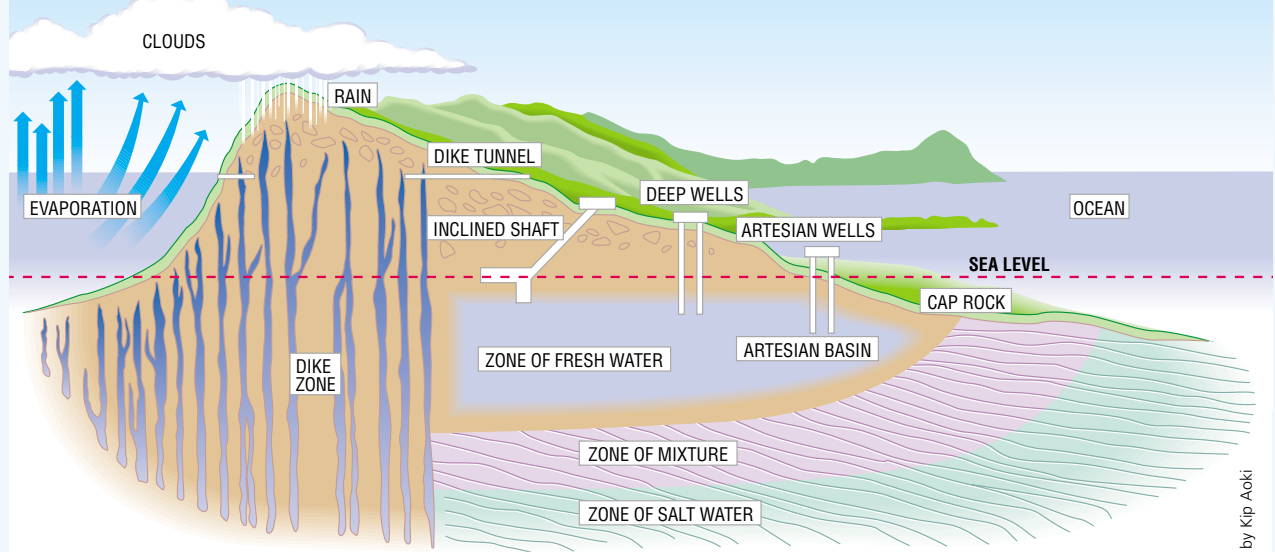
The threat of chlorine-flavored water became a very real possibility for O'ahu in 1992 when the U.S. Environmental Protection Agency began discussions to clarify specifications for the Groundwater Disinfection Rule—a regulation under the Safe Drinking Water Act of 1986, which was established to protect the public from waterborne diseases. "The rule said that public water suppliers had to maintain 0.2 milligrams of chlorine in their distribution systems unless they could prove that the water was not vulnerable to contamination by fecal bacteria," says Fujioka. "The Board of Water Supply hired us to conduct the necessary tests."

Fujioka and his team examined hundreds of samples drawn from

underground wells and from distribution points at schools, playgrounds, restaurants, the airport and other places where people have access to community water supplies. "The guidelines tell us to test using 100-milliliter samples, and that's the stan-

### Hawai'i's water watchers

**F**or three decades, the multidisciplinary faculty at UH's Water Resources Research Center has conducted research and worked with agencies responsible for water management to protect groundwater from contamination, address public health issues, forecast rainfall and drought, assess native water rights and provide environmental impact assessment training sessions throughout the Pacific. Current projects range from diesel fuel bioremediation to ocean sewer outfall monitoring and take faculty from fishponds on Moloka'i to an effluent reuse study at O'ahu's Schofield Barracks. Learn more about the center at [www.hawaii.edu/morav/WRRC.html](http://www.hawaii.edu/morav/WRRC.html).



**In O'ahu's naturally pure water cycle, rainwater is filtered into Windward lava dike reservoirs and the aquifer underlying other parts of the island.**

ard," says Fujioka. "We wanted to prove beyond a doubt that our water was clean enough to be exempt from the extra chlorination." To do that, the researchers tested larger samples—10 times larger—and used highly sensitive analytical methods to more thoroughly scrutinize the assays. Both techniques increased the possibility of finding even minute quantities of bacteria and viral indicators. Fujioka also looked at the amount of organic carbon, sediment and other factors to see if the overall aquatic environment would support bacterial growth.

The results to date are promising. "We knew our wells contained exceptionally clean water because rain water has to seep through 200 to 1,000 feet of porous lava rock before it gets to the aquifer, says Erwin Kawata, Board of Water Supply laboratory director. "It takes an average of 20 years for water to pass through this natural filter. Most bacteria and viruses can't survive that long."

Tests of samples from the distribution system were also favorable. "There's a chance some contamination can get into the reservoir tanks," says Kawata, "so we selectively chlorinate on a regular basis and when there's a specific need—when we're replacing pipes, for example—and that takes care of potential problems. Since we only treat the water with a minimal

level of chlorine, you usually can't taste it."


In addition to saving Hawai'i water from unnecessary chlorination, the WRRC tests have had an impact on national water-quality standards. UH's water experts have become advisers to the federal Environmental Protection Agency. In February, Fujioka and other researchers from around the country met with EPA officials in Virginia to discuss proposed guidelines—testing methods, appropriate sample volume and specific bacterial indicators—to be included in the Groundwater Rule now being finalized. "We're one of nine labs nationwide that are evaluating what methods will work," says Fujioka, "then the EPA will decide the specifics of the rule and everyone will have to comply."

### **NOT ALL CONTAMINANTS ARE BAD.**

Naturally occurring minerals that actually make Honolulu water taste better include calcium, sulfate, potassium, bicarbonate, chloride, nitrate, sodium and magnesium. Learn more about O'ahu water in the Board of Water Supply's Consumer Confidence Report for your neighborhood or on free BWS tours of its Hālawā Shaft and Fred Ohrt Water Museum at the Kalihi Pumping Station. Call 527-6113 or 527-6126 or visit [www.lava.net/bws](http://www.lava.net/bws).

Does that mean there's still a possibility Honolulu's water will taste like chlorine in the future? "I think they're going to keep the chlorine maintenance level at 0.2 milligrams, but there will be exceptions," says Fujioka. "Everywhere on the Mainland, your water source is down river from someone else, and another state can impact your water. That's not the case on an island. We've shown them that O'ahu's water is not vulnerable to contamination by fecal bacteria, which is what they were worried about."

EPA is expected to announce the final regulations early this year. The Board of Water Supply's Kawata is confident that Honolulu will be exempt from unnecessary chlorination. "The work that Roger did was very helpful in changing the EPA's approach to the rule," he says. "We'll still have to do regular monitoring, but as long as we keep our wells maintained and our distribution system in good shape, then we probably will not have to chlorinate to the 0.2 level."

That's good news for O'ahu residents. "Pure, sweet, cool, clear as a crystal," is how Mark Twain described the island's water in 1866. "We're proud of our crystal clear, great tasting water," says Kawata, "and we plan to keep it that way." 

Jennifer Crites ('90 Windward CC, '92 UHWO) is a freelance writer, photographer and former managing editor of ALOHA magazine

# Voices from Our Past

**I**nnovation requires both a gleam in the eye and the drive to push ahead. Here are some determined dreamers behind a few of UH's remarkable programs.



**Diversification of agriculture is a pressing problem in Hawai'i. ... Much effort has been expended during the past 150 years in experiments upon many different agricultural crops and industries here.**

—1937, David L. Crawford, entomologist and past UH president

The UHM College of Tropical Agriculture and Human Resources works with growers of tropical flowers and food crops throughout the state and develops biotechnological techniques for growing disease-resistant plants, shellfish and other products.

Photo by Cory Lum/Honolulu Advertiser



**The only two women's sports were volleyball and track. One woman's scholarship was awarded. It went to a drum majorette. ... Very few people thought about the credibility of women's athletics.**

—1972, Donnis H. Thompson, past UHM women's athletics director

Still working to achieve full gender equity, Rainbow Wahine now compete in nine sports thanks in large part to the efforts of Thompson. The former Olympic athlete and physical education professor fought the demise of the UHM women's sports program.



**Enormous numbers of students come to the University without ever having seen live theater...**

—1972, Earle Ernst, past drama professor

Development of theater literacy in Hawai'i took an international turn when kabuki, performed at UH as early as 1924, was revived by Ernst. John F. Kennedy Theatre opened with a kabuki performance in 1963 and is designed to accommodate both Western and Eastern productions.

**...Your journal [Biography] sounds interesting. I hope ... it will widen our horizons in many ways at once.**

—1964, anthropologist Margaret Mead to future Center for Biographical Research Director George Simson



**...a college for the study of general biology, a marine biological station, a zoological garden and aviary and a botanical garden.**

—1906, William T. Brigham, Social Science Association, Honolulu

The University, with departments of anthropology, botany and zoology, was founded in 1907. A marine biological station, opened in 1920, evolved into the Hawai'i Institute of Marine Biology. Harold K. Lyon Arboretum, established in 1918, was transferred to UH in 1953.



**There is an increasing interest in the language of the Hawaiian people, amounting to a renaissance in Hawaiian.**

—1939, Henry P. Judd, past UH Hawaiian language professor

The Hawaiian language professor predicted a sea change. Today more than 800 students enroll in Hawaiian language classes at Mānoa; UH Hilo boasts a master's program in Hawaiian language and creates Hawaiian curriculum materials; and UH Community Colleges are active in the revival of Hawaiian language and culture.

**Mike who?**

—Unidentified U.S. congressman after the U.S. acquired Micronesia, post-World War II

Anthropologist Leonard Mason and others at UH consolidated their Pacific Islands expertise, creating a center that offers the nation's only interdisciplinary master's degree in Pacific Islands area studies.



**It became my dream to establish a solar observatory on top of one of the mountains.**

—ca. 1953, Walter Steiger, past UH physics professor

Mees Solar Observatory was established in 1964 atop Haleakalā. Meanwhile, astronomer John Jefferies led UH's bold and successful 1965 bid to place a \$3-million-dollar NASA telescope on Mauna Kea, now recognized as the premier site for ground-based astronomy.



**How can the kid from Nānākuli afford to choose to be a lawyer when we don't have a law school in Hawai'i?**

— 1972, Wallace Fujiyama, former UH regent

Fujiyama helped fight down initial opposition to establishing the UH School of Law. The nation's most ethnically diverse law school now ranks among the top 50 out of 180 U.S. schools accredited by the American Bar Association.



**There are legal ways of getting it done if you are resourceful.**

—1965, Ralph Shaw, past UH library dean

Within three years of Shaw's arrival in Hawai'i, UH created an accredited school of library studies, adopted the Library of Congress classification system, transferred professional staff to faculty appointments and built a new graduate library. The Mānoa library now ranks 62nd among the nation's research libraries.

**The key to much of cultural knowledge is in the people... who lived through crucial transition periods in [Hawai'i] history. ... The data collection from various projects dealing with ethnic studies should be housed in a central repository.**

—1971 legislation creating the Center for Oral History

Compiled by Nancy J. Morris, head of archives and manuscripts and the Charlot Collection at Hamilton Library. Contributors include Alison Kay, George Simson, Eileen Herring, Lei Seeger, Karen Rehbock, Craig Howes, Warren Nishimoto and *Mālamalama: A History of the University of Hawai'i* (University of Hawai'i Press, 1998), by Robert M. Kamins and Robert E. Potter.

We solicited millennium musings from a smattering of UH experts. Here are the prognostications of faculty members who have their...

# Eyes on the future

## The new university

It is 2030. Hawai'i is a newly independent state whose citizens are not only locally based but also globally dispersed. They are, in short, not only citizens but also netizens. Devolution of large nation-states into smaller geographical and networked communities, which had just begun in 2000, is in full force everywhere, including the Untied (formerly, United) States. While Hawai'i is "sovereign," if I can use an obsolete word from the old industrial era, it is also aligned with other "sovereign" communities into a larger cultural community called Oceania.

The University of Hawai'i is everywhere and nowhere. A physical presence takes the form of scores of what, in the old days, were called community colleges spread throughout the Hawaiian Islands. Most provide a meeting place for specific learning projects or face-to-face tutoring. Others provide facilities for ad hoc research groups, formed on what used to be considered a multidisciplinary basis, although most of the old academic disciplines have long since vanished. Some of these research groups are brought together to address issues of basic, theoretical concern. Others, the vast majority, are of an applied and practical nature.

A large number of intellectual ronin/monks and nuns—scholars of the truly old school who live with little concern for worldly goods or profit—still do research on matters of interest only to themselves. Their "crazy ideas"



**Probably the most exciting new development for UH was the creation, only a year ago, of a branch "campus" on Mars...**

often provide breakthroughs and insights for others later.

The heart and soul of higher education in 2030, however, is what was misleadingly called "distance education" three decades earlier. Learners have access to material in highly sophisticated, personalized, interactive, virtual-reality modes. Some of the form and content are created by curriculum-providers located in Hawai'i; most are developed in vast and spectacular profusion, usually by the very best (but sometimes by the very worst) scholar-producers in the world. Each learner may start whatever course of study she wants, wherever she wishes to enter it, and proceed as far and as fast as she wishes in any direction, branching out into related areas through what were called hot links in 2000. Each person thus has individualized and utterly unique (and endlessly ongoing and evolving) knowledge and skills.

"Where you graduate?" used to be the first question each local young adult asked every new acquaintance. Now finding out what people know and don't know and learning from each other in face-to-face or virtual encounters is a major interpersonal preoccupation—almost a fad.

What was once called intramural athletics has replaced the semi-professional NCAA programs. Each local community college has fielded teams of true student athletes and developed wonderful rivalries. Their contests are enormously popular. Online and in-person programs and facilities in the Islands enable people, if they have the skill and the will, to compete in physical activities at world-class levels. Most games and competition occur in cyberspace.

Probably the most exciting new development for UH was the creation, only a year ago, of a branch "campus" on Mars, inspiring this additional verse to our alma mater:

*In Valles Marineris our Alma Mater waits*

*For Martian songs and laughter to ring its opened gates.*

*So come and join your children! The journey's now begun*

*For wider truth and service, in worlds beyond our Sun.*

By James Dator, director of the Center for Future Studies and a professor of political science at UH Mānoa



## Economics will provide Hawai'i's reality check

Economists will continue to provide a reality check to society globally and here in Hawai'i in the 21st century, as they have for well over 200 years—reminding us that there is no free lunch and that every scarce resource has an opportunity cost. Economic principles that guide the allocation of limited resources have enjoyed widespread adoption in business and government in the last half century; this influence will increase in other organizations in the United States and abroad.

One issue that will distinguish the application of economics in the coming century has to do with exactly which resources will be relatively scarce, and thus command a high price, and which will be relatively abundant. In his essay “White Collars Turn Blue,” Massachusetts Institute of Technology’s Paul Krugman opined—one might say in true Darwinian fashion—that the pressure of population growth will make natural resources dear once again, while the explosion of information will make knowledge workers (like myself) very cheap.

As governments respond to environmental limits by increasing their reliance on buying and selling rights to emit certain kinds of pollution, such licenses might account for as much as 30 percent of gross domestic product. Energy scarcity, environmental considerations and the congestion of roadways might halt the spread of suburbia—despite the telecommunications revolution that eliminated the need for synchronous, face-to-face worker interactions—and lead to the rebirth of the big city, served by the most effective mass transit system yet devised, the elevator.

On a more crowded spaceship Earth, economists will have to give more attention to phenomena they call “externalities,” the side effects of production and consumption decisions not fully reflected in arm’s length market prices. This will certainly make economists more politi-



**Hawai'i will feel the impact of economic reasoning**

cal and perhaps more technical. As a fan of political economy, I applaud the former, but, as a former mathematics major, I occasionally cringe at the pseudo-scientific masquerade our profession at times embraces.

Hawai'i, which has learned to make hard choices only in the last 10 down years, will feel the impact of increased use of economic reasoning. Given a forecast of renewed pressure on the environment, the timing couldn't be better.

By David McClain, dean and former Henry A. Walker Jr. Professor of Business Enterprise and Financial Economics and Institutions in the UH Mānoa College of Business Administration

## The family will remain strong

The family has traditionally been cherished in Hawai'i. A recent survey shows that this is still the case. The survey, conducted by Market Trends Pacific for the UH Center on the Family, asked residents what was most important for their children. More parents said having a good marriage and family (88 percent) than being successful in work (68 percent), contributing to society (48 percent), being a community leader (23 percent) or having lots of money (18 percent). Extended family relationships are valued—81 percent of parents said their children see or talk to grandparents at least once per week, 75 percent reported similar contact with aunts and uncles.

What will Hawai'i families be like in the coming decade? Demographic trends indicate there will be fewer two-parent households and more one-parent families. We will welcome more Hispanics and more children of mixed heritage. The 60-plus age group, just 7 percent of the population in 1960, will grow to 20 percent in 2010. Aging baby boomers, who will be in their late 40s to early 60s in 2010, will empty their nests, adding to the increase in households without children. In addition to attending to their own health and personal affairs, they will financially and emotionally support several generations—parents, children, grandchildren and even great-grandchildren. Healthier, wealthier and more educated than previous retirees, they can be a rich resource in service to their community.

Not all families will be financially well off. Nearly one-third of the families in the survey identified financial issues as their greatest challenge—the gap between the richest and poorest families has increased over the past two decades, with both middle- and low-income families experiencing decreases in real earnings. Families in poverty, and especially their children, are vulnerable to a host of negative academic, work, health and behavioral outcomes that put them and society at considerable

risk. Technological advances and the knowledge industry contribute to the disparity in wealth and expose both the weaknesses in our educational system and the importance of preparing all children to be successful.

As time of day becomes less relevant in conducting business and providing services, more parents will be working split-shifts, part-time, in the evenings and as free-agents. Fathers will play a larger role in caring for children, and grandparents and other family members will be pressed into service. Also, changes in welfare programs that mandate work intensify the need for out-of-home care for the young. Because early experiences are critical to development, high quality programs for infants and preschoolers are imperative. There will be an acute demand for skilled child and family workers. Early childhood programs, medical care and social services must embrace children of diverse socioeconomic and health status; be offered on days and at times not presently available; and be delivered by professionals trained from interprofessional, family-centered and community-based principles.

Mental health problems will be less hidden, and more treatment modalities will be available. As advances in molecular biology and genetic engineering are applied to emotional and mental disabilities, congenital conditions and appearance, parents must join with ethicists, scientists and policy makers to determine how treatment is allocated, used and paid for.

Time together nourishes and supports individuals, perpetuates values and traditions and strengthens family bonds; preserving it will be a challenge in the midst of forces that isolate individuals from each other in work and play and value people as consumers rather than phil-anthropists. Yet, technology can also improve communication and enhance family functioning.

Families are extremely resilient. They have survived through the centuries and continue to be critical to the development of children, well-being of individuals and strength of society. Despite financial vicissitudes during the past decade, Hawai'i families are optimistic. Nearly



**Preserving time together will be a challenge amid forces that isolate individuals**

nine in 10 families surveyed believed they will climb higher on the ladder of life in the years ahead, and people's beliefs strongly influence reality. While 'ohana may evolve into different forms and patterns, its essential place and value in our lives will not diminish.

By Ivette Rodriguez Stern, coordinator of the Hawai'i Family Touchstones project, with Center on the Family Director Sylvia Yuen, both of the UHM College of Tropical Agriculture and Human Resources. For information on the Touchstones survey and other indicators of family health documented in the report, see [www2.ctahr.hawaii.edu/family](http://www2.ctahr.hawaii.edu/family) or call (808) 956-4132

## **Diversity and accessibility will characterize the arts**

I am very excited about the future of the arts in Hawai'i, based upon what has been happening in recent years. The arts are extremely important as they provide a means for us to connect with ourselves and the community we live in. Increasingly, in the age of technology, we find ourselves alone with machines or lament the lack of human encounter. As the world becomes more desensitized, more than ever before, the arts provide us with a sense of human dignity and opportunity to interact.

On the one hand, computer technology provides a wonderful tool, an increasingly powerful vehicle artists can use to create and opportunities to interact not available before. We can expect an explosion of creativity in the next decade using new technology in the arts. However, I believe we will also see the opposite as artists rely on hand-made art objects to communicate that the human hand and spirit can never be replaced.

Native Hawaiian artists continue to gain national and international recognition for their arts and craft making. Hawai'i will become a gathering place for the arts in the 21st century as we develop cultural and ecological tourism.

Art belongs to the people. I believe the new century will emphasize this as we continue to recognize, with pride, the arts of all cultures and the diversity of our



**The arts are the life of a community; without them, it dies**

state. Walls of elitism are giving way as major museums and art galleries provide more and more programs that appeal to all age groups, cultures and interests. Children's programs are often emphasized in museums, and programs are directed to the whole family.

In a healthy community, art must become part of every person's life. Unfortunately, we have cut educational budgets and programs so badly that generations of children go through school without playing an instrument, writing a poem or painting a picture. This must not continue. The arts are the life of a community; without them, it dies.

By Toni Martin, assistant professor of art and the coordinator of Gallery 'Iolani at Windward Community College

## Education is the key to Hawaiian reconciliation and sovereignty

When I look at the future of Hawai'i, I see that it must include a reconciliation between the American government and the Hawaiian people. That reconciliation must include Hawaiian control over our trust lands, free education for our people, free health care for our people, reasonable housing packages, the availability of Hawaiian immersion schools in every Hawaiian community, Hawaiian professors in every department in this University and a Hawaiian president of the University. Without an American reconciliation with the native people, Hawai'i will never be able to progress and enjoy economic success.

In 1986, the Ka'u Hawaiian Studies Task Force Report described what was imperative to bring more Hawaiians into the University. The report called for 15 professors at the Center for Hawaiian Studies; today there are only 4.5. It asked for more courses in things Hawaiian; we have designed almost 15 courses, from Hawaiian history, culture and politics to traditional navigation to mālama 'āina and mālama Hawai'i, but we don't have enough funding to teach these invaluable courses on a regular basis.

The University, which sits primarily on Hawaiian ceded lands, could show leadership by providing tuition waivers for all Hawaiians as part of the compensation for the use of our land. The introductory course, Hawaiian Studies 107, Hawai'i: Center of the Pacific, could be a core requirement for all UH Mānoa students. It is the responsibility of everyone who comes to this place to learn about the native point of view—other departments might discuss Hawaiian issues but only from foreign perspectives.

The alternative to education and reconciliation is that Hawaiians will seek complete independence from the United States by way of the United Nations process for reinscription on the list of decolonizing territories and a withdrawal of the American military from our shores. Is not reconciliation a more desirable outcome?

The University of Hawai'i and the Center for Hawaiian Studies can play a crucial role in the future of Hawai'i in choosing an appropriate model of sovereignty, whether it be a nation within a nation or full independence. That choice can be made only with an understanding of all the issues involved.

Construction of the Center for Hawaiian Studies building was a great commitment by the University toward the Hawaiian people and our ability to educate ourselves and each other. Now we need a master's degree and a PhD program to allow another level of scholarship to blossom in all things Hawaiian. For me, education is the key to peaceful change toward resolving the very terrible political issues that have plagued us as a Hawaiian people. In reality, education is our only hope for the future.

By Lilikala Kame'eleihiwa, director and associate professor of Hawaiian studies at UH Mānoa

## Digital technology will be even faster, cheaper and more powerful

The Internet seemed to spring from nowhere to begin transforming nearly every aspect of our lives—the way we work, learn, communicate with friends and family, plan our leisure activities, obtain financial services and access our government. In reality, the Internet emerged almost inevitably from the convergence of several trends that, together, have helped telecommunications and informa-



**It is the responsibility of everyone who comes to this place to learn about the native point of view**



tion technologies fulfill their potential to improve our quality of life.

We live in a time of simultaneous increases in capacity and decreases in the cost of nearly every type of digital technology, permitting the inexpensive mass production of computers with more power than early pioneers imagined possible. We enjoy the increasing maturation of software technologies that permit us to instruct these powerful computers to do more complex tasks. The digitization of sounds, images and motion permits the rapid storage and retrieval of media. And the emergence of a competitive telecommunications landscape is bringing us faster and cheaper ways to send and receive information over wires and through the air and fiber optics on both a global and local basis.

There are almost no limits to the possibilities before us. Imagine electronic assistants that can recognize your voice, understand your verbal instructions and speak to you in return. Such devices might have access to all the world's libraries, video collections, newspapers and current broadcasts (if they still exist) and be able to search them all based on your interests and requests. You might use such devices to pay your taxes and bills, search the local hardware store's inventory before you go out for that hard-to-find replacement and check on your mother's health, comparing what she tells you with her appearance and her vital signs (with doctor's permission of course). You might have these electronic assistants in your home, office or car or on your wrist.

There are challenges, to be sure. In this whirlwind of development we need to preserve a humane pace and high quality of life. We must be vigilant about how the increasing quantities and details of personal information are collected and used. We are all responsible to ensure that every segment of society has full access to the benefits these technologies can bring.

But it's an exciting time to face these promises and challenges.

By David Lassner, UH director of Information Technology Services



**There are almost no limits to the possibilities before us**

## Wayfinding suggests new direction in education

In recent decades, Hawai'i has followed with interest and pride the many successes of the *Hōkūle'a* and other vessels in the Polynesian

Voyaging Society fleet. These accomplishments resulted from a blend of old and new and the diversity of peoples found in Hawai'i today. They have demonstrated the great wisdom and skill of these islands' ancient settlers and reawakened interest in traditional Pacific cultures and their historical ties to each other. In the process, voyaging has taught other ways of instruction, of knowing and of being. It has established connection— with the past, with each other and with the neighbors encountered as the canoes sailed through Polynesia and Micronesia.

I hope that education in Hawai'i and the Pacific in the next century will become like a voyaging canoe. The history of formal education in the region included colonial schools organized to replace indigenous knowledge and re-socialize children of immigrants. The results have certainly varied, differing throughout the area in the amount that old traditions have been retained and the degree that change has occurred. Going into a new century, the University of Hawai'i's emphasis on Hawaiian and Pacific studies as an area of excellence can provide a vehicle to alter the largely unidirectional flow of education in the region. Innovations in transportation and communication technology will help make this possible.

One way that we can achieve this change is to develop more educational exchanges. We can welcome more Hawaiian and Pacific Island traditional experts, contemporary leaders, faculty members and students to our campuses. We can develop ways for them to play a more active role in shaping our educational environment. We must create more opportunities for our faculty and students to gain firsthand experience of wider Pacific ways, both in and out of the classroom. In addi-



**Voyaging has taught other ways of knowing and of being**

tion, we can explore interactive forms of distance education via satellite television and the Internet to connect peoples throughout the Hawaiian Islands and the wider region.

By developing our educational canoe—to rediscover valuable lessons from the past, to enhance our enduring connectedness and to learn from one another—UH can help the peoples of Hawai‘i and the Pacific chart a new and better course for the future.

By Suzanne Falgout, professor of anthropology at UH West O‘ahu

## Population will influence the economy in Asia

**T**he future of the Asian economy will be governed to a great extent by important demographic changes that are occurring in Japan and the rest of Asia. The continent is undergoing a rapid and fundamental transition that will continue well into the 21st century. Two important changes will dominate. Population growth will slow, and, in some countries, population decline will begin. Low birth rates and improvements in life expectancy are leading to rapid population aging; by mid-century, perhaps 30 percent of Japan’s population will be 65 or older.

An important implication of these changes will be that Asia’s economic center of gravity will shift westward, away from Japan. If other Asian economies continue to grow more rapidly than Japan’s, they will overwhelm the smaller nation by virtue of sheer numbers. The populations of China and India already exceed 1 billion; Japan’s population may well drop below 100 million during the next century.

The labor force and capital accumulation will be most directly influenced by changing demographics. During the coming century, the work force will decline as the working-age population begins dropping, probably reinforced by earlier retirement among the elderly. Increased numbers of foreign and female workers may slow but will not reverse the decline. As the retire-



**Asia’s economic center of gravity will shift westward**

ment-age populations increase, Asians’ high saving rates may drop to the low levels typical of industrialized Western economies.

Japan will continue to be rich in terms of material wealth, but relatively poor in the size of its human resources. Thus, its economic vitality will depend on a well-functioning global economy that facilitates trade and international capital flows. Japan will prosper only if it can readily import labor-intensive goods and services and export capital.

What does that mean for Hawai‘i? Japan will continue to be our most important market—and, potentially, a healthy one—for some time. Important future markets will emerge in Asia. South Korea and Taiwan, though smaller than Japan, should become increasingly important; China’s potential dwarfs all.

By Andrew Mason, chair of economics and professor of population studies at UH Mānoa and contributing author to *Japan’s New Economy: Continuity and Change in the 21st Century* (Oxford University Press), a collaborative work by UH and the Stockholm School of Economics

## The Big Island will emerge as a center for conservation

**T**he new millennium provides a vantage point from which to bring forward an appreciation of the Islands’ natural habitats and combine it with the desire to improve the economy. Will the islands become overrun with alien pests and degraded habitats, or will they be home to the rich diversity of species and native habitats that are celebrated in Hawaiian culture and recognized worldwide as unique? The University of Hawai‘i and the state must continue to preserve our natural resources while improving the economic situation of the people. I hope we will witness a forging of partnerships among natural resource conservation organizations, businesses and the University that will culminate in a future where both people and native habitats are richer.

The next century will be an era of eco-tourism and adventure tourism around the world, and Hawai‘i truly has the potential to become a shining star as pictures of native Hawaiian habitats and species in people’s minds, in magazines and in travel guides lure visitors to the state. In addition, the potential for bio-prospecting compounds from native plants and animals is a largely unexplored opportunity.

Sustainability of natural habitats and species, coupled with an educated work force in natural resource conservation, will be essential to taking full advantage of the eco-tourism and bio-prospecting potential. The Big Island of Hawai‘i is an emerging center of activity in this

area. UH Hilo will soon be home to several federal agencies (such as the U.S. Department of Agriculture, U.S. Forest Service and Biological Resources Division of the U.S. Geological Survey). The state Department of Forestry and Wildlife and the U.S. Fish and Wildlife Service are located just a few blocks away, and Hawai'i Volcanoes National Park is only a short drive up the road. With a brand new program in ecology, evolution and conservation biology, in conjunction with the burgeoning Marine Science Department, UH Hilo can play a major role in state and national resource conservation efforts by developing partnerships among these departments and organizations.



**We will witness a forging of partnerships among conservation organizations, businesses and the University**

The Big Island of Hawai'i is also home to some of the world's most spectacular natural areas. Volcanoes National Park, sports diving and eco-tourism companies provide the Big Island adventure seeker with a wealth of activities. The park alone welcomes more than 2 million visitors annually. By working in partnership with these businesses, government agencies and private conservation groups, UH Hilo can help ensure a future that enriches both the lives of people and quality of natural habitats.

By Donald Price, assistant professor of biology at UH Hilo

## Local and global importance of tourism will continue

**T**ourism is economically significant in global and national as well as local terms. Expected to generate \$4.5 trillion worldwide in 1999 (double that of world military expenditures), tourism accounts for 3 percent of the world's jobs and 10 percent of government revenues. Among the three largest employers in 43 out of 50 U.S. states, it generates more than one in seven jobs, about 18 percent of total exports and a tenth of capital investments.

In the larger context, the industry is robust and resilient. It is not only stable but also growing. Tourism's current contribution of 5 percent to both the world

economy and national gross domestic product is expected to more than double during the next decade.

In Hawai'i, tourism generates as much as one-third of the income, jobs and government revenues. It will remain the leading economic sector into the foreseeable future. Industries with synergistic ties with the travel industry—food and beverage, accommodations, recreation, entertainment, agriculture, manufactured products and professional services, to name a few—historically demonstrated the greatest potential for growth.

Tourism provides a diversity of jobs, from entry level to executive. The substitution of capital for labor is limited in a service-oriented industry—high tech application will never entirely replace high touch in this industry. Still, job requirements will increasingly require managerial and technical as well as people skills. Critical and creative thinking abilities will be essential; opportunities in the new millennium will go to those who can meet the challenges of innovative technologies, telecommunications, strategic marketing and developmental planning.

The School of Travel Industry Management (TIM) will continue to provide leadership in this burgeoning field, which has been designated as a high priority area in the UH Strategic Plan. Faculty and staff will continue to offer high quality curricula and expertise in business, internationalism, technology, law, culture and environment. With the support of industry and community, TIM will build on its international reputation and record of service, unique location and successful alumni, carrying on the legacy established by recently retired Dean Chuck Gee.



**Tourism can be a keeper of the culture, protector of the environment and force for peace**

Hawai'i is attempting to develop niche markets that have the greatest potential for expanding tourism in Hawai'i, such as ecotourism, edutourism and cultural, sports, recreation and medical tourism. The benefits transcend economics, for these are the very elements that we wish to foster for residents as well as visitors. If managed properly and judiciously, tourism can be a keeper of the culture, protector of the environment and vital force for

peace. I believe that the ultimate message of Hawai'i tourism is that of ethnic harmony and mutual respect. Hawai'i has capitalized on its image as a 4-S destination—sun, sand, sea and surf. Future success will depend on how well we take care of three more—our smiles (aloha), songs (culture) and spirituality. Finally, we need to promote sustainable tourism by protecting the Hawai'i environment.

By Juanita C. Liu, UHM professor of tourism management, recipient of the Regents' Medal for Excellence in Teaching and author of *Pacific Islands Ecotourism: A Public Policy and Planning Guide*

## Partnerships will characterize community health care

Nurses are taking on new roles in Hawai'i's health-care delivery systems as community-based education provides rural and underserved communities with high quality health-care services. For example, faculty members and several new graduates of UH Mānoa's advanced practice nursing (APN) graduate curriculum provide pro bono services at the Waimānalo Health Center on Saturday mornings. The arrangement meets the scheduling demands of working people in the community and our students' need for practice sites. We hope to expand into other communities.

Studies document great satisfaction with the care APNs (often called nurse practitioners) provide. The diverse members of our community often need health education and counseling, practices in which APNs excel. Increasing numbers of elders demand additional services from nurses in order to remain in their homes. Research also demonstrates the cost- and quality-control benefits associated with these nurses, whose advanced training can include authorization to write prescriptions. APN-centered discharge planning and home-care interventions have reduced hospital re-admissions and the cost of providing health care for at-risk elders, high-risk newborns, pa-



### Cost- and quality-control benefits are associated with advanced practice nursing

tients with congenital heart disease, women with unplanned caesarean births and other populations.

The UHM School of Nursing is also testing a pediatric extended care program with support from the HMSA Foundation to determine if case management and day care can reduce the stress of caring for medically fragile children at home. UH nurses also provide child health services in day-care centers with the Keiki Gold program, which promotes safety, health, disease prevention and developmental potential. Concern for quality of life is also behind Hale Olakino Maka'i, our healing place, where nursing students can seriously explore biopscho-social-spiritual aspects of health and human life.

Opportunities abound; the millennium illuminates multiple new pathways for service with our community partners.

By Rosanne C. Harrigan, dean of the UH Mānoa School of Nursing, a pediatric APN and a fellow in the American Academy of Nursing

## Libraries will handle information in both print and digital forms

The Internet and its most user-friendly subset, the World Wide Web, have drastically changed the ways and modes of finding information. Many believe that there will be no need for brick-and-mortar libraries or for librarians. This is an ill-conceived idea. While digital libraries—where books, journals, newspapers, dissertations and conference papers are available in a format that can be searched, displayed and read using an inexpensive personal computer—are growing, they represent a mere fraction of what is available in print format only.

The current issue and some back issues of the local daily newspaper may be available online, but if you want to know what Honolulu Mayor Fasi said 10 years ago, you still need the print archive from a real library. If you want to read UHM library school graduate Dorothea Buckingham's new book *My Name is Loa*, about the life of a young boy on Kalaupapa, you will find it in a real, not digital, library. The same applies to the bestseller about Hawai'i sports history by another former student of ours, Dan Cisco. The issue of *Social Process in Hawai'i* dedicated to issues of women's studies is not available in digital format...yet.

Digital libraries will complement brick-and-mortar libraries, not replace them. Some publications may disappear from the shelves because their digital versions or digital competitors are far better. Libraries may stop buying the venerable *Books in Print* because digital book directories and catalogs of Amazon, Barnes and Noble or

Borders offer richer content in a much more appealing format with better search capabilities for free. Libraries will spend the money instead on more books and access rights to digital information sources that are not free.

Librarians will steer you to both physical and digital shelves for information and show you how to find facts from a reliable Web source. They will help you effectively search (rather than rummaging through) the Web.

Librarians have been preparing for this digital librarianship for years. Almost all of our library courses incorporate information about digital resources and digital finding tools applicable to various study areas and patron needs. Our students learn how to create and publish high quality Web bibliographies—guides to resources about topics such as global warming, history of Japanese Americans or high-fire ceramics, to name a few prepared by our students this past summer. They convert brittle, historically valuable Hawaiian newspapers into HTML format for Web access and publish in digital format the indexes and abstracts of Hawaiiana publications.

Your public, school, special and academic libraries will be staffed by flesh-and-blood librarians who are educated to handle digital aspects of their traditional jobs—selecting, collecting and organizing valuable information and making it accessible.

By Peter Jacso, associate professor in the Library and Information Science Program of the UH Mānoa Department of Information and Computer Sciences and recipient of the 1999 Outstanding Information Science Teacher Award of the American Society for Information Science and UH Presidential Citation for Meritorious Teaching

## Hawai'i can be part of a global innovation economy

**T**he world economy is being transformed through an unprecedented pace and scale of innovation, driven by tremendous wealth created from successful entrepreneurs. Hawai'i's ability to play a larger role in this innovation economy depends on its ability to create a society of



**Digital libraries will complement brick-and-mortar libraries**

entrepreneurs and to develop a state of readiness to seize upon opportunities.

While much attention is placed upon the technologies themselves, what truly drives the innovation economy is creative people operating in highly collaborative ways. This only works when individuals and institutions have the right incentives to collaborate, including the chance to realize financial gains, dominate certain areas of technology and, in some cases, change the world.

Hawai'i's ability to develop a strong innovation economy depends on its capacity for continual change, adaptation and reinvention. There is nothing static about a successful innovation economy. The state government and the University of Hawai'i must continually improve the overall climate for entrepreneurship. The business and finance community must become much more comfortable working with intellectual property and global markets. Finally, we must build a society of entrepreneurs by linking inventors and technology developers with the business and finance community.

Modern telecommunications and the Internet reduce the impacts of isolation, so Hawai'i is better positioned to play a stronger role in the global economy. Our celebrated environment and lifestyle are also a draw, but are not a strong enough "value proposition" to attract technology companies to the islands. There is a popular saying among people developing new technologies: "You need to do the best thing for the technology itself." That governs location choices, personnel decisions, resource deployment and other essential elements of developing and commercializing technology. Hawai'i's ability to be a place where innovation occurs rests on its ability to be an effective place to develop technology. The best proof is our ability to grow and sustain new technology companies within Hawai'i.

By Keith Mattson, director of University Connections, a program to link entrepreneurs within and outside the University to stimulate development of knowledge-based companies



**There is nothing static about a successful innovation economy**

## Class Notes

## 1990s

**Dee Buckingham**

('90 Mānoa) turned to historical fiction for her second book, *My Name is Loa* (Island Heritage). Set in Kalapapa in 1898, the young adult novel tells the story of an affluent boy, descended from Hawaiian royalty, who is diagnosed with Hansen's disease at age 15 and banished to the leprosy settlement. Buckingham calls it "a joyful book, not gruesome, not wrought with descriptions of distorted faces and death, but the spirit of the residents and daily life as seen through the eyes of a young boy, who must find a purpose for living and getting up in the morning." Half the proceeds from sale of the book will go to HUGS.



**Craig Calcaterra** ('98 Mānoa) is an assistant professor in Metropolitan State University's College of Arts and Sciences. He was previously a teaching assistant in the UHM Department of Mathematics.

**Halfred Chang** ('93 HonoluluCC) and wife **Lillian Chang** ('73 Mānoa) are living in Japan, where Halfred is production controller at the Sasebo Naval Base Ship Repair Facility.

**Jacqueline Chun** ('94 Mānoa) received the National Association for Public Interest Law Pro Bono and Public Service Award for outstanding public service commitment at the Washington University in St. Louis School of Law.

**Dan Cisco** ('92 Mānoa), a children's librarian at Pearl City Public Library, recently published his first book, *Hawai'i Sports: History, Facts and Statistics*. It covers 59 sports in alphabetical order, from adventure racing to wrestling. Among interesting facts and records highlighted are those set by the UH Rainbows' "Fabulous Five" basketball team.

**Stephen Cui Jr.** ('96 LeewardCC, '99 Mānoa) is the MIS/Web specialist for Crazy Shirts, Inc. He implemented the shopping system for the firm's Internet store, which increased sales by more than 300 percent.

**Mary Fastenau** ('96 Mānoa) is managing director and co-founder of StarrTech Interactive, a marketing division of Starr Siegle Communications.

**Shanin Forsythe**

('92 Mānoa) is sales manager at Kā'anapali Beach Hotel on Maui, working with the domestic and international wholesale market.



**Jeff Kohn** ('93 Mānoa) is a real estate development officer for Care Matrix Corporation in Redwood City, Calif.

**Jeff Lee** ('92 Mānoa) is co-owner of Lee Ceramics with his sister Carol Lee. He creates original ceramic mugs, bowls, plates and vases. His designs, based on petroglyphs, plants and turtles, are reminiscent of '40s and '50s Hawaiiana.

**Valerie McKee Kohn** ('96 Mānoa) is an English teacher at Notre Dame High School in Belmont, Calif.

**Lauren Oda** ('90 Mānoa) is deputy controller at CB Bancshares, with responsibility for financial reporting and general accounting operations for the holding company's two principal subsidiaries, City Bank and International Savings and Loan.

**Julie Ann Lehuanani Oliveira** ('93, '95 Mānoa) is a consultant for the Native Hawaiian Health Care Systems and Kahumana Residential Treatment Center. She is conducting research with the UHM Department of Psychology on the impact of managed care on the severely mentally ill.

**Dave Del Rocco** ('90 Mānoa), a children's librarian at the 'Āina Haina Public Library, was named 1998 Librarian of the Year by the Hawai'i State Library Foundation for his outstanding customer service, public education efforts and professional and community involvement.

**Norm Skorge** ('91 Mānoa) is the owner and president of Turbo Surf Hawai'i Bodyboarders Headquarters, Turbo Motorsports Hawai'i.

**Manfred B. Steger** ('90, '91 Mānoa) co-edited *Engels After Marx*, a critical examination of Engels as Marx's intellectual heir and as an influence on socialism today.

**Kirk Tengan** ('91 Mānoa) is general manager at Hawai'i Bio-Waste Systems. He first took a job as a part-time driver at the company while studying for law school exams. He now manages the transport, treatment and disposal of medical and infectious

wastes from more than 800 hospitals, laboratories and doctors' offices on O'ahu.

## 1980s

**Carlos De Almeida** ('86 Mānoa) is the oils planning manager for Tesoro Hawai'i Corporation. De Almeida earned a bachelor's degree from the University of Miami in Florida before completing his UHM master's degree in mechanical engineering.

**Sonia Lugmao Aranza** ('86, '90 Mānoa) heads Aranza Communications, a consulting firm that teaches tolerance for differences. Clients include Texaco, the U.S. Postal Service and the federal Food and Drug Administration. She also speaks to Filipino youths on the Mainland. Aranza previously worked with the Honolulu City Council and Hawai'i Legislature, served as U.S. Rep. Neil Abercrombie's director of constituent relations in Washington, D.C., and was featured on the cover of the national magazine *Filipinas*. She says, "The individual lens from which we see the world is how we end up treating each other. I help people investigate their lens."

**Jean-Pierre Cercillieux** ('81-'84 Mānoa) is vice president and general manager of the New Otani Kaimana Beach Hotel. Cercillieux spent 12 years in Japan as director of sales and marketing for Hotel New Otani Osaka.

**Bruce Lau** ('77 LeewardCC, '80 Mānoa) is one of the artists behind the award-winning Walt Disney Classics Collection of figurines. He also creates three-dimensional models, known as maquettes, that help guide Disney feature film animators. Lau traces his career roots to Pearl City High School. "While everyone else was molding clay pots, I sculpted a Disney character," he says.

**Tom Nishi** ('79, '83 Mānoa) coordinates Asian American and Pacific Island student affairs in the Michigan State University Office of Minority Student Affairs.

**Tiny Tadani** ('86 WindwardCC) is executive producer at Oceanic Cable and has a new weekly hour-long cable show called Tiny TV.

**Dana Taschner** ('87 Mānoa) received the American Bar Association's 1998 Solo Practitioner of the Year Award for continued exceptional



work, making new law and helping craft national policy. California Gov. Gray Davis called Taschner “an inspiration to all California” for providing “the voice of justice in protecting the basic human rights” of clients. The Los Angeles trial lawyer also earned a tribute from the U.S. Senate.

**Lisa Tojo** ('80 Mānoa) is director of marketing communications for the Outrigger Hotels and Resorts.

**Mary B. Vail** ('82 Mānoa) is president of Mary Vail Publicity, an independent public relations agency that specializes in image-building campaigns. She created a media campaign for the four-day CineVegas International Film Festival inaugural event in Las Vegas. Previous clients include the Pacific Aerospace Museum in the Honolulu International Airport and Ice Palace in 'Aiea.



## 1970s

**Robin Campaniano** ('73, '83 Mānoa), president and chief executive officer at AIG–Hawai'i Insurance Company, was recently honored as the Hawai'i regional Ernst & Young Entrepreneur of the Year.

**Russell Chun** ('70 Mānoa) is general manager at the Miramar at Waikiki. He has more than 15 years experience in the resort industry and worked 10 years for Sheraton Hotels. Recently Chun returned from 15 years of service as an independent missionary and pastor in Malaysia.

**Hilary K. Josephs** ('78 Mānoa) has been a professor of law at Syracuse University since 1990. She was appointed managing editor of the *China Law Reporter*, a publication of the American Bar Association Section of International Law and Practice, in 1994.



**Wanda Kakugawa** ('78 MauiCC) is president of Market Trends Pacific. The market research firm contributed its expertise to *Hawai'i Family Touchstones*, a compilation of data on family well-being in Hawai'i, produced by the College of Tropical Agriculture and Human Resources' Center on the Family.

**Ben Nakaoka** ('78 Mānoa) is corporate controller at Servco Pacific. He is also treasurer of the Hawai'i Automobile Dealers Association and a member of the Hawai'i Society of Certified Public Accountants and Hawai'i Corporate Planners.

**Henry Pan** ('73, '74 Mānoa) is the president, chief executive and managing partner of Pharmacologics, a company that participates in value creation by partnering with pharmaceutical and biotechnology companies by providing capital, drug development skills and processes and infrastructure to efficiently move drugs down the research and development continuum. He was previously president and CEO of MDS Pharmaceutical Services, a division of MDS made up of MDS Panlabs, MDS Harris, MDS Neo-Pharm, MDS Clinical Trial Laboratories, MDS Tricon, MDS China, MDS SCI and Analytical Solutions.



**Barbara Peterson** ('78 Mānoa) and her husband Frank, both retired UH faculty members, spent the fall teaching aboard the University of Pittsburgh–sponsored ship *Universe Explorer*, which carried close to 700 students on its 100-day semester-at-sea voyage from Canada to Japan, Hong Kong, Vietnam, Malaysia, India, Egypt, Turkey, Croatia, Italy and Morocco before returning to Miami.

**George T. Price** ('78 Mānoa) is vice president and chief financial officer of the Blood Bank of Hawai'i. Price is a certified public accountant with 20 years of financial experience.

**Masatoshi Sato** ('78 Mānoa) is general manager of the marketing and industry management department at Siemens K. K. in Tokyo.

**Winnie Singeo** ('69, '75 Mānoa) is collections manager of the Honolulu Botanical Gardens, which are dedicated to conservation and education. She manages inventories for all five gardens, leads school tours to help children appreciate plants and prepares common and botanical names and places of origin for engraved



signs placed at the base of each plant. Part of the city and county Department of Parks and Recreation, the gardens are headquartered at Foster Garden, where Singeo spends most of her time, and include Lili'uokalani Garden in Liliha, Ho'omaluhia in Kāne'ohe and Wahiawā and Koko Crater Botanical Gardens.

**Floyd Takeuchi** ('77 Mānoa) is publisher for Discover Hawai'i Publishing Group and publisher and editor of Hawai'i Business Publishing Co., both units of Pacific Basin Communications.



## 1960s

**Jerry Matsuda** ('68 Mānoa) is the state airports administrator. His division employs 1,200 people, has an average annual budget of \$315 million and operates 16 airports statewide.

**Sylvia Gaye Stanfield** ('66 Mānoa) is ambassador to Bandar Seri Begawan, Brunei, a sultanate on the northwest coast of Borneo. She has been with the U.S. State Department since 1968, most recently as a deputy at the U.S. Embassy in Wellington, New Zealand.

**Thomas Yamashiro** ('68 Mānoa) is senior manager at Grant Thornton LLP. He has more than 30 years of information technology experience.

**Stella Yu** ('68 Mānoa) is associate director for the Mayor's Office of Art, Culture and Film in Denver. After 11 years as a teacher, Yu started her own printing company, which specialized in translation and typesetting and was the first printer in the Rocky Mountain region to typeset Chinese. When a fire destroyed the business, Yu pursued her new career.

**Tell us what you've been up to. E-mail the information along with your name to [ur@hawaii.edu](mailto:ur@hawaii.edu), or mail it to *Mālamalama*, University and Community Relations, 2444 Dole Street, Honolulu, HI 96822. Please include the campus(es) you attended and year(s) you graduated. We welcome photos.**

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## Leonard K. M. Wong: A passion for food



Memories from childhood feed Wong's passion for food. His favorite dish was *tin ler*, snails from the taro fields cooked in a wok and seasoned with black beans, shoyu, garlic and *shiso* for the Full Moon Holiday. "Boy, it was delicious. It was the sauce. I would use a toothpick to dig out the meat and would just eat the tips of the snail, suck on the shell and make loud slurping sounds," Wong recalls. He recalls the sight of mango, lychee and lime trees on the family property at 'Alewa Heights. He remembers the feel of warm chicken eggs gathered from the yard for breakfast and the motion of chopping cubes of pork on a tree-stump chopping block, a Chinese cleaver in each hand, until they reached the proper consistency for his mom to make

The Center for Oral History is a part of the Social Sciences Research Institute at UH Mānoa. For information about Center for Oral History projects, see [www2.soc.hawaii.edu/css/oral\\_hist](http://www2.soc.hawaii.edu/css/oral_hist).

into hash. He recollects the clanging of the spatula against the sizzling cast-iron wok as his grandfather quickly stir fried vegetables.

At college, Wong became the cook, stir-frying fresh meat and vegetable dishes for his roommates. Drafted after earning his degree in industrial technology, he served as a second lieutenant in the Army in Vietnam. He returned to Hawai'i and held several different positions during a 23-year career at GTE Hawaiian Tel before accepting an early retirement offer in 1993 and deciding to pursue his dreams. The dreams included traveling and signing up for the culinary arts program at Kapi'olani CC. Wong did both—working in a French restaurant in Belgium and traveling around Europe during the summer break. He also did volunteer work with visiting chefs and worked at a French restaurant in Honolulu in exchange for lessons in French language and cuisine. Upon completing the program, Wong found himself more interested in school than in working in the food industry—"I had an interest in food and a desire to learn more about Hawai'i

Chinese food, culture and history. I found that American studies was flexible enough for me to design my own area of interest for a thesis."

He changed topics, in part because information on Chinese history in Hawai'i was very limited.

Then UHM Center for Oral History Director Warren Nishimoto suggested that Wong help create the historical record by preserving the life histories of entrepreneurs who owned Chinese restaurants in Hawai'i. Wong did research and conducted interviews with early restaurateurs, finding out how and why they started their businesses, what their daily lives were like and how they cared for their children while working in their restaurants. He has interviewed owners of some of the state's legendary Chinese restaurants, including McCully Chop Suey, King's Garden and Happy Inn. He wants to make sure the experiences and contributions of women are included.

Wong says the interviews have been fascinating because the people in the Hawai'i Chinese restaurant community are all connected some how. Their vast network of culture is important to Hawai'i and to American history, he says. Wong's record of a slice of Hawai'i life in the '20s and '30s will be available at all state libraries and UH Mānoa's Hamilton Library. 🍷

—Emily White

**His memories include tasty snails, pounding cleavers and sizzling woks**

## Marion Higa: A watchful eye



Everyone loves to criticize government actions and agencies. Marion Higa gets paid to do it. She's the state auditor. With that title comes subpoena powers and the ability to audit any state agency, except the Legislature.

Higa realizes she's not winning any popularity contests. "Sometimes consequences can be very unhappy for the auditees," she says. She remembers former state librarian Bart Kane, who was dismissed after state audits raised questions about the library system's book-buying contract.

The office of the auditor helps the Legislature hold state agencies—including UH—accountable for their programs and their money. The staff focuses on program audits while financial audits are contracted out to accounting firms. "Often a financial audit and program audit will move in parallel. The findings of one support the other," Higa says.

A typical program audit takes six to eight months. From May to December, the office concentrates on leg-


islatively mandated projects. During the remaining months, Higa's staff of 30 are authorized to initiate their own work.

Public input and current events can trigger the auditor's scrutiny. "Some of the self-initiated projects are not so much audits of problems as they are areas we think it would be useful for the Legislature to give some attention to," she says. Classification of state positions is one example. "The Legislature might fund a new position, but, in some cases, it took two years before a person occupied the job. It was very frustrating for both the Legislature and the agency. There were fingers pointed all over," Higa recalls. She and her staff recommended broad banding, which means expanding the definition of a position, a technique that other jurisdictions have used with success.

Higa has also initiated followup audits, checking back to make sure that agencies are making recommended changes. Contrary to what some of her targets may believe, Higa knows what the experience is like. Her office is audited every three years by the National State Auditors Association.

Higa is in the last year of her eight-year term as state auditor. Appointment is made by majority vote in each house, and removal, which has never happened, requires two-thirds vote by each house. She is only the second person to be formally appointed to head the office; the first auditor, Clinton Tanimura, served for 23 years before retiring.

Friendly, warm and humble, Higa's personality seems at odds with her role as chief state critic. Her desire to instruct and assess improvement is indicative of her training, however. Her bachelor's degree, earned at UH Mānoa, and master's degree, earned at University of Illinois are both in education. In fact, Higa turned down a coveted teaching opening at Kalani High School in 1971 to become an assistant analyst at the Office of the Auditor because, she said, the job sounded interesting.

"I have no regrets," she says, adding that her UH experience has stood her "in good stead." In addition to her studies in the honors program, she enjoyed extracurricular activities with the debate team and student government. She was a member of the senior honorary society Mortar Board, which is dedicated to scholarship, leadership and service. She recently served as the board's off-campus adviser for six years, sparked by her daughter's involvement. In fact, her daughter, who was also a Rainbow Dancer, her son and her late husband, attorney Warren Higa, are all UH graduates, and her father competed on the UH swim team. So it is no wonder that Higa keeps a close eye on UH in another way—as a Rainbow athletics fan who watches all the games on television. 

**State critic  
knows what  
it's like to be  
audited**

—Emily White


## **Kelvin Chun: Magical Teacher**



Educator Kelvin Y. S. Chun ('82, '83, '95 UHM; '83, '85, '86 Leeward) unlocks the magic that lies within every student. The technology resource teacher at Nu'uaniu Elementary School was the 1999 Honolulu District Teacher of the Year and one of only 39 teachers in the nation to receive last year's Disney's American Teacher Award. The award honors teachers who find "creative ways to stimulate curiosity, engage the imagination and pass the joy of learning on" and inspire their students, colleagues and communities. Chun received \$2,500; another \$2,500 went to Nu'uaniu School.

Chun credits UH with providing opportunities for students from a variety of backgrounds. Deciding whether to pursue a master's degree in business administration or education, he felt that education would provide more meaning. Teaching experience in the UHM College of Education provided valuable insights, he says.

"I found my most rewarding experiences in teaching children of all levels, abilities, backgrounds and experiences," Chun says. "The most gratifying experience is to see change at the school level by developing innovative programs to support student learning."

Chun is also a magician, balloon artist and kite enthusiast. He says his hobby invests in itself—supporting teaching and learning. Learn more at his Web site, [www2.hawaii.edu/~kyschun](http://www2.hawaii.edu/~kyschun). 

—Teri Yanigawa



Illustration by Scott Goto

## Planning to do good

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heritage, unique environment and ties to Asia and the Pacific

**Retirement plan gifts** name the University of Hawai‘i Foundation as a beneficiary of your 401(k) or 403(b) retirement plan—a particularly advantageous way of reducing or avoiding estate taxes. Retirement plan assets that are left in your estate could be taxed up to 85 percent, leaving very little for your heirs. Consider naming the UH Foundation a beneficiary of your retirement fund assets, while leaving other assets to your heirs.

**Testamentary gifts** entitle your estate to a charitable deduction and can reduce or even eliminate estate tax liability. Planning for a bequest of cash, securities or real property to benefit the campus or program of your choice through your will or living trust allows you to make a substantial contribution without diminishing the assets available to you during your lifetime. Your bequest can specify that the University receive a specific dollar amount, a percentage of your estate or the assets remaining after distributions have been made to family or friends.

#### Appreciation makes all the difference

**T**he current economic climate makes this an opportune time to make outright or deferred charitable gifts of appreciated securities or real estate.

Depending on the type of deferred charitable gift you select, you can avoid or reduce the capital gains tax on appreciation, increase income from your assets and free yourself from property management responsibilities.

**For confidential assistance** or to learn more about the benefits of a charitable gift annuity, call the UH Foundation’s Office of Planned Giving at (808) 956-8034 or write to University of Hawai‘i Foundation, 2444 Dole Street, Bachman Hall 101, Honolulu, HI 96822-2330. 