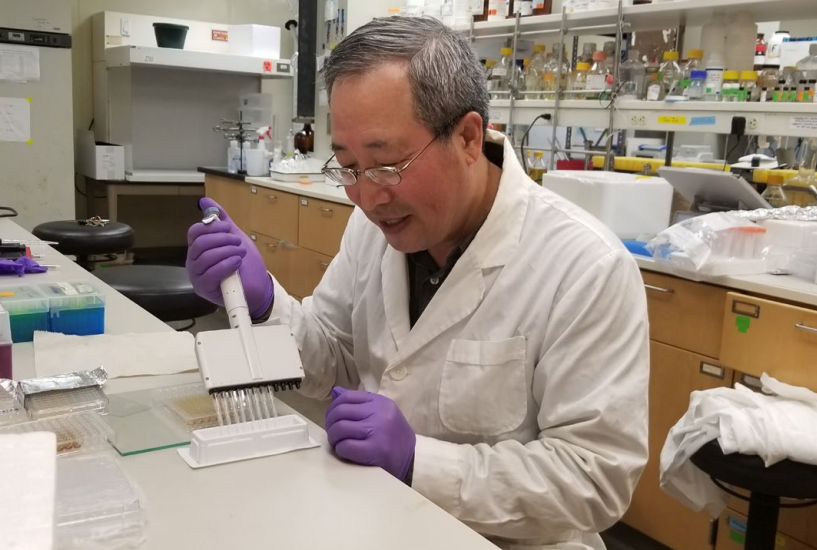


2019-2020 Annual Report

**Our impact on Hawai'i's
growers, families, economy,
environmental sustainability
and food security**



COLLEGE OF TROPICAL AGRICULTURE
AND HUMAN RESOURCES
UNIVERSITY OF HAWAII AT MANOA



CTAHR is

Cooperative Extension

Department of Family & Consumer Sciences

Department of Human Nutrition, Food & Animal Sciences

Department of Molecular Biosciences & Bioengineering

Department of Natural Resources & Environmental Management

Department of Plant & Environmental Protection Sciences

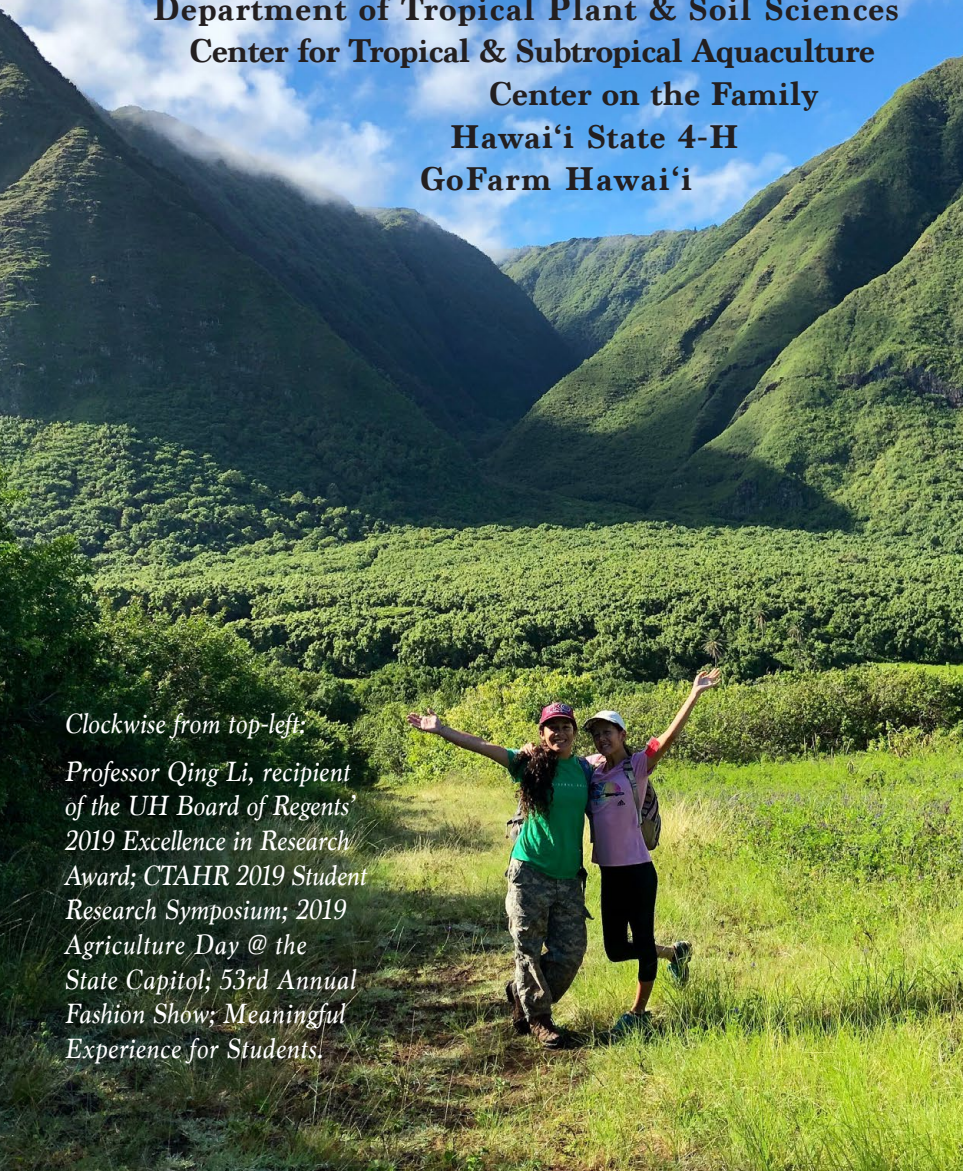
Department of Tropical Plant & Soil Sciences

Center for Tropical & Subtropical Aquaculture

Center on the Family

Hawai'i State 4-H

GoFarm Hawai'i



Clockwise from top-left:

Professor Qing Li, recipient of the UH Board of Regents' 2019 Excellence in Research Award; CTAHR 2019 Student Research Symposium; 2019 Agriculture Day @ the State Capitol; 53rd Annual Fashion Show; Meaningful Experience for Students.





INTRODUCTION

2019 was a year of positive changes in CTAHR, which are now being overshadowed by the COVID-19 crisis of 2020.

As will be outlined below, the faculty were active in research, grantsmanship, publication, impactful Extension, and all aspects of instruction. The college set out to reinvigorate its advisory council. We began organizing a reconnection to our alumni by way of island BBQs, as well as reaching out to our retired faculty.

We also changed our budgeting to provide more monetary support for the six departments, and we invested in Distance Education (which wound up being fortuitous, given the need for it in 2020).

The purpose of this annual report is to collect the major accomplishments of the faculty and staff in Research, Extension and Instruction.

For **Research**, one can find a summary of the refereed journal publications for 2019, along with an itemization

of the books, book chapters and conference proceedings that our faculty produced. A complete list of publications is in a [Supplement to the 2019 Report](#). One can also get a feel for our grantsmanship activity.

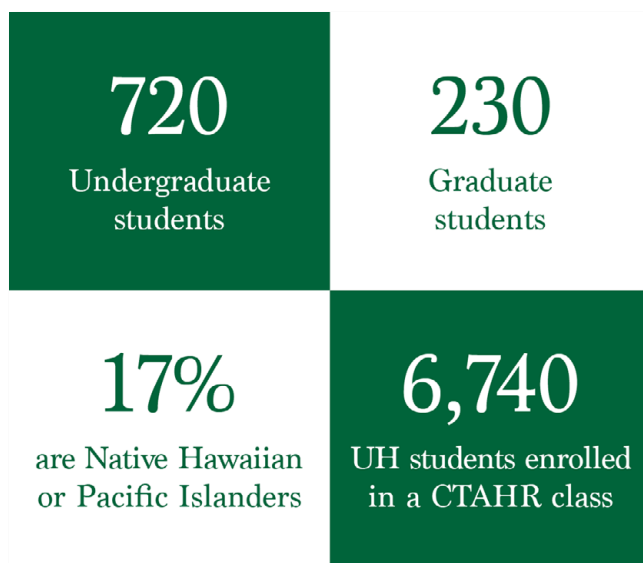
For **Extension**, we provide metrics that document the activity of agents and specialists, and address the impact of Extension activities.

For **Instruction**, one can find our student numbers, our recruitment and retention activities.

For our alumni or retired faculty, one can find out who retired and who was hired, and learn how to keep in touch with past friends and colleagues.

Nicholas Comerford, PhD
Dean and Director

CTAHR is



INSTRUCTION: August 2019 to May 2020

CTAHR by Student Numbers

During this past academic year, CTAHR was home to a total of 720 undergraduate and 230 graduate students. Our biggest academic program was Human Development and Family Studies (165 students), closely followed by the Animal Sciences program (128 students). When it comes to our graduate programs, Molecular Biosciences and Bioengineering, and Natural Resources and Environmental Management had the highest numbers of students (59 and 55 students, respectively).

We are proud that 17% of CTAHR students are Native Hawaiian or other Pacific Islanders! We are thus serving a diverse and relevant population of students.

Our faculty are not only teaching CTAHR students, but also provide instructional support to students in other colleges of the rest of the University of Hawai'i at Mānoa. During this previous academic year, our faculty had 6,740 students in their classes.

Academic Advising is Key to Our Students' Success

We believe that excellent academic advising is key to any

student's success in our college. From August 2019 to the beginning of May 2020, our advisors had 2,388 appointments with students. Of these appointments, 523 students were identified as prospective or new to CTAHR.

We are extremely proud of 197 students who were awarded their Bachelor of Science degrees at the conclusion of the last academic year, and 55 graduate students who were awarded Master of Science and Doctor of Philosophy (Ph.D.) degrees.



Students who have received a CTAHR scholarship for the 2020-2021 academic year.

CTAHR Awards \$185K in Student Scholarships and Stipends

The last academic year was one of the most unpredictable and challenging years...ever! We are determined to always put our student's needs first. Most recently, we have awarded a total of \$185,535 in scholarships and stipends to help students cover their college expenses.

Specifically, a total of:

- \$65,300 was awarded as CTAHR ASAO-UHF Scholarships for the upcoming academic year.
- \$40,335 was awarded as CTAHR HNFAS - UHF Scholarships for the upcoming academic year.
- \$14,400 was awarded as Summer Success Scholarships.
- \$48,000 was awarded as Grow With Us Mentoring Program Stipends.
- \$18,500 was awarded as CTAHR Scholarships.

We couldn't have done this without the generous contributions of all our private donors, organizations,



CTAHR's Student Advisors (from top-left): Maile Sing, Irene Morrow, and Martin Motooka

INSTRUCTION

and sponsors who have contributed to this generous resource for our CTAHR students, including University of Hawai'i Foundation donors, the UHM Outreach College, National 4-H Council, USDA-National Institute for Food and Agriculture, and CTAHR.

Helping Our Students Build Work Experience

This year, we presented two new events to expose students to opportunities for building work experience.

In Fall 2019, the CTAHR Internship Fair connected freshman and sophomore students seeking work experience with CTAHR faculty and graduate students seeking to engage undergraduate students in their research programs.

Students exercised their resume writing and interviewing skills as they explored opportunities spanning field, lab, and office work.

In Spring 2020, the CTAHR Hiring Fair invited employers with open job opportunities to seek out our junior and senior students for immediate hiring, or employment for the summer. Many employers were alumni returning to connect with our current students and provide advice for not only the hiring process but also general career guidance.

Students could practice inquiring about positions while networking with people from a variety of industries. Seniors had the opportunity to be employed after graduation,

while juniors received feedback on employer expectations for preferred courses, qualifications, and experiences. As we continue to grow our network of partners, more opportunities become available for our students.

One of our top 2019/20 initiatives was to re-connect with our alumni and CTAHR advocates, to emphasize how important they are to us and our vision for the future.

Our goal is to foster and facilitate collegial, social and professional connections between CTAHR's new and current students and alumni, friends and supporters, by sharing experiences and insights,

providing support, maintaining friendships and offering career development opportunities.

60% Student 1-year
Retention Rate in CTAHR

67% Female
33% Male

Student Demographics
(undergraduate and graduate)

64% Minority
36% Non-Minority

CTAHR ALUMNI BBQ ATTENDEES BY ISLAND

KAUAI
KAUAI RESEARCH & EXTENSION STATION
JULY 20, 2019

20

O'AHU
O'AHU URBAN GARDEN CENTER
NOVEMBER 16, 2019

110

KONA
OLA BREW
JANUARY 11, 2020

13

HILLO
KOMOHANA RESEARCH & EXTENSION CENTER
FEBRUARY 22, 2020

67

* 2020 MAUI & MOLOKAI BBQ'S CANCELLED DUE TO CORONA VIRUS



Building connections between our alumni and current students – pathway to student success!

What is one of the best ways to connect with people? Food (and a little local beer too!). Thus, began our Backyard BBQ's with Dean Comerford, and a goal of having one on each island every year. In 2019, alumni events were held on O'ahu, Kaua'i and Hawai'i Island.

Students Love the Lounge

During this past academic year, our students continued to love using the CTAHR Student Lounge to either study, eat, or to hang out. With the success of our lounge and a generous donation from Steve Sato, CTAHR Alumnus, we were able to continue fully stocking the lounge with

INSTRUCTION

snacks, fruits, drinks, and other pantry goods to help fuel our students for their day! Mahalo Steve! On top of that,



we have three hydroponic systems where we use seeds provided by CTAHR to grow tomatoes, eggplants, and lettuce in the lounge! Students continued to check-in throughout the academic year, totaling 2,243 check-ins. They indicated the reasons for their visit were: 31% for studying; 30% for food/coffee/tea; 13% for hanging out; and 14% to use the printer service.

Grow With Us: CTAHR Academic Programs Connect With Hawai'i High Schools.

One of our favorite events for the 2019-2020 academic year was the inaugural CTAHR Day, which was held on January 31, 2020! CTAHR Day welcomed over 700 participants including 200+ high-school students and their teachers from W. R. Farrington and Waipahu High School, and Hawai'i Tech Academy.



One of the W. R. Farrington High School teachers, Violeta Romero, who attended the event was very appreciative of the opportunity to bring her students and shared, "My students really enjoyed the field trip and some are even beginning to change their mind about college and going for it".

CTAHR Day showcased all CTAHR departments and undergraduate programs, CTAHR cooperative extension, and featured an "Alumni Alley." Participants also toured the university campus, interacted with CTAHR faculty and staff, learned about what CTAHR alumni are doing in a diverse range of work fields, and participated in hands-on and interactive CTAHR exhibits by our CTAHR 'Ohana!

CTAHR Students, Alumni, Faculty and Staff Give Back to University of Hawai'i Ohana - Keep on Sewing

In early April, UHM Provost Michael Bruno reached out to CTAHR to see if we could help sew masks for the essential facilities workers on UH Manoa Campus, who have been working throughout the COVID-19 pandemic to keep everything in order for us. As Fashion Design and Merchandising (FDM) is one of our programs, our response was an immediate "Yes, we can!"

More than 500 yards of fabric were donated by FDM alum Sylvia Kop, and in one month, the CTAHR 'ohana was able to produce over 600 masks so that each UHM facilities employee could be provided with two masks.



This could not have been done without the help of numerous CTAHR Alumni, students, and university and community partners. Mahalo!

EXTENSION: January-December 2019

Improving the Lives of Hawai'i Residents

The Hawai'i Extension system extends research-based information to the people of Hawai'i in order to make their lives better. As an essential part of the College of Tropical Agriculture and Human Resources, Extension has "extended" knowledge from UH Mānoa, resulting in positive impacts in the economy, families, food systems, and the environment of Hawai'i for more than 100 years.



Above: Jensen Uyeda, Extension Agent,
Department of Tropical Plant and Soil Sciences.
Below: The Master Gardener Program; Teaching the
Waimanalo community about sweet potato, a canoe crop.



Hawai'i State 4-H: Positive Youth Development

The Hawai'i State 4-H Positive Youth Development program reached more than 3,000 youth ages 5-19 across the Islands in the 2018-2019 year through a variety of delivery formats, including community and military clubs, special interest and short-term clubs, and school enrichment programs.

Popular project topic areas covered community/volunteer service, foods & nutrition, communication & expressive arts, plant science, environmental/earth science, technology & engineering, and livestock.

The program currently enrolls a diverse membership with members in all current Census Bureau race/ethnicity categories. Programming was supported through the efforts of more than 225 4-H volunteers who provided services to University of Hawai'i educational programs at a monetary value of more than \$735,000.



The Hawai'i State Farm Fair is an opportunity
for 4-H keiki to show off their prize animals and
other accomplishments, and bond with other 4-H'rs.



Hawai'i Extension's 2019 Statewide Impacts

The Hawai'i Extension system extends research-based information to the people of Hawai'i in order to make their lives better. As an essential part of the College of Tropical Agriculture and Human Resources, Extension has "extended" knowledge from UH Mānoa, resulting in positive impacts in the economy, families, food systems, and the environment of Hawai'i for more than 100 years.

75,000 Direct Contacts with the Public

Through office visits, farm visits, and group meetings, Extension agents and specialists share information and support to the public. Added to the **567,000 indirect contacts** from phone calls, social media, and online resources, this totals to **more than 640,000 total contacts** in one year.

900 Workshops & Demonstrations Conducted with **27,000** Total Participants

Hands-on teaching is one of the methods used in informal settings to transfer knowledge to the public.

1,200 Volunteers Giving **159,000** Service Hours Valued at **\$4.2M** Each Year

Volunteers – trained and mentored by Extension agents and specialists – are at the heart of the outreach mission of Hawai'i Extension.

104 Extramural Grants Totaling **\$8.4M**

Obtained by Extension agents and specialists to support their Extension educational efforts.

\$13.8M Total Extramural Support (Grants, Donations and Volunteer Time)

UH Extension faculty generate at least \$2 in support of Extension programming for every public dollar used to fund their Extension positions.

25,000 Positive Changes in Knowledge/Attitude of Extension Clientele

11,400 Adopted Practices or Changed Behaviors Because of Extension Educational Programming



RESEARCH: January to December 2019

CTAHR faculty actively seek and compete for extramural grants and contracts from federal, state and local governments, as well as from foundations and private and nonprofit organizations. During 2019, 79 CTAHR faculty, as Principal Investigators, brought in a total of 173 grants and contracts, with a total value of \$17,922,263.



Entomology research in the Dept. of Plant and Environmental Protection Sciences.

Notable Grants

- At the federal level, two National Science Foundation awards (\$197,913 and \$44,660) totaling \$242,573.
- Six awards from NIFA worth \$3,543,914.

Focus of Discovery

With this funding, CTAHR faculty, students, and staff continued to focus research and discovery around the following:

- Sustainable resource management, improving

173 Awards
\$17.9M

53 Federal Awards
\$9.7M

65 State Awards
\$5.3M

55 Other Sources
\$3.0M

ecosystem health, and increasing economic prosperity.

- Opportunities for diversifying tropical agriculture in Hawai'i.
- Improve scientific understanding and participatory methods for monitoring and controlling invasive species.
- Providing families with the knowledge to make better educated decisions on how to improve quality of life.
- Improving food choice in Hawai'i for better health.
- Increasing food security.
- Climate change impacts on carbon sinks and sources.
- Making healthy living a priority for children.
- Ensuring a safe food supply.

A Wide Net

When Dr. Rachel Novotny was asked to lead the new Children's Healthy Living Program, her goal was both ambitious and straightforward: to prevent obesity in young children of the Pacific.

To increase the region's capacity to build and sustain a healthy food and physical environment, CHL began by partnering with remote, underserved, minority populations. Then, it helped train a public health and nutrition workforce, and conducted public health and nutrition research. It also developed a food, nutrition, and physical activity data-management and evaluation system, and communicated nutrition- and health-related information to the public.

On April 25, 2019, the USDA's National Institute

of Food and Agriculture (NIFA) recognized CHL and Dr. Novotny with its Mission Integration of Research, Education, and Extension Award, citing the program's "exceptional impacts" that support NIFA's mission to "advance agricultural research, education, and outreach to solve societal challenges."



Books, Book Chapters, Conference Proceedings, Journals in Which CTAHR Published, Refereed Journal Publications

**for a full listing of all 2019 CTAHR publications,
please visit [Supplement to the 2019 Annual Report](#)*

3 Books

16 Book Chapters

4 Conference Proceedings



Real-time PCR testing developed in early 2019 by Dr. Jenee Odani (right) gives O'ahu veterinarians a new tool for detecting Rat Lungworm Disease.



CTAHR Extension agent Russell Galanti at the 2019 Agriculture Day at the Hawai'i State Capitol.

186
Refereed
Publications

1.9
publications
per faculty FTE
(not counting agents)

5.7
publications
per faculty
research FTE

3.9
publications
per faculty
research +
specialist FTE

Published in

137

different refereed journals



The 2019 Business Proposal Contest by the Department of Family and Consumer Sciences.

FUTURE DEVELOPMENT

Taking education out of the classroom

Lee-Iwaoka partnership supports leadership and personal development in their department.

Just like the students who participate in CTAHR's leadership development camps, Dr. C.N. Lee and Dr. Wayne Iwaoka have been personally enriched by the partnership these two longtime faculty have enjoyed.

To build on the learning momentum they started, the passionate educators have created an endowment to ensure that future students in the Department of Human



Nutrition, Food and Animal Sciences (HNFAS) can also benefit from immersive skill-building experiences.

The idea of a leadership

and personal development camp started when Dr. Iwaoka became CTAHR's Interim Dean for Academic and Student Affairs in 1997. He and his staff initiated the twice-yearly camps, encouraging CTAHR student organizations to become sponsors.

Since 2000, the HNFAS annual student leadership camps have provided students with valuable experiences to develop leadership and self-awareness skills they can rely on throughout their lives. Drs. Iwaoka and Lee are the



backbone of these experiences, contributing funds, food, speakers, even their personal participation in these camps.

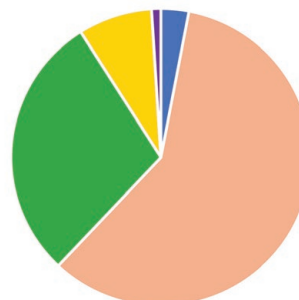
"We feel that college is a great opportunity to network, build tolerance, learn to work in teams, learn to lead and help others," said Dr. Iwaoka. "It is a great time to shape young minds, values and visions for their roles in society."

The Lee-Iwaoka Student Leadership Endowment provides funding for undergraduate student organizations in HNFAS for leadership, team, and personal development activities, such as weekend retreats, camps, seminars and conferences.

Dr. Lee adds, "We think leadership and personal development skills will be necessary for our students' success when they graduate and join the workforce. Through retreats and camps, our students learn about themselves and how to interact with others, resolve conflict, and work on teams."

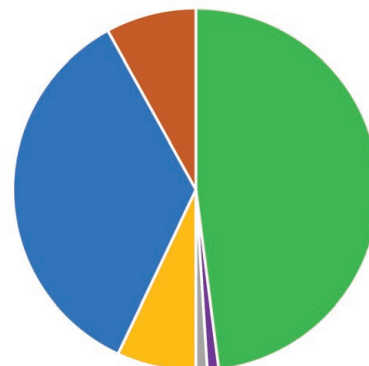
To support CTAHR academic, research and extension programs, please contact **Audrey Hirayama**, Director of Development, at (808) 956-9172 or Audrey.Hirayama@uhfoundation.org.

2019 GIFTS BY PURPOSE

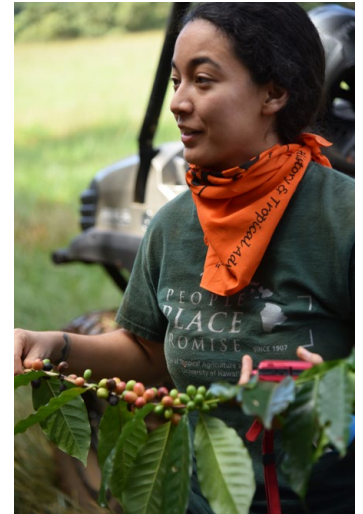
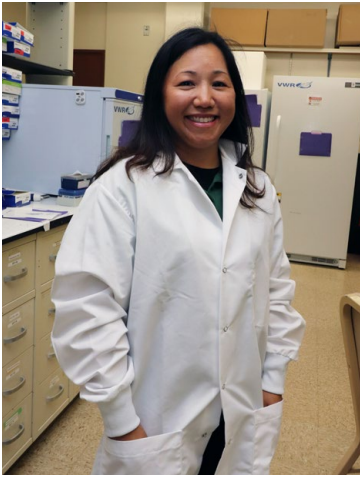


- Faculty & Academic Support, 3%
- Student Opportunity & Access, 59%
- Enrichment & Research, 29%
- Special Programs & Extension Services, 8%
- Other, 1%

2019 SOURCE OF GIVING



- Alumni, 48%
- Foundations, 35%
- Other (Non-Individuals), 8%
- Corporations, 7%
- Other (Individuals), 1%
- Faculty & Staff, 1%



Clockwise from top-left:
Dr. Jenee Odani, Extension Veterinarian, Dept. of Human Nutrition, Food & Animal Sciences; 2019 Student Research Symposium; Meaningful Experience for Students; Charles Darwin's 210th Birthday at the Insect Museum; Dr. Kent Kobayashi and grad students with their 2019 Holiday poinsettias; One-of-a-kind "floral jewelry" by 491 Floriculture Arts students under professors Tessie Amore and Orville Baldos; 2019 Faculty Leadership Academy; a four-legged friend at CTAHR's Komohana Research Station, Hawai'i Island; the 53rd Annual Fashion Show by students in Fashion Design and Merchandising.





Retirements and New Faces

In 2019-2020, we said Mahalo! and Aloha! to a number of faculty and staff who have faithfully served the college.

Bega, Roxane, Pub Health/Med Care Para Prof
Cadelinia, Stephanie, Secretary III
Cox, Linda, Specialist
Dela Cruz, Nestor, Equipment Operator III
Ferreira, Stephen, Assoc Specialist
Hata, Trent, Academic Support
Hee, Terri, Institutional Support
Kadooka, Chris, Research Support
Kaheiki, Mary, Ag Tech V
Kai, Terrence, Ag Lab Tech I
Kanehiro, Naomi, Assoc Extension Agent
Kaneke, Ryan, Agricultural Research Tech IV
Kawahara, Elsie, Information Tech
Kinoshita, Charles, Researcher
Lee, Chin, Specialist
Maeda, Dennis, Building Maintenance Worker
Matsuda, Ronald, Agriculture Research Tech IV
Messing, Russell, County Admin
Muraoka, Janice, Institutional Support
Nagai, Gareth, Ag Tech III
Nagamine, Charles, Academic Support
Nagata, Norman, Asst Extension Agent
Nakamura-Tengan, Lynn, County Extension Agent
Saulo, Aurora, Specialist
Sewake, Kelvin, Associate Dean
Uchida, Janice, Associate Researcher
Uchida, Raymond, County Admin
Umaki, Alan, Agr Res Tech VI
Wold, Karen, Pub Health/Med Care Para Prof
Zee, Julia, County Extension Agent

We also wish a warm welcome to faculty and staff who have joined us in serving our students and the community.

Adams, Brandi-Leigh, Research Support
Asui, Dionne, Secretary II
Bloese, Joanne, Assistant Extension Spec
Boteilho, Whitney, Research Support
Bowen, Herbenia, Inst Supp
Bowen, Walter, Associate Dean
Cheung, Angela, Admin & Fiscal Supt Sp
Collier, Eric, Educational Spec
Cristobal, Haille, Jr. Extension Agent
Cristobal, Nicole, Institutional Support
Dasalla, Makoa, Ag Research Tech III
Elduque Boix, Adrian, Institutional Support

Fujimoto, Lianne, Pub Health/Med Care Para Prof
Galanti, Russell, Jr Extension Agent
Gutierrez, Rosemary, Asst Ext Agent
Hackney, Lara, Instructor
Hampton, Marielle, Jr. Extension Agent
Hanakawa, Christine, Asst. Extension Agent
Hawkins, Jennifer, Jr Ext Agent
He, Yanghua, Asst. Professor
Ito, Lauren, HR Specialist
Jamieson, Kristen, Jr. Extension Agent
Kelliher, Lisa, Pub Health/Med Care Para Prof
Kirk, Emilie, Asst. Extension Agent
Koahou, Christine, Office Asst IV
Lacanaria, Kiani, Admin & Fiscal Supt Sp
Lee, Mi Jeong, Asst Prof, 9 month
Lutgen, Hannah, Jr. Extension Agent
Ma, Maggie, Institutional Support
Maaz, Tai, Jr. Researcher
Mashima, Kapualani, Pub Health/Med Care Para Prof
McCarthy, Minako, Instructor
Miyashiro, Lauren, Inst Supp - Fiscal
Miyazono, Diane, Office Asst IV
Montgomery, Monica, Academic Support
Mow, Elton, Ag Tech III
Murphy, Jennifer, Pub Health/Med Care Para Prof
Nemoto, Julia, Ag Tech III
Oshiro, Carol, Admin & Fiscal Supt Sp
Oshiro, Melelani, Asst Ext Agent
Park, Cassandra, Academic Support
Park, Darren, ADSC Manager
Radovich, Jessica, Educational Specialist
Rehkamp, Sarah, Asst. Extension Agent
San Jose, Michael, Jr. Researcher
Sand, Shannon, Asst. Extension Agent
Scoville-Layfield, Judy, Education Specialist
Shikano, Ikkei, Asst. Professor
Stephenson, Raquel, Office Asst IV
Takahara, Lynn, Secretary III
Taniguchi, Glenn, Inst Supp - Fiscal
Tay, Jia-Wei, Asst. Researcher
Thomas, Victoria, Pub Health/Med Care Para Prof
Tsuha, Dayle, Ag Tech IV
Ugale, Shirley, Pub Health/Med Care Para Prof
Yamanaka, Ashley, Jr. Researcher
Yamauchi, Nicholas, Agr Res Tech V
Yeh, Justin, Research Support
Youkhana, Adel, Jr. Researcher

"What does CTAHR mean to me? It is the glue of my entire college experience. Like glue, it became the indispensable tool I needed to put together the pieces I didn't know how to put together myself. Like glue, CTAHR has stuck by me, through thick and thin, and prepared me with the knowledge and confidence I now have to put together the pieces myself."

**Marissa Nash, Fashion Design & Merchandising, Class of 2021
CTAHR Student Ambassador**



Liked by uhcenter and 100,000,000 others

CTAHR #growwithus #uhm #ctahr

