

The AAS Vice-Presidents and staff have scheduled the following sessions designed to bring astronomers, Hawaiians and others together to share perspectives and learn from each other. Event descriptions and biographies of participating community voices can be found below.

Sunday, January 5

- 10:00am, 128 (SS) Innovative Collaborations of Integrity with the Hawaiian Community, Room 316 B
- 11:40 am, 140 Plenary Lecture: He Lani Ko Luna, A Sky Above: In Losing the Sight of Land You Discover the Stars, Kalā Baybayan Tanaka and Kālepa Baybayan (Polynesian Voyaging Society), 11:40 am–12:30 pm, Ballroom AB

Monday, January 6

- 3:40pm, 267 Plenary Lecture: The Stewardship of Maunakea's legacy from the Perspective of the Hawaiian and Astronomical Communities, Amy Kalili (Ōiwi TV) 3:40 pm–4:30 pm, Ballroom AB
- 7:00pm, Public Talk: Physics of Pō, Larry Kimura (College of Hawaiian Language & Hawaiian Studies) and Doug Simons (Canada-France-Hawai'i Telescope) 7:00 pm–8:30 pm, Room 311

Tuesday, January 7

- 2:00 pm – 3:30 pm, Room 324
Special Session: Astronomy and Culture — Best Practices for Systematic Transformation in an Increasingly Diverse and Interconnected Global Society

Event: Sunday, January 5th: 10:00am, 128 (SS) Innovative Collaborations of Integrity with the Hawaiian Community, Room 316 B

Abstract: Maunakea is a nexus for cultural, environmental, scientific, and numerous other interests in Hawai'i. While these interests overlap on Maunakea, they do not always seamlessly intersect. In recent years though, motivated by a strong sense of community and grounded in an island culture with roots that extend back in time for millennia, Hawai'i is becoming a crucible for expressing contemporary world views in an indigenous context. The result is a powerful platform of collaboration with integrity that is leveraging new approaches to listening, learning, and growing as a diverse but unified community. Collaboration with integrity is the practice of integrating Indigenous and Western scientific perspectives as complementary ways of knowing. This approach is essential for addressing historical and cultural tensions over the scientific use of indigenous lands, such as Maunakea. The seat of creation for the Hawaiian people and a site of cultural and religious importance, the dry, dark, high-altitude summit of Maunakea has also enabled many of the most fundamental astronomical discoveries over the past 50 years. The conflicts over who has access to and stewardship of these lands, and for what purposes, can only be resolved through collaborations of integrity. In this special session, our speakers will describe the motivation, design and outcomes of several innovative collaborations of integrity between astronomers and native communities that have emerged around Maunakea.

John De Fries III



John De Fries III is president of Native Sun Business Group Inc. which he established in 1993 as a business consulting practice and project management firm, headquartered in Kona, Hawaii. He is a board member of Bishop Museum, Kualoa Ranch, Astronaut Ellison Onizuka Memorial Committee and the Julie Ann Wrigley Global Institute of Sustainability at Arizona State University.

Greg Chun

Greg Chun was raised in Windward O‘ahu, first in Kualoa where he spent his early years and then later in Kailua where the family relocated. He grew up with ocean activities, particularly surfing and competitive canoe paddling, as strong interests and continues to enjoy these pursuits



on a recreational basis today. This upbringing provided him a deep appreciation for the stewardship kuleana that we as a community bear to ensure Hawai‘i’s natural environment is preserved for future generations.

Greg was appointed Executive Director of Maunakea Stewardship at the University of Hawai‘i at Hilo in July 2019. Previously he was an Associate Specialist at the University of Hawai‘i at Mānoa (UHM) where he provided consultation, technical assistance, and training in community-engagement processes, particularly as it relates to bridging complex scientific research, land development, resource management, education, economic development, and policy issues with culture and community. He was a member of the Hui ‘Āina Momona cluster, a group of faculty responsible for developing a program of cross disciplinary scholarship designed to prepare students and working professionals to work at the nexus of these disciplines and processes. Greg maintains his involvement on selected projects in the areas of water resources, sustainable land use, and economic development. In January 2018, Greg accepted an assignment to serve as Senior Advisor the UH Board of Regents and the President on Maunakea.

Greg is a non-traditional academic coming to the University after years in the private sector. Prior to joining UHM in 2013 he was employed at The Kamehameha Schools where he served as President of Bishop Holdings Corporation, the Estate’s for-profit development and investment subsidiary, and later moved to the Education Division as Vice-President of the Keauhou-

Kahalu‘u Education Group. He managed a real estate and financial portfolio exceeding \$500M and oversaw a restructuring plan resulting in a return of capital to the parent company of \$30M. He was also responsible for the restoration and stewardship of several significant cultural sites in the ahupua‘a of Kahalu‘u in West Hawai‘i, and for developing a portfolio of innovative ‘āina-based learning programs that broadened KS’ educational reach in the region while contributing to the Estate’s economic interests at the Keauhou Resort.

Greg’s professional experience has spanned numerous industries including electric utilities, land development, ranching, historic preservation, ‘āina-based education, insurance, and health care. In all roles his responsibilities have included leadership and organizational development and strategic planning, with a strong emphasis on engaging community. He is the Immediate Past Chair of the Maunakea Management Board, past President the Hawai‘i Leeward Planning Conference and the Hawai‘i Island Economic Development Board, and is active with several Hawai‘i Island and O‘ahu non-profits.

Greg is a graduate of The Kamehameha Schools, earned his undergraduate degree at the University of Hawai‘i at Hilo, and his Ph.D. at the University of Hawai‘i at Mānoa in Clinical Psychology. He and his wife Debra are high school sweethearts and have been married for 40 years.

Ka’iu Kimura

Ka’iu Kimura is the Executive Director of the ‘Imiloa Astronomy Center of Hawai‘i where she played an integral role in developing the mission of the Center as well as cultivating and advocating for community engagement in the continuance of astronomical research while ensuring the integrity and integration of the host culture.



Ka’iu Kimura is a graduate of the Kamehameha Schools class of 1996 and went on to pursue a Bachelor of Arts degree and a Master of Arts degree at the University of Hawai‘i at Hilo (UHH) in Hawaiian Language and Literature. She is currently a PhD candidate in the Indigenous Language Revitalization program of the College of Hawaiian Language at UHH. While at UHH, she participated in the first UHH student exchange program with the University of Waikato in Hamilton, New Zealand where she spent a semester studying Maori language and culture.

Ms. Kimura has worked for the ‘Aha Punana Leo (a statewide non-profit organization who’s mission is to renormalize the Hawaiian language) in various positions including the facilitator of Hale Kipa ‘Oiwī, an outreach program that hosts other Native American communities and international indigenous groups worldwide who are working towards language and culture revitalization. She has lectured for the College of Hawaiian Language and has also developed Hawaiian language curriculum offered to Hawai‘i’s business and tourism industries. She participated in the inaugural First Nations’ Futures Fellowship which focused on improving the wellbeing of indigenous communities through strengthening leadership in areas of economic development, environment and resource management, and community and culture. She has been a fellow in

the Pacific Century Fellows program as well as the Center for Advancing Informal Science Education fellowship. Most recently, she participated in the inaugural Omidyar Fellows program (2012-2013) and continues to participate in the forum of fellows created to develop an active network of leaders and change makers dedicated to making positive movement on Hawai'i's most pressing issues.

Event: Sunday, January 5th: 11:40 am, 140 Plenary Lecture: He Lani Ko Luna, A Sky Above: In Losing the Sight of Land You Discover the Stars, **Kalā Baybayan Tanaka and Kālepa Baybayan** (Polynesian Voyaging Society), 11:40 am–12:30 pm, Ballroom AB

Abstract: Some 4,000 years ago oceanic mariners set out on an epic human odyssey to explore and settle the largest expanse of ocean in the world, the Pacific. Pwo navigator Kālepa Baybayan and his daughter, navigator Kalā Tanaka will speak about the resurgence of Oceanic Wayfinding, the indigenous art of non-instrument navigation and orientation at sea, and the bond formed between father and daughter to preserve this tradition. Moving west to east against the direction of the prevailing trade winds, oceanic explorers, farmers and traders, pointed their canoes upwind and left their footprints on the untouched shores of distant uninhabited islands. With a tropical star field circling above their heads they developed a simple system to orient their canoes and to mark the location of newly discovered islands, leading to this remarkable feat of human migration.



Kālepa Baybayan

Kālepa: "By sailing away from the safety of the shores we discovered the stars. The canoe is a reminder of all that we have overcome in the face of enormous adversity, it remains a vehicle for powerful messages, a symbol for the survival of island earth and humanity."

Born and raised in Lahaina, Maui, Kālepa Baybayan has been an active participant in the Polynesian voyaging renaissance since 1975. Kālepa has served as captain and navigator

onboard the iconic Hawaiian double-hulled voyaging canoe Hōkūle‘a as well as the canoes Hawai‘iloa and Hōkūalaka‘i. In 2007 he was one of five Hawaiian men initiated into the order of Pwo, a three thousand year old society of deep-sea navigators, by their teacher, Master Navigator Mau Piailug on the island of Satawal. Kalepa has served as 'Imiloa's first Navigator-in Residence since his appointment in 2009. Kālepa most recently participated in the 3-year Mālama Honua Worldwide Voyage, which traveled 42,000 nautical miles, visited 150 ports in over 20 countries, while training a new generation of navigators, educators, scientists, and community stewards. He returned to school late in life graduating with a BA from Ka Haka ‘Ula o Ke’elikōlani College of Hawaiian Language in 1997 and followed with a Masters in Education from Heritage College. He resides in Kona with his wife Audrey.

Kalā Tanaka

Kalā: "The stars have always been what has intrigued me about navigation, it connects me to the universe we live in, and I can feel my ancestors calling me in the clouds, in the rain, in the rainbows, and in the birds."



Kalā Baybayan grew up playing around voyaging canoes with her siblings and watched as her father, Pwo navigator and captain Kālepa Baybayan, left for and arrived from voyages. She learned sailing and navigation from her dad and other mentors in PVS. On her home island of Maui, she is an educator and apprentice navigators with Hui o Wa'a Kaulua, Maui's Voyaging Society. She teaches kids the star compass and the history of voyaging and dreams of being able to train them on the voyaging canoe Mo'okiha o Pi'ilani.

Though she has participated in several inter-island sails, crewing on Hikianalia from Hawai'i to Tahiti was her first long distance voyage. She relished the opportunity to sight land, to experience islands rising from the sea.

Event: Monday, January 6th, 3:40pm, 267 Plenary Lecture: The Stewardship of Maunakea's legacy from the Perspective of the Hawaiian and Astronomical Communities, Amy Kalili (Ōiwi TV) 3:40 pm–4:30 pm, Ballroom AB

Abstract:

“Imi” and “Pono” are two very basic Hawaiian words that embody critical concepts related to searching for knowledge and discovery alongside with the manner, motivation and impact of said discovery. The mere reordering of these two words can represent almost polar opposite situations, one where discovery is pursued in an appropriate manner and the other where it becomes discovery just for the sake of discovery.

Native Hawaiians have a long, living tradition of exploration and discovery, motivated in no small part by a desire to increase the quality of life for ‘ohana (family) and the greater, interdependent kaiāulu (community). From epic voyages over thousands of miles, guided by an intimate connection to the heavens and natural environment that led us to the settlement of the vast Pacific to the embracing of modern technology and educational approaches here in Hawai‘i before many places in the States and abroad, to say that ‘imiloa - or to seek far and wide - is inherent to a Hawaiian perspective and way of life would be an understatement.

Amy Kalili is an indigenous language advocate whose work in the Hawaiian language movement over the past 25+ years has taken her from the classroom to the board room to mainstream television. The opportunity and kuleana (responsibility) to (re)shape the narrative and disseminate stories about the Hawaiian community through the Hawaiian language and lens - including the Maunakea conflict - has yielded valuable insight. As evidenced in the simple yet powerful dichotomy between the concepts of ‘imi pono and pono ‘imi, all of us - from community advocates to scholars, researchers and scientists -are faced with an urgency to not only weigh the value of our efforts to “‘imi pono” without crossing the line into “pono ‘imi” but just

as importantly be able to communicate the relevance and practical application of our continued efforts to seek and discover.

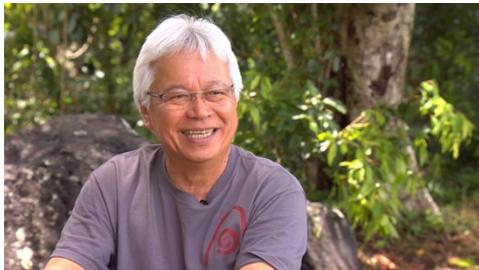
Event: Monday, January 6th 7:00pm, Public Talk: Physics of Pō, **Larry Kimura** (College of Hawaiian Language & Hawaiian Studies) and Doug Simons (Canada-France-Hawai'i Telescope) 7:00 pm–8:30 pm, Room 311

Abstract:

The prelude to the kumulipo, a ~2000 line Hawaiian creation chant, describes the formation of the universe and precedes an extensive description in the chant of the evolution of life forms on earth, through the establishment of the first humans. The kumulipo has been translated several times but Dr. Larry Kimura's unpublished translation of this chant's prelude provides remarkable insights into ancient perspectives, some of which appear both counterintuitive and prescient. The term pō appears over 100 times in the chant and is clearly an important element in the Hawaiian creation story. Understanding pō, a vast region of dark empty space from which everything emerged long ago, is essential to understanding Hawaiian cosmology. Though we will never know the original meaning of pō with complete certainty, studying its many forms in the kumulipo through the lens of modern astrophysics leads to a deeper understanding of worldviews and knowledge systems. This also leads to important lessons from nature that transcend generations and help provide context for approaching some of the complex challenges we face.

Dr. Larry Kimura

Dr. Larry L. Kimura, PhD (Hawaiian), is Associate Professor of Hawaiian Language at Ka Haka 'Ula O Ke'elikōlani College of Hawaiian Language at the University of Hawaii Hilo. He is chairperson of the Hawaiian Lexicon (new Hawaiian words) Committee for the Hale Kuamo'o



Hawaiian Language Center of the College focusing on Hawaiian curriculum development and teacher licensing for Hawai'i's DOE K-12 Hawaiian Immersion / Medium Programs. Dr. Kimura is a Co-Principal Investigator for a NSF & NEH grant to digitize and archive spoken native Hawaiian speech documentation. He has been recording Hawai'i's last native Hawaiian speakers since 1966 and

most significantly through his hosting the Ka Leo Hawai'i radio program of some 525 hours of first language Hawaiian speakers for sixteen years, from 1972 – 1988. Dr. Kimura is the first President and Co-Founder of Hawai'i's first Pūnana Leo Hawaiian language immersion preschools.

Event: Tuesday, January 7 th 2:00 pm – 3:30 pm, Room 324. Special Session: Astronomy and Culture — Best Practices for Systematic Transformation in an Increasingly Diverse and Interconnected Global Society

Abstract:

In these times of turbulence and uncertainty there are few things that anchor us firmly in awe, excitement, curiosity, and hope. Our human connection to the stars excites and sustains us like nothing else. We have looked at the stars for tens of thousands of years. Indigenous people have nurtured critical relationships with the stars, from keen observation and sustainable engineering to place-based ceremony, navigation, and celestial architecture. The Indigenous relationship and knowledge of the sky is exceptional in that it encompasses mind, body, heart, and spirit. This legacy of our species - connection to sky - is in critical danger. Indigenous communities and Indigenous knowledge systems have suffered great losses, but knowledge and knowledge keepers are still among us. In the positivist world that we live in, are we missing something? Is there a need for a wider, more inclusive science? Indigenous Knowledge Systems bring to the conversation that piece that is critically and urgently needed, the wider sensory experience of the creation of new knowledge phenomenologically and as part of culturally embedded practices. This Special Session, Astronomy and Culture – Best Practices for Systematic Transformation in an Increasingly Diverse and Interconnected Society, brings together Indigenous Star Knowledge Keepers, Indigenous Astronomy experts, and Allies of Indigenous STEM communities from US, Canada and internationally. Speakers include: astronomers, science educators, artists, cultural knowledge holders/elders, planetarium and museum professionals, K-12 educators, informal science educators, assessment and evaluation experts, and colleagues from other interdisciplinary fields. As we face an increasingly diverse American landscape in higher education and in society, we must consider paths of change that are more than superficial, but instead weave systematic transformation into the very thread of science and society: a decolonization activity. This session is in honor of Paul Coleman who passed away in 2018. There will be a “Tribute to Paul Coleman” at the start of the special session. Paul Coleman was the first Native Hawaiian to earn a doctorate in astrophysics, a professor at University of Hawaii at Manoa in Astrophysics, and an irreplaceable educator/communicator of science.