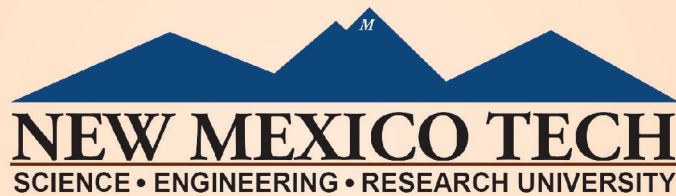


ALUMNI HAWAII TRIP MARCH 2023



Hotel Information:

Kona

Arriving on March 23 and Departing on March 26

Hotel: Courtyard by Marriott King Kamehameha's Kona Beach Hotel

75-5660 Palani Rd, Kailua-Kona, HI 96740

808-329-2911

Hilo

Arriving on March 26 and Departing on March 30

Hotel: Hilo Hawaiian Hotel

71 Banyan Dr.

Hilo, HI 96720

808-935-9361



Welcome Letter

Aloha and welcome to Hawaii!

I am delighted that you have chosen to travel with us and sorry I could not join you all, however, you will be in good hands. On behalf of the entire New Mexico Tech team, I extend a warm welcome to you and hope you enjoy the action-packed itinerary we have planned. Your hosts, Nelia, Van, Bill, and Nels, have prepared some excellent presentations for you that I am sure you will truly enjoy.

We want this trip to be as enjoyable as possible for you and understand that you might not attend every excursion we have planned; we hope that you will also feel free to explore Hawaii on your own. We do ask that you let us know if you will not be attending an activity so we don't think you're lost. Please take a moment to review this booklet and familiarize yourself with the itinerary.

Megan and Sandi will be happy to assist with anything you might need during the trip – please do not hesitate to reach out to them!

Sandi Lucero, 575-491-1574
Megan Schwingle, 575-420-6381

In future news, I wanted to take this time to let you know about our 2023 49ers plans in October. The 2023 annular eclipse, which crosses over Albuquerque, NM, falls on the same weekend as NMT's 49ers and the Albuquerque International Balloon Fiesta. We are partnering with ExxonMobil and the Balloon Fiesta to bring you several great viewing parties, both in Albuquerque and in Socorro.

We are currently looking at Chile for a 2024 alumni trip and will have more information available soon. My team and I also are back on the road and hosting receptions for NMT alumni around the country. If you would like one in your area please let me know.

I am looking forward to seeing all the pictures and hearing all about your Hawaii adventures!

Mahalo,

Colleen Foster



Director, Office for Advancement and Alumni Relations



Thursday Mar 23, 2023

Arrival Day



4:30 pm Meet & Greet Poolside Bar

5:30 pm Luau Check-In Luau Grounds

Winner of the “Best of West Hawaii” Award since 2000.

Island Breeze Luau at the Courtyard King Kamehameha’s Kona Beach Hotel

Hawai’i Island’s only lu’au featuring the presentation of the Royal Court. A family-friendly evening of delicious Hawaiian food & award winning Polynesian entertainment on the shores of Kamakahonu Bay.

Held under the stars on the grounds of historic Ahu’ena – Kamehameha the Great’s former estate in Kailua-Kona. The evening begins with a warm welcome, learn a hula and hear the mo’olelo (stories) of the Hawaiian history that took place at Kamakahonu Bay. Enjoy a delicious buffet and open bar. Entertainment throughout the evening includes live dinner music and a spectacular Polynesian show – “He ‘Ohana Kakou” (We are Family).

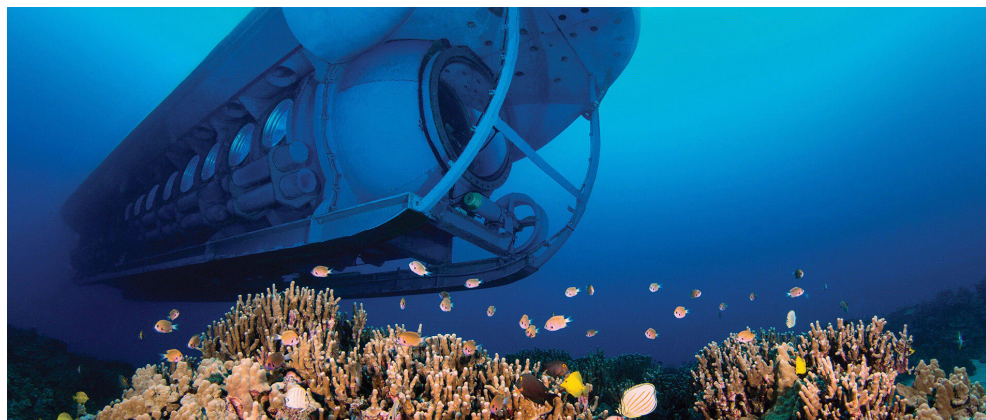
Recommendations:

The dress code is casual. They recommend a light cover up if you are susceptible to the cold.



Friday Mar 24, 2023

Atlantis Adventure Day/Snorkel



6:00 am – 8:30 am

Breakfast

Honu's on the Beach

8:30 am

Atlantis Check-In

Hotel Lobby

9:00 am

Atlantis Submarine Tour

Kailua Bay & Pier

10:00 am

Free Time

12:00 pm

Host Lunch

TBD

2:00 pm

Snorkel & Beach Time

Hotel Beach Side

6:00 pm

Host Dinner

TBD

8:00 pm

Nels Iverson Talk

Hotel Lobby

Geology of the Hawaiian Islands

Recommendation:

Bring a light jacket for cooler mornings.



Dr. Nels Iverson



Dr. Nels Iverson is a research scientist at the New Mexico Bureau of Geology and Mineral Resources and where he manages the electron microprobe lab. His research uses volcanic ash preserved in ice cores, marine cores, and terrestrial records as time markers to tie these different records together. Nels got his Master's and Ph.D. in Geochemistry from NMT working on Mt. Erebus volcano and characterizing the volcanic ash record of the West Antarctic ice sheet divide ice core. Prior to that, he received his Bachelor of Science in Geology from the University of Hawaii at Hilo on the Big Island. He enjoys hiking, camping, rafting, and hunting with his fiancée, Zoë, and their dog, Winston.



Saturday Mar 25, 2023

Free Day with Optional Tours



6:00 am – 10:00 am	Breakfast	Honu’s on the Beach
7:20 am	Depart for Fishing Trip Van, Barbara, Brittni, Candace, Sam & Keely	Hotel Lobby
10:00 am	Depart for Geologic Hike	Hotel Lobby
12:30 pm	Host Lunch	TBD
6:00 pm	Host Dinner	TBD
8:00 pm	Nelia Dunbar Talk Expedition to Mount Waesche, Antarctica	Hotel Lobby

Hike Recommendation:
Wear comfortable closed toe shoes



Dr. Nelia Dunbar

With a background in geochemistry, Dr. Nelia Dunbar is now the director of the New Mexico Bureau of Geology and Mineral Resources, and in that role, has the title of "State Geologist." She completed a B.A. degree, summa cum laude, in geology at Mount Holyoke College (1983) and then went on to a Ph.D. in geochemistry at New Mexico Tech (1989). Dunbar has worked for the Bureau since 1992, focusing on geochemistry of volcanic rocks, particularly volcanic ashes and other explosive eruptions, mainly in New Mexico and Antarctica. She also received funding from NSF for an electron microprobe in 1996, which she managed until 2016.



Her professional interests include research on a wide range of topics broadly focused on volcanic and igneous processes, in New Mexico and elsewhere. These include studies of volcanic eruption processes, geochemical evolution of magmas, chronology and chemistry of volcanic ashes, fluid migration within magmas and geochemical alteration caused by fluids that interact with volcanic rocks. Dunbar has also spent 23 field seasons in Antarctica, working on NSF-funded projects, all related to Antarctic volcanism, and interactions between volcanism, ice, and climate. In addition to New Mexico and Antarctica, she has worked in Tibet, Peru, Ethiopia, Bolivia, Ecuador, all on projects related to volcanism. Dunbar is an adjunct faculty member at the department of Earth and Environmental Sciences, taught a graduate classes on electron microprobe analysis, advised graduate students and served on student committees, and is involved in outreach activities for New Mexico teachers and students. She also serves as secretary for the Association of American State Geologists (AASG), is a GSA Fellow, received the New Mexico Tech Distinguished Research Award in 2021, and is a member of Phi Beta Kappa and Sigma Xi.



Bill McIntosh

My position at New Mexico Tech was 75% research and 25% teaching. In my teaching role I co-taught argon geochronology courses open to graduate students and upper level undergraduates. These courses combined seminars in current Ar-Ar topics with hands-on laboratory projects. Since 2015 the introductory argon geochronology class is taught through the Distance Education Program at NMT, making the class available to students at University of New Mexico and New Mexico Highlands University. In addition to teaching, I served as primary advisor or committee member for numerous MS and PhD students at New Mexico Tech and UNM.



In my role as co-director of the New Mexico Geochronology Research Laboratory, I made it a priority to make high quality Ar-Ar geochronology available and affordable to students from other universities, particularly those working on geological projects in southwestern USA and Antarctica. We also accommodated, at very low cost, a number of student projects based out of Central American and South American Universities. My outreach activities included giving public presentations on Antarctic Research at other universities, high schools, and elementary schools. I also served as a regular judge for the New Mexico State Science Fair and Science Olympiad, and was a regular participant in "Rockin' around New Mexico" K-12 Teacher Training sponsored by the NM Bureau of Geology.



Monday Mar 27, 2023

Excursion Tours Day

6:00 am	Breakfast	Hotel Restaurant
7:45 am	Depart for PGV	Hotel Lobby
8:30 am – 11:00 am	Tour PGV	PGV
11:00 am – 1:00 pm	Vaughn Property (Cookout)	
1:00 pm – 3:45 pm	Travel to Honoka’a and beyond	
6:30 pm	Dinner at Allen Property (Pizza)	

The Puna Geothermal Venture

The Puna Geothermal Venture (PGV) is a geothermal energy power plant on the island of Hawaii, the largest island in the state of Hawaii. The plant was shut down shortly after the start of the May 2018 lower Puna eruption, and resumed power generation in November 2020. The eruption had caused lava to flow over a PGV power substation, a warehouse and at least three geothermal wells that had been preventatively quenched and capped when lava fountains erupted nearby, eventually also cutting off road access.

PGV is the first and only commercial geothermal power plant in Hawaii. Constructed on a site adjacent to failed experimental wells drilled and operated by the Hawaii Geothermal Project in the 1970s and 80s, construction on the generating facility began in 1989 and was completed in 1993.

Prior to the lava damage, the plant had an installed generating capacity of 38 MW from six production wells and five injection wells along Kīlauea’s East rift zone. Its output was sold to Hawaiian Electric Industries (also known as HELCO). The plant generated up to 10% of the island’s electrical energy as of 2018.



Doran Vaughan

Vaughn Property



Fresh after graduating high school in Roanoke, Virginia, in 1968 I took the first airplane flight of my life to Albuquerque on a DC-3. A bus from NMT met a batch of us at the airport and brought us down to Socorro. My time at NMT was profoundly influential throughout the rest of my life; the friendships formed then have been valuable and enduring. I graduated from NMT in 1972 then attended grad school at Seattle University before entering into a long career in social services administration, guidance counseling, and disabilities accessibility advocacy. My first partner, Frank, and I moved to Alaska in 1980. As a university professor with the University of Alaska system I established the first Office of Disabled Student Services, a model which was expanded and adopted statewide throughout Alaska. Frank and I had an interest in developing disabilities & accessibility services in Russian society; we went to Russia in 1995. We subsequently adopted our daughter from a Russian orphanage. Four years after Frank succumbed to diabetes I met my current spouse, Steven, a scientist, teacher, and university professor who had also lost his first partner and who also had an adopted son. We formed a family together and lived in Anchorage, AK, until our youngest graduated from high school and went off to university. We then retired and moved to the Big Island of Hawaii, where for 15 years it has been one adventure after another, never a dull moment. During the COVID pandemic we returned to AK to assist with looking after grandchildren. Our hope is to now become snowbirds, annually migrating back and forth between AK and HI. In October we enjoyed seeing NMT class of 1972 friends at the wonderful reunion NMT hosted and we look forward to taking our grandchildren on a tour of the NMT campus in the summer of 2024.

We are delighted to be able to share the remarkable steam vents on our 40 acres with NTM!



Vaughn Property



David & Dallas Allen

David graduated from NMML in 1967 and in his final year there he won a scholarship to New Mexico Tech for his science fair work on building a helium neon laser. He stayed at NMT for a semester before moving on to the future he chose.



Allen Property



Allen Property

Tuesday Mar 28, 2023 Volcano Hazards Program Tour/Volcano National Park Day

6:00 am – 8:30 am	Breakfast	Hotel Restaurant
8:30 am	Van Romero Talk “Creation of the Universe, From Ancient Myths to the Big Bang	Hotel Meeting Room
9:45 am	Hilo Farmers Market	
11:00 am	Hawaiian Volcano Observatory Tour with Dr. Ken Hon (Scientist-in-charge)	
12:30 pm	Host Lunch	TBD
1:30 pm	Depart for Hawai'i Volcanoes National Park	
6:00 pm	Picnic Dinner	VNP
7:00 pm	Volcano National Park Tour	VNP

Recommendation:

Wear closed toe shoes, a rain jacket, and comfortable pants for hot and sunny or cooler and rainy weather.

Hawaii Volcano Observatory

HVO monitors the earthquake and volcanic hazards of the Hawaiian islands. They have over 40 research staff and visiting scientists at their USGS office in Hilo. Most of the research focuses on Kīlauea and Mauna Loa, the two most active volcanoes. Scientists also monitor the other 4 active volcanoes in the Hawaiian chain (Kama'ehuakanaloa, Hualālai, Haleakalā, and Mauna Kea). Scientists deploy a number of instruments to monitor the volcanoes including GPS, seismometers, infrasound, tilt meters, color and thermal cameras, and gas monitoring stations. These instruments are used to monitor active eruptions to inform scientists what to expect next, as well as look for signs of a pending future eruption. HVO scientists work closely with Civil Defense to distribute knowledge and hazard information to the public.



HVO Building (2008)



HVO Building (2018)



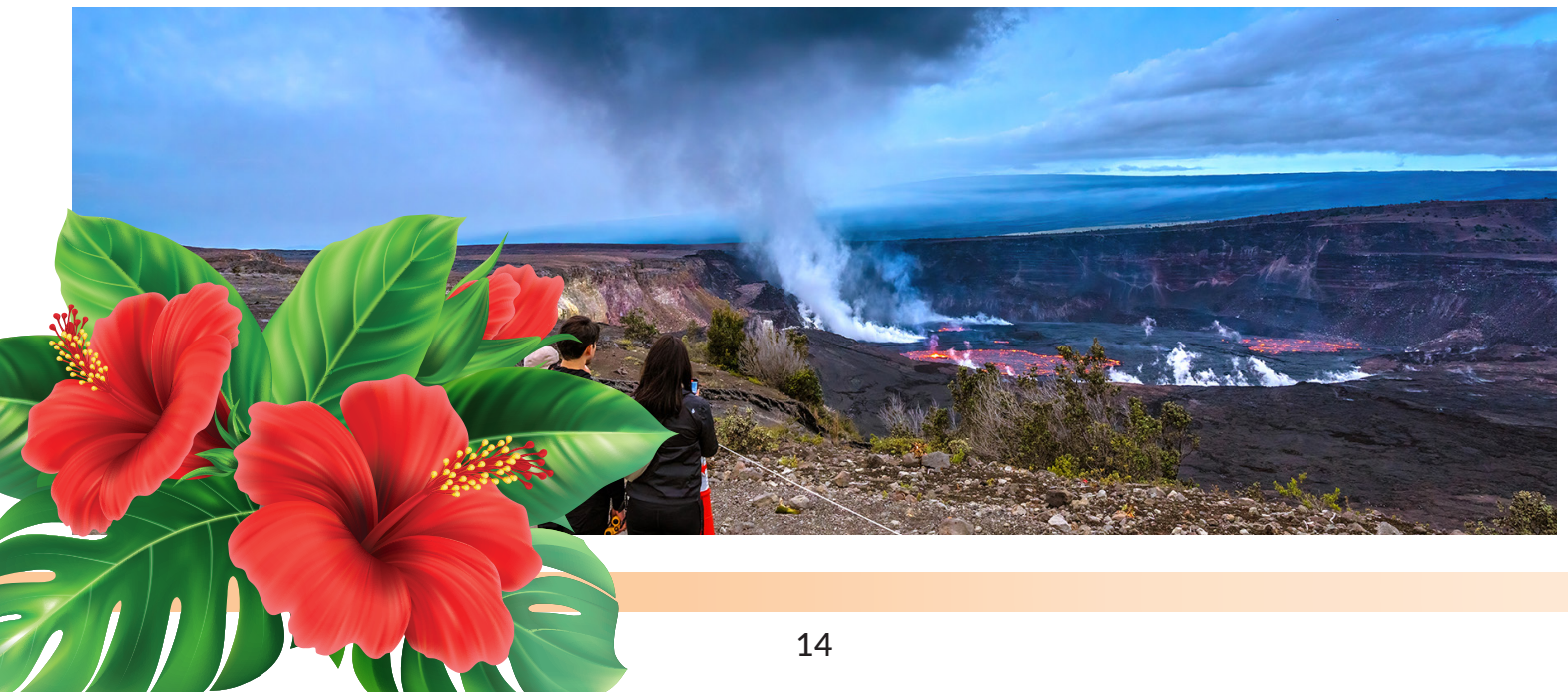
Hawaii Volcano Observatory continued & Volcano National Park

In 2018, following numerous earthquakes, eruptions, and subsequent collapse at the Kīlauea caldera, HVO was forced to move down to Hilo where they operate out of temporary facilities.

Dr. Ken Hon is the Scientist-in-Charge (SIC) at HVO and will give a presentation on hazards and eruption response. He led the eruption response to the November 2022 Mauna Loa eruption. The first eruption of the world's largest active volcano in 38 years.

Volcano National Park

Hawai'i Volcanoes National Park protects some of the most unique geological, biological, and cherished cultural landscapes in the world. Extending from sea level to 13,680 feet, the park encompasses the summits of two of the world's most active volcanoes - Kīlauea and Mauna Loa - and is a designated International Biosphere Reserve and UNESCO World Heritage Site.



Van D. Romero

Dr. Romero is the Director of Space Science and a Professor of Physics at New Mexico Tech. He has served as the PI for the Magdalena Ridge Observatory (MRO) since 1997. The MRO is home to two astronomical instruments, a 2.4M fast tracking telescope and an optical interferometer. The fast tracking telescope tracks both natural and man-made objects in our solar system while the interferometer studies deep space objects such as Young Stellar Objects, Planet forming regions, and Active Galactic Nuclei. Additionally, Dr. Romero is currently the Executive Director of the program “Accelerating the Energy Transition: Reinventing DOE’s Energy Innovation Programs” at Energy Futures Initiative (EFI). Prior to his current positions, he served for 25 years as the Vice President for Research at the University and as the Principal Investigator for projects that total over 1/2 of a billion dollars, which includes programs in energy, astronomy, earth science, and Homeland Security. Dr. Romero obtained his B.S. and M.S. in Physics from New Mexico Tech where he studied natural radiation in the environment. He obtained his Ph.D. in Physics from the State University of New York at Albany, where his dissertation research focused on the strong force coupling constant that drives binding within the nucleus. Prior to joining New Mexico Tech, Dr. Romero worked at four DOE laboratories and spent 15 years working in the Naval Reactors program. In addition to his research, Dr. Romero is a member of numerous advisory boards, mentors students, and teaches classes.



Wednesday Mar 29, 2023

Mauna Kea Day

6:00 am – 9:00 am	Breakfast	Hotel Restaurant
9:00 am	Depart for Mauna Kea	
12:00 pm	Picnic Lunch	
4:00 pm	Rainbow Falls	
6: 00 pm	Dinner	Hotel Restaurant
8:00 pm	Stargazing Tour	TBD

Recommendation:

Wear closed-toe shoes, long pants, and layers. It should be clear and sunny (sunscreen is necessary) but could be below 50 degrees and windy.

Rainbow Falls

The rainbow falls are inside Hilo town and extremely easy to reach. Walk less then 100 ft to the first scenic overlook.



The Rainbow Falls cascade 80 ft over a lava cave that, according to legends, is home to the ancient Hawaiian goddess Hina, the goddess of the moon. Compared to its significantly higher (422 ft!) neighbor, the 'Akaka falls, the Rainbow Falls win out for accessibility and how close you get to see the waterfall – either directly from the parking lot or from the top of the falls after a several minute hike.



Wednesday Mar 29, 2023

Mauna Kea Day

Mauna Kea



What: Dormant volcano that is the highest point in the Hawaiian Islands

Where: 35 miles west of Hilo on the island of Hawai'i

Early Hawaiians named the behemoth Maunakea, or “white mountain,” for the snow that caps its broad slopes for parts of the year. It's been more than 4,000 years since Maunakea last erupted, but scientists predict it could become active again in the future.

As the highest point in not only Hawai'i but the entire Pacific Basin, Maunakea serves an important role in the scientific community as a hub of astronomical observation. From the dry, cloudless atmosphere of Maunakea, it is possible to observe galaxies at the farthest edges of the observable universe. The volcano is home to more than a dozen massive telescopes from around the world, making it the largest observatory of its kind on the planet. (NOTE: Observatories are not open to the public.)



Hilo Farmers Market



The Hilo Farmers Market is rated as being one of the top “must see” attractions to experience while visiting Hilo, by publications such as Sunset Magazine, Hawaii Magazine, The Huffington Post and more! Call (808) 933-1000 for more information.

Recommendation:
Mauna Kea takes us to over 13,000 ft so dress in layers.



Thursday Mar 30, 2023

Departure Day

6:00 am – 9:00 am

Breakfast

Hotel Restaurant



The Bright Star Scholars Program

The Bright Star Scholars Program provides NMT students with valuable real-world experience through employment at the Bureau of Geology and mentorship by Bureau scientists and staff. Bright Star Scholars participate in a range of research and career development projects. To date, support from NMT alumni has funded eleven Bright Star students. Last year's Bright Star Scholars studied carbonatites in the Lemitar Mountains, investigated the geochemistry of water in Crownpoint and Alamo, and mapped the structure of the San Marcial Basin.

About Me

I grew up in a small town in New Mexico and for as long as I can remember, I've wanted to follow in my grandfather's footsteps and become a geologist. During my time at NMT, I have been fortunate enough to have undergraduate research opportunities that further solidified that geology is the path for me.

Kyle Gallant
CLASS OF 2022
GEOLOGY



Why I chose NMT

During my junior year a recruiter from NMT visited my high school; this was the first time I really started to think about where I wanted to go to college. After I learned about the highly regarded reputation of the NMT geology program, I decided if I was going to be a geologist, why not attend the best program in the state?

Why Support for Undergraduate Research is Important

Undergraduate research is essential for giving students like me the opportunity to participate in hands-on work in science and engineering. It can be a thrilling experience to have the chance to explore questions that have never before been answered. Involving students in early research opportunities benefits both the students and science in general.

About my Project

The Bright Star Program has allowed me to study the San Marcial Basin by using variations in earth gravity. The goal of this research was to gain a better understanding of the basin as a whole, as well as to answer questions about structural complexities that existed. Before this study, little was known about the basin, and many questions had never been addressed before.



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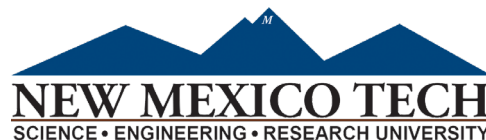
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