

SUMMER 2024 EDITION

# Cascadia CoPes Hub Quarterly Newsletter



# ABOUT US

The Cascadia Coastline and Peoples Hazards Research Hub, or Cascadia CoPes Hub, is a team of researchers funded by the National Science Foundation to increase knowledge about the natural hazards coastal communities face and ways to increase their resilience. The Hub is working with communities in the Pacific Northwest, including Washington, Oregon, and Northern California to increase their ability to mitigate and adapt to impacts from hazards like earthquakes, tsunamis, sea level rise, landslides, and climate change. Read more [here](#) or visit our [website](#).

Please enjoy this sixth edition of our newsletter for updates on the progress and activities of the Cascadia CoPes Hub. The Hub is wrapping up their third year of amazing accomplishments. You will find descriptions and links to highlights from recent Hub activities, upcoming events, and ways to get engaged with the Hub.

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# HIGHLIGHTS

**Congratulations to all of our graduate students who completed their degrees this year!**

Congratulations to **Nayré Herrera** on her successful completion of her Masters program in Environmental Science & Management from Cal Poly Humboldt. Her thesis work is titled: "Incorporating equity into sea-level rise planning: Perspectives from practitioners across California" and can be accessed [here](#). Nayré was a member of the Team 3: Community Adaptive Capacity, and worked under the guidance of Dr. Laurie Richmond and Jen Marlow J.D. Nayré was awarded the NOAA Coastal Management Fellowship for 2024 - 2026 cycle, and matched with host agency San Francisco Bay Conservation and Development Commission. She will join the coastal management agency as part of their Environmental Justice, Climate Equity, and Community Outreach Unit.

"It was incredibly empowering to have been a part of a network of passionate and talented human beings from all different walks of life. I am forever grateful for the connections I have made during my short time as part of the Hub. I hope to stay connected with Hub members and their work into the future. Lastly, if you are ever in the Bay Area, don't hesitate to reach out!"

- Nayré Herrera



*Nayré stands with advisor Dr. Laurie Richmond*

**Laura St. Jarre** successfully defended at UW for the Master of Urban Planning degree. Advised by Dan Abramson and Marina Alberti, Laura presented "Hazard Planning Games Co-Designed with Youth using Player Motivation: A Longitudinal Pilot in Westport, WA"

**Matias Korfmacher** successfully defended at UW for the Master of Public Health and Urban Planning degree. Advised by Dan Abramson, Nicole Errett, and Resham Patel, Matias presented "Incorporating Youth Perspectives into Disaster Planning: Piloting Drone-Based Photovoice to Map Community Assets"

Congratulations to **Meredith Leung** on her successful completion of her PhD program at Oregon State University in the College of Earth, Ocean, and Atmospheric Science. Advised by Hub PI Peter Ruggiero, Dr. Leung focused on the impact of climate change and sea level rise on coastal evolution, including modeling coupled natural-human systems to inform community resilience and decision-making. Her thesis title is “Stochastic Coastal Futures: Using Statistical Techniques to Assess and Inform Adaptation to Chronic Coastal Hazards Under a Changing Climate” and can be downloaded [here](#).

She will be moving to Boulder, Colorado to work at NCAR at the Rising Voices Changing Coasts (RVCC) CoPe Hub as an ASP postdoctoral scholar. The RVCC Hub focuses on



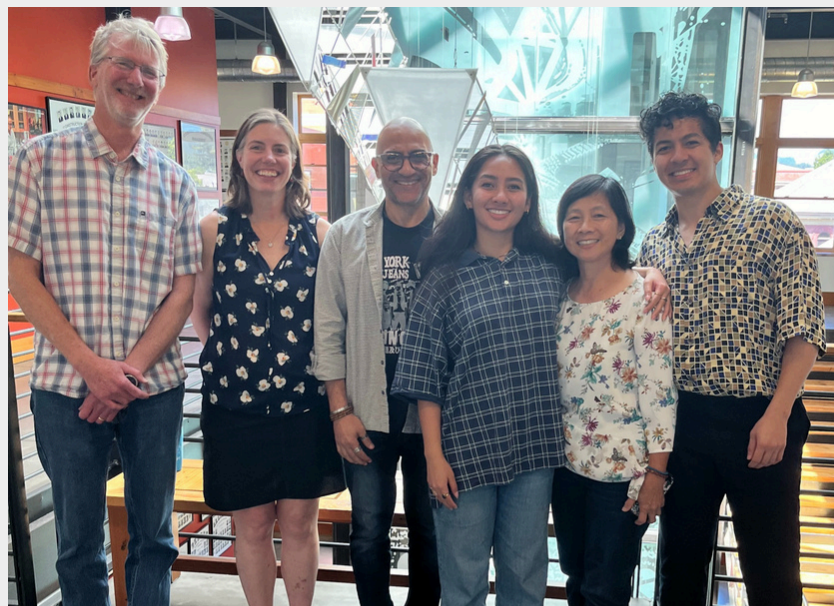
*Meredith stands with advisor Dr. Peter Ruggiero*

improving the adaptive capacity of Indigenous communities to climate change. Dr. Leung will be using modeling techniques and convergent research practices that she learned while part of the Cascadia CoPes Hub, and applying them to new communities.

“The Cascadia CoPes Hub has given me opportunities to interact with a huge variety of scientists and community partners of all career stages — and I have learned so much from them! Thank you to the whole Hub, it has been such a positive and rewarding experience to work with such kind, passionate, and dedicated people!”

- Meredith Leung

Congratulations to **Amina Meselhe** on her successful masters defense with Oregon State University at the College of Engineering. Her masters title is “Connectivity following Cascadia: A Human-Centered Analysis of Network Damage and Recovery Following a Cascadia Subduction Zone Multi-Hazard” and can be read [here](#). Amina will continue to pursue her PhD at OSU with her advisor Dan Cox.



*Amina (3rd in from right) stands with Advisor Dan Cox (left most) with family*

“The Hub has been the highlight of my masters degree. The work being done in this group is relevant and impactful and the transdisciplinary nature of the teams and the collaborations have made me a better researcher. The people, however, both inspire and support me and remain the best part of it all.” - Amina Meselhe

# THE CASCADIA COPES HUB 3RD ANNUAL GATHERING

The Cascadia CoPes Hub held their 3rd Annual Gathering May 10 - 12 for all Hub members at the Hatfield Marine Science Center in Newport, Oregon and included local partners. The event featured a variety of activities, presentations, and collaborative sessions aimed at enhancing our understanding and preparedness for natural disasters in the Pacific Northwest.



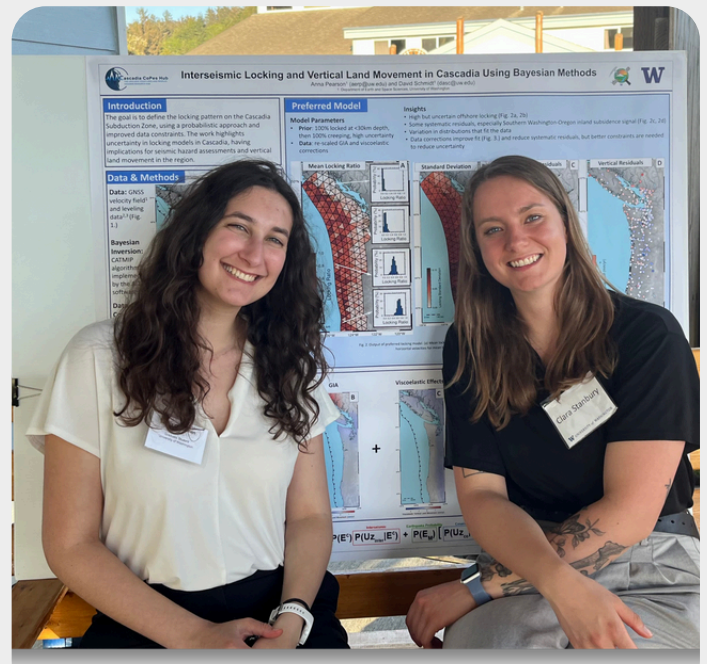
Photo: Left shows graduate student John Downes holding an old crab shell. Right shows Itchung pointing over the estuary.

The gathering kicked off with activities to immerse participants in the local environment. Marine scientist Itchung Cheung led an estuary walk, offering insights into Newport's natural estuary features. Others visited the Hatfield Marine Science Visitor Center to learn about marine species, coastal research, and history around Newport.

The afternoon was dedicated to team meetings and cross-team engagement activity to foster inter-team connections and collaborative opportunities. The day concluded with a poster session and happy hour at the Yaquina Bay Yacht Club. The evening featured a delicious dinner catered by Local Ocean and a post dinner session titled 'Beer and Bucks' to discuss grant writing tips. Amazingly, that evening, several Hub members ventured out for late-night strolls to witness the northern lights, as a strong solar flare made the spectacular display visible as far south as Southern Oregon.



Directors Ann Bostrom and Peter Ruggiero kicked off the meeting



Graduate students Julia Grossman and Clara Stanbury



Northern lights seen from the beach



Community partners. (Left to right). Jonathan Allan, Daniel Eungard, Roxanne Carini, Phillip Johnson, Charlie Plybon, Kevin Goodrich, Carl Hendrickson, Rhiannon Bezore, Georgia Smith, Ian Keene, and Beatriz Botello

The next morning, early risers participated in a morning run led by Jenna Tilt, setting an energetic tone for the day. The morning featured a series of science talks, with topics ranging from landslide modeling to hydrodynamics and coastal geomorphology. Mid-morning, groups broke out to develop a research agenda for coastal hazards based around the themes that were discussed during the [Navigating Coastal Hazards Workshop](#). These ideas were later presented to various partners from the region for their thoughts and advice on the ideas (photo above). The afternoon held a science communication training session, giving participants a chance to learn more about podcasts, visual science communication, or writing for a non-scientific audience. The night concluded with a dinner at the Oregon Coast Aquarium with guest speaker Jonathan Allan from DOGAMI discussing community resilience through science and collaboration.



Left photo: Art creation from the communication training.  
Top photo: Hub members enjoy the shark tunnel at the Newport Aquarium during Saturday evenings dinner

The final day showcased research presentations and concluded with a series of field trips. Participants chose from three options: exploring coastal dune ecomorphodynamics, community asset mapping in Newport, or an earthquake evacuation drill. These hands-on activities provided practical insights into coastal hazard management and community resilience.

Overall, the Cascadia CoPes Hub Annual Gathering was a dynamic and informative event that brought together experts, researchers, and community leaders to advance the understanding and management of coastal hazards. The diverse range of activities and presentations ensured a comprehensive exploration of the issues, fostering collaboration and innovation in the field of coastal resilience.



*Peter Ruggiero and Sally Hacker lead a field trip on Coastal Dune Ecomorphodynamics*



*Graduate students gather post meeting*

## CHARTER FELLOWS PRESENT RESEARCH AT PACIFIC SOCIOLOGICAL ASSOCIATION CONFERENCE IN SAN DIEGO

In April, Dwaine Plaza (an OSU faculty member and one of the leads of our undergraduate fellows program) took several [CHARTER Fellows](#) to the Pacific Sociological Association conference in San Diego. Students presented academic posters at the conference on themes of the broader impacts of earthquakes or tsunamis. Students were able to explore the city learning about the sociology of everyday life, including a visit to the border wall at Tijuana and Old Town San Diego. The students are looking forward to returning to San Francisco to present next year.



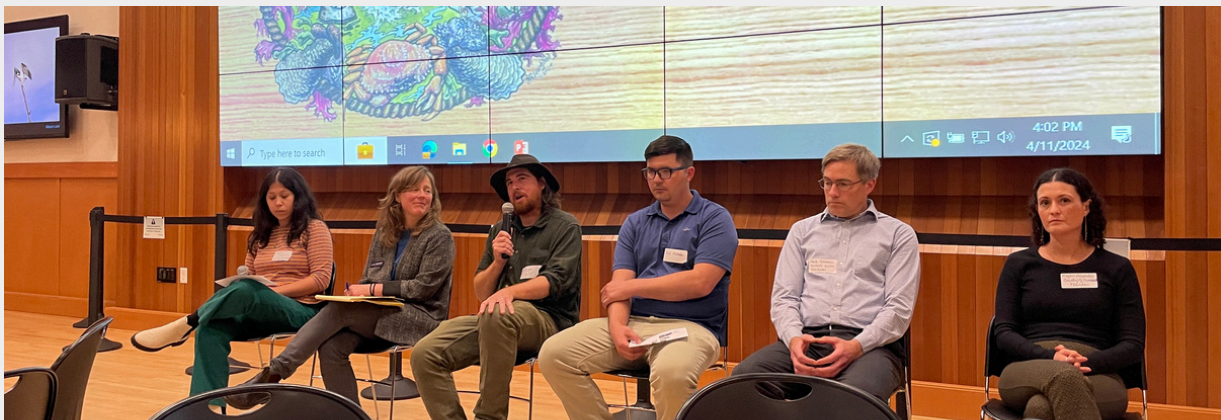
*Featuring CHARTER fellow Kaitlynn Spino on her poster "Identity and Preparedness: Natural disaster preparedness in Native American communities located in present-day Oregon."*

# EXPERTS DISCUSS HUMBOLDT BAY DEVELOPMENTS AT SYMPOSIUM ORGANIZED BY CAL POLY HUMBOLDT RESEARCHERS

The [Humboldt Bay Symposium](#) is a chance for the public to hear directly from experts about the latest developments on a variety of timely topics related to Humboldt Bay including: scientific research, ecological restoration, sustainable use of natural resources, recreational facilities, and maritime infrastructure and industry. From Cal Poly Humboldt, researchers Nayré Herrera and Laurie Richmond helped to organize and plan for the symposium as well as give presentations related to their Hub work. Ms. Herrera gave a presentation titled "From Vulnerability to Equity: Rethinking Adaptation to Sea Level Rise in California". She then facilitated a panel discussion on Climate Equity & Humboldt Bay -- that included representatives from the Wiyot Tribe, Blue Lake Rancheria, Humboldt County, and Cal Poly Humboldt. Finally, Nayré and Laurie helped organize a session of nine different talks related to sea-level rise at the symposium on the second day of the symposium.



Dr. Laurie Richmond speaking at the conference. PC: Jen Kalt



Nayré (Left) facilitates a panel discussion on Climate Equity & Humboldt Bay. PC: Jen Kalt

After that Nayré and Laurie traveled to Hawaii to attend the Association of American Geographers meetings where we each gave a talk on Hub-funded research activities.

### **Talk titles:**

*Herrera, Nayré. 2024. From Vulnerability to Equity: Rethinking Adaptation to Sea Level Rise in California. Association of American Geographers. April 16, 2024. Honolulu, HI.*

*Richmond, L. 2024. Lessons from establishing a University, Tribal, and community partnership for sea-level rise research and planning: Navigating relationships and transformation. Association of American Geographers. April 16, 2024. Honolulu, HI.*



# EXPLORING TECTONIC GEOMORPHOLOGY



Dr. Alison Duvall working in New Zealand. PC: Paul Morgan.

Hub researcher Alison Duvall was featured on the UW College of the Environment's FieldSound podcast to discuss Tectonic Geomorphology. Dr. Duvall's research focuses on areas where tectonic plates collide, uplifting mountains and triggering erosion processes such as landslides.

"If you can read the landscape, you can extract information about events that happened thousands or millions of years ago," Duvall said. "A lot of my work is theoretical, like using new technology to uncover information about the history of landslides in an area – which can help us project future landslide risks for people who live and work nearby." - Alison Duvall

As a member of the Cascadia CoPes Hub, Dr. Duvall serves on the leadership team and as a [team 1 lead](#). "CoPes has been really, really exciting because we are doing important work in service to community and pushing the boundaries on the science, too," Duvall said. "We're modeling the potential erosion events that could flow from the next Cascadia earthquake, the next Seattle earthquake, and learning so much from our work." You can read the full article [here](#) and listen to the podcast [here](#).

## HUB MEMBERS PRESENT AT THE 49TH ANNUAL NATURAL HAZARDS RESEARCH AND APPLICATIONS WORKSHOP IN COLORADO

This year's theme was, "The Stories We Tell: Creative Strategies for Understanding and Communicating Disaster Risk"

Photo: (Left to right) Joe Louis, Andrea Mah, Amina Meselhe, Dan Cox, Jenna Tilt, and Hub alumnus Dylan Sanderson



## HISPANIC AND LATINX DISASTER TRAININGS

On April 25, 2024, Josh Blockstein, Jenna Tilt, Felicia Olmeta-Schult, and Beatriz Botello delivered a comprehensive 2-hour training session on natural hazard literacy and preparedness at the Newport Middle School in Lincoln County. Delivered in Spanish, the session covered the importance of an emergency 'go-bag' with recommended supplies and how to use tsunami evacuation maps. The event attracted 45 people representing 26 families.

Hub members were supported by OSU College of Earth, Ocean, and Atmospheric Sciences (CEOAS), OSU Extension, and OR Sea Grant staff, in collaboration with the American Red Cross and Lincoln County School District. Generous contributions from Samaritan Health Services and OSU Extension and Engagement's Expanding Access mini-grant enabled us to provide each family with starter supplies for their go-bags, including a Walmart gift card.



*Photo: Josh Blockstein (Left) stands with community members showing first aid kits*

Following the event's success, the Lincoln County School District requested a similar session at Taft High School in Lincoln City on May 22, 2024. This time, the focus was on wildfire preparedness, featuring discussions led by Amanda Thiel and resources provided by the Lincoln County Emergency Management Division. Thirty individuals attended this event.

At both events, we showcased preparedness [videos](#) created in collaboration with Consejo Hispano, further enhancing the community's readiness for natural hazards.

# TSUNAMI WORKSHOP IN VALDEZ HIGHLIGHTS GROWING RISKS TO ALASKAN WATERS

In early June, a group of experts and stakeholders gathered in Valdez, Alaska, for a crucial [workshop](#) addressing the increasing risks posed by tsunamis to vessel operators. The event, held on June 3-4, 2024, was organized by the Prince William Sound Regional Citizens' Advisory Council (PWSRCAC) and the City of Valdez. Among the attendees were Hub researchers Loyce Adams, Randy LeVeque, and Yong Wei, along with approximately 40 others, including vessel operators, tsunami modelers, emergency managers, and representatives from various organizations such as the Alaska Earthquake Center, the Alaska Division of Geological and Geophysical Surveys, the National Tsunami Warning Center, the Coast Guard, NOAA, and USGS.



*Photo: Participants visit a potential landslide region near the Columbia Glacier in Prince William Sound*

The workshop, which aimed to enhance understanding of tsunami hazards and develop better guidance for vessel operators, placed a particular emphasis on the unique challenges posed by large landslide-generated tsunamis. These events are becoming a growing concern in Alaskan fjords as glaciers retreat and permafrost melts, creating conditions that could trigger sudden, massive landslides with little warning. A highlight of the workshop was a day-long excursion aboard a ship to observe a potential landslide region near the Columbia Glacier in Prince William Sound. This hands-on experience provided attendees with a firsthand look at the geological features that could potentially generate tsunamis, underscoring the urgency of the issue. This photo captures about half of the group from that day, offering a glimpse into the collaborative spirit of the event. This workshop represented a significant step forward in addressing the complex and evolving threats posed by tsunamis in Alaska, fostering collaboration and knowledge sharing among key stakeholders dedicated to enhancing maritime safety.

## UN OCEAN DECADE CHAMPIONS

In the autumn of 2023, two CoPes Hub researchers—Kendall Valentine and Jamie Donatuto — applied to be and were recognized as [UN Ocean Decade Champions](#). Funded by NSF and the Every Page Foundation (EPF), formerly the Kaleta A. Doolin Foundation, UN Ocean Decade Champions are women leaders at the frontiers of research and innovation in ocean and coastal science, integrating natural, social, and technological processes toward a mission of coastal resilience. In total, 25 female professionals across the US received this inaugural honor. The purpose of the opportunity is to connect US-based female researchers with researchers around the world working on the UN Ocean Decade challenges in order to learn about and contribute to meeting the [10 Ocean Decade global challenges](#). The opportunity provides professional support to collaborate with UN researchers on Ocean Decade issues, as well as funds to build additional leadership skills through trainings or workshops.

Thanks to the Ocean Decade Champion support, Jamie Donatuto had the pleasure of meeting and collaborating with researchers at the Ocean Decade Collaborative Center for the Northeast Pacific, based on Vancouver Island, British Columbia, Canada. She presented in a webinar session titled [Revitalizing Sea Gardens in the NE Pacific: Reconnecting to Cultural Traditions, Ecologies, and Food](#) specifically discussing the Swinomish Indian Tribe clam gardens.

Other activities through this initiative led Jamie to participate in a [panel discussion](#) with other UN Ocean Decade Champions at the UN Ocean Decade conference in Barcelona, Spain. She also has the opportunity to become involved in a women’s leadership journey, called [Women Emerging](#). This is a group of Indigenous and Indigenous-allied women who work in Indigenous communities throughout the Pacific Northwest and coastal British Columbia. Once her fellowship with the UN Ocean Decade Champion is complete in autumn 2024, she looks forward to sharing some of the insights learned with the Cascadia CoPes Hub group.



*Dr. Jamie Donatuto presenting at the UN Ocean Decade conference in Spain*

“The UN Ocean Decade Champion support has been an incredible opportunity to shift my gaze beyond the regional focus that I normally hold and get a glimpse of the incredible work going on across the US and the globe.”

- Jamie Donatuto

# CHARTER FELLOWSHIP SUMMER RETREAT



The Hub's Team 4 faculty – Dwaine Plaza and Lisa Gaines (OSU), José Meléndez and Michael Howard (UO), and Dan Abramson (UW), with graduate student mentor Christine Thompson and Hub graduate researcher Jordan Totty (UO) – led the third cohort of undergraduate [CHARTER Fellows](#) to Coos Bay, Oregon, for this year's annual retreat. The retreat included a visit to the Coos History Museum; meetings with first responders and emergency managers from the City of Coos Bay, Coos County, and the Coquille Indian Tribe; a tsunami evacuation drill on the Coquille tribal reservation; GIS-supported community asset-mapping; resilience workshop role-play; and career development goals-and-mentor-mapping.



Participating Fellows included Jordan Ackemann (UO), Mya Baker (UW), Estela Carvajal Arellano (OSU), Daniel Friese (OSU), Annika Jensen (UW), Cat Kurihara (UO), Si Tong Lu (UW), Cloe McMichael (OSU), Thaile Schrock (OSU), and Sadie Woolman-Schlukebier (UO). Second cohort Fellow Valentine Bentz (UO) provided assistance in preparing advanced materials.

*Dr. Dan Abramson discusses asset-mapping with Fellows*

# CRESCENT WORKSHOP AND FIELD STUDY UNVEIL NEW INSIGHTS INTO CASCADIA SEISMIC HAZARD



The Cascadia Region Earthquake Science Center (CRESCENT) held a Partnerships and Applications workshop in Portland, OR on June 27. The event brought together researchers, practitioners, and others invested in understanding and mitigating Cascadia seismic hazards. Hub leadership team member Harold Tobin, who is also a member of the CRESCENT Executive Committee, gave an overview of the Cascadia CoPes Hub structure and activities, with an emphasis on ways the two centers can create synergy. Hub members Yong Wei and Carrie Garrison Laney presented posters on the Hub and their Hub-supported research.

Following the CRESCENT workshop, the CRESCENT's [Cascadia Paleoseismology](#) group, or CPAL, traveled to Bandon Oregon and the Humboldt region of California for eight days of field work. The group, including Carrie Garrison-Laney and new UW ESS grad student Bering Tse, collected sediment cores that captured the subsidence from the 1700 CE Cascadia earthquake, and tsunami deposits from multiple Cascadia tsunamis. The effort was a major success, and will lead to quantitative estimates of coseismic subsidence and inland tsunami extent of past Cascadia earthquakes and tsunamis, which will support future modeling efforts and research efforts of the Hub.



*Left most photo: Sediment core from Lagoon Creek showing at least two tsunami deposits, shown in the gray layers near the bottom and top of the core.*

*Right most photo: New Hub masters student Bering Tse on the shoulders of graduate student Brandon Hatcher standing next to a coring tool. On the left stand Brandon's adviser Dr. Tina Dura, both of Virginia Tech. Lagoon Creek Marsh, Del Norte County, CA.*

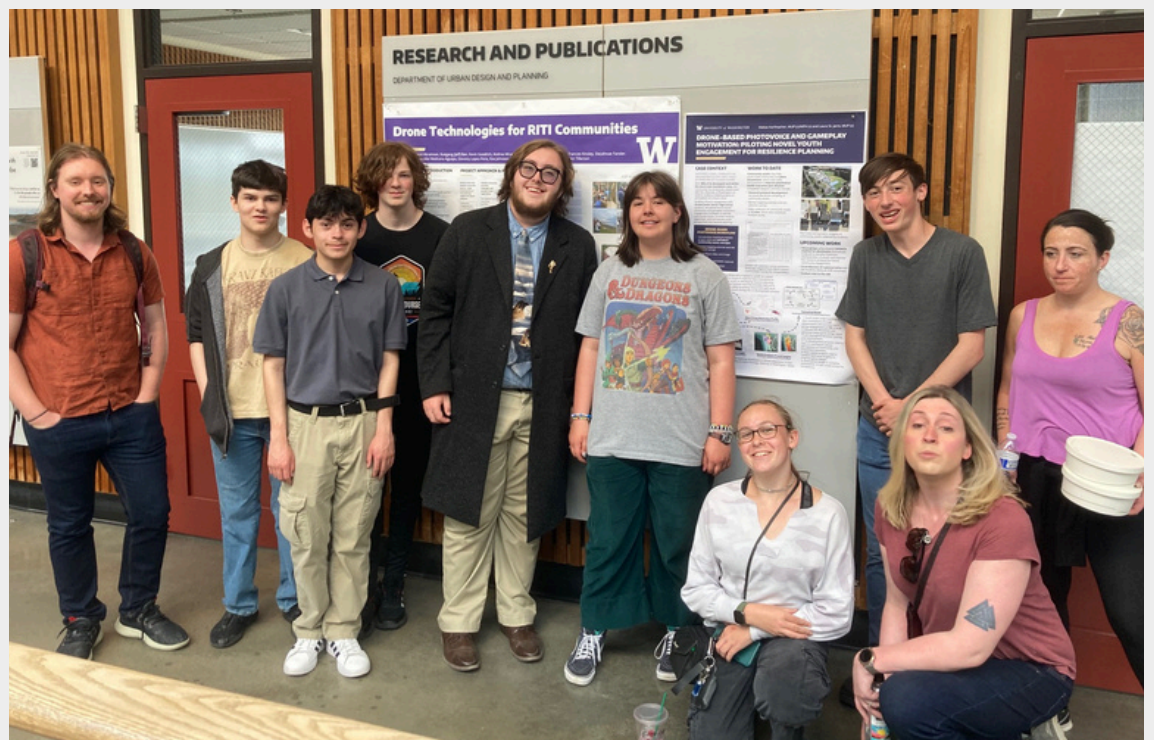
# OCOSTA NEWS NETWORK/STREAM CLUB



Image of ONN/STREAM Club visiting the NHERI RAPID Facility's tent for UW Engineering Discovery Day, May 3, 2024, from left to right: Quinn Leonard, Matias Korfmacher (UW MUP-MPH), Jacob Canfield, Salvador Medrano, Andrea Mirante (kneeling, ONN/STREAM Director), Laura St. Jarre (UW MUP), Kayleen Weber (kneeling), Frances (Finn) Kinsley, Grayson Bearden, Declan Kachman, Dan Abramson (UW faculty)

The Cascadia CoPes Hub [pilot research project](#) on “Inclusive Community-based STEAM Identity-building in Coastal Hazards Research: Pilot Activities for Cascadia TEACH with the Ocosta School District, WA” has allowed Ocosta youth to organize themselves into the Ocosta News Network/STREAM (Science Technology Reading Engineering Arts and Math) Club. Youth in this club were able to visit Seattle on May 3 for a tour of the UW campus, the College of Built Environments, and the K-12 Engineering Discovery Days to see the NHERI Rapid Facility’s tabling event on drone technology use in hazards research and environmental design.

Image of ONN/STREAM Club visiting the UW College of Built Environments, May 3, 2024, with the poster their group presented at the ASCE-ICTD meeting in Seattle the previous year, from left to right: Matias Korfmacher (UW MUP-MPH), Jacob Canfield, Salvador Medrano, Declan Kachman, Grayson Bearden, Frances (Finn) Kinsley, Kayleen Weber (kneeling), Quinn Leonard, Laura St. Jarre (kneeling, UW MUP), Andrea Mirante (ONN/STREAM Director)



# FIELD WORK IN WILLAPA BAY



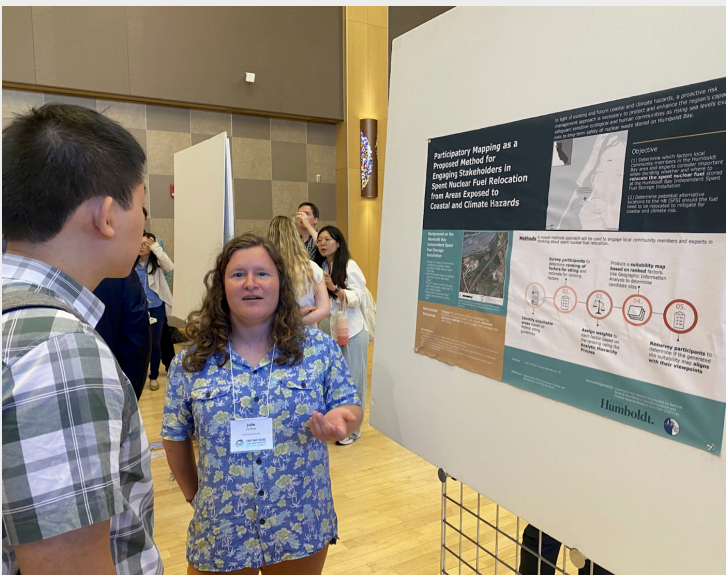
Dr. Kendall Valentine gave a seminar at the Willapa Bay Grays Harbor Estuarine Collaborative (WGHEC) Spring Quarterly meeting on the Cascadia CoPes Hub, with special emphasis on the work going on in Willapa Bay. The WGHEC is a group of local, tribal, state, federal, industry, and environmental organizations all working towards resilient ecosystems and have great interest in both flooding and shellfish aquaculture. Additionally her group within the Hub has been hard at work in the field, carrying out monthly sampling throughout Willapa Bay.



## PODCAST: SEA LEVEL RISK IN HUMBOLDT, CA

Researcher Laurie Richmond was interviewed in the EcoNews Report Podcast series. In this third episode of Humboldt Waterkeeper's special series on communities at risk from sea level rise, we hear from long-time residents and relative newcomers who share their thoughts and concerns about sea level rise. How will we adapt to increased flooding and rising groundwater in low-lying areas? Whether we decide to protect certain areas, relocate critical facilities, or figure out how to live with rising water levels, major changes are on the horizon. The good news is that we have time to plan, and a lot of people are thinking deeply about these issues like Dr. Richmond. Give it a listen [here](#).

## CAGIS+UCGIS SYMPOSIUM



Julie Sorfleet, Hub masters student, attended the CaGIS+UCGIS Symposium at Ohio State University in June that focused on how GIScience, cartography, and related disciplines can help mitigate the impacts of our changing climate and lead to a more sustainable future. Julie received a travel scholarship from the International Cartographic Association to present a poster about her Hub-funded research, which aims to examine how the perspectives of current spent nuclear fuel host communities on social siting criteria can influence GIS-based spent nuclear fuel site selection planning.

## NEWPORT YOUTH COMMUNITY SCIENCE AND ART PILOT PROGRAM

Arcoiris Cultural and Lincoln County Health and Human Services Public Health staff, along with Oregon Sea Grant, Oregon State University faculty, staff, and students (Emma Gleeman, Jenna Tilt, Felicia Olmeta Schult, and Beatriz Botello), and University of Washington postdoc and student (Maja Jeranko and Daniel Acosta Reyes), have developed a Youth Community Science and Art Pilot Program in Newport, Lincoln County. This initiative aims to engage Spanish and Mam-speaking youth and families in meaningful ways, including:

- Engage with their community and natural environments through art, storytelling, geospatial mapping, and science;
- Acquiring tools to identify community assets, assess the natural hazard risks these assets face, and explore ways their community can adapt to these risks,;
- Sharing stories about their community using photovoice and art;
- Empowering youth to be civically engaged by sharing their adaptation ideas and strategies to improve their communities.

# GETTING ENGAGED

## Join Our Vital Study on Enhancing Tsunami Preparedness and Resilience

We invite you to participate in a vital research study titled “Enhance Community Disaster Preparedness and Resilience through Physical and Virtual Drills,” conducted by the Cascadia CoPes Hub.

This survey is one of the Hub’s research projects, led by Oregon State University’s Dr. Haizhong Wang (PI) and Dr. Michael Lindell (Co-PI). The goal of this project is to assess coastal communities’ preparedness for a Cascadia Subduction Zone tsunami by evaluating evacuation drills. A key focus of this project is the time it takes for coastal residents to get ready to evacuate after earthquake shaking stops.

If you are from another community also facing the CSZ earthquake and tsunami hazards you are welcome to take the survey! **Read more and take the survey [here](#)**

**Oregon State University Research Study**  
**North Tillamook County Residents Opportunity**

OSU and EVCNB have been collaborating for several months on development of a questionnaire to benefit future preparedness strategies regionally and coast wide.

**Your input is critical** in providing for measurable data. The questionnaire only takes a few minutes.

Do not miss out on **contributing** to this important exercise while learning about your **family's preparedness**.

**More information at**  
[EVCNB.org/events-and-training](http://EVCNB.org/events-and-training)

**Win \$100**  
Participation includes two chances for being awarded \$100 gift cards.

**OSU** **COPE** **Cascadia CoPes Hub** **Oregon State University**

**EVCNB** EMERGENCY VOLUNTEER CORPS OF NEHALEM BAY **EVCNB.org**

## Cascadia Community Engaged Research Clearinghouse (CCERC)

**Coastal Hazards Support**

**CONNECT** with regional experts for

- Coastal Hazard Research
- Science Communication
- Technical Assistance

Learn more and submit your request for support at [cascadiacopeshub.org](http://cascadiacopeshub.org)  
[cascadia.copes@oregonstate.edu](mailto:cascadia.copes@oregonstate.edu)

**Cascadia CoPes Hub**  
THE CASCADIA COASTLINES AND PEOPLES HAZARD RESEARCH HUB

The CCERC is a pathway to link community needs with the Hub’s resources and services. Learn more and submit your request for support [here](#).

**The Hubs website has gone through a full refresh!**

**Check out our research pages [here](#)**

# PUBLICATIONS

**Hub researchers have been busy! Check out all of our recent publication below**

*\***Bold** indicates a Hub member*

Carbotte, S., Boston, B., Han, S., Shuck, B., Beeson, J., Canales, J., **Tobin, H.**, Miller, N., Nedimovic, M., Tréhu, A., Lee, **M., Lucas, M.**, Jian, H., Jiang, D., Moser, L., Anderson, C., Judd, D., Fernandez, J., Campbell, C., Goswami, A., and Gahlawat, R. (2024). Subducting plate structure and megathrust morphology from deep seismic imaging linked to earthquake rupture segmentation at Cascadia. *ScienceAdvances*. 10(23). DOI: [10.1126/sciadv.adl3198](https://doi.org/10.1126/sciadv.adl3198)



This paper was featured in the Washington Post “Scientists map one of Earth’s top hazards in the Pacific Northwest: A catastrophic earthquake and tsunami will one day hit the Pacific Northwest as tectonic plates slip at the Cascadia subduction zone” including photos and quotes from Hub members Madeleine Lucas and Harold Tobin. Read it [here](#)

*Streamer and sound source fully deployed and towed behind the ship. PC: Madeleine Lucas*

Brown, A., **Marlow, J., and Sorfleet, J.** (2024). Crafting Effective Oversight for the Long-Term Storage of Spent Nuclear Fuel on Sites at Risk of Climate and Coastal Hazards. *Frontiers in Climate: Climate Law and Policy*. Vol. 6. [doi.org/10.3389/fclim.2024.1356724](https://doi.org/10.3389/fclim.2024.1356724)

*Despite a documented push to expand nuclear energy in the U.S., the status quo of indefinite in-situ nuclear waste storage is uncertain and increasingly threatened by climate and coastal hazards. Findings from Humboldt Bay, California, one of the nation’s most vulnerable nuclear storage sites, informed recommendations for managing emergent climate and coastal hazards. Although existing legislative frameworks were not designed to address climate and nuclear waste interactions, more effective oversight leveraging existing federal, state, local, and Tribal government authorities could adapt spent nuclear fuel management to a climate-changed world. More effective oversight requires updated regulations and site-specific risk assessments as well as enhanced coordination across jurisdictions, disciplines, and publics to increase legitimacy, trust, accountability, and creativity in light of failed solutions to a multi-decadal issue.*

**Ledeczi, A., Lucas, M., Tobin, H., Watt, J.,** Miller, N. (2024). Late Quaternary Surface Displacements on Accretionary Wedge Splay Faults in the Cascadia Subduction Zone: Implications for Megathrust Rupture. *Seismica*, 2(4). DOI: [10.26443/seismica.v2i4.1158](https://doi.org/10.26443/seismica.v2i4.1158)

*This recent study presents a new map of splay faults of the offshore Cascadia subduction zone that may play a role in the tsunami source when a major earthquake occurs*

Lovell S, **Vickery J**, López P, Rodríguez AJ, Cummings BJ, Moloney K, **Berman, J., Bostrom, A.,** Busch Isaksen, T. Estrada, E., Hartwell, C., Kohler, P. Kramer, C.B., Patel, R., Schnall, A.H., **Hannah Smith, M.,** and **Errett, N. A.** (2024). Evaluating an equity-focused approach to assess climate resilience and disaster priorities through a community survey. *PLoS ONE* 19(6): e0302106. <https://doi.org/10.1371/journal.pone.0302106>

**Moore, A., Jean, C., Korfmacher, M., Vickery, J., Bostrom, A., Errett, N.A.** (2024). Coastal emergency managers' risk perception and decision making for the Tonga distant tsunami, *International Journal of Disaster Risk Reduction*, Volume 108, 104560, [doi.org/10.1016/j.ijdrr.2024.104560](https://doi.org/10.1016/j.ijdrr.2024.104560)

Nieminski, N.M., Sylvester, Z., Covault, J.A., **Gomberg, J.,** Staisch, L., McBrearty, I.W. (2024). Turbidite Correlation for Paleoseismology. *GSA Bulletin*. <https://doi.org/10.1130/B37343.1>

**Richmond, L.** and Kunkel, K. (2024). Living in the 'Blue Zone' of a Sea-level Rise Inundation Map: Community Perceptions of Coastal Flooding in King Salmon, California. *Climate Risk Management*, 44, 100596. <https://doi.org/10.1016/j.crm.2024.100596>

*This publication was derived from Kristina Kunkel's Masters research working closely in the community of King Salmon in 2018. The team shows important findings about the social dynamics related to sea-level rise, particularly in the lower income and more rural regions around Wigi (Humboldt Bay). A news article by CA Sea Grant can be read [here](#). Importantly, the work with King Salmon on flooding and sea-level rise issues will continue. Cal Poly Humboldt will be supporting Humboldt County in a new project funded by the California Coastal Conservancy titled "Coastal Resilience Planning for Frontline Communities on Humboldt Bay". Humboldt County will lead this effort to conduct follow-up community engagement, vulnerability assessments, and sea-level rise adaptation and flood mitigation in the community of King Salmon and Fields Landing. This work also has and will continue to be supported by the NSF Cascadia Coastlines and Peoples Hazards Research Hub. The team is grateful to residents and community members who shared their perspective and to project funders.*

The Cascadia CoPes Hub supported the work of a **UW Evans School Student Consulting Lab team** this spring as part of [CCERC](#) (Cascadia Community Engaged Research Clearinghouse). The team - Juliana Borges, Leah Harari, Heeju Jung, Micah McFeely, and Nat McPherson-Siegrist - has been awarded the 2024 Evans School Policy & Governance Research Prize for their capstone report, "Indigenous Worldviews and Tribal Priorities in Hazard Mitigation Planning: A Comparative Analysis."

Advised by Hub researchers **Evan Mix, Jamie Donatuto, Nicole Errett, and Ann Bostrom**, the team drew from prior planning theory and Tribal Climate Change Principles to assess the contents of Hazard Mitigation Plans in Washington with regard to their coverage of Tribal worldviews and principles, and compared the Tribe-specific plans with those that are not Tribe-specific but cover Tribes. Read their report [here](#).

# MEMBER SPOTLIGHTS

## SPECIAL MENTIONS

Congratulations to **Dr. José Meléndez** for receiving tenure in June, effective September 2024. He has been at the School of Planning, Public Policy, and Management since fall 2018 and also an affiliated graduate faculty member in the Indigenous, Race, and Ethnic Studies Department (IRES) at the University of Oregon. Dr. Meléndez trained as a learning scientist/urban planner at the University of Illinois at Chicago where his research applies concepts and methods to investigate planning contexts where findings inform and expand related practice and theory. Specifically, Dr. Meléndez' research is centered around the design of participatory and decision-making processes to identify how language usage and tools, modes of participation, and the inclusion of new participants in how these processes impact one another and influence process, policy, and learning outcomes.



**Christine Thompson**, Team 4 Graduate Mentor, accepted an internship as a Policy Analyst with the Oregon Department of Transportation. This 6-month internship will enhance her studies as a public policy – social policy track graduate student at OSU. Christine will be working in the Office of Equity and Civil Rights where she will learn from experts and share her experiences in advancing and implementing equity initiatives for underrepresented communities in Oregon and beyond. She currently works as a program manager for the Council of Graduate Schools where she oversees another NSF project: the Innovations in Graduate Education (IGE) project.

[CHARTER Fellow](#) **Angie Díaz** is a summer intern for the Hydro Surficial/Hazards team at the Department of Geological and Geophysical Surveys (DGGs) in Alaska's Department of Natural Resources where she works directly on the Arctic Strategic Transportation & Resources (ASTAR) project. [ASTAR](#) is designed to help improve access to infrastructure material for remote coastal communities of Northern Alaska. The DGGs ASTAR team's goal is to collect data about sand, gravel, and rock resources and produce accessible community maps for the North Slope Borough villages for building material. These materials will be used to build roads, erosion protection barriers, and other critical components. This research is significant because supplies can only be flown in by private charters, which is often too expensive and time consuming, hence knowledge of local resources is necessary. Earlier this month Angie visited Anaktuvuk Pass to collect sand and gravel samples to design detailed resource maps. She will soon embark for Skwentna to work on a Paleoseismology project.

Angie says that the research methods course as part of the CHARTER fellow program was particularly helpful since she works with Native Alaskan villages where language and cultural differences affect science communication and trust building.



**Annika Jensen**, CHARTER Fellow, landed an internship with the Department of Environmental and Occupational Health at UW where she will be working on developing a GIS Washington State food systems map. Her degree is in Environmental Public Health with a minor in German Studies. She has many interests, including environmental justice, epidemiology, and environmental public health policy. She also volunteers at the University of Washington Food Pantry. Her past experiences include working with the Severn School in Maryland as a project fellow where she helped redesign oyster reefs in Chesapeake Bay. She also worked with Spirogyra Butterfly Garden, an eco-sustainability organization, in Costa Rica to expand educational outreach.

# AWARDS

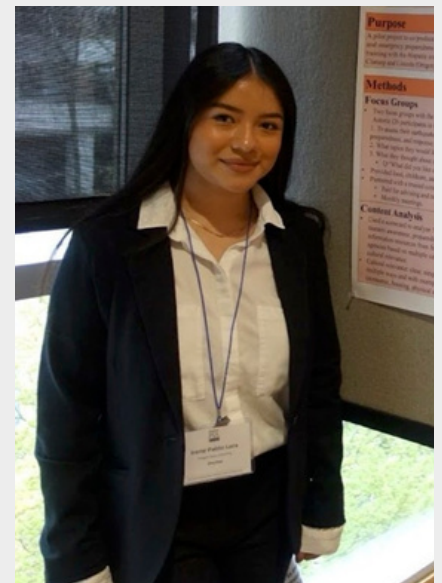


Professor **Randall J. LeVeque** at UW, was the recipient of the [2024 CSDMS lifetime achievement award](#)! Dr. LeVeque was recognized for his outstanding intellectual leadership in numerical computing and its applications to problems in geophysical fluid mechanics and conservation laws, as well as for major contributions to reproducible computational research and open-source software.

Congratulations to CHARTER Fellow and OSU undergraduate **Daniel Friese** on his Ford Family Foundation Scholarship and a remote sensing scholarship through Oregon State. Additionally, Daniel is also receiving the Michael Freilich Memorial Scholarship from OSU. This award is aimed at students who are using remote sensing for Earth Sciences research.



CHARTER Fellow and UW undergraduate student **Nell Thompson** was awarded the Husky 100! The Husky 100 recognizes 100 UW undergraduate and graduate students who are making the most of their time at the UW. You can read more [here](#).



CHARTER Fellow and OSU undergraduate student **Irene Pablo** Lora was named one of the 15 College of Liberal Arts (CLA) Outstanding Graduating Seniors. This is the highest award CLA presents to less than 1% of graduating seniors. Congratulations Irene on your success and future endeavors!

# THANK YOU FOR READING!



**We wish everyone a happy and restorative summer!**

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Low tide at Willapa Bay, WA

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