

## UVic is gaining climate traction



### Powering sustainable energy transformations across Canada

#### ACET project aims to find low-carbon energy solutions for Canada's smaller remote and rural communities

There's no one-size-fits-all tech solution to help communities transition to a low-carbon energy future, according to Curran Crawford, executive director of Accelerating Community Energy Transformation (ACET). As a mechanical engineer, he's worked with a wide range of transformational green technologies—and now, with ACET partners spanning research, finance, policy and local governments, he's ready to find community-specific solutions that work.

Crawford believes an interdisciplinary approach is crucial to implementing sustainable energy systems that are reliable, cost effective, societally driven and in line with the United Nations Sustainable Development Goals. His

research history is a showcase for how visionary engineers, communities, finance experts and policy makers can pull together to create such positive change.

A UVic mechanical engineering professor, Crawford is the founding executive director of the ACET initiative, an ambitious research program with partners across Canada, and internationally in the US, UK and EU.

Climate change is the defining issue of our time. Globally, governments are signing international agreements, setting targets and looking in all directions for the strategies that will reduce emissions as quickly as possible.

"But while high-level work is critically important," Crawford says, "there's much we must do to support communities as they try to move swiftly toward low-carbon energy systems."

That support is the *raison d'être* of ACET, a seven-year research program that will support communities to develop, implement and assess

specific place-based energy transformations that feed into national level goals. The long-term intention is that what the ACET partners learn in Canada will be shared and put into practice around the world to help communities realize their unique visions for low-carbon futures.

Crawford's unique set of energy expertise provides a strong foundation for the multifaceted ACET. He has been at the forefront of research into wind, tidal and wave energy; direct-air and seawater CO<sub>2</sub> capture; grid integration of electric vehicles; and micro-grid energy in remote First Nations communities. For a large, future-facing project like ACET, his vision is vital.

"Our goal is nothing less than helping to transform community energy systems and developing scalable solutions that can be replicated around the world," he says. "We are also nurturing the emerging great minds the world is counting on as never before."

Crawford has worked with colleagues in

psychology, science, geography, business, environmental studies and management, public policy and economics, applying a broad systems approach to energy. He especially enjoys working with a diverse cross-section of students, from co-ops to grad students and post-docs, who each bring their own lived and disciplinary backgrounds to contribute innovative perspectives and ideas to solving the energy transformation puzzle.

At ACET, Crawford and the expansive research team will work with small to medium-sized Indigenous and non-Indigenous communities, both urban and rural, to identify, develop, finance and integrate breakthrough renewable energy technologies and policies, helping Canada, and the world, achieve net-zero emission targets—one community at a time.

[More climate stories on pages 4-5](#)

#### Teaching climate action

"There's not a problem with the environment, there's a problem with how we are living in it."

—UVic environmental studies professor Kara Shaw.

"What's slowing down climate solutions is not knowing how to change our economies and societies." That's the insight that inspired Shaw to create the Transformative Climate Action certificate—an interdisciplinary credit program, offered by UVic's Continuing Studies and School of Environmental Studies, that provides students with tools and strategies to help shape a sustainable future.

Shaw hopes that learners from diverse backgrounds are empowered to find their own personal pathway toward climate action and create social and political change in their communities.

"The core thing I want students to take away from this program is an understanding of their own

place in the world of climate action," Shaw says. "What skills they bring, why those skills are important, and how they can put them into play."

#### A tailored approach

Now in its first year, the Transformative Climate Action program is comprised of three core courses that all students must take, plus four electives—all of which are offered online and asynchronously to accommodate parents, professionals and full-time students who wish to complete the certificate on their own schedule.

While the core courses introduce the skills needed to plan and make decisions about climate action, the focus is on exploring various perspectives on climate

change—including those of Indigenous communities, policy advocates, grassroots organizations, and climate scientists and engineers—and engaging in critical thinking with others.

"I want students to feel that they have agency and know how they can put that agency to work in making change," Shaw continues. "It's important people understand the social aspects of climate change because that's where the action is now. That's how climate solutions are built."

The program's electives allow students to tailor their program to meet their own specific climate action goals, whether by learning about new technologies, renewable energy, or innovative approaches to understanding climate change mitigation and adaptation.

#### Shaping a sustainable future

A former director of UVic's School of Environmental Studies and

a lifelong learner herself, Shaw researches the energy dynamics of climate change with engineers at the university, and collaborates with local governments and community organizations seeking to implement climate policy and programs. These collaborations encouraged her to build educational opportunities for others seeking climate solutions.

"There is a strong demand for more capacity in the area of climate action, and this requires understanding what solutions are possible and how to implement them," she says. "Addressing climate change requires collaboration, so these programs prioritize collaboration with other students in the classroom and with local organizations and communities outside the university."

Applications for the new Transformative Action Certificate program are now being accepted. Visit [tiny.cc/tca-cert](http://tiny.cc/tca-cert) for info.



Shaw. UVIC CONTINUING STUDIES

# global leadership

#1 Canadian comprehensive university for grad employability

For the fifth year in a row, a prestigious international ranking by Times Higher Education (THE) shows that UVic grads are among the world's most employable. THE's 2023 Global University Employability Ranking report identifies UVic as the best Canadian comprehensive university, and one of the world's top 200 universities overall, in preparing its students for the workplace, based on feedback from top international companies.

More: [uvic.ca/rankings](http://uvic.ca/rankings)



## National Centre for Indigenous Laws wins prestigious design award

Located on Ləkʷənjən (Songhees and Esquimalt) territory, the National Centre for Indigenous Laws (NCIL) at the University of Victoria is still under construction, but its architectural design is already winning awards. Slated to open in late Fall 2024, the NCIL has received a 2023 Canadian Architect Award of Excellence, celebrating its Coast Salish design elements and focus on bringing the surrounding forest into the building.

The NCIL architectural design was created through a collaborative partnership between three architectural firms led by Two Row Architect, an Indigenous-owned firm, along with Teeple Architects Inc. and Low Hammond Rowe Architects. In assembling a team for the project, the architects "put themselves in UVic's shoes" to consider how the university could be best served. They started by appointing an Indigenous firm, Two Row Architect, as the architect of record to provide leadership throughout all phases of the project, with a focus on conducting Indigenous and community engagements. They enlisted an international-calibre design firm, Teeple Architects, to collaborate with and provide insight into the drawings and specifications, and also joined with a local firm, Low Hammond Rowe Architects, familiar with UVic, to respond quickly and provide design input during the construction and commissioning phases of the project.

"UVic has been one of those very rare clients that not only supports the development of an Indigenous-inspired design, but also remains steadfast through all phases of the

project to see it through," says Brian Porter of Two Row Architect.

The 2,440-square-metre addition to the UVic Anne and Murray Fraser law building will provide culturally appropriate space for the learning and teaching of Indigenous laws. This includes the Canadian Common Law and Indigenous Legal Orders joint degree program (JD/JID), the first of its kind in the world, as well as space for the JD program, public legal education programs, and much-needed classroom, clinical and research spaces for the Indigenous Law Research Unit, the Environmental Law Centre, the Business Law Clinic and the Access to Justice Centre for Excellence. The building will include an Elders' room and garden, and spaces for gathering, ceremony, dialogue, research and the sharing of histories and knowledge. The design of the building will facilitate place-based learning and will create a flow between the old and new buildings and indoor/outdoor spaces, including an outdoor learning deck, a sky classroom and a maker classroom.

### A design to honour Indigenous communities and the land

The design for the new building emerged through a long engagement process with Elders and members of the Songhees, Esquimalt and WSÁNEĆ communities, as well as with UVic's Faculty of Law students and a team of staff and faculty members. The importance of honouring the land where the building is situated was at the forefront of all design decisions. "Indigenous Peoples have main-

tained vital relationships with the places they have inhabited since time immemorial," says Sarah Morales (Sutaxwiye), associate professor, Coast Salish and Cowichan Tribes member. "These places, deeply imbued with meaning and identity, are sources of law and necessary inspiration for legal reasoning."

"Recognizing this deep connection between land and law, the NCIL is inspired by the legal landscapes of the Coast Salish world," Morales continues. "Its design reflects the importance of water and offers acknowledgement of our relationships with the beings of this place: the forests, mountains, sky and all their inhabitants. In designing a space that seeks to represent what the Coast Salish world teaches us about our legal relations and lawful obligations, the NCIL design team has created an environment that intentionally gives pause to its visitors—reminding them to consider what it is they are being called upon to do as actors in this legal landscape, and how they can continue the work of honouring the legal traditions of their Coast Salish hosts."

### An Indigenous law institute

The NCIL responds to the Truth and Reconciliation Commission's Call to Action #50, which recommends "the establishment of Indigenous law institutes for the development, use and understanding of Indigenous laws and access to justice, in accordance with the unique cultures of Aboriginal peoples in Canada." It also seeks to meet the responsibilities identified

by the TRC for the legal profession and law schools, as set out in Calls to Action #27 and #28.

"From its inception, the NCIL has honoured Indigenous laws of these lands," says UVic Vice-President Indigenous Qwul'sih'yah maht Robina Thomas, "Upholding the local teaching ʔetal nəwəl | ÁTOL, NEUEL, where the essence of respecting the rights of one another and being in right relationship with all things is not merely a principle, it's how we live and walk in harmony with everything on this land. The University of Victoria has proudly redefined its approach to building and being in right relations with the land by weaving together Indigenous languages, arts and culture into the development of the NCIL. This innovative model not only harmonizes with the environment, but also lives out our commitment to the local nations, sustainability and a forward-thinking vision in architectural practices. May this recognition ignite inspiration for other institutions to build respectful relationships with Indigenous communities to guide and support their planning and development."

The NCIL is the culmination of years of work, commitment to partnerships with local Indigenous communities, and supports the goals of the university's Climate and Sustainability Action Plan, Strategic Plan and Indigenous Plan. It also supports the United Nations Sustainable Development Goals of quality education, good health and wellbeing, life on land, and peace, justice and strong institutions, which reflect UVic's values.

# Fresh perspectives on UVic's unique BSc in Climate Science

UVic's new Bachelor of Science in Climate Science program welcomed its first students in Fall 2023. The new program allows students to learn about the complexities of human-induced climate change—and prepares them with essential skills to turn knowledge into tangible action.

NICOLE CROZIER

A new joint program in climate science—offered by the UVic Faculty of Social Sciences and the Faculty of Science—stands as the first-degree program of its kind in North America, and the first on North America's West Coast to be accredited for delivering on the United Nations' Sustainable Development Goals (SDGs).

At the end of the fall term, we sat down with Camryn Thompson, a fourth-year Science student studying climate science, and David Atkinson, chair of the geography department and co-developer of the program, to learn more about the program and their experience.

### Who should study climate science?

**Atkinson:** The BSc in Climate Science is great for those who enjoy science and want to help people.

More specifically, it's for students who are tired of being told what to think about the "climate question" and want to take that next step to understand how the climate system operates, and how to analyze and present weather and climate data. Perhaps most importantly, it's for students who want to learn how to apply these skills and understandings to help organizations and communities make a difference in the climate crisis.

Ultimately, the program represents the perfect merging of the science approach that understands the world through math and numbers with the social science world that engages with the world around us to understand and respond to the needs of society.

### As faculty, why was it important to you to create a climate science program at UVic?

**Atkinson:** It started when we realized that all the right pieces were already in place and that, with a bit of imagination, we could package these parts into a great new program.

We have a number of people on campus who research climate from different perspectives, and I am a weather researcher who focuses explicitly on understanding how weather affects human operations. Many of my grads are currently working in the environmental consulting sector doing exactly the type of work this new program will train people for.

Once we looked around and real-

ized there is no other program like it in North America, combined with the support at UVic for community-engaged learning and co-op, we knew we had to go for it.

### As a student, why did you choose to study climate science?

**Thompson:** My longstanding interest in Earth systems and their interconnectedness with daily life, particularly in the context of changing climate, led me to choose the climate science program.

I had the opportunity to work for a development group as a Sustainability Intern last summer, which gave me exposure to working within an environmental, social and governance framework. This experience provided me direction and helped me make the decision to switch into the climate science program.

This program will provide me with a comprehensive perspective, offering the tools necessary to identify climate challenges and apply scientific methodologies to formulate solutions.

### What will students learn in the climate science program? What aspect of the program are you most excited for students to learn about?

**Atkinson:** Students start out with a suite of science and math foundation courses that lead into courses about things like atmospheric dynamics.

Unlike other meteorology programs, however, we move into analysis and statistics courses, working in parallel to hone computer skills. That is different enough, but the most exciting aspect for me is the capstone experience where students will work directly with stakeholders out in the world to help them address climate-related questions affecting their operations.

### What's something you've learned that you've found really interesting while taking this program?

**Thompson:** In EOS 325, Earth System Modelling, we delved into the complexities of modelling the carbon cycle and other Earth systems. This experience has expanded my knowledge of Earth systems' driving factors through models, enhancing my understanding of the dynamics within our environment.



L-R: Atkinson and Thompson. PHOTO MONTAGE BY JULENA LOVEGROVE

This course has also advanced my coding abilities, which is a valuable skill in climate science.

### What types of hands-on learning opportunities are available to students in the program?

**Atkinson:** The BSc in Climate Science is part of UVic's highly organized co-op program, which is second to none in the country. Many of the courses have laboratory components where emerging skills are directly practiced.

Students participate in hands-on experiments to understand physical climate processes, such as learning how to program and install an automatic weather station, using advanced computer coding to analyze and present data about atmospheric patterns, sea ice trends, stream flow extremes, and other environmental data, and examining Indigenous ways of understanding weather and climate.

Once equipped with a broad suite of physical science, communications, and analytical skills, the capstone experience course then offers students an opportunity for direct engagement with external stakeholders in the real world.

### Tell me about a hands-on learning experience you've had in your program, or one you're really excited about participating in.

**Thompson:** Engaging in outdoor lab work for various courses has offered me hands-on experience that synthesizes course content with real-world surroundings. These experiences have given me practical skills in data collection, utilizing measurement tools, and interpreting findings in the field.

In one of my labs, for example, we set up local weather stations that we monitored daily for a month. Various factors that could influence the data

were taken into account, such as proximity to buildings, overhanging trees, shade, and so on. We then assessed our data based on alignment with that of fellow students and nearby weather stations in the Vancouver Island school network.

### What types of career opportunities are available for climate science graduates?

**Atkinson:** There are many opportunities for graduates from this program.

We offer two separate streams: climate impacts, adaptation and mitigation (IAM), and physical climate science (PCS).

The IAM stream is more for those interested in learning how to bring their climate and analysis skills to bear on real-world problems; grads from this stream would work with climate consulting firms on teams that are engaging with organizations to help them understand their climate needs.

The PCS stream is geared towards those wanting to focus more on climate analysis work without necessarily engaging the public, such as climate research support or environmental technician.

### Where are you hoping your climate science degree will take you?

**Thompson:** My decision to pursue a degree in climate science was driven by my desire to contribute meaningfully to the climate science community. Recognizing the urgency of addressing climate challenges, I aim to play an active role in advancing our collective understanding and finding pragmatic solutions.

I believe that with the right knowledge and actions, we can make an impact on the Earth's trajectory. I hope to work towards a more sustainable and resilient future.

Interested in enrolling in the Bachelor of Science in Climate Science program? Discover climate science program details, get application guidance, and explore opportunities at [tiny.cc/climate-BSc](http://tiny.cc/climate-BSc).

From physics to biology, geography to earth and ocean sciences, UVic has over 25 degree, diploma, minor and certificate programs to tackle our planet's biggest challenges.

More info about UVic programs in climate and sustainability at [tiny.cc/climate-programs](http://tiny.cc/climate-programs).

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# Powered by climate traction

Climate hope propels us. UVic has gained ground on clean energy transitions, climate program offerings and sustainable operations—and that’s just the beginning of the positive actions we see ahead. Find out more at [uvic.ca/impact](http://uvic.ca/impact).

## “Droids of the deep” monitoring the northeast Pacific Ocean

UVic’s Ocean Networks Canada (ONC) has expanded the reach of Pacific Ocean monitoring with the deployment of new deep-sea Argo floats that collect vital ocean data while traveling up and down through the water column—the space between the sea surface and the seafloor.

The introduction of these drifting autonomous “droids of the deep” brings a new dimension to ONC’s existing deep ocean observing system in the Pacific: NEPTUNE, an 800-plus-kilometre cabled observatory located on the seafloor off the west coast of Canada.

Five floats have been deployed in the northeast Pacific this year, between latitudes of 49.57° and 53.18° N, during expeditions led by Fisheries and Oceans Canada. They are now successfully transmitting ocean data that is open and accessible, expanding Canadian contributions to the international Argo program.

ONC’s new NKE Deep ARVOR floats have a vertical range of four kilometres—double the depth of most other operational floats. There are approximately 3,800 floats currently operational in the global ocean. ONC’s floats are the first to explore the northeast Pacific region below two-kilometre depths, and are equipped with a sensor that measures dissolved oxygen.

“The data from these floats will help researchers assess dynamics in the distribution of low-oxygen waters in this region,” says Kohen Bauer, ONC senior staff scientist. “The deep waters of the northeast Pacific have been losing oxygen due to climate change, which threatens ecosystem stability. The Deep Argo floats are providing measurements of dissolved oxygen more frequently and over a larger area than previously established, allowing us to better monitor critical changes in environmental conditions.”

Other metrics captured by the floats are temperature (heat storage), seawater salin-

ity, pressure and the amount of oxygen gas in seawater, which most marine species rely on to survive.

ONC President and Chief Executive Officer Kate Moran says more than half of the ocean’s volume lies below 2,000 metres, so these deep floats will advance understanding of the changes occurring within the ocean interior, including impacts of climate warming.

“NEPTUNE observatory, for example, helped identify an extreme low-oxygen event (i.e. hypoxia) in August 2021 along the southern British Columbia continental shelf. The addition of the deep floats will give us a wider geographic picture of these types of events,” she says. “With early detection, there is potential for protecting coastal aquaculture industry resources before low oxygen conditions emerge.”

The battery powered ARVORS travel up and down using a mechanism that controls their buoyancy—allowing them to ascend and descend through the water column. When the float breaches the surface, it connects via satellite to the global Argo data portal to transmit the collected data before beginning the cycle again.

The data from the ONC floats are contributing to Argo Canada and are accessible to all via the international Argo program, which is bringing more certainty to global heat storage estimates and therefore projections of sea level rise. Argos can also help identify ocean heat waves, and salinity data allows changes in global rainfall patterns and ocean circulation patterns to be studied.

ONC is also planning future deployments of more NKE Deep ARVORS.

## An observatory for the Antarctic

### Canada-Spain scientific collaboration establishes new Ocean Networks Canada subsea observatory in the Southern Ocean.

Antarctica is now home to a new subsea observatory providing near real-time ocean data, year-round, thanks to a new partnership between scientists in Canada and Spain.

The partnership between UVic’s Ocean Networks Canada (ONC) and the Spanish National Research Council (CSIC) will advance scientific understanding of one of the most under-observed parts of the planet—the Southern Ocean, also known as the Antarctic Ocean.

Data began flowing in January from the observatory, located offshore of the Spanish Antarctic Station Juan Carlos I, on Livingston Island in the South Shetlands Archipelago that is north of the Antarctic Peninsula.

ONC president and CEO Kate Moran says this observatory marks a tremendous milestone in polar scientific collaboration.

“Ocean Networks Canada has been monitoring Arctic conditions since 2012 through its network of Indigenous community-led and remote coastal observatories that provide continuous ocean data, available to all,” she says.

“ONC’s expertise in designing and successfully operating underwater observatories able to withstand harsh polar conditions will contribute to Spain’s scientific expertise in monitoring Antarctica, a continent that is critical to this planet’s climate system, and is undergoing rapid, consequential changes that we need to understand.”

Further contributing to ONC’s monitoring of Antarctica is the planned deployment of two ONC deep-sea Argo floats in the Drake Passage in the Southern Ocean.

“This partnership with Ocean Networks Canada will provide vital ocean science data in the Southern Ocean, not least because the new observatory will operate year-round outside of the station’s staffed summer months,” says Jordi Sorribas Cervantes, director of the Unit of Marine Technology.

“Having access to this near-continuous data, from anywhere in the world, will help meet

the current data gap challenge in the Southern Ocean.”

The collaboration between Canadian and Spanish scientists follows a recent call for the urgent expansion of ocean monitoring in the Southern Ocean. In a joint statement released at the 2023 Southern Ocean Observing System (SOOS) Symposium, 300 scientists from 25 nations asserted that “the chronic lack of observations for the Southern Ocean challenges our ability to detect and assess the consequences of change.”

The cabled seafloor observatory, sitting at a depth of 23 metres, is modelled on one of ONC’s Arctic observatories, and uses the Iridium satellite network to transmit the data every 30 minutes to ONC for processing, archiving and distribution.

The observatory measures conductivity, temperature and depth. Additional sensors will track dissolved oxygen concentrations—as well as optical properties including turbidity and chlorophyll-a—that are important for monitoring seawater quality, particularly at this location, where freshwater glacier melt and ocean water meet.

The observatory, alongside ONC’s two new autonomous deep Argo floats in the Southern Ocean, will help monitor the changing biogeochemical and physical ocean processes in this under-observed, sensitive region.

Polar Knowledge Canada (POLAR) manages Canada’s scientific contributions and commitments to the Antarctic Treaty. David Hik, POLAR chief scientist and executive director, says this new partnership between Spain and Canada marks an important milestone in advancing ocean monitoring.

“We are delighted that ONC is contributing its expertise and infrastructure to Antarctica and Southern Ocean research to advance knowledge, as well as Canadian leadership in polar science and technology.”

## Hope for some kelp forests in the Salish Sea

The kelp forests of the Salish Sea are important pockets of ecosystem health—home to seals, orcas, juvenile salmon, rockfish and sea stars—protected by bull kelp that grows on rocky substrates and forms visible canopies on the surface during the summer months.

Those regions are also at risk due to marine heatwaves and other environmental stressors. In a recently published paper, UVic geographer Alejandra Mora-Soto dug deeper into the impact of heat and wind on kelp resilience, looking at satellite data over the last two decades from southern Vancouver Island, and a site observed in Ella Beach since 1972.

Mora-Soto found that in some cooler regions of the Salish Sea, particularly those exposed to waves and wind that help stir up nutrients, kelp forests are still flourishing.

Mora-Soto explains, “The coasts in the Strait of Juan de Fuca are still within the optimal temperature range for kelp growth. We hypothesize that the summer winds in the Strait of Juan de Fuca increase water motion, an effect that favours canopy growth and the health of the kelp in general.”

The hopeful trends for kelp forests exclude areas around the east coast of Mayne, Saturna and Galiano islands, as they’re more sensitive to warming temperatures—where there’s also been a recent decline in kelp presence.



## Bombardier and UVic aim to cut flight emissions in half

Bombardier, one of Canada’s top aerospace companies, has chosen the UVic Centre for Aerospace Research (CFAR) as the first academic partner on its trailblazing pan-Canadian and sustainability-focused EcoJet Research Project.

The project explores blended wing body aircraft configuration and advanced new technologies to cut flight emissions in half.

The technology has the potential to transform the Canadian and global aerospace industries and to forge a new path forward in the field of sustainable aviation technologies. CFAR has taken a critical and leading role in the project with scale model design, manufacture and

flight testing.

“For more than a decade, the Centre for Aerospace Research has grown from strength to strength, and our cutting-edge work with Bombardier represents the most significant research partnership in our history,” says UVic mechanical engineer Afzal Suleman, a Canada Research Chair and director of the centre.

“Through this collaboration, our students and researchers are gaining critical real-world skills while helping to push forward the frontiers of sustainability and redefining the boundaries of what is possible for the future of the global aviation industry.”

### Innovative and experimental aviation

CFAR’s mission is to spur innovation and attention to the positive role aerial vehicles can play in the betterment of society.

Since its beginnings in 2012, CFAR has greatly expanded its range of offerings to include turn-key research services, design, fabrication, ground testing, flight testing and operations for a wide range of potential applications in the aviation and aerospace fields.

These unique and world-class capabilities are highly valued by Bombardier, and have helped position CFAR as the premier research centre in Canada for end-to-end develop-

ment of a range of innovative and experimental aviation technologies.

UVic President Kevin Hall says, “We are thrilled to contribute our university’s expertise to Bombardier’s groundbreaking EcoJet Research Project, a tangible example of UVic’s dedication to a brighter future for all through innovation. This collaboration marks a significant step forward in our commitment to sustainability, a greener future for the aviation industry, and the development of cutting-edge technologies that advance the frontiers of science and engineering right here in British Columbia and throughout Canada.”

Further understanding this process, and how it might be changing, can help us understand whether even more drastic measures to mitigate climate change are needed.

## Ocean research and student engagement

If you see someone with a GoPro and an aquarium at the front of the classroom, there’s a good chance it’s UVic Earth and Ocean Sciences professor Roberta Hamme. Using the aquarium and coloured dye, she teaches her students about the movements of ocean currents.

The GoPro helps to ensure all students can see her demonstration up close, even from the back of the 300-person lecture hall. These and other engaging teaching techniques Hamme has used in her classes have led to her being one of two recipients of the 2022-23 Faculty of Science Award for Teaching Excellence.

“Roberta is an exceptionally gifted and effective teacher who is dedicated to providing students with high-quality experiential learning opportunities,” says Dean of Science Peter Look. “The Faculty of Science Award for Teaching Excellence recognizes and rewards excellence in teaching in our Faculty, and Roberta’s commitment to experiential learning, innovative course design and student success make her an extremely deserving recipient.”

In 17 years at UVic, Hamme has built an impressive record of new and redesigned courses and programs. Her 2019 redesign of a foundational course in oceans and atmosphere restructured the course to better integrate lecture and lab material—allowing students to more directly apply the concepts covered in lectures.

Hamme often combines lecturing with real-time calculations on the overhead or whiteboard, walking students through thought experiments or asking students to discuss questions with their neighbours. Collectively, Hamme’s changes have resulted in a doubling of lecture attendance.

Hamme’s impact extends far beyond the courses she teaches, as she’s also a leading ocean science researcher. She recently received an NSERC Discovery grant related to studying the natural mechanisms that sequester carbon in the deep ocean.

Further understanding this process, and how it might be changing, can help us understand whether even more drastic measures to mitigate climate change are needed.



Albert Ruskey, ONC project engineer, pictured with a NKE Deep ARVORS profiling float

Alejandra Mora-Soto

Xuebin Zhang

Curran Crawford

Roberta Hamme

# Studying Ukraine's national literature in wartime

BY KATY DECOSTE

When Russia launched a full-scale invasion of her home country of Ukraine in 2022, after annexing the Ukrainian peninsula of Crimea in 2014, Olha Chaplia was nearing completion of her doctoral dissertation—an in-depth study of the first work of Ukrainian literature, commonly translated as *The Sermon on Law and Grace*.

Two years later, after travelling to UVic as a recipient of the Ukraine Emergency Doctoral Student Fellowship in the Humanities, Chaplia reflects, “my research is primarily a study of myself. It’s an attempt to understand myself through my roots, my identity as a Ukrainian and a Christian, as well as the richness of my cultural tradition.”

Born in Ukraine and raised by a church cantor, Chaplia grew up surrounded by music, nurturing a love of singing with her choir. When she considers her interest in early Ukrainian literature, she credits the professors who introduced her to Ukrainian music and poetry. After completing doctoral studies in Ukraine, Chaplia was selected to receive the Ukraine Emergency Doctoral Student Fellowship in the Humanities, which is funded by humanities faculty and staff, as well as the Wishevan family and Booster Juice—providing students with financial support, peer and faculty members and office space to safely work and study in Canada.

“What motivates me in my research? Probably my love of all things old,” Chaplia says, laughing. “But seriously, what motivates me the most are people—my friends, and teachers who have become my friends.” These include her supervisor, poet and professor Nazar Fedorak, and literature professor Bodhana Krysa, who both teach at the Ivan Franko National University of Lviv, where Chaplia completed a master’s degree in philology and her doctoral studies.

At UVic, supervisor Serhy Yekelchych, along with Oliver Schmidtko and Jodie Walsh, his colleagues at the Centre for Global Studies, have been invaluable supports. Yekelchych, a professor with the Department of Germanic and Slavic Studies

and historian of modern Ukraine, helped launch the Emergency Fellowship that brought Chaplia to UVic.

For the past several years, Chaplia has studied the Sermon, which she argues is an important historical record, as well as a literary work of cultural and religious significance. Written in Kyiv in the 11th century, it’s emblematic of Ukraine’s national literature and distinctive cultural history.

Like many Ukrainian artists and scholars, Chaplia sees her work as part of the defense of her home and its right to self-determination. “I am convinced that this war was also about the *Sermon on Law and Grace*, which the Russians had been taking away from us for a long time. I have to work for our victory in my small field.” It was difficult to leave home during the war.

“It’s impossible to disconnect from the news of the destruction of my country and the countless deaths of my people at the hands of Russia,” Chaplia says.

In Victoria, she spends her days working at her office in the Centre for Global Studies, volunteering and connecting with the Ukrainian community, biking through the city and finding places to hike. “It’s been a time of challenges, but also a time of gratitude. Sitting at my desk in my office, looking out the panoramic window at the squirrels, birds, and even deer, I’ve been able to find moments of comfort. These are invaluable gifts—the opportunity to be safe, and to work in this environment.”

As she looks to the future, Chaplia plans to return home and hopes to someday teach at a Ukrainian university. At the same time, she wants to share her knowledge and her culture with the world, whether by studying and teaching in Europe or North America, or by publishing her research as a book. Chaplia knows that the war has led to an interest in Ukraine’s history and culture at Western universities, and it’s an opportunity that she doesn’t want to let pass.

“I am open to new and sometimes unexpected things. I try to recognize the work of grace in my life so I can serve where I am called. Perhaps this is our chance to speak up for ourselves, because we have a lot to tell the world. The study of Ukrainian history and the promotion of Ukrainian culture can help sepa-



Chaplia.

rate the truth from Russian propaganda. Knowledge saves lives,” Chaplia says of the importance of her research. “And this is a case where that’s not a metaphor, but a cruel reality of the war. We are now seeing the consequences of a long-lasting cultural genocide. Because it was only partially successful, they began to kill us physically.”



Stevenson. SUBMITTED



Beatty. PHOTO: TAYLOR ROADES



Housty. PHOTO: FOGLINE

## CELEBRATING ALUMNI ACHIEVEMENTS

# 2024 Distinguished Alumni Awards

An environmental problem-solver committed to healing our dirt, an ocean engineer who is unlocking powerful climate data and a grassroots activist, writer and land-based educator are among 18 recipients of this year’s Distinguished Alumni Awards. The annual awards celebrate the remarkable achievements of University of Victoria graduates in three categories: the Presidents’ Alumni Awards, Indigenous Community Alumni Awards and Emerging Alumni Awards.

### Danielle Stevenson

Presidents’ Alumni Award recipient Danielle Stevenson is an applied scientist and mycologist who works with soils, fungi, plants and people to address waste and pollution in creative and circular ways. She founded D.I.Y. Fungi to help people growing mushrooms from home and Healing City Soils to provide soil testing and community bioremediation for people growing their own food.

“I’ve experienced a lot of pushback in my work because [it] involves facing big problems that are painful and uncomfortable to face,” says Stevenson, “and the solutions that I’m proposing and working on are different than the status quo. One thing people have told me that was helpful is that all of that pushback is a good sign because it means that you’re having an impact. When you’re innovating or challenging the status quo, there’s going to be pushback.”

### Jonny Morris

Presidents’ Alumni Award recipient Jonny Morris is the CEO at the Canadian Mental Health Association BC Division and has more than 20 years of experience in community-based mental-health services, policy and advocacy.

“The ring, the circle, at UVic, is symbolic for me, around a sense of a community that cares,” Morris says. “I had a pretty rough go in my first years of undergrad, and what really stood out was the role in which a supportive and caring faculty formed a circle of care and trust around me... And so much of how I’ve arrived as a provincial leader in mental health really gets traced back to the culture of support and mentorship and growth that I was so lucky to experience.”

### Scott Beatty

As founder and CEO of MarineLabs, Scott Beatty gets to combine his love of the ocean with cutting-edge technology and coastal weather expertise. The recipient of an Emerging Alumni Award, Beatty has spent more than 18 years as an engineering

researcher and consultant in maritime technology. Through his work, he aims to transform marine safety and help build climate resilient coastal infrastructure through MarineLabs’ fleet of ocean sensors and data sources.

“In grad school, it was about ‘let’s see if we can get this renewable energy source online. Let’s see if we can reduce carbon and build a new renewable energy source for society,’” Beatty recalls. “That was extremely motivating. I’ve moved on a little bit in terms of the problem itself... To me it’s about leaving the world in a better place than when I arrived. That’s fundamental to me.”

### Karen Saini

Emerging Alumni Award recipient Karen Saini is the executive director of the Oasis Society for Spiritual Health, an urban Indigenous organization. She is also a sessional instructor at UVic and Camosun College and is pursuing a PhD in Public Administration while doing a two-year certificate program at UVic. Previously executive director of the Victoria Immigrant and Refugee Centre Society (VIRCS) and an analyst with the Victoria Police Department, Saini received BC’s Medal of Good Citizenship in 2022.

“I want to be somebody that contributes to my community,” Saini says. “I want to put what I learned into practice. I am somebody who was impacted by mentors, who is impacted by people around me. And I want to give that same kind of gift to the people around me.”

### Jess Housty

Recipient of the Indigenous Community Alumni Award, Jess Housty (Cúagilákv) is a parent and writer of Heiltsuk and mixed-settler ancestry who serves their community in Bella Bella as a herbalist and land-based educator, alongside broader work in the non-profit and philanthropic sectors. Last year, they published their debut poetry collection, *Crushed Wild Mint*.

Housty says, “One of the things that I heard often throughout my childhood and into my adolescence was that it doesn’t matter what we do and what we accomplish if there isn’t a generation coming up under us that is poised to do what we do and do more. That’s been a key learning for me, and a guiding force in my work.”

### Jon Carr

A visitor on the Coast Salish lands, Jon Carr has served many roles in education and is now district principal, NA’TSA’MAHT,

in Sooke. This Indigenous Community Alumni Award recognizes his extensive work in Indigenous Education. He’s presented workshops on co-creating curriculum with local First Nations and helps organize cultural learning events that bring community and students together. He also volunteers with the Métis Nation of Greater Victoria.

“People get accolades for being outgoing or having a strong personality,” Carr says, “but often it’s that quiet leader in the room... who can have such a tremendous impact or influence on a young person, and being able to listen to what traditionally quiet people have to say can teach us the most. Students are often looking for that safe person to connect to.”

## This year’s Distinguished Alumni Award recipients are:

### Presidents’ Alumni Awards

Rob Bennett, BSc ’83  
Susan Blanchet, BA ’97, JD ’02  
Jonny Morris, BA ’07, MA ’11  
Bren Simmers, BA ’00  
Danielle Stevenson, BA ’10  
Carrie Tennant, BMus ’99, PDT ’00

### Emerging Alumni Awards

Scott Beatty, MASC ’09, PhD ’15  
Dennis Gupa, PhD ’21  
Katlià (Catherine) Lafferty, JID ’23  
Trevor MacKenzie, BA ’03, PDT ’04, MEd ’20  
Karen Saini, BSW ’15, MPA ’18  
Jayesh Vekariya, MBA ’19  
Fiona Wong, JD ’20

### Indigenous Alumni Awards

Melinda Kachina Bige, MA ’16  
Jon Carr, BSc ’10, BEd ’12  
Jess Housty (Cúagilákv), BA ’09  
Ivy Martin, Dipl ’23  
Lydia Toorenburgh, BA ’18, MA ’23

Read bios and Q&As with each of this year’s recipients at [tiny.cc/DAA-24](https://tiny.cc/DAA-24)



## Co-op program advances UN SDGs while building careers

### UVic’s co-op program launched a new initiative that helps students directly link their work to the United Nations Sustainable Development Goals.

UVic co-operative education (co-op) students have always been changemakers—the work they tackle in their work terms are often focused on making positive change to the world around them.

A new program, developed in partnership with CIFAL Victoria—a training centre connected to the United Nations Institute for Training and Research (UNITAR)—provides students who do co-op terms outside Canada with the opportunity to receive UN accreditation for engaging in co-op work terms that advance the UN SDGs as part of their experiences. They must also lead a community-based activity that supports the SDGs in their host country.

Before their work term, students receive training about the UN SDGs as well as how to develop their cultural intelligence, then complete reports following their time abroad. Since the launch of the program, seven students have received certificates from CIFAL Victoria through this initiative.

### Tokyo: food security

During her work term at APEX K.K. in Japan, Lauren McDiarmid (commerce) focused her community engagement activity on UN SDG 2, which aims to achieve zero hunger worldwide. She organized a food drive at her workplace to support a food bank in Tokyo. “This initiative not only provided tangible support but also

ignited conversations around food insecurity,” McDiarmid says.

### Brussels: decent work and economic growth

Jenna Inch (political science) used what she learned during her co-op term as a junior Canada-EU policy analyst at the Canada-EU Trade and Investment Association in Brussels to engage young professionals in a trivia mixer. Her “So... How Much Do You Really Know About the Canada-EU Relationship?” event opened discussions that highlighted several UN goals, including decent work and economic growth (SDG 8) and partnership for the goals (SDG 17).

### Belgium: industry and gender equality

During her work term at the European Commission’s Sustainable Development Policy and Global Partnerships unit in Belgium, Angelina Schwarz (humanities) set up meetings and roundtable discussions with representatives from the European External Action Service and the Mission of Canada to the European Union. The goal was to facilitate EU-Canada discussions on the topics of gender equality (SDG 5), industry, innovation and infrastructure (SDG 16) and more. “I was able to learn a great deal about Canada-EU relations on a variety of topics,” Schwarz notes, “notably SDG engagement, joint collaboration on the war in Ukraine, and upholding democracy and human rights.”

Students who took part in this new UVic program received funding to support their international co-op experiences. Several students received funding through the Government of Canada’s new “Global Skills Opportunity” (GSO) student mobility program. Funded through Employment and Social Development Canada, GSO is a component of the federal government’s five-year International Education Strategy. Some participants received



(L-R) Crystal Tremblay, Director of CIFAL Victoria, and Stephen Joyce, who received the CIFAL certificate for co-op work term on SDGs at UNITAR in Geneva.

funding through UVic’s Strategic Framework Experiential Learning Funds, Asia Partners Fund and the Graham Branton Endowment Award.

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Morris. PHOTO: MICHAEL KISSINGER



Saini. SUBMITTED



Carr. PHOTO: MICHAEL KISSINGER



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