



University  
of Victoria

## SPEED READ

MARCH 10-12

### Gender, labour, fashion and globalization

Who makes our clothing and under what conditions? Over the past 150 years, how has the shift from artisanal production to "fast fashion" devalued women's textile labor? Gendered Threads of Globalization is a free, three-day public symposium at UVic (and online) examining women's roles in textile/garment production in Asia from the late 19th century to the present. Events include panels, a film screening and a textile-based performance.

[tiny.cc/23-threads](http://tiny.cc/23-threads)

MARCH 30-APRIL 2

### Conference celebrates Trans visibility

Community activists, academics and allies from around the world will come together for the fifth Moving Trans History Forward conference March 30-April 2. This international conference considers the past, present and future of Trans+ people—locally and globally. Presented by UVic's Chair in Transgender Studies, this conference is not just for scholars. Many events are also open to the public by donation. Info: [uvic.ca/mthf](http://uvic.ca/mthf)



NASA CAPSTONE spacecraft integration. PHOTO: ROCKET LAB

## Co-op partnerships build careers and drive successful business

### Recognizing this year's top co-op employers

BY EMMA ULVELAND

**52%**

**OF UVIC CO-OP  
STUDENTS  
ARE OFFERED  
A JOB BEFORE  
GRADUATION**

Each year, UVic recognizes employers who have gone above and beyond to provide co-operative education learning experiences for UVic students. UVic co-op employers have supported more than 100,000 co-op placements since the co-op program launched in 1976.

We want to acknowledge all co-op employers for their extraordinary contributions to the UVic experience. Here are this year's award winners.

#### Rocket Lab

##### International employer

The sky's the limit with Rocket Lab, this year's winner of the International Co-op Employer of the Year. As a global leader in rocket and satellite design and manufacturing, spacecraft components, software and launch services, it's no surprise that the multinational company is invested in the next generation. They're an employer of choice for UVic co-op students looking to contribute to a world-changing industry.

UVic's relationship with Rocket Lab

began in 2013 when three mechanical engineering students won first place in an international rocket building competition. Spurred by this experience, one of these students reached out to Rocket Lab to set up a co-op work term in the world of rocket science, and a partnership was born.

Since 2014, 13 software and mechanical engineering co-op students have completed a total of 23 work terms with Rocket Lab; this trend of staying with the company for a second work

**SEE CO-OP EMPLOYERS, P. 2**

## CLEAN ENERGY

# Wave energy project on Nootka Island receives \$1-million grant



Buckham. UVIC PHOTO SERVICES

BY IVAN WATSON

UVic's Pacific Regional Institute for Marine Energy Discovery (PRIMED) has received one of 10 million-dollar grants under the 2022 TD Ready Challenge.

PRIMED is working towards the development of a first of its kind renewable energy microgrid, incorporating a wave energy device at Yuquot on Nootka Island, a National Historic site and traditional home of the Mowachaht/Muchalaht First Nation (MMFN), located off the west coast of Vancouver Island.

The funding will assist communities disproportionately affected by climate change in the transition to a low-carbon economy, TD Bank

Group announced this week. PRIMED is the only recipient from British Columbia.

The project will be at the cutting edge of renewable energy system development, support the Nation to achieve its long-held dream of re-occupying Yuquot after being forcibly relocated decades ago, and contribute to reconciliation.

"This is such an exciting, pure and wonderful example of an Indigenous-led, community-based resurgence through clean energy," says PRIMED Director Brad Buckingham, who is also the chair of UVic's mechanical engineering department. "The idea of reinvigorating a community and helping them return to their traditional lands

is powerful. You can't undo history, but you can change the future. This project represents a symbolic changing of course where all of us are working together to support the Nation to go back to their rightful home in Yuquot."

### Technological solutions to support self-determination

Yuquot is located on a world-class wave energy supply and the Nation is highly motivated to pursue clean energy solutions that improve quality of life, facilitate economic development and support self-determination. As keepers of the land, they want to demonstrate technological solu-

**SEE WAVE ENERGY, P. 3**



## CO-OP EMPLOYERS

CONTINUED FROM P. 1

term is a testament to the strength of the learning opportunities. The company is a major proponent of hands-on learning—more than 80 per cent of students who complete co-ops and other forms of internships join the team after graduation, including eight UVic alumni.

Rocket Lab also puts a focus on supporting women in science, with more than 25 per cent of placements being made by female-identifying co-op students. Students are hired in positions ranging from

junior manufacturing engineers to production design interns. They're tasked with solving real problems that impact the success of rocket launches and work alongside senior engineers at every stage.

"There's no cap on the type of work that students are given—we're respected, appreciated and supported in our learning," says a former co-op student. "I was tasked with testing hardware for a big upcoming mission and was responsible for connecting with other design and test engineers to meet that goal. The rocket launched a few months after I returned to Canada."

Rocket Lab is also a community change maker, providing more than \$100,000 in annual community grants and scholarship and injecting more than \$20 million into local economies through direct and indirect employment.

The company has locations in the US, Canada and New Zealand, with the majority of placements taking place in Auckland.

"Rocket Lab's commitment to providing quality work-integrated learning and mentorship is outstanding," says Karima Ramji, associate director of UVic's Indigenous and International Strategic Initiatives with the co-op team. "Students are encouraged to innovate, and their experiences are incredibly impactful as they develop their careers."

### Aecon Group

**Employer with more than 50 employees (tie)** With more than a decade since hiring its first UVic co-op student, Aecon Group Inc. is on a roll. The Canadian leader in construction and infrastructure development has provided 80 work terms to UVic students since 2010, with 72 work terms in the last year alone. The opportunity to gain exposure and experience in construction management, and to be immersed in the day-to-day operations of large-scale, complex projects has made Aecon an employer of choice for co-op students and graduates alike, so it's no surprise that it's been named one of the 2022 UVic Co-op Employers of the year.

"Aecon is a tremendous learning partner," says Wendy Bearsto, co-op coordinator with UVic's engineering and computer science co-op programs. "Staff treat students as professionals from day one and make them feel like a valued member of the team. They also encourage students to pursue projects that line up with their areas of interest and future career goals."

Students have contributed to some of Western Canada's foremost, landmark civil projects including the Site C Generating Station and Spillway, Kicking Horse Canyon Phase 4, Pattullo Bridge Replacement Project and the Second Narrows Water Supply Tunnel.

Students often return to Aecon for a second co-op and the company has a history of recruiting past co-op students into full-time positions up to a year before students graduate. "This makes such a difference in student learning, as it lets them focus on their last year of students and takes away the uncertainty of finding work," says Bearsto.

### BC Transit

**Employer with more than 50 employees (tie)** What do UVic co-op students find so rewarding about their co-op work experiences with BC Transit? Students thrive in the inclusive and learning-focused environment and are immediately welcomed as true members of the team. It's a dynamic that has made this province-wide employer one of students' favourite places to work and one of the 2022 UVic Co-op Employers of the Year.

Operating in both small towns and large urban centres alike, BC Transit transports over 57 million customers in communities across the province each year. For the past 12 years, more than 115 UVic co-op students from programs as diverse as civil engineering to commerce to health information science have joined the team as fleet engineering assistants, business analysts and more.

"Our students rave about their co-op experiences at BC Transit," says Calvin Tripp, a co-op coordina-

tor with UVic's engineering and computer science co-op program. "From working with our team to develop inclusive job postings to fostering an inclusive environment where all perspectives are welcomed, there's a lot to like."

BC Transit provides co-op students with independence, flexibility and autonomy in their projects, while still maintaining quality training and resources. This includes the co-op student 'buddy system' where students are paired with a staff member who ensures students have what they need to succeed, as well as established opportunities to connect with leadership.

Students who work for BC Transit also have access to courses that aligned with their interests, as well as encouragement from staff to incorporate those interests into their work. Learning about other departments and making connections with staff in other areas pave the way for professional growth.

"My boss took the time to meet with me regularly to ensure that I was being challenged and learning things that were relevant to my career development," says a former co-op student. "I felt like I produced work I was proud of and was able to make a meaningful contribution to the communities we were serving."

### Trev and Joyce Deeley Research Centre (BC Cancer Research)

**Employer with under 50 employees** When UVic co-op students join the team at the Trev and Joyce Deeley Research Centre's Molecular and Cellular Immunology Core (MCCIC) here in Victoria, they contribute to life-changing cancer research. As a world leader in advancing what we know about how the immune system and cancer interact, the MCCIC encourages students to bring their critical thinking skills to work each day. This collaborative approach has made the research centre stand out as the 2022 Co-op Employer of the Year (under 50 employees).

"At the end of every eight-month co-op term, students have been exposed to a broad scope of tech-

niques and have completed an immunological technique research project," says UVic science co-op coordinator Heather Croft. "These experiences help students develop their analytical and critical thinking skills as well as their ability to discuss big ideas."

Deeley Research Centre has welcomed UVic co-op students into 96 co-op work terms since it first started hiring in 2011. Fifty-seven of these biochemistry, microbiology, biomedical engineering, and mathematics and statistics students have worked with Katy Milne, a UVic alum who was one of the first scientists to join the team in 2003 and whose leadership has helped the team advance what we know about how cancer hides from the immune system.

"Katy consistently provides co-op students with an exceptional depth and quality of experience," says Croft. "Thanks to her mentorship, students have contributed to more than 30 peer-reviewed publications. They regularly share how Katy's kind, courteous and encouraging approach has shaped their interest in careers as researchers or health care practitioners."

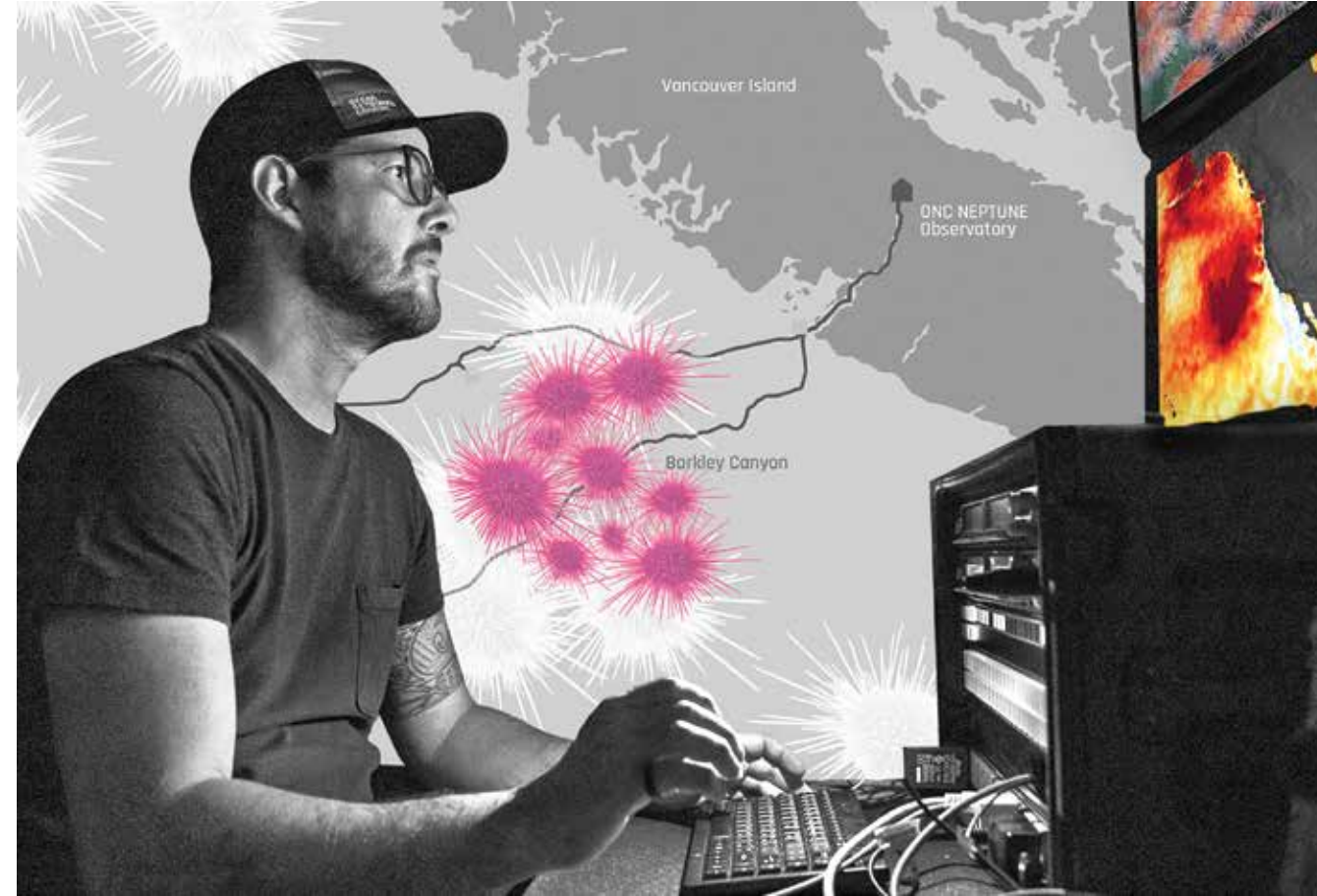
In fact, co-op students who complete a work term with MCCIC have returned to work as research interns and research assistants after completing their degrees, a testament to the powerful impact of this world-class learning environment.

### Benefits for employers

Employer partnerships are at the heart of the co-op program's ongoing success, and many employers go above and beyond to support students' professional development. Work term placements give students the opportunity to apply their academic studies and bring emerging knowledge into the workplace—a virtuous circle where building career skills benefits both student and employer.

For more information about participating in co-op as a student or employer, visit [uvic.ca/coop](http://uvic.ca/coop).

[tiny.cc/23-coop](http://tiny.cc/23-coop)



De Leo with a map of urchin locations and a heat map of the "blob." PHOTO: OCEAN EXPLORATION TRUST; ILLUSTRATION: JULENA LOVEGROVE

# Sea urchins are on the move, and the 'Blob' is partly to blame

**New research has uncovered a change in behaviour of deep-sea fragile pink sea urchins off the south coast of Vancouver Island that is linked to climate change impacts including "the Blob," a marine heatwave that persisted in the Pacific Ocean off North America between 2013 to 2016.**

Researchers from Memorial University, Ocean Networks Canada (ONC) and UVic found that pink sea urchins (*Strongylocentrotus fragilis*) have been moving up into shallower waters as food sources and oxygen levels at lower depths decline due to a warming ocean.

The research team analyzed seven years of physicochemical and video imagery data collected at Barkley Canyon Upper Slope within ONC's NEPTUNE observatory, along with 14 years of Fisheries and Oceans Canada trawl surveys, covering a 760-square kilometre area in the northeast Pacific Ocean.

The data from NEPTUNE's Barkley Canyon Upper Slope platform, 396m below the surface, included video cameras, oxygen sensors and tools that monitor water currents and water physical properties.

By analyzing data before, during and after the Blob marine heat wave, they found that, on average, the pink urchins moved up to 49 vertical metres into shallower water at a rate of 3.5-metres per year.

Ryan Command, lead author from Memorial University and UVic Faculty of Science alumni, says kelps have been slow to recover from recent heat waves along the BC coast, posing challenges for many species, including bottom-dwelling sea urchins, which rely on decaying kelp for food.

and climate change increases the frequency of marine heat waves.

The researchers say this adaptation by sea urchins may have a long-lasting effect on the wider coastal ecosystem, as well as economic impacts.

Command says it could affect the abundance and distribution of shallow water red sea urchins (*Mesocentrotus franciscanus*) and green sea urchins (*Strongylocentrotus droebachiensis*), both of which are fisheries species.

Pink sea urchins also play a key role in cycling nutrients in the water column by stirring up ocean floors, known as bioturbation, as well as feeding on decayed organic material. Changes in the density and distribution of this species may directly affect sediment turnover rates and nutrient cycling on the continental margin, with consequences for surface and coastal productivity.

Co-author and ONC senior scientist Fabio De Leo says this work highlights the value of combining multiple data sources to tell a holistic story of how underwater species respond to ocean change over time.

"This study shows the importance of long oceanographic data time-series not only in coastal areas but also in the deep-sea. ONC has now accumulated nearly 14 years of observations at the sea floor in Barkley Canyon, which is helping us better understand how individual species and entire ecosystems are responding to the effects of climate change."

ONC's infrastructure collects continuous data on our shifting ocean conditions on the Pacific, Atlantic and Arctic coasts of Canada, and provides an open-source data portal for researchers to understand ocean-and-planet sustainability and to support evidence-based decision-making.

## Advancing science and innovation for ocean protection

Canada's advancement of ocean science and innovation continues to accelerate with the expansion of Ocean Networks Canada's world-leading deep sea and coastal ocean observatories.

In early February, Minister of Fisheries, Oceans and the Canadian Coast Guard Joyce Murray announced \$46.5 million in funding over five years to UVic's Ocean Networks Canada (ONC) through Canada's Oceans Protection Plan.

This investment supports ONC's network of cable, mobile and community-led observatories that collect data to monitor changes, including climate impacts and underwater noise on all three coasts. It also supports oceanographic radar and ocean buoy monitoring efforts that provide real-time information on wave and surface currents that help monitor ocean conditions and prepare for extreme events.

ONC operates observatories in the deep ocean, coastal waters, and land of the Pacific, Atlantic and Arctic coasts of Canada, delivering continuous, real-time and archived open-access ocean data.

ONC President and Chief Executive Officer Kate Moran says ONC is committed to supporting Canada's Oceans Protection Plan.

"Our culture of innovation and partnership brings together scientific research and Indigenous knowledge to advance the goals of the plan and deliver the tools needed to tackle the biggest challenge today in the ocean and on the planet—climate change."

### Stories of impact

Moran says ONC's commitment to a sustainable ocean future also rests at the community level through its support of a growing network of Indigenous and coastal community-led observatories on the three coastlines of Canada, plus an ocean science outreach program co-developed with Indigenous partners.

The new funding will also support the extension of ONC's coastal data for maritime and incident response into the Arctic and into coastal Indigenous emergency response management.

Separate from the Ocean Protections Plan, ONC's NEPTUNE observatory offshore Vancouver Island also supports coastal resilience and community safety by powering the deep-sea section of ONC's earthquake early warning seismic network. A recent earthquake off Tofino showed the value of the system, providing 43 seconds of notification to infrastructure operators in Victoria and Vancouver before ground-shaking arrived.

Canadians can be proud of their national ocean observatory, which provides an open-source data portal for researchers to understand ocean-and-planet sustainability and to support evidence-based decision-making, says Moran.

### Life, the oceans and planet

Federal investments in research infrastructure are critical to keeping Canada at the forefront of innovation, says Lisa Kalyanchuk, UVic's vice-president, research and innovation.

"DFO's ongoing support has helped Ocean Networks Canada enhance its position as a global leader in ocean observation. This new funding will further enable the integration of real-time ocean observing into Indigenous communities for monitoring and emergency response management. ONC is also working with industry partners to develop high-quality sensors and data products that will deliver information directly into the hands of communities and decision-makers to better protect our oceans."

[oceannetworks.ca](http://oceannetworks.ca)

# UVic named 2023 top employer

For the second year in a row, the University of Victoria has been named one of BC's top employers, recognizing its role as an industry leader in offering an exceptional place to work.

The competition recognizes the top 100+ employers in each province or region. UVic was among seven universities in BC to be honoured.

"We are proud to be recognized as a top employer again this year, and of UVic's commitment to people, places and the planet," says Associate Vice President Human Resources Kane Kilbey. "Thank you to our talented and dedicated employees who work tirelessly to support our students, faculty, staff and community. Their energy and efforts help make UVic a great place to work."

The university was selected for a range of staff supports, including:

- Cultivating an inclusive, family-friendly culture with maternity and parental leave top-ups for new parents and the option for

employees to extend their leave. UVic also supports working parents with onsite child care and flexible work arrangements.

- Managing a comprehensive health and wellness strategy along with discounted memberships to the CARSA onsite fitness facility that features tennis, squash and badminton courts, a climbing centre, multi-purpose field house and sports therapy clinic—plus a range of specialized inclusive programs, including wheelchair sports, blind soccer, inclusive spin class, adapted climbing, inclusive dance, and adapted strength and conditioning classes.
- Helping all employees confidently plan for the future with generous



contributions to a defined benefit pension plan and access to free financial and retirement planning workshops.

BC's Top Employers are chosen by Mediacoop Canada Inc., which also coordinates the annual competitions for Canada's Top 100 Employers, Top Diversity Employers and Canada's Greenest Employers. UVic has been recognized as a Best Diversity Employer for 11 years in a row and seven times as a Greenest Employer.

UVic also placed 25th on Forbes' 2023 Canada's Best Employers list. [uvic.ca/careers](http://uvic.ca/careers)

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## JCURA Research Fair

**Wednesday March 22, 2023**  
11:30am - 3:00pm

The Jamie Cassels Undergraduate Research Awards (JCURA) encourages undergraduate students to pursue innovative and original research to enhance their learning at UVic. Visit the fair to see the 2022 JCURA students' hard work on display!

**Learn more:**

[uvic.ca/jcura](http://uvic.ca/jcura)

Learning and Teaching Support and Innovation





SINGH, UVIC PHOTO SERVICES

## No one left behind: equity in sustainable planning

With 40 per cent of the globe's population living within 100 kilometres of the coast, people are a vital part of our oceans' future. When we plan for sustainable coastal development, what are the tradeoffs?

BY ANNE MacLAURIN

"Social equity is at the heart of sustainable development; all development options require a consideration of tradeoffs as they affect equity," says Gerald Singh, of UVic's School of Environmental Studies. "If we limit fishing to protect fisheries for future generations, what does that mean for the people who rely on coastal food systems now?"

Singh, who examines intersections between environmental management, development and social

equity, also holds an Ocean Nexus Chair of Global Change and Sustainable Development—a role supported by the Nippon Foundation Ocean Nexus Center with UVic as a partner institution.

The Nippon Foundation Ocean Nexus Center is one of the largest research networks in the world focused on issues of ocean sustainability and governance. The centre works on international ocean sustainability issues, often with major partners such as UN agencies.

Singh's mission is to think about

ocean conditions and development and the complexities involved in a populated space. Beyond this, Singh examines the interconnections between the United Nations Sustainable Development Goals (SDGs) to see how advancing one goal impacts another goal.

"People are the priority," says Singh, "so my key focus is on decision-making with an eye on equity and social justice."

Decision-making about climate mitigation and adaptation often favours those with wealth and power, explains Singh. For instance, when flooding and sea level rise impact wealthy properties, the solution to build a sea wall to offset the risk can increase the flood threat to the poorer communi-

ties next door—a process sometimes described as "threat displacement."

He explains part of the issue with inequities is they are difficult to measure.

In some cases, such as when projects are intended to address public concerns (e.g., climate adaptation planning), the general good intention may be enough for people to ignore differential consequences to different groups and may deepen inequities.

In response, Singh is developing a planning and accountability tool that promotes equity. "I see science as a tool for better decision-making," he says.

Singh explains that his hope is that by using this tool, marine development and conservation pro-

jects proactively work and plan with local communities who often face unintended effects of development and conservation.

"We want to measure equity consequences of a project," says Singh. "Right from planning to implementation to the outcomes, equity is part of the goal."

Singh's accountability tool is a framework that will help with planning and monitoring equity.

"Equity is the core value of the UN's Sustainable Development Goals," Singh continues, "but there is a disconnect—equity is often overlooked when it comes to climate action and sustainable development proposals—perhaps because the benefits are assumed to be universal."

## The building blocks of sustainable concrete

Eight per cent of the world's carbon dioxide (CO<sub>2</sub>) emissions come from cement, a key ingredient in concrete, the most commonly used construction material globally. But what if construction materials like concrete didn't contain any cement, resulting in a low carbon footprint?

BY SHARI STEWART

Rishi Gupta, engineer and professor in UVic's civil engineering department, thinks this may be one way to combat carbon emissions. Gupta and his team in UVic's Facility for Innovative Materials and Infrastructure Monitoring (FIMIM) are pushing the boundaries of what can be done with concrete by replacing cement with other sustainable binding materials, providing an alternative to carbon dioxide sequestration.

One approach is to use precast products like alkali-activated concrete paver blocks for pavements and parking lots, including those for remote and rural communities. This is done through Gupta's work with India-Canada Impacts Centres of Excellence (IC-IMPACTS), of which UVic is an affiliate partner. IC-IMPACTS develops, tests and scales up local solutions for India and Canada.

The infrastructure theme of IC-IMPACTS led to Gupta's first project on geopolymers. Instead of ending up in a landfill, fly ash gets collected from coal-powered plants and then alkali activators are added to make it harden like concrete, producing geopolymer concrete that can be used for applications such as paver blocks. "Geopolymer concrete is technically cementless, as it doesn't contain Portland cement, which is

attributed to global greenhouse gas emissions," he adds.

Although geopolymer concrete was already in use when Gupta and his team started their research nearly 10 years ago, they took things further by also incorporating the ash that sits at the bottom of coal-burning thermal power plants—a byproduct that would also sit in a landfill. "We wanted to take the difficult and less-travelled route of dealing with the bottom ash—in addition to fly ash—as another sustainable option," says Gupta.

Then there's the issue of heat. "Geopolymer concrete needs heat during the initial curing period to make it stronger. But heat means energy and producing energy can be a sustainability issue due to associated greenhouse gas emissions," he explains. Using local bottom and fly ash from both countries, the international research team demonstrated a sustainable technology using 50 per cent fly ash and 50 per cent bottom ash and cured the concrete at ambient temperature conditions. From there they produced paver blocks.

"What we are doing is using sustainable technology and demonstrating its application in the real world," says Gupta.

"The fact that our geopolymer mixes require little-to-no heating of concrete during production is the greenest part of our research," says Gupta.

Not only is Gupta's cementless concrete better for the environment, it's also helped to strengthen UVic's global connections, leading to a stream of UVic-bound international students excited to be making a difference with climate action research. "It started with a student coming here for an internship, then moving on to complete graduate studies," adds Gupta.

"We've had at least six to eight grad students coming to UVic solely from one university in India. Some students were still studying at Nirma University and came here to do the research, and some eventually came back here to do their PhD." Gupta's research group also sees students from various parts of the world, including Iran and China.

Gupta and his team are also examining the long-term effects of CO<sub>2</sub> sequestering, looking closely at durability—including corrosion resistance—as well as integrating special types of green fibers in CO<sub>2</sub> sequestered concrete to make it crack-free and self-healing. This will ultimately result in full service life of structures, reducing the overall lifetime carbon footprint.

Through thoughtful research and innovative techniques, Gupta and his students are paving the way to reducing nearly four billion tonnes of CO<sub>2</sub> every year from cement—a huge step to combating carbon emissions.



GUPTA, PHOTO:ARMANDO TURIA

# CLIMATE GAME CHANGERS

UVic has been dedicated to climate action for more than three decades to bring vital impact to people, places and the planet. From preserving local ecosystems to hosting the biggest ocean observation network in the world, leading positive change is the common thread in our research and culture. UVic also hosts 12 institutes and research centres focused on climate change. Learn more about how UVic is making an impact at [tiny.cc/23-climate](https://tiny.cc/23-climate).

## Supporting Indigenous-led biodiversity monitoring

BY ALF WILSON

Oil sands industrial activity, like any large-scale industrial development, modifies the ecology of the surrounding region. The people who live in those regions, and scientists around the world, want to know exactly what those changes are, in order to help support mitigation and minimization policies and responses.

UVic researcher Louie Lopez has been awarded a prestigious Liber Ero Post-Doctoral Fellowship to conduct Indigenous-led environmental DNA (eDNA) ecosystem monitoring with the Chipewyan Prairie Dene and Cold Lake First Nations. Their goal is to document long-term human-mediated ecosystem changes in lakes affected by oil sands industrial activity in northern Alberta.

"I'm excited by the potential of combining Indigenous knowledge and ways of knowing with western science, like sedimentary eDNA, to provide a more comprehensive understanding of ecosystem changes," says Lopez. "This project will provide eDNA-based monitoring tools and training, empowering the Indigenous partners to have timely and pertinent information on the impacts of oil sands activities within their territories."

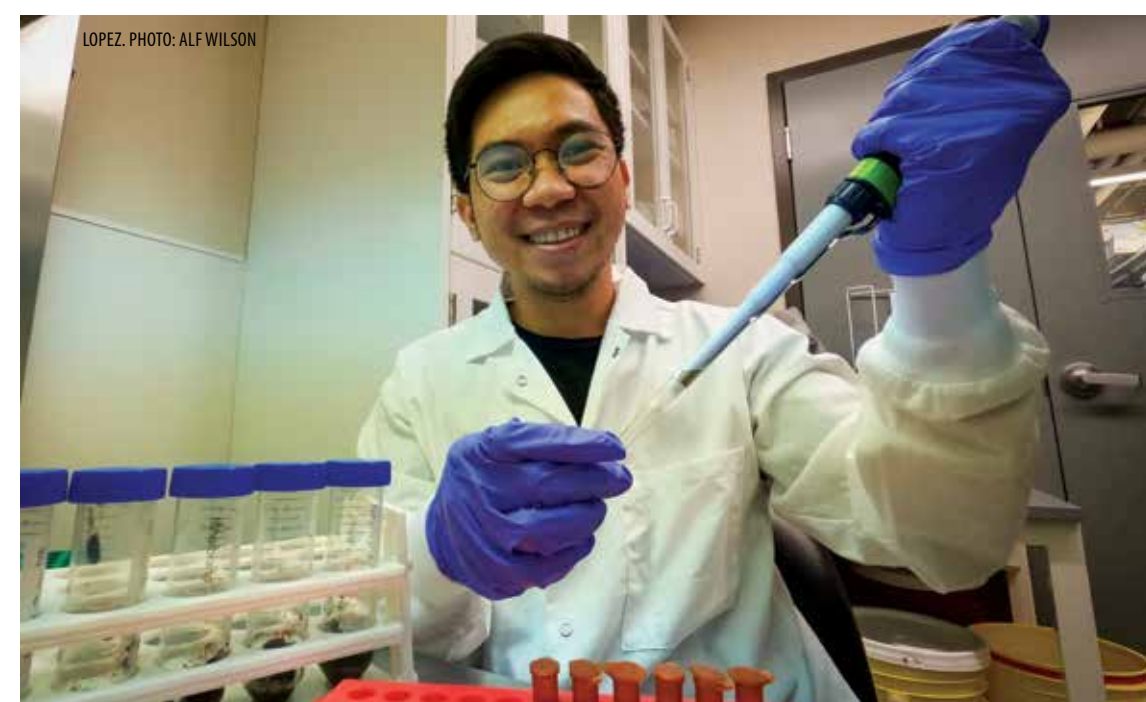
Liber Ero post-doctoral fellowships support exceptional early-career scientists to conduct and communicate research that informs applied

conservation and management issues relevant to Canada. The two-year fellowship consists of a \$70,000 per year stipend and a \$15,000 annual travel and research budget.

"I am deeply invested in promoting equity in conservation science. We need to move 'inclusion' and ensure we provide a sense of belongingness when setting conservation priorities," adds Lopez. "This project empowers and enables Indigenous communities to have their own environmental program for monitoring changes within their territories. In my little ways, I hope to contribute to providing a sense of belonging for everyone with a stake in environmental monitoring and conservation planning."

Lopez works with UVic biochemist Caren Helbing, whose foundational work has transformed the use and uptake of eDNA testing. Helbing's innovations and leadership have advanced eDNA into reliable use, analyzing long-term regional impacts on plants and animals—biodiversity changes.

The iTrackDNA program and Alberta Environment and Parks' Oil Sands Monitoring workplan, in which Indigenous community-based monitoring projects are integrated with aquatic ecosystem health monitoring, are extensions of this work.



LOPEZ, PHOTO: ALF WILSON

(sedDNA) provides an ongoing record across time, each layer going deeper into the past.

"SedDNA can help us reconstruct long-term ecosystem dynamics, bridging crucial information: gaps in the biodiversity historical record," Lopez explains. "First Nations communities in the oil sands region hold detailed Indigenous knowledge about historical territorial land use and fisheries data that predate industrial oil sands activity. Bringing Indigenous knowledge together with western science,

like sedDNA-inferred biodiversity, can help reveal long-term human-mediated ecosystem changes."

Along with Lopez and Helbing, this collaboration includes Mark E. McMaster (Environment and Climate Change Canada), Paul Drevnick (Teck), Ave Dersch (Chipewyan Prairie Dene First Nation and Moccasin Flower Consulting), Chris Heavy Shield (Chipewyan Prairie Dene First Nation), Findlay MacDermid (Cold Lake First Nations), and Matt Lemay and Chris Hebda (Hakai Institute).

Lopez continues, "I am looking forward to working with a diverse group of mentors that include Indigenous members whose communities will directly benefit from this project.

Lopez and Helbing's research reflects UVic's ongoing commitment to the United Nations Sustainable Development Goals (UN SDGs) on clean water and sanitation (SDG 6), climate action (SDG 13), and life on land (SDG 15)—all areas where UVic is ranked as a global leader, among the top 25 universities around the world.

## Political viability a key part of hitting net-zero emissions

UVic climate policy experts are assessing ways Canada can meet its greenhouse gas emissions targets while winning support from everyday Canadians.

BY STEPHANIE HARRINGTON

We are in a climate crisis—and Canada has an emissions problem.

Studies show that Canada will likely miss its targets to reduce greenhouse gas emissions (GHGs) to 40 per cent below 2005 levels by 2030 and to net-zero by 2050.

UVic climate policy expert Katya Rhodes says the situation is urgent, and her research offers hope that Canada can fulfill its international obligations.

Rhodes's latest project is assess-

ing ways Canada can meet its GHG targets while winning support from everyday Canadians.

The stakes are high for the environment, for the economy—and for governments trying to implement smart climate policies. The good news? Rhodes says the technology and know-how exists to fight the climate crisis, but politicians need to choose policies that are both effective and acceptable to voters.

"The climate crisis, it's getting worse and worse," Rhodes says. "My vision is to reduce climate change in

BC, Canada and worldwide. For that, we need compulsory and politically acceptable climate policy."

For example, Rhodes's research shows that although many economists and policy advocacy groups recommend increasing a carbon price to reduce emissions, carbon pricing remains a divisive issue for voters.

In BC, Rhodes says measures such as the clean electricity standards and low-carbon fuel standard have led to significant emissions reductions—more than the province's carbon tax, in some cases—without political opposition.

"There are multiple ways to achieve Canadian climate targets," Rhodes says. "What we're interested

in is understanding characteristics of public support around alternative options."

Her net-zero study will be the first to assess existing and hypothetical climate policies to achieve Canada's emissions targets. The study will also measure the chances of long-term policy survival by calculating the political cost of various policies per tonne of greenhouse gas emissions reduced.

Rhodes, a member of the Institute for Integrated Energy Systems (IESVic), has enlisted the help of PhD student Aaron Hoyle, who previously worked at the Canada Energy Regulator.

A climate and energy policy researcher with a background in mineral resources engineering and energy economics, Hoyle will develop an energy systems model that can better assess greenhouse gas emissions and the economic impacts of policies that hit Canada's climate targets.

He'll then devise a range of hypothetical climate policy packages, and conduct web surveys with Canadians on which measures they support or oppose—and why. It's the combination of modelling and survey work that makes the research unique.

"We're trying to design a study that paints a realistic vision of different futures for people, and those are tied into modelling different policy packages," Hoyle says.

The findings will be shared with partner organizations in Rhodes's Social Sciences and Humanities Research Council Insight grant, including the federal government's Environment and Climate Change Canada and the think-tank Canadian Climate Institute.

Hoyle, who grew up in a family of environmentalists, says it's exciting to have the chance to directly inform how Canada tackles the climate crisis and to work with leading researchers like Rhodes.

"I believe that climate policy has to work for people for it to work for the planet," Hoyle says. "The UVic School of Public Administration and IESVic are committed to the kind of interdisciplinary research that needs to be done, given the nature of our emissions problem."

Through students like Hoyle, Rhodes is helping train a new generation of researchers dedicated to climate action. She hopes to empower citizens and politicians alike to make informed choices to curb runaway climate change.

"In the end, it will be people on the ground, regular citizens, voting for climate-sincere governments, switching to electric vehicles and heat pumps, and perceiving this as a good thing," Rhodes says. "The transition will increase quality of life, create jobs and save the planet."

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# What do humpback whales eat in the depths?

Thanks to DNA analysis and more than a dozen difficult-to-source samples, some answers emerge—from near the tail.

BY ALF WILSON

People have been giving Rhonda Reidy a lot of “crap” over the past several years. But don’t worry—she’s been asking for it.

Reidy, fresh from defending her PhD, recently published a paper that pulls together a unique collaboration, a record number of fecal samples, and DNA analysis to tell the surprising story of what some humpback whales in the Salish Sea are eating.

This story really starts in 1999 when Reidy, crewing on a BC whale watching boat, saw her first humpback whale.

After decades, humpbacks were returning to BC waters.

A question formed that stuck with Reidy over the years: how might increasing humpback whale predation impact commercial BC fish populations?

Reidy approached UVic professors Laura Cowen (statistics) and Francis Juanes (biology) about doing a graduate degree to statistically model humpback whale predation. But there was one big problem: no one knows precisely what humpbacks in BC eat at depths of 50–200m underwater, where they primarily feed.

“All of the current data in BC is for humpback whales feeding at the surface. I dug through the literature,” Reidy recalled, “and I just couldn’t find information on what humpback whales are eating underwater, where they spend most of their time.”

opportunistic or if the whales were targeting those fish species.)

Reidy says, “the interesting result was that the whales may be targeting higher trophic-level fish like pollock and hake, in addition to lower trophic-level fish like herring and anchovy and invertebrates like krill.”

## Sample size: cetacean

As it turns out, collecting humpback poop requires good luck, timing and reflexes—it rapidly dissipates, some sinking and some floating away. That’s why humpback feces-collection expeditions have mostly left researchers empty-handed.

“People have tried dedicated humpback whale faecal sampling programs and it just—so far—hasn’t worked very well. You never know when a whale is going to defecate,” Reidy chuckles. “They roam vast areas. You can go days and days without a fecal sample.”

Reidy’s own journey, from whale-watching crew to boat skipper to academic, provided unique connections. And she was savvy enough to recognize her access to—and the respect of—highly qualified personnel.

“I called on my colleagues in the Pacific Whale Watching Association who are out on the water daily—who I trust and know,” Reidy explained. “They know what they’re looking at and they know the animals, and they know to follow the very strict boating rules around the whales.”

Reidy was able to get 18 samples over four seasons for humpback whales in the Salish Sea. Of these, 14 contained faecal matter. No one had ever collected so many Salish Sea humpback faecal samples in such a short time.



REIDY PHOTO: JESSICA QUALLEY

“... the whales may be targeting higher trophic-level fish like pollock and hake, in addition to lower trophic-level fish like herring and anchovy and invertebrates like krill.”

— UVIC BIOLOGY GRAD RHONDA REIDY

## So, how is humpback whale poop collected?

“Sometimes you can see the humpback defecate. You bring the boat alongside the feces and I use a pool-skimmer net to scoop as much as I can. Then I scrape it into a new Ziploc bag,” Reidy detailed. “I had a couple of colleagues on a larger boat use a bucket. I had somebody use a water bottle.”

Like any leading-edge research, more questions have been raised. But Reidy explains that one thing is now certain: we shouldn’t generalize.

“All of the work that I have done tells me that we cannot assume what the humpback whales are eating un-

derwater,” she says. “Not precisely at the species level.”

But thanks to Reidy’s research, and her less-than-squeamish volunteer collection squad, we’re starting to find out.

Reidy’s research with supervisors Juanes and Cowen reflects UVic’s ongoing commitment to the United Nations Sustainable Development Goal 14, life below water—an area where UVic ranks fifth among all universities worldwide, according to the Times Higher Education Impact Rankings.

tiny.cc/23-digest



Jewel Davies, a member of Carcross First Nation, tries on Maasai ceremonial arm bands during a cultural exchange in Tanzania.



Kate Herchak sits with Maasai youth discussing photos they took in their community.

# Connecting land, water and community

BY ANNE MacLAURIN

For UVic geography grad student Kate Herchak, a six-week research experience in Tanzania was a journey about identity—as well as education.

“It was dusty and hot riding in the jeeps but the land was so vast and beautiful,” says Herchak “The openness of it all reminded me of Nunavut.”

Herchak is Inuk on her father’s side from Kuujuaq, Quebec with ties to Rankin Inlet Nunavut.

“My dad is a survivor of the ‘60s Scoop, so I was born and raised in

the south, by my mom,” says Herchak. “I have only been home to Nunavut twice.”

As an urban Inuk removed from her culture, Herchak is on a path to reclaim her Inuk ways of knowing, being and doing in the world. Her work with Maasai youth explores context, culture and risk: how youth maintain cultural connections and knowledge despite increasing pressure to relocate to larger cities. This work has important links to Indigenous communities in Canada and around the world.

“It is important for Indigenous people to connect with other Indigenous people on an International community level to share our cultures and way of knowing, being and doing,” says Herchak.

Herchak’s thesis work is a key part of a broader, multi-faceted UVic geography research project on the international collaboration. For several weeks last summer, Tanzanian youth empowered with photography and video equipment shared how they and their peers maintain connections with their own culture and traditions, gathering information and knowledge.

It’s one part of the two-year Indigenous Knowledge Bridging of Land and Water Stewardship in Tanzania and Canada project, funded by the Social Science and Humanities Research Council (SSHRC). This project aims to access and mobilize Indigenous-led knowledge that will enhance land and water governance and self-determination for Indigenous Peoples in both countries, while also increasing research capacity.

Herchak was pleasantly surprised by some similarities between the Maasai and Inuit cultures. Throat singing for example, is a cultural practice performed by men in Maasai culture, but in Inuit culture, it is the women who are the throat singers.

“Despite the differences, I felt a sense of home among the Maasai people,” says Herchak.

UVic geographer Crystal Tremblay led the delegation and ongoing collaboration with the Maasai and several partners including EMAYO, Enguserosambu Forest Trust, the Kesho Trust and the Carcross/Tagish First Nation in the Yukon.

More info: [thekehotrust.org/ikg](http://thekehotrust.org/ikg)

# Urban Indigenous youth shape graphic novel

BY ANNE MacLAURIN

A visual storytelling project unites the voices of urban Indigenous youth in care, Knowledge Keepers, and Indigenous and non-Indigenous allies in *Becoming Wolf*, a graphic novel about coming of age.

Grounded in wisdom held by Indigenous Knowledge Keepers, coming-of-age teachings are shared through song, stories, ceremonies and traditional rites of passage with many urban Indigenous youth who grow up away from their ancestral territories and culture.

“Reconnecting with these teachings supports community healing, wellness and resilience and helps to prepare young people for their roles in carrying this wisdom forward in a good way,” says Jennifer Chucky, Executive Director of the delegated urban Indigenous organization, Surrounded by Cedar Child and Family Services (SCCFS).

The project was led by urban Indigenous youth in care and employees of SCCFS along with UVic researchers Andrea Mellor—a recent PhD graduate in Social Dimensions of Health—and health geographer Denise Cloutier.

“The opportunity to work on this project with Surrounded by Cedar

Child and Family Services, and the Indigenous youth was deeply meaningful and inspiring for me as a community-engaged researcher, but most importantly, my wish is that this work—to explore what it means to come of age—will have benefit for Indigenous youth in supporting culture, identity and resilience,” says Cloutier.

Urban Indigenous youth, alongside Knowledge Keepers, workshopped coming-of-age teachings that guided comic book creator Ken Steacy in the adaptation of the story to a graphic novel. Steacy is a Canadian comics artist and writer best known for his work on the NOW Comics comic book series of *Astro Boy*.

The story of *Deer*—a young teen living away from home experiencing her first Moon Time—was created through the words shared by the urban Indigenous youth involved in the project. The arts-based methodology used research storytelling to gather the wisdoms shared and learned from youth during interviews, sharing circles and vision boarding into the story *Becoming Wolf*. The team then collaborated with Steacy to guide the visual storytelling of what culture and coming of age can mean for urban Indigenous youth.

“Despite Deer’s changing identity, she remains connected to her child-

hood, her territory and her community, regardless of her physical distance from those elements,” says Mellor.

The story of *Deer, Becoming Wolf*, inspired a watercolor infographic as well as the graphic novel. The infographic was created by designer Luyi Wang, through her guidance in a series of activities with the youth to help develop a visual language reflective of their unique and diverse styles, imagery and colour preferences.

Wang then used their ‘visual voice’ to link the research findings to the cyclical coming-of-age journey of leaving one’s childhood, cultivating the self-awareness that develops during adolescence and building a sense of empowerment that leads one back to the community as an adult, mentor and leader.

“Many Indigenous youth in care are disconnected from their cultural roots, so visual storytelling is a way to rewrite a narrative of strength and togetherness,” says Chucky.

The project closed with a community feast as a report-back opportunity to share the work and celebrate the many months during which the project members came together on the traditional territory of the lək’wəḡən people. It also included a blanket ceremony honouring the young people and community



Watercolour by Luyi Wang

members who contributed to and supported this work. The work is being carried forward by SCCFS’s youth advisory council who are considering how they wish to carry Indigenous teachings into their lives as young adults.

The UVic community raises its hands to all who led and participated in this project—particularly Indigenous Knowledge Keepers Jessica Sault, Bradley Dick, May Sam and Skip Sam, many other urban Indigenous community members, the staff at SCCFS and the youth who participated in the workshops and blanket ceremony.

The coming-of-age project is a collaboration between SCCFS and UVic. This research was supported by the Social Sciences and Humanities Research Council, the Vancouver Island Health Authority and the BC Support Unit, Island Centre.

To access a copy of the graphic novel and support this good work, contact Surrounded by Cedar Child and Family Services at [surroundedbycedar.com/coming-of-age-ceremony](http://surroundedbycedar.com/coming-of-age-ceremony).

# New study demonstrates that traffic pollution impairs brain function

First-in-the-world study suggests that even brief exposure to air pollution has rapid impacts on the brain

A new study by researchers at UVic and the University of British Columbia shows that common levels of traffic pollution can impair human brain function in only a matter of hours.

The peer-reviewed findings, published in the journal *Environmental Health*, show that just two hours of exposure to diesel exhaust causes a decrease in the brain’s functional connectivity—a measure of how different areas of the brain interact and communicate with each other. The study provides the first evidence in humans, from a controlled experiment, of altered brain network connectivity induced by air pollution.

“For many decades, scientists thought the brain may be protected from the harmful effects of air pollution,” said Dr. Chris Carlsen, Canada Research Chair in occupational and environmental lung disease at UBC. “This study, which is the first of its kind in the world, provides fresh evidence supporting a connection between air pollution and cognition.”

For the study, the researchers briefly exposed 25 healthy adults to diesel exhaust and filtered air at different times in a laboratory setting. Brain activity was measured before and after each exposure using functional magnetic resonance imaging (fMRI).

The researchers analyzed changes in the brain’s default mode network (DMN), a set of inter-connected brain regions that play an important role in memory and internal thought. The fMRI revealed that participants had decreased functional connectivity in widespread regions of the DMN after exposure to diesel exhaust, compared to filtered air.

“We know that altered functional connectivity in the DMN has been associated with reduced cognitive performance and symptoms of depression, so it’s concerning to see traffic pollution interrupting these same networks,” says UVic psychologist Jodie Gawryluk, the study’s first author. “While more research is needed to fully understand the functional impacts of these changes, it’s possible that they may impair people’s thinking or

ability to work.”

## Taking steps to protect yourself

Notably, the changes in the brain were temporary and participants’ connectivity returned to normal after the exposure. Carlsen speculated that the effects could be long-lasting where exposure is continuous. He said that people should be mindful of the air they’re breathing and take appropriate steps to minimize their exposure to potentially harmful air pollutants like car exhaust.

“People may want to think twice the next time they’re stuck in traffic with the windows rolled down,” said Carlsen. “It’s important to ensure that your car’s air filter is in good working order, and if you’re walking or biking down a busy street, consider diverting to a less busy route.”

While the current study only looked at the cognitive impacts of traffic-derived pollution, other products of combustion are likely a concern.

“Air pollution is now recognized as the largest environmental threat to human health and we are increasingly seeing the impacts across all major organ systems,” says Carlsen. “I expect we would see similar impacts on the brain from exposure to other air pollutants, like forest fire smoke. With the increasing incidence of neurocognitive disorders, it’s an important consideration for public health officials and policymakers.”

The study was carefully designed and approved for safety, and used freshly-generated exhaust that was diluted and aged to reflect real-world conditions.

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# Ancient *Medea* gets a timely update with *Mojada*

BY JOHN THRELFALL

While the Phoenix Theatre's season opener *Spring Awakening* had its origins in a play which debuted in 1906, their closing production *Mojada* takes its inspiration from even further back in theatrical history: Euripides' *Medea*, first produced nearly 2,500 years ago.

Yet *Mojada* is as modern as today's headlines, blending the ancient Greek family tragedy with Mexican folklore and the bitter reality of America's immigration system.

"All stories are universal, but what makes them so universal are the specifics," explains guest director Carmen Aguirre. "*Mojada* is very specifically set in contemporary East LA with undocumented Mexican folks—but its theme of exile and the violence of assimilation makes it universal."

If Aguirre's name rings a bell, it may be from her international bestseller and CBC Canada Reads winner *Something Fierce: Memoirs of a Revolutionary Daughter*. However, you may also know her as a busy actor, playwright and Siminovitch Prize finalist, who is both artistic associate of new play development at Ontario's Stratford Festival and a core artist with Vancouver's acclaimed Electric Company Theatre (co-founded by former classmate Kevin Kerr, current chair of UVic's writing department).

As a director, Aguirre is thrilled to be offering the Canadian premiere of *Mojada*—indeed, it was her first choice of production when she was approached about directing at the

Phoenix. (Ironically, she has written her own adaptation of *Medea*, whose debut has been repeatedly delayed due to COVID.)

"I love directing because it's ultimately your vision, your interpretation of a script," she says. "How do you communicate your ideas to the actors, the design team and, most importantly, to the audience? My approach—certainly for this script—is to really focus on the text with the actors."

Written by her friend, LA-born Chicano playwright Luis Alfaro, *Mojada* has already engaged audiences in LA, Off-Broadway and at the Oregon Shakespeare Festival. "Luis specializes in adapting Greek tragedies and setting them in East LA with Mexican characters," she explains. "*Mojada*' translates as 'wetback', a racial slur against Latinx folks, which actually refers to undocumented people who have had to cross the Rio Grande river into the US from Mexico... thus they have a 'wet back'."

Co-founder of the Canadian Latinx Theatre Artist Coalition (CAL-TAC), Aguirre is a fierce proponent for Latinx cultural representation—which was also the subject of her second memoir, *Mexican Hooker #1 and My Other Roles Since the Revolution*.

"There are three Latinx folks involved in this project, and the actor playing Medea is Mexican, so they absolutely understand who these characters are and what they've been through," she says. "The other actors in it are also racialized folks who, while not Latinx, do come from im-

migrant families, so they understand issues around exile and assimilation."

No stranger to directing theatre students ("they're so excited, so open and work so hard!"), Aguirre is also pleased to see positive developments in theatre schools since her days in Vancouver's Studio 58 in the early '90s.

"There have been big changes in regard to what's acceptable for students these days," she says. "We never had anything like an intimacy coordinator, for example... now, a director has to really be in tune with the care needed to keep their actors safe. And when I was in school, everyone was white—the playwrights, the faculty, the designers, the directors... all white. We had a student body of about 50 people, and less than 10 percent were racialized folks. That was really challenging for me."

For an artist who has based her career on making positive change in the industry she loves, *Mojada* offers the chance to bring so many of her passions together: a timely story, engaging script, strong cast, talented designers and a director who isn't afraid to tell it like it is.

"I took the opportunity to bring the research to them—breaking down the story, giving them historical background and cultural context... my cast understands what a great opportunity this is to work on such a great script," she concludes.

*Mojada* runs March 16-25 at UVic's Phoenix Theatre. Tickets range from \$16-\$30 via 250-721-8000 or in person at the Phoenix Box Office.

[uvic.ca/theatre](http://uvic.ca/theatre)



PHOTO: ALEJANDRA AGUIRRE



*There are three Latinx folks involved in this project, and the actor playing Medea is Mexican, so they absolutely understand who these characters are and what they've been through."*

— GUEST DIRECTOR CARMEN AGUIRRE

## AUDAIN PROFESSORSHIP IN CONTEMPORARY ART PRACTICE OF THE PACIFIC NORTHWEST

# Delaronde and Audain Foundation broaden community engagement

BY JOHN THRELFALL

An early morning walk through the visual arts department usually sees a mix of students, faculty and staff arriving with coffee in hand; something not typically seen is an informal smudging ceremony outside the front door. But that's just one of the ways Lindsay Katsitsakatste Delaronde is looking to make a difference as the latest Audain Professor in Contemporary Art Practice of the Pacific Northwest.

"I've never abandoned who I am as a Mohawk person," says Delaronde. "I really try to work under the value systems of my own knowledge. This position is a marker of the hard work I've been doing for the past 20 years: it grounds my artistic practice in relationship to my scholarship in one central place and has a creative grounding that really aligns with who I am."

It also clearly aligns with the mandate of Vancouver's Audain Foundation, which originally established the position in 2010 with a \$2-million gift from philanthropist and UVic alumnus Michael Audain. In February 2023, they further committed \$160,000 in new funding to the professorship—including a three-year, \$60,000 project specifically designed to support the Audain Professor's efforts around outreach, community engagement and related research activities. The foundation also funds the annual \$7,500 Audain Travel Award for visual arts students, presented to graduate student Kosar Movahedi in fall 2022.

### Staying authentic

A Kanienk'e'haka woman born and raised on the Kahnawake reservation outside of Montreal, Delaronde is no stranger to transforming public spaces: as the City of Victoria's inaugural

Indigenous Artist in Residence (2017-19), her collaborative land-based/site-specific performance art dramatically engaged viewers from the lawn of the BC Legislature to almost every cultural institution in the city.

Yet despite having multiple degrees—including two from UVic (MFA in Visual Arts, MA in Indigenous Communities Counselling Psychology)—and years of professional practice, Delaronde has never lost sight of her own learning journey: in addition to her current three-year term as Audain Professor, she is also pursuing a PhD in applied theatre practice with the Department of Theatre. This, she feels, gives her unique insight into the educational process.

"I love teaching and learning, both inside and outside the classroom," she says. "I'm just trying to stay authentic to who I am as a person, as an artist, and bring that into the institution. But I can also look back and see the ways I struggled as an Indigenous student, regardless of which department. There's a lot of folding of time and history that really helps me navigate this position."

### Broadening the scope

Over the past decade, the Audain Professorship has been held by such distinguished practicing artists as Governor General's Award-winner Rebecca Belmore, Witness Blanket creator Carey Newman and the internationally acclaimed Michael Nicoll Yahgulanaas, among others. Delaronde is now the seventh Indigenous artist to hold the position.

"These are all foundational artists within the Canadian landscape of Indigenous contemporary art," she says. "Each has a big history to draw on in terms of tools and techniques and facilitation, and each brings something of themselves into the space. That's



Delaronde. PHOTO: TORI JONES

what's beautiful about the position: it doesn't have a narrow scope. The Audain Professorship creates a platform for Indigenous artists to be themselves within our institution."

Yet Delaronde's personal and professional experiences have also fuelled a desire for change which parallels similar societal demands.

"Making change on an institutional level is always a top-down approach, but my philosophy is around grassroots mobilization of new ideas that really surface from the community—and, in this case, my students are the community," she explains.

"We're working with a generation of students who are more aware than we were 15 or 20 years ago. They're looking for anti-oppressive and anti-racist models, an increased sensitivity around cultural appropriation and

a safe atmosphere of inclusivity and diversity that retains and encourages the rigour of learning how to talk about culture in good, productive, generative ways. Sometimes we forget we all come from different cultural lenses, and I'd like to see that grow in the department."

### Being the change

Delaronde's long connection with UVic also makes her unique in Audain history. "The University of Victoria has been essential not just in my educational journey but also as a place of deep reflection in my purpose," she says. "I've never stopped caring about people and trying to make positive changes in our communities."

From First Peoples House to Indigenous Studies and the Indigenous Governance program, she's seen a lot

of positive change since she first came to campus 15 years ago, yet feels now is not the time to slow down. "It's important to value and acknowledge the good work that has happened at the institution, but there's more work to do and there's no stopping it now."

Indeed, it's hard not to see Delaronde herself as being emblematic of the very changes she's witnessed.

"We need to see ourselves in leadership roles and I need to be there for my students and work with others towards institutional change," she concludes. "Sometimes I feel like I just have to survive the institution daily, but at the same time I have such a passion and love for the arts. My practice has changed a lot and my teaching continues to reveal itself in terms of who I am today. It's all very exciting and very fresh."