# OUR CHANGING MOUNTAIN LANDSCAPES PAGE 3



# #RING

**JANUARY 2018** 

The University of Victoria's community newspaper

ring.uvic.ca



**University** of Victoria

### **SPEED READ**

#### **WEATHER CLOSURES**

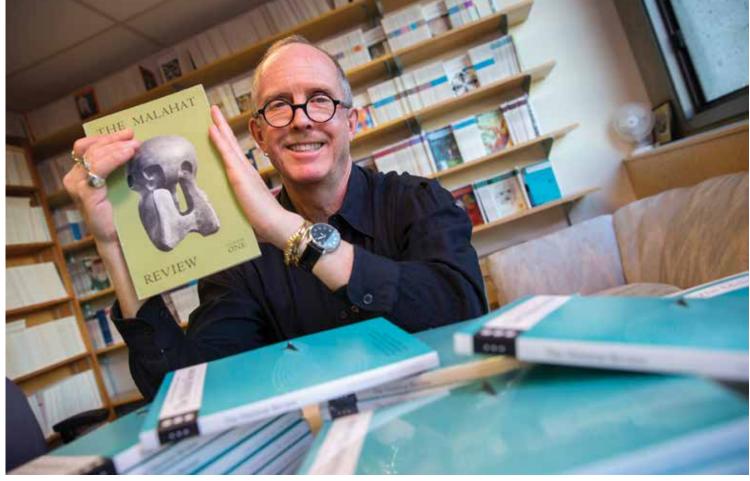
#### Is it a snow day?

In the event of a major snowfall or other extreme weather event, check the UVic home page for advisories about service disruptions, campus closures and safety precautions. You can also check UVic's Facebook and Twitter. As a general rule, if BC Transit buses are travelling to and from UVic, the university will remain open. Info: uvic.ca/services/emergency/hazards/weather/

#### **VIDEO CONTEST**

## Tell us your research stories—in three minutes or less

Do you want to develop or hone your video skills? Have you got a UVic research story to tell? UVic students, faculty, staff and alumni are invited to submit an entry to the second annual Research Reels video showcase. Videos must be under three minutes and demonstrate the vital impact of research or creative activities taking place at UVic. Finalists will be screened March 6 during Ideafest, with a top prize of \$1,250 and total prize money of \$4,000. Submission deadline is Feb. 5, so grab your camera (yes, smartphone cameras count) and get filming! uvic.ca/researchreels



Barton with the first (in hand) and 200th editions of *The Malahat Review*. **UVIC PHOTO SERVICES** 

## 29

NUMBER OF
GOLD AND
SILVER MEDALS
THAT WRITERS
FEATURED IN THE
MALAHAT REVIEW
HAVE WON AT
THE NATIONAL
MAGAZINE
AWARDS SINCE
1978

## UVic's iconic literary journal celebrates 50 years

The first edition of *The Malahat Review* came off the presses the same year as Expo '67 was in Montreal and the first moon landing was still two years away. This revered literary journal, which has since served as a springboard for some of the most recognizable names in Canadian publishing, is celebrating its 50th anniversary.

*The Malahat* was the first magazine to publish a short story by Yann Martel, 14 years before he went on to win the Booker Prize for the international bestseller *Life of Pi*.

In 1977 the journal dedicated an entire issue to Margaret Atwood's work—before

she became internationally known and only five years after she published her pivotal survey of Canadian literature, *Survival*.

Poets such as Michael Ondaatje, Dionne Brand, Lorna Crozier and Patricia Young have frequently graced its pages.

"IT'S BEEN AT THE FOREFRONT OF LITERARY CULTURE IN CANADA, PUBLISHING THE VERY BEST IN POETRY, FICTION AND CREATIVE NONFICTION." — CHRIS GOTO-JONES "Publishing in *The Malahat* is a rite of passage for many writers, who feel that they have 'arrived," says outgoing editor John Barton, who took over the role in January 2004. "The consistent quality of its content attracts the best writing and writers."

Founding editors Robin Skelton and John Peter, then professors in the Department of English, established the journal in 1967. The Faculty of Humanities has supported it over its history, with the Faculty of Fine Arts providing additional funding

SEE MALAHAT REVIEW P. 2

## TOP 10 STORIES OF 2017

As we begin 2018, we look back at a year brimming with UVic news that garnered media attention across the country and helped shape memorable stories about UVic people, projects, ideas, creativity and research. Here are 10 of many from 2017.

#### A top 10 finalist in Canada's first Google Impact Challenge

Based in Nick Dechev's Biomedical Design Lab at UVic, the Victoria Hand Project uses 3D printers to create low-cost upper-limb prostheses for amputees in developing countries. It was one of five finalists receiving the first Google Impact Challenge Canada grants.

## BC treaties translated into Indigenous languages

The translation into two local Indigenous languages of the original treaties of the colony of Vancouver Island was a pivotal element in a Canada 150 signature event at a conference organized by the Songhees First Nation and UVic's faculties of Humanities and Law.

#### "Smart" bandage uses phone app to ID infection

Bioengineer Mohsen Akbari and his team's GelDerm "smart bandage" allows smart phones to scan for signs of bacterial infection so that antibiotics can be administered—all without removing the bandage.

### around the ring

## Thank you for Giving Tuesday

On Nov. 28, the campus community came together for our second Giving Tuesday at UVic with hot chocolate, cookies, zorbing and a life-sized sprinkle-filled snow globe. UVic alumni, faculty, staff, students and friends helped us raise over \$25,000. This was aided by several anonymous donors, who matched the first \$5,000 raised, and the Alumni Association, who donated \$2 for the use of #AddSprinklesUVic across social media, and every use of the sprinkle-themed Snapchat Geofilter. Funds will help support student-led initiatives at UVic, like helping the AERO Club build and compete their unpiloted aerial vehicle or helping the Rocketry Team launch their 10-lb. rocket. Thank you to everyone who took part and helped add sprinkles to UVic.

#### Help celebrate our extraordinary researchers and teachers

Calls for nominations for both teaching and research REACH awards are open until the end of January. Nominations for teaching awards are welcome in six categories: graduate supervision and mentorship, research-inspired teaching, teaching for experiential learning, the Harry Hickman, the Gilian Sherwin and the Andy Farquharson teaching awards. The research award categories include career achievement, research excellence, creativity and artistic expression, knowledge mobilization and research partnerships. Nominations are open until Wednesday, January 31, 2018. For more information, visit www.uvic. ca/president/awards.



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## TOP 10 OF 2017 CONTINUED FROM P.1

## Clearing the air around e-cigarettes

Researchers at UVic's Canadian Institute for Substance Use Research (formerly CARBC) reviewed the rapidly increasing academic literature on e-cigarettes. Their final report earned national coverage in print, radio and TV, as well as extensive traction on social media channels internationally.

## Furthering knowledge about Indigenous legal traditions

John Borrows, the Canada Research Chair in Indigenous Law, won a national Killam Prize for his commitment to furthering knowledge about Indigenous legal traditions. Coverage also drew attention to UVic's proposed joint degree in Canadian common law and Indigenous legal orders, led by Borrows and colleague Val Napoleon.

## Tom Thomson multimedia project for 100th anniversary

Despite unseasonably cold winds and choppy waves, visual arts chair Paul Walde plunged into the waters of Algonquin Park's Canoe Lake this past summer on the 100th anniversary of iconic Canadian artist Tom Thomson's death. It was the first stage of his new project to reframe the early 20th-century artist's legacy.

## Can brainwaves predict baseball performance?

Neuroscientist Olav Krigolson worked with master's education student and former pro player Anthony Pluta on research involving brainwaves, EEG devices and baseball. Coverage included a radio spot on CBC's flagship science program "Quirks and Quarks."

## Doctoral candidate's questioning of ninth planet prompts global

A PhD candidate's work threw cold water on a hot theory about a huge ninth planet lurking beyond Neptune. Cory Shankman's paper, which suggests the alleged planet could be nothing more than a statistical fluke when the data is analyzed differently, generated international headlines.

## Findings at ancient site affirm oral history

PhD candidate Alisha Gauvreau was part of an archaeology team that unearthed an 14,000-year-old village on BC's central coast. The find—one of the oldest known sites of human occupation on North America's northwest coast—affirms the oral history of the Heiltsuk First Nation.

Read full Top 10 stories bit.ly/uvic-top10-2017

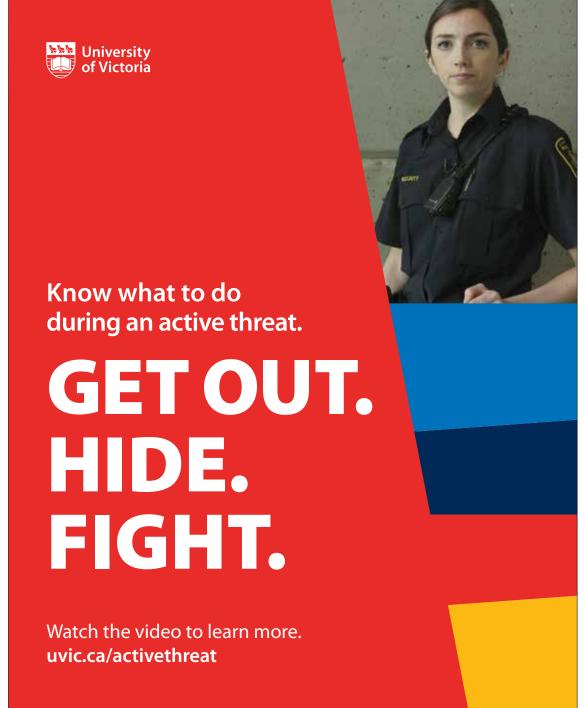


#### Syphilis linked to HIV treatment

Microbiologist Caroline Cameron contributed to a study showing that HIV treatment could be inadvertently contributing to the uptick in syphilis outbreaks. There are an estimated 36 million cases of the disease

worldwide. Cameron continues work on a syphilis vaccine that promises to help eradicate syphilis.

Visit uvic.ca/news and follow @UVicNews and @UVic to read more stories as they happen.



### MALAHAT REVIEW CONTINUED FROM P.1

in recent years.

"It's been at the forefront of literary culture in Canada, publishing the very best in poetry, fiction and creative nonfiction," says Dean of Humanities Chris Goto-Jones. "Both faculties are proud to continue supporting this iconic magazine and to join in the celebrations of its semi-centennial."

The Malahat has had six editors over its lifetime: Barton Constance Rooke, Derk Wynand, Marlene Cookshaw, and Skelton and Peter. Initially carrying the subtitle "An International Magazine of Life and Letters," the journal at first reflected Skelton and Peter's backgrounds and connections in the international literary community.

The Malahat is very much a national icon now and echoes the exponential increase in stature of Canadian literature in recent decades. The current 200th issue, a special 50th anniversary edition, was published in November.

A limited-edition commemorative monograph, *The Malahat Review at Fifty: Canada's Iconic Literary Journal*, edited by Barton and produced by UVic Libraries as part of its awardwinning imprint and publication series, will be unveiled this month. The new publication will highlight *The Malahat's* achievements while looking forward to the future, and is richly illustrated with archival material from UVic Special Collections and University Archives.

Also this month, a new exhibition—*Landmarks: The Art of The Malahat Review*, curated by Caroline Riedel of UVic Legacy Art Galleries and showcasing the role of art in the journal during its 50-year run—opens Jan. 25 in Legacy Maltwood on campus.





Athabasca Glacier in Jasper, in 1917 (left) and 2011 (right). credits: MLP AND LIBRARY AND ARCHIVES CANADA (1917 PHOTO), MOUNTAIN LEGACY PROJECT (2011 PHOTO)

## Mountains of change

#### Historical and modern-day photos show dramatic transformation in 150 years

BY ANNE MacLAURIN

Researchers from UVic's Mountain Legacy Project are raising the alarm about the impact of climate change on the mountain landscapes of western Canada by using repeat photography and an astonishing array of images-historical and recent-in one of the largest projects of its kind anywhere.

The team has documented 150 years of ecological and cultural change by recapturing historical photos first taken by dozens of intrepid mountain surveyors from 1861 to 1958. By bringing modern camera equipment deep into the back country, the team captured fresh images of the same mountain vistas from exactly the same locations as the original photos, and then compared the results.

"We now have more than 7,000 repeat pairs of images gathered over 19 summers working with graduate and undergraduate students," says UVic environmental scientist Eric Higgs, who leads the project. "People can clearly see the significant changes brought about by a shifting climate, human activity and development, and ecological processes."

The project's new map-based tool features

side-by-side image comparisons and the ability to zoom into any of the thousands of images presently online. The historical images are housed at Library and Archives Canada in Gatineau, Quebec, and the BC Archives at the Royal British Columbia Museum in Victoria. They constitute the largest systematic collection of mountain photographs in the world.

The team uses archival research, image interpretation and analysis, as well as software development to make the paired images widely available to ecologists, managers, researchers, historians, mountaineers, environmentalists, students and anyone else interested in the project.

"PEOPLE CAN CLEARLY SEE THE **SIGNIFICANT CHANGES BROUGHT ABOUT** BY A SHIFTING CLIMATE, HUMAN ACTIVITY AND DEVELOPMENT, AND ECOLOGICAL **PROCESSES."** — ERIC HIGGS

Originally based at the University of Alberta, the study quickly grew beyond the Rockies and became the Mountain Legacy Project shortly after it moved to UVic with the appointment of Higgs as director of the School of Environmental Studies (2002 to 2010).

Mary Sanseverino, a keen mountaineer, photographer and computer science instructor now retired from UVic, has been involved in the project since 2011.

"The importance of the work is, to my mind, in the name of the project," she says. "We make use of the important photographic legacy left to Canada by the early surveyors. We walk in their footsteps, stand where they stood, repeat their images and, through our research, pay their legacy forward to the future."

Working with long-running partner Library and Archives Canada, UVic Libraries and the Canadian Mountain Network, which is hosted at the University of Alberta, Higgs and his team are exploring ways of expanding the scope and potential of the project to inform effective sustainable management, conservation and restoration of the fragile and changing mountain landscapes.

The project was supported by the Social Sciences and Humanities Research Council and the Ministry of Agriculture and Forestry in Alberta.

## around the ring

#### Foot program celebrates a milestone

UVic School of Nursing's Feet First Foot Hygiene Program reached an important milestone with the 2,500th patient treated since the program began in 2008. Fourthyear nursing students provide foot hygiene services to anyone in need through the support of Our Place Society in downtown Victoria. "We have people that come back every week" student Julia Wiewiorowski told CHEK News. Students offer the free service twice a week from September to November. "Those of us who are the most vulnerable often face the greatest barriers to health care services," says Judy Burgess, who helped create the program. "Everyone benefits from this service and in many different ways."

#### Do you have a talent for fixing things?

Join like-minded people at UVic's Repair Café and share your passion for repairing items such as small appliances, computers, clothes, jewellery, bikes and books. As a volunteer or mentor, you can share your passion for repair with community members. The café takes place Jan. 9 from 2-5 p.m. in Turpin B215. The event is hosted by the Community-based Research Lab in the Department of Geography. Info: Florian Katerndahl at florian.katerndahl@outlook.de or Jutta Gutberlet at gutber@uvic.ca

### Vikes campaign promotes awareness of sexualized violence prevention

UVic Vikes Athletics and Recreation, a department within Student Affairs, is partnering with the Office of Equity and Human Rights to champion sexualized violence prevention through an education and training campaign.

"We all have individual, collective and institutional responsibility to prevent sexualized violence, and this campaign will reinforce our intent to be leaders in making our facilities safe, inclusive and welcoming for the diverse population that we serve," says Clint Hamilton, director of Vikes athletics and

The Vikes have begun work with Leah Shumka, sexualized violence prevention and education coordinator, and the Anti-Violence Project, a UVSS resource for students. They're developing a training program for student athletes, frontline student staff and full-time staff, to raise awareness of sexualized

violence and how to prevent it. It's expected to be in place by early 2018.

The partnership also includes a sign and poster campaign across Vikes facilities that will reinforce education about sexualized vio-

Preventing sexualized violence starts with attitudes and beliefs about building a culture of consent and respect. The campaign will ensure that all participants and users of the facilities are aware and understand the definition of sexualized violence in the context of healthy active living and competitive sport, says Hamilton.

Sexualized violence includes any non-consensual act or behaviour that targets a person's sexuality, sex or gender. The policy, as well as information about support and resources, can be accessed on the Equity and Human Rights website at uvic.ca/equity.

#### CALL FOR NOMINATIONS **UNIVERSITY OF VICTORIA CONVOCATION SENATORS**

Nominations are invited beginning Jan. 22, 2018 for the positions of four members of the Senate elected by and from the Convocation, for three-year terms commencing July 1, 2018. Consistent with Section 35(2)(i) of the University Act, these positions are for persons who are not faculty members at the University of Victoria.

Members of the University of Victoria Convocation are eligible to make nominations and to vote. Convocation members include alumni, past and present members of Senate and the Board of Governors, regular and retired faculty members, regular staff members holding a university degree who have been employed at the University of Victoria for at least 12 months, and those who completed one full year at Victoria College prior to 1963.

For information about eligibility to serve or to obtain nomination forms visit uvic.ca/universitysecretary/voting, call 250-721-8101 or email usec@uvic.ca.

Nomination forms must be received by the Office of the University Secretary by Feb. 6, 2018 at 4:30 p.m. (PT).

If more than four (4) valid nominations are received by the deadline, an election will be conducted using the university's electronic voting system, WebVote, from Mar. 5, 2018 at 12:00 p.m. (PT) until Mar. 20, 2018 at 4:30 p.m. (PT).

Office of the University Secretary, Room A138, Michael Williams Building PO Box 1700 STN CSC, Victoria, British Columbia V8W 2Y2















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### around the ring

#### **Creating our future**

How can the sacred wisdom of diverse cultures help to build a peaceful and compassionate world? At Creating the Future: Visioning a Sustainable, Compassionate World, a special event co-sponsored by **UVic Multifaith Services and Victoria** Multifaith Services, panelists from the diverse traditions of First Nations spirituality, Hinduism, Buddhism, Christianity, Islam, the Bahá'í Faith and Unitarianism will discuss how spiritual traditions can help build a sustainable, humanitarian future. The afternoon will feature guest speakers, storytelling, music, displays and refreshments. This is a free event in honour of UN World Interfaith Harmony Week and the 70th anniversary of the Universal Declaration of Human Rights. Sunday, Feb. 4, 1–4:30 p.m. Info: bit.ly/uvic-createfuture

### Nominate a colleague for a service award

Do you know UVic employees who deserve a round of applause? An individual or team who make UVic a great place to work and learn? Any UVic employee or recognized student organization can nominate an individual, group or team in one of the five President's Extraordinary Service Awards (PESA) categories: navigator, innovator, collaborator, cultivator or connector. Those interested in submitting a nomination are invited to register for a Nominator's Workshop on Jan. 10. The nomination deadline is Jan. 29, and results will be announced at the Cause for Applause event in May. Visit uvic.ca/pesa for full details and nomination forms.

## UVic hosts national meetings on work-integrated learning

In November, UVic hosted the AGM of the Canadian Association for Co-operative Education's (CAFCE) where representatives from 79 post-secondary institutions voted to expand the association's mandate to include forms of work-integrated learning beyond co-operative education. As a result, the association has changed its name to Co-operative Education and Work-Integrated Learning Canada (CEWIL Canada). UVic is an active member of CEWIL Canada; its current president is Claudia Sperling, who manages UVic's Optional and Professional Co-op Programs and Career Services.

## University Club begins its next half-century

BY MEL GROVES

The University Club is the kind of place where "everybody knows your name." The club celebrated a double anniversary in 2017—50 years since its establishment as a social club for UVic employees, and 35 years since moving to its current location on the west side of campus.

"Everybody knows me here. It's like family. The staff know my name and my order," says Professor Emeritus Reg Mitchell, a 40-year member and former chair of the board.

The club (originally the Faculty Club) came into being in 1967 as a social space for faculty and staff of the then-new University of Victoria. Located in E hut at the corner of McKenzie and Finnerty Roads—a former officers' mess for the Gordon Head Army Officer Training Camp—it wasn't long before the club was pushing the limits of its physical space. Membership more than doubled between 1967 and 1976, from 168 to 400 members.

In 1977, the club's board—led by Mitchell—began discussions with the UVic Board of Governors to find a new location.

"It didn't make economic sense to renovate E hut and bring it up to code," says Mitchell. The board agreed to fund a new building in a less-busy part of campus, and construction began on the current site in 1981. On March 15, 1982, the club hosted its gala opening. It became the University Club of the University of Victoria in 2000.

An independent entity governed by its own board of directors, the club's



Angus in the main dining room. UVIC PHOTO SERVICES

main revenue comes from membership dues, dining and special events.

"We're one of the few university clubs in Canada that's survived," Mitchell says. "We've had great managers over the years and the special events offer something for everybody."

The club has strong support from UVic faculties and units for meetings and events, and can accommodate gatherings of 10 to 275 people. Popular events range from the traditional (Valentine's Day, Mother's Day, Christmas buffets) to children's themed events and special monthly member events, including patio barbeques and beverage tastings. The club also hosts

private gatherings such as weddings and celebrations of life.

"This is a vibrant place and our location is spectacular," says general manager Dan Angus. "Private clubs are really a home away from home for their members. It's a great place to network and to relax with colleagues outside of the work environment."

The first year of club membership is free for faculty, staff and UVic alumni who have not previously been members.

More information about the club's services and history is available at *club.uvic.ca/*. Watch a new video about the club at *facebook.com/TheUniversityClubOfVictoria* 

#### By the numbers

- 1,350 number of current members
- 300 serving capacity of the dining room
- 63 number of members in attendance at first board meeting on Oct. 26, 1967
- 40 cents price of a beer at the club in 1967
- 33 number of years executive chef Mark Davie has been with the club
- 7 number of resident turtles in Mitchell's Moat (the pond)

### Collaboration promotes Victoria as education destination

Three post-secondary institutions and three school districts in the Capital Regional District have signed a memorandum of understanding to work together to promote Victoria as an education destination for international students.

The University of Victoria, Camosun College, Royal Roads University (RRU), the Greater Victoria School District 61, Sooke School District 62, and Saanich School District 63 are now members of Education Victoria, a joint partnership to promote academic cooperation and student pathways for the benefit of students and the six institutions and school districts

The five-year agreement involves joint marketing and recruitment activities in target international markets; shared coordination of activities such as agent familiarization visits, recruitment travel, conference presentations, advertising and promotion; and the exchange of data, documentation and research materials.

The Education Victoria partnership has been in the works since 2013, when UVic, Camosun, RRU and District 61 came together to recruit international students to the region. The idea is to overcome the challenges of increased competition in international recruitment, as well as explore new ways of positioning Victoria as an education destination.

To date, Education Victoria has coordinated six visits to Vietnam and two visits to Korea for Victoria Day promotional fairs. The project has also presented at leading international education conferences in 2015 and 2016.

The long-term vision for Education Victoria is to position Victoria and the Vancouver Island region as a centre of excellence in education. This is based on Canada's and BC's strong global reputation for high-quality education, and on Victoria's reputation as a safe and welcoming community that offers natural beauty and the mildest weather in the country.

#### INDIGENOUS EDUCATION

## UVic to host 2018 national reconciliation forum

UVic has been selected to host the 2018 National Building Reconciliation Forum this fall. The announcement was made in November by Universities Canada at the 2017 forum in Winnipeg.

"Hosting the forum is an important responsibility to carry forward a dialogue among universities and Indigenous communities inspired by the residential survivors' gift of truth to the nation," says Nancy Wright, UVic's associate vice-president of academic planning. Wright attended the 2017 forum with other UVic representatives.

The forum brings together leaders from universities, colleges and Indigenous communities to create meaningful and lasting institutional change in the higher education sector to advance reconciliation.

The 2018 forum will focus on Indigenous language revitalization and economic growth of Indigenous communities. Just over half of Canadian universities offer Indigenous language courses, and since 2015, there's been a 57 per cent increase in courses taught in which the language of instruction is Indigenous.

UVic is deeply committed to the ongoing and collective postsecondary response to the Truth and Reconciliation Commission's findings and 94 Calls to Action, and remains unwavering in its dedication to decolonizing and indigenizing its

"UVic is honoured to be the host for this key national initiative," says Wright, adding that more details will be made available closer to the date.

Last fall, UVic launched its first Indigenous Plan. Researchers, students and collaborators have been immersed for decades in local and national efforts in Indigenous language revitalization and community building while delivering successful programming that is responsive to community needs.

February 1–7 | 2018

AIIJMINITER



Thinkers, changers, difference-makers

alumni.uvic.ca





Buckham (with a wave measurement buoy) in front of the Hesquiaht First Nation community of Hot Springs Cove. **UVIC PHOTO SERVICES** 

### Clean energy research at UVic gets a funding boost

Off-the-grid coastal communities seeking renewable energy alternatives and heavy-duty transportation companies working to reduce fossil fuel dependence are closer to achieving their goals thanks to \$2.4 million in new funding to UVic researchers.

#### Help for coastal communities

A \$1.4-million investment by Western **Economic Diversification Canada** establishes the Pacific Regional Institute for Marine Energy Discovery (PRIMED) at UVic.

The institute, co-led by mechanical engineers Brad Buckham and Curran Crawford, will support the adoption of alternative technologies in remote coastal communities that currently rely on diesel fuel generators to meet their energy needs.

There's strong appetite in these communities—many of which are Indigenous—for renewable technologies such as wind, wave and tidal. But there's a knowledge gap that needs to be bridged, says Buckham.

"The communities need real data to assess how the resource will be harnessed, how the technology will produce power over decades of operation, and how it will offset diesel use over that same period."

Without that long-term assessment, he says, uncertainty dominates discussion and first-of-a-kind

community-based marine energy projects fail to materialize.

PRIMED will gather extensive wind, wave and tide data from a number of existing sources, including the multi-partner West Coast Wave Initiative which Buckham also leads, and the new Canadian Pacific Robotic Ocean Observing Facility (C-PROOF), led by UVic oceanographer Jody Klymak. C-PROOF will feature sensors mounted on autonomous underwater gliders and floats.

PRIMED involves a range of academic and marine energy technology partners, notably Barkley Project Group in Nanaimo, a renewable energy developer that already works with remote communities along the coast.

**"OUR RESEARCHERS ARE LEADING THE WAY IN SUSTAINABLE ENERGY RESEARCH, WORKING CLOSELY WITH GOVERNMENTS, INDUSTRY AND COMMUNITY GROUPS TO FOSTER CLEAN GROWTH AND LOW-CARBON ECONOMIC DEVELOPMENT." -UVIC PRESIDENT JAMIE CASSELS** 

As the first project of its kind in Canada and the world, PRIMED will be a model for other jurisdictions, says Buckham.

"Worldwide, remote coastal com-

munities are the break-in market for marine renewables. Our goal is to demonstrate how this 'third party' approach to risk mitigation should be a best practice in BC and elsewhere."

#### **Hybrid technologies**

A \$1 million investment by the Washington Foundation in conjunction with Seaspan will significantly advance the work of the green transportation research team led by mechanical engineer Zuomin Dong, working with UVic's Institute for Integrated Energy Systems.

Engineers know that electrified vehicles with advanced hybrid electric propulsion systems are effective for improving energy efficiency and reducing harmful emissions. Yet the technology still hasn't been widely applied to heavy-duty transportation systems due to the large variation in their operational uses and high development costs.

The green transportation research team at IESVic is investigating hybrid electric technologies that enable cleaner, lower cost fuel alternatives.

This new funding will advance research on how to integrate hybrid electric vehicle powertrain technologies with cleaner natural gas engines to help the marine, mining and transportation sectors meet their greenhouse gas reduction and mitiga-



## One mind, one people—and 42 **Indigenous languages**

#### BY SUZANNE AHEARNE

A new language revitalization project led by UVic will bring new life and strength to at least 42 Indigenous languages in Canada.

NETOLNEW, which translates as "one mind, one people" in SENĆOŦEN, will work with nine Indigenous-led partner organizations across the country, forming a learning and research network to strengthen efforts to revive Indigenous languages.

The six-year project, supported by a \$2.5 million Social Sciences and Humanities Research Council (SSHRC) Partnership Grant, is led by Onowa McIvor in UVic's Department of Indigenous Education with linguist Peter Jacobs, now at Simon Fraser University.

"This grant highlights a lot of hope and possibility," says McIvor. "Across the country, intergenerational connections are being re-sown through language."

McIvor says the project will help realize the goals of the Truth and Reconciliation Commission's Calls to Action with such direct actions as: increasing Indigenous language audio resources for growing a radio and TV presence of Indigenous languages in Canada; promoting post-secondary Indigenous Language Revitalization (ILR) programs; improving community

mechanisms for sharing the best language revitalization methods; and engaging other organizations in supporting Indigenousled ILR programs.

A unique feature of the study is the focus on adult language learners, whom McIvor refers to as the "missing generation"adults who had little opportunity to learn their ancestral language as children due to adoption, residential schooling, disconnection from their homelands and urbanization.

The Indigenous language revitalization movement has been mostly focused on school-based programs for children and youth. But in a previous study, co-leads McIvor and Jacobs identified adults as a "great untapped po-

The earlier study emphasized that learning to speak an Indigenous language is not just a booklearning exercise; the language needs to be spoken in everyday activities, such as speaking to children, praying, discussing the weather and how things are going, through to discussing history and philosophy, and conducting business and political matters.

"This is our shared history," says McIvor. "It's an opportunity to be part of reviving, remembering and continuing the real history of Canada through Indigenous languages."

## Faculty of Science gains three new Canada Research Chairs

#### BY VIMALA JEEVANANDAM

The University of Victoria's three newest Canada Research Chairs-announced in 2017—are doing scientific research that cuts to the heart of issues related to human health and safety.

The three new chairs—all from the Faculty of Science—are developing more efficient and accurate patient testing and drug discovery methods, refining our understanding of seismic hazards, and combing through vast amounts of data to make sense of genome sequencing.

Four other chairs in the faculty have also been renewed: Verena Tunnicliffe (Earth and ocean sciences/ biology) in Deep Ocean Research; Jeremy Wulff (chemistry) in Bioactive Small Molecule Synthesis; Guatam Awatramani (biology) in Synaptic Physiology; and Martin Boulanger

(biochemistry and microbiology) in Molecular Interactions and Structural

"These chairs affirm UVic's position as a top-tier research-intensive university and further strengthen our expertise in materials science, biostatistics and Earth systems," says Rob Lipson, dean of science. "The research these chairs do is vital to understanding the world around us, and promises to have an impact far beyond the university."

#### Lab-on-a-chip technologies

As the Canada Research Chair in New Materials and Techniques for Health Applications, Katherine Elvira works at the intersection of chemistry, biology and engineering. Working with the pharmaceutical industry and health care organizations, she's developing microfluidics technologies

that manipulate miniscule amounts of a sample substance on a single chip.

"Microfluidics can help save time and resources," says Elvira. The technology will help medical researchers test the properties of a potential new treatment, determining how a drug will transport in the human body before doing live-testing. She's also developing platforms that will allow health care workers to rapidly and accurately assess patient status and deterioration.

#### Bird's-eye view of geohazards

Edwin Nissen, the Canada Research Chair in Geophysics, studies geohazards across the world, from the subduction zones of the Cascadia plate boundary to recent earthquakes in Iran and New Zealand.

Clarifying the characteristics and behaviour of subduction zones is

vital to predicting patterns of rupture, ground shaking and tsunamis. "A recent global surge in seismic events has overturned the consensus on how seismologists think about these areas,"

At UVic, he's gathering data from across northern Cascadia to better understand the characteristics of the seismic hazard. He uses cutting-edge space-borne and airborne sensors to map surface deformation and topography associated with earthquake faulting.

#### **Unravelling big data**

As the Canada Research Chair in Biostatistics and Bioinformatics, Xuekui **Zhang** develops statistical algorithms and software for analyzing genomic data, and applies them to help biological and medical researchers.

"Next-generation sequencing tech-

nologies are creating huge amounts of genomic data," says Zhang. "This creates exciting opportunities in biological mechanisms and medical research, but to take advantage of this, researchers need to efficiently analyze the big data generated from sequencing genomes, extract useful signals and precisely interpret the results."

That's where Zhang comes in. He's collaborating with medical researchers, such as those at the BC Cancer Agency and Fred Hutchinson Cancer Research Center, and researchers in a variety of other fields to develop effective experiments and understand the data they've gathered.

All three are five-year Tier 2 chairs, which go to researchers who are acknowledged as having the potential to lead in their field. For each chair, the university receives \$100,000 annually.

The new chairs bring UVic Canada Research Chairs to a total of 38.

## ringers

Long lineups, poor signage and garbled announcements over a loudspeaker can be a nuisance for any traveller. But for older adults, they can present significant roadblocks. These are some of the findings in "Older Canadians on the Move," a new report by an expert panel chaired by Neena Chappell, professor emeritus (sociology) at UVic's Institute on Aging and Lifelong Health. The report, released by the Council of Canadian Academies, identifies key obstacles and makes recommendations for adapting Canada's transportation system to meet future needs. By 2036, one in four people will be 65 or older. Full report at scienceadvice.ca

An honorary Doctorate of Literature was bestowed upon UVic Chancellor Shelagh Rogers by Carleton University in November. The honor recognizes her outstanding contributions to Canadian culture, Indigenous relations and advocacy for the support of people struggling with mental health. A veteran broadcast journalist, Rogers is the host and producer of *The Next* Chapter, a CBC Radio program devoted to Canadian writing. She moved to BC in 2003 after 23 years working on cultural and current affairs radio programs with CBC. She became UVic's 11th chancellor in January 2015.



### Goodbye CARBC, hello CISUR

**BY AMANDA FARRELL-LOW** 

What's in a name? For UVic's Centre for Addictions Research of BC (CARBC), many things. Which is why it's now known as the Canadian Institute for Substance Use Research (CISUR).

The name change follows an extensive consultation process with scientists, researchers and stakeholders, and was approved by the UVic Senate in November.

"Our organization has grown and changed dramatically since its inception nearly 15 years ago," says CISUR director Tim Stockwell. "Our new title more accurately reflects the nature of our work and the scale on which we're operating."

The decision to change the name from BC to Canadian reflects the national and international scope of many of CISUR's activities. For example, investigations on how alcohol policy impacts health have involved collaborations with organizations in the UK, Sweden, the US, Australia and other countries.

Overall, CISUR has over 100 collaborating scientists and centres, research affiliates, partner institu-

tions and community collaborators spread across Canada and around the world.

It was felt that the term "institute" is a more accurate representation of the breadth of expertise among CISUR's faculty and students, as well as the scale of research and knowledge mobilization activities.

The change from "addiction" to "substance use" was chosen to reflect the institute's focus on broad patterns of substance use across society and policies that influence overall levels of use and harm. CISUR's mandate extends beyond exclusively addressing what might traditionally be referred to as "addiction."

The name change comes at a time when CISUR's work is more important than ever, says Stockwell.

"Our favourite recreational substance, alcohol, is being rapidly deregulated," he says. "Less hazardous, but not completely safe ways of using nicotine have been discovered. The use of and harms from both prescription and illicit opioids have reached epidemic proportions. And cannabis is about to be legalized."

Info: uvic.ca/research/centres/cisur



ONC staff on sea ice with local guides at Gjoa Haven. PHOTO: ONC

### Local knowledge, community needs drive Arctic sea ice research

**BY JODY PATERSON** 

Expanded community engagement into more Arctic communities is helping UVic's Ocean Networks Canada (ONC) carry out the ocean science that matters most to the people who live in Canada's North.

ONC received \$247,000 from Polar Knowledge Canada (POLAR) in December to expand its successful community-engagement program in Cambridge Bay, Nunavut, to the communities of Kugluktuk and Gjoa Haven. The two-year grant, focused on the science of sea ice, continues POLAR's support for ONC's community engagement efforts in the Arctic.

"Research driven by the needs of a community is well-established in areas such as health and social work, but it's lagging in the sciences," says Maia Hoeberechts, project lead at ONC.

"We have the intention with all of our projects of doing scientific work in ways that are meaningful to the communities we work with. But what really excites me about this one is that it's the first time we've been funded exclusively to work with the communities, with the option to develop a follow-up research proposal with them if there's interest."

The study of sea-ice processes is a key aspect of understanding climate change in the Arctic. Ice growth, melt rates and ocean acidification are all affected by increasing amounts of carbon dioxide and other greenhouse gases in the

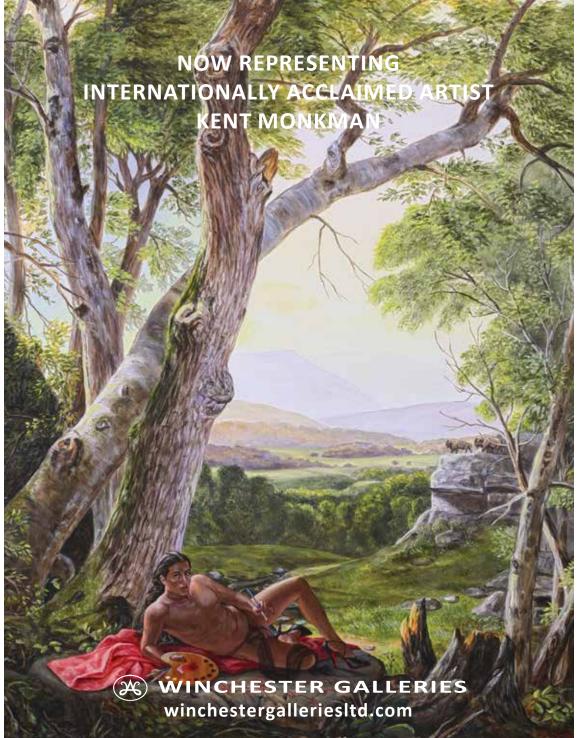
atmosphere, largely a result of burning fossil fuels.

ONC will conduct interviews with youth, hunters, Indigenous elders and non-Inuit community members in Kugluktuk and Gjoa Haven as part of the project, and will replicate its two successful youth engagement programs launched in Cambridge Bay in 2014

Young community members are encouraged to make their own observations, analyze ONC data and talk to Indigenous Elders. The project will also train college students in the North in ONC instrumentation.

The project will improve accessibility of information for people in Arctic communities by translating and sharing data from ocean monitoring bodies including Fisheries and Oceans Canada's Canadian Ranger Ocean Watch program and the Canadian Ice Service—both partners in the project. That data will be shared with the public as well as via Oceans 2.0, ONC's data portal for deep-sea information collected by its network of undersea observatories.

ONC has been collecting data and detecting environmental change in the Arctic Ocean for more than five years at Cambridge Bay. The state of sea ice due to climate change is a global concern, and scientific conjectures that the Arctic Ocean will be ice-free by 2030 has accelerated the need for understanding how the Arctic functions and responds to climate change.



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## Research, new book shine spotlight on forgotten hero's wartime efforts

#### BY STEPHANIE HARRINGTON

Thirty-six harrowing stories of survival that retrace the wartime diplomatic efforts of Switzerland's forgotten Schindler—a diplomat named Carl Lutz—come to life in new research published by a UVic historian after a chance discovery three years ago.

Charlotte Schallié from UVic's Faculty of Humanities found out about Lutz during a trip to Budapest, where she came across a monument to him while researching her own grandmother, who had been killed at Auschwitz.

Schallié, who is Swiss but had never heard of Lutz, found and then worked with Lutz's stepdaughter, Agnes Hirschi, to collect testimonies from survivors in Switzerland, the US, Canada and Israel.

Schallie's findings were published in November in the book, *Under Swiss Protection: Jewish Eyewitness Accounts from Wartime Budapest*, co-edited with Hirschi.

Lutz, who is credited with saving 60,000 Hungarians in the largest civilian rescue operation of Jews in the Second World War, was the Swiss vice-consul in Budapest during the last three years of the war.

While the heroic efforts of German businessman Oscar Schindler and Swedish diplomat Raoul Wallenberg have been widely celebrated, the actions of Lutz, his wife Gertrud Lutz-Fankhauser and other people who helped form the rescue team remain largely unknown, says Schallié.

"My hope is these survivor accounts will make Carl Lutz's story much more well-known," she says. He was a deeply religious and principled man who undertook these efforts at great personal risk."

Hirschi visited Israel in November for the unveiling of a monument for her stepfather. She says Lutz was given a desk job after the war and was never thanked for his humanitarian efforts because he had violated Swiss neutrality.

"I had promised my stepfather on his deathbed that I would do my best that his rescue activity would not be forgotten," Hirschi says. "The youth and coming generations should know about the atrocities during the war and that they should never happen again."

In 1942, Lutz organized the issuing of Palestine certificates to help more than 10,000 Jewish children and youth reach Palestine by March 1944. Shortly after, Lutz authorized the production of 50,000 letters of Swiss protection, called *schutzbriefe*, designed to guarantee the safety of each person named until they were able to emigrate.

He established 76 safe houses, which were under Swiss protection, to house more people including a former glass factory that became known as the Glass House. It alone ensured the safety of some 3,000 Jews during the Nazi occupation of Hungary.

Schallié says other governments such as Sweden, resistance fighters and the International Red Cross followed Lutz's example and started issuing protective letters. By the war's end, close to 124,000 Hungarian Jews survived in Budapest, half of those due to Lutz's efforts.

*Under Swiss Protection* is published by Ibidem Press and distributed by Columbia University Press.



Schallié. PHOTO: CHORONG KIM



Carl Lutz, his wife Magda Grausz and stepdaughter Agnes Hirschi in 1949. ARCHIVES OF CONTEMPORARY HISTORY IN ZURICH

## ringers

Andrea Giles (co-operative education program and career services) has been awarded the inaugural Co-op Lifetime Achievement Award from the Association for Co-operative Education BC/Yukon (ACE). Giles is a champion of co-operative education at UVic and has supported the expansion of work-integrated learning initiatives across the province through two decades of work with ACE. Giles received ACE's **Outstanding Contribution Award** in 1998 and 2009, as well as the Canadian Association for Co-operative Education's Service Award in 2000 and 2015.

Aaron Devor, Chair in Transgender Studies, received national acclaim in late November with a 2017 Equity Award from the Canadian Association of University Teachers. The award recognizes "outstanding commitment to challenging exclusionary behaviours and practices such as racism and homophobia and by so doing making postsecondary education in Canada more inclusive." Devor works with some of the world's top researchers, scholars, thought leaders, transgender community activists and students to increase knowledge about a broad range of topics concerned with the lives and circumstances of trans, gender nonbinary and two-spirit people.



## ringers

Lindsay Tedds (public administration/economics) an expert in applied economic research and policy analysis, has been appointed chair of a task force to advise the BC government on how to eliminate medical premiums within four years. Tedds and a group of experts will consult with citizen's groups and businesses to make recommendations in a report due March 31, 2018.

Elizabeth Borycki (health information science) has won the inaugural Women in Leadership Award in Digital Health from Digital Health Canada. Borycki's innovative research on health care information system safety has influenced countries around the world. She developed the first nursing informatics master's degree in Canada, offered only at UVic, and is regarded as one of the first health care practitioners to develop Canadian informatics competencies.

Trevor Hancock (public health and social policy) has received the Lifetime Achievement Award from Health Promotion Canada. Career highlights include helping initiate and promote the Healthy Communities movement in Canada and globally, and developing the concept of healthy public policy. Hancock is a consultant to the provincial and federal governments, the World Health Organization, and local communities and health care organizations. He also writes a regular column on public health and health promotion for the *Times* Colonist.

Yang Shi (mechanical engineering) was recently appointed as a coeditor-in-chief of IEEE Transactions on Industrial Electronics. One of the leading journals in the field of electrical engineering, the international monthly covers the applications of electronics, controls and communications, instrumentation and computational intelligence. Shi is an expert in the long-distance control of machines and electrical systems, also known as networked control systems. IEEE is the world's leading professional association for advanced technology, with 400,000 members in 160 countries.

## Indigenous knowledge crucial to future of fisheries

BY ANNE MacLAURIN

For thousands of years, First Nations along BC's central coast have told stories about the abundance of marine life, including Dungeness crab and yelloweye rockfish—two culturally and ecologically important marine species.

But today, both species are in such decline there's not enough for Indigenous peoples to meet their food and ceremonial needs. Recently, Indigenous fishers shared information with researchers to fill in the data gaps.

"Traditional and local ecological knowledge are increasingly recognized for their capacity to complement ecological data and improve fisheries management," says UVic conservation scientist Natalie Ban (environmental studies). "Indigenous peoples' cultures, practices and beliefs represent a lifetime of observations that complement a scientific framework."

"AN OPPORTUNITY EXISTS
FOR CANADA TO IMPLEMENT
A POLICY SHIFT TOWARD A
JOINT FISHERIES MANAGEMENT
APPROACH WITH FIRST
NATIONS." — UVIC GRAD
STUDENT LAUREN ECKERT

The Central Coast Indigenous Resource Alliance (Wuikinuxy, Nuxalk, Kitasoo/Xai'xais, Heiltsuk nations) partnered with Ban on two recent publications about the status of Dungeness crab and yelloweye rockfish. By interviewing Indigenous fishers, Ban and collaborators were able to fill in data gaps for the Dungeness crab (where no data existed in the study region) and yelloweye rockfish (where no data existed prior to 2003).

"Indigenous knowledge is crucially important in contributing local observations, especially where no biological data exist," says Ban.

"We uncovered severe reductions in Dungeness crab catch rates and our modelling work showed that an estimated eight of nine sites do not have enough crabs for Indigenous fishers to meet their families' needs," says Alejandro Frid, science coordinator of the Central Coast Indigenous Resource Alliance, an adjunct professor at UVic and co-author in both studies.

"Yelloweye rockfish are about half the size they used to be," says Ban, "which means many are being caught without having a chance to reproduce."

Over thousands of years, coastal BC First Nations have developed complex management strategies suited to species within their territories. These strategies are passed from one generation to the next through stories, ceremonies, family lineages, norms



Measuring a Dungeness crab. PHOTO: TRISTAN BLAINE

and harvesting practices.

"Despite the impacts of industrialization and colonization," says Ban, "communities still harvest local ocean resources for food and cultural well-being, and try to influence their management."

Ban hopes that considering both Indigenous knowledge and science—and integrating them when appropriate—will address the modern fishery problem and provide a collaborative approach applicable to BC and elsewhere in the world.

An outcome of Ban's collaborative

work with Central Coast First Nations has been a recently formed working group with the Fisheries and Oceans Canada to improve the evidencebased management of Dungeness crab.

Funding was provided for the research projects by the Marine Environmental Observation Prediction and Response Network (MEOPAR), the Social Sciences and Humanities Research Council, the National Sciences and Engineering Research Council, the National Geographic, Tides Canada Foundation and the BC Marine Planning Fund.

## Frog genome mapping sheds new light on environmental contaminants

**BY VIMALA JEEVANANDAM** 

A UVic molecular biologist has gained new insights into how environmental contaminants may disrupt thyroid systems. The discovery was made while assembling the genome of the North American bullfrog.

Caren Helbing's findings could help explain the mechanisms of early development, as well as how environmental contaminants cause thyroidrelated diseases and malfunctions.

While bullfrogs might be best known as an invasive species in much of Canada, they are also vital animal models for scientific research.

"Understanding the mechanisms of gene expression in bullfrogs provides valuable insights, with applications in human health, conservation and developmental biology," says Helbing.

For a tadpole to turn into a frog, a genetic process is set in motion by thyroid hormones. Helbing's research found that this metamorphosis involves thousands of non-coding genes. Unlike genes that code for proteins,

which are the building blocks of life, noncoding genes are still a puzzle to researchers.

"The takeaway for human health is that non-coding genes may also be at play during early development," says Helbing. "Understanding the mechanism of non-coding genes will help us understand how the thyroid system is affected during gestation, and how environmental contaminants can disrupt this process."

Helbing's lab is the first to map the full genome of any "true frog"—the family of frog species with the largest global distribution. True frogs are sentinel species, signalling by population distress or absence that there is environmental degradation.

"Two-thirds of amphibians are either threatened or declining. Some populations are being wiped out by diseases like chytrid fungus and ranavirus," says Helbing. "Genomic information can help us determine what's happening, and how to stop the decimation of these species."

Helbing's results were published in

Nature Communications in November. The work was funded by Genome BC and the Natural Sciences and Engineering Research Council, with additional support provided by the National Human Genome Research Institute of the US National Institutes of Health.



Bullfrog. PHOTO: NAZISH SABA



