Every year I’m proud to share stories of discovery, accomplishment and collaboration with our global community that exemplify the UVic mission—to contribute to the betterment of our society and our world through scholarship, teaching and research.

For each breakthrough chronicled this year, there are countless others across our campus—and more developing each day. These achievements are inextricably bound with the energy of discovery and commitment to excellence that live in the heart of our research-intensive university.

The work done by our students, faculty and staff is helping to shape our future. I hope you’ll take a moment to review our year’s highlights—a clean energy, oceans research, student, faculty and staff contributions that help to define UVic’s identity.

Welcome to the University of Victoria’s annual review for 2010-11.

David H. Turpin, CM, PhD, FRSC, president

From the president

Largely due to the Institute for Integrated Energy Systems (IESVic), UVic is a world leader in the development of sustainable energy technologies with real-world, practical applications.

Energy is a crucial element of society—it is essential for communities to work together. But our reliance on fossil fuels has a limited impact on the climate change, sustainability issues and unstable supplies of energy. Canada and the world need a roadmap to a different energy future.

Back in 1989—well before energy industry executives, governments and the public understood the severity of the climate change challenge—UVic founded the Institute for Energy Systems (IESVic) to develop and promote feasible energy solutions.

Since then, IESVic has become an internationally recognized leader in the development of sustainable energy technologies with real-world, practical applications. Working closely with private and public sector partners in Canada and around the world, IESVic researchers investigate entire sustainable energy systems—from the harnessing, storage, transmission and conversion of new energy sources to the delivery of services to communities and industries.

IESVic pioneered Canada’s first major university-industry research partnership to study fuel cells and hydrogen systems. Engineers at IESVic used computer models to explore what a large-scale hydrogen economy would look like. And they redesigned fuel cells to be smaller and more efficient. The work resulted in the transfer of 18 patents to industrial partners and spawned a host of new business ventures. It also solidified IESVic’s place at the forefront of energy systems research.

International scope

In May 2010, IESVic hosted the second annual Canada-China Clean Energy Workshop, where 15 leading energy system researchers from across Canada and China got to know each other and explore collaborative research opportunities.

The workshop included discussions on climate change and the need for science-based solutions, but also focused on new horizons in renewable energy, including fuel cells, smart grid technology and green vehicles.

While plans are already under way for next year’s workshop—to be held in Beijing—this year’s event is definitely being seen as a success. “Many new relationships were formed between Chinese and Canadian researchers, and plans for a number of exciting collaborative projects were generated,” explains IESVic Director Peter Wild.

Real-world solutions

Many of the projects that will shape our energy future are already underway. Today, IESVic investigators areas as diverse as fuel cell science, cryo fuels, hydrogen technology, energy systems analysis and energy policy development, as well as alternative energy sources such as wind, solar, run-of-river hydro, tidal and wave power.

A big picture approach

Over two decades, IESVic has forged strong collaborative links with leading industrial partners and public sector decision-makers across Canada and around the world. Research partners include utilities, car manufacturers, transportation planners, renewable energy device developers, First Nations communities, governments, and university researchers in more than 15 countries.

IESVic’s multidisciplinary approach is unique, as energy research often is pursued from a single disciplinary perspective. At the institute, engineers, scientists and social scientists come together to examine the “big picture” in energy systems—from fuel extraction through to service provision.

To cover the broad spectrum of energy systems research, research at IESVic focuses on five research themes:

- Hydrogen and fuel cell systems
- Renewable energy systems
- Techno-economic modelling
- Transportation
- Carbon management

Largely due to IESVic’s research successes, UVic is now ranked the fifth most influential university in the world in the field of energy and fuels. In North America, only Princeton, Cornell and the US National Renewable Energy Lab are rated higher.

2010-11 at a glance

CLEAN ENERGY

- New PICS research projects include a boost for clean energy. In May 2011, the UVic-hosted and led Pacific Institute for Climate Solutions (PICS) announced $8 million in new funding for 17 BC-led projects aimed at finding solutions to the environmental, social and economic challenges—and opportunities—brought about by climate change. Project durations range from eight months to 2.5 years and come under one of the PICS research themes: the low carbon emissions economy, sustainable communities, social mobility, and resilient ecosystems. UVic-based projects include evaluation of wave energy converters and design and testing of wind turbines. http://bit.ly/UVICarbon

- Nanotechnology from solar cells to cancer screening. Two leading researchers in nanotechnology research received this year’s Craigdarroch Award Silver Medals for work fabricating and investigating the properties of nano-scale metallic structures. Chemist Alexandre Boullo and engineer Rennet Gordon are both working in this field, with a variety of likely applications including sensors for cancer diagnostics and the creation of more efficient solar cells. http://bit.ly/2011Nano

- From biosfuels to the biokinetics of disease. The research of biochemist Alasdair Botan, which focuses on environmental polysaccharides (including plant cellulose and scoured) as well as the role of carbohydrate-active proteins in infections and genetic diseases, also spans the gamut from clean energy research to health. His work on polysaccharide biosynthesis holds the potential to yield carbon-neutral biofuels, and his work in human health includes an understanding of basic biological processes that result in diseases such as a microbial infections and protein storage disorders.

INNOVATION AND ENTREPRENEURSHIP

- A new name for excellence: the Peter B. Gustavson School of Business. In November 2010, UVic celebrated the renaming of the Faculty of Business to the Peter B. Gustavson School of Business. This is the first time in UVic’s history that a faculty has been named after an individual. Gustavson was involved in the Faculty of Business since 1973 as an employer, member of its advisory board, executive-in-residence and dean of the Distinguished Entrepreneurs and Distinguished Managers: Year Award event that he helped establish. http://bit.ly/UVI2011Gustavson

- Innovative engineering degree program wins business award. UVic’s engineering entrepreneurship master’s program is one of the ”25 Most Innovative Companies” in BC. That’s according to BC Business Magazine, which describes the program as “innovatively unique” and “groundbreaking” ideas that have a business plan encoded in their DNA.” Through a unique partnership with Wesley Clover International, an Ontario-based investment company, UVic engineering students are being given the opportunity to graduate with a master’s degree, a diploma in entrepreneurship delivered by the Gustavson School of Business, and equity in a business they helped form. http://bit.ly/UVI2011Gustavson

- UVic Industry Partnerships put knowledge to work. UVic’s industry liaison office, formerly known as Innovation and Development Corporation (i2c), is now UVic Industry Partnerships, or UViP. “Our new name reflects the value and emphasis we place on working with the private sector to develop UVic technologies in a way that adds value for our researchers, our partners and the economies,” explains Brent Storring, president and CEO of the unit. http://bit.ly/UVICorp

Largely due to the Institute for Integrated Energy Systems (IESVic), UVic is a world leader in the development of sustainable energy technologies with real-world, practical applications.

An IESVic researcher investigates gas-dispersion patterns to improve the safety of hydrogen fuel cells.

"IESVic fills a niche that brings industry and academia together to solve some of the world’s more difficult problems.”

—Nigel David, graduate
There was something ironic about the deluge of media attention that followed the February 2011 release of a new study linking an increase in the intensity of extreme precipitation events to human-induced global warming.

At the centre of the flood was UVic climatologist Dr. Francis Zwiers, one of the paper’s co-authors. “There was something ironic,” he says. “When tsunami waves radiated outward across the Pacific after the March 11, 2011 earthquake off the coast of Japan, sensors on the ocean floor off British Columbia helped coastal residents and emergency planners know what to expect when the waves hit Canada.”

The study was featured on the cover of Nature, one of the world’s premier science journals. It offered the strongest evidence to date that human-induced global warming is responsible for the observed increase in the intensity of heavy rain and snow events in the northern hemisphere over the past several decades.

Coverage of the story crossed the globe, including front-page coverage in the New York Times, USA Today, Le Monde and the Sydney Morning Herald. Concerns about climate change and flooding stresses on our communities (except Antarctica) to report on the study’s findings.
The LE,NONET research project has dramatically improved the culture and climate for Indigenous student access and success at UVic. Any student entering university can feel a bit out of place. To some extent, this is normal. As its best, post-secondary education is designed to be full of new challenges, offering a wealth of opportunities to explore, test and develop new ideas. What’s more, even a mid-sized college or university campus can be a confusing but exciting, cosmopolitan place. For many students, university is also their first taste of life as an adult, away from the communities where they grew up, and a step away from the expectations and support of their families and friends. But for Indigenous students, those challenges have historically been difficult to navigate, with conflicting claims on identity and a distance from their home communities. At UVic, a range of programs exist to help students from all backgrounds adapt to campus life. And since its inception in 2005, one cornerstone of support for Indigenous students has been the LE,NONET project—named for a Straits Salish term that means “success after enduring many hardships.”

The first program of its kind in Canada, the LE,NONET research project (pronounced LEE-non-it) has been important in improving Indigenous student success at UVic, and in demonstrating the supports that can be put in place to help Indigenous students at colleges and universities across Canada.

Supporting Indigenous values and community

More importantly, student participants in the project reacted positively to LE,NONET’s work to acknowledge and respect Indigenous identity, foster Indigenous community on campus, and value Indigenous practices and ways of knowing. Based around a suite of student-focused programs including peer mentoring, bursaries and emergency relief funds, preparation seminars, community internships and research apprenticeships developed with the support of the Canadian government and input from Indigenous groups, LE,NONET dramatically improved student outcomes. (There was also an additional program for UVic faculty and staff to support student participants.)

The pilot phase of the program, from 2005 to 2009, proved to be an unqualified success, giving researchers, participants and partners an opportunity to investigate program models for supporting the success of Indigenous students in their university studies by providing a culturally grounded, supportive environment.

Between 2005 and 2009, LE,NONET students experienced:

- 30% per cent increase in term-to-term continuation
- 30% per cent increase in graduation rates
- 45% per cent reduction in withdrawal rates

LE,NONET participants also remained in their academic programs for an additional year when compared to Indigenous students who didn’t participate in the program.

Continuing the program

Although the pilot phase of LE,NONET wrapped up in 2009, a number of programs developed as part of the widely praised project will continue at UVic. Thanks to $35,000 in one-time funding from the Government of British Columbia announced in March 2011, LE,NONET will continue to enhance the experience and opportunities of Indigenous students by:

- Increasing the amount of funding for bursaries so that interested students can apply for bursaries for both the summer and winter terms.
- Expanding the elder-in-residence program.
- Doubling the number of research apprenticeships and community internships so that LE,NONET students can experience both programs.
- Expanding the mentorship program beyond current UVic Indigenous students to include Indigenous students in local high schools—easing their transition into university.

Continuing the research component of the LE,NONET project by tracking the participation of First Nations, Métis and Inuit students and the success of the current LE,NONET students.

A success for students, and for educators

The pilot phase of the LE,NONET project demonstrated that substantial improvements can be made in the context of a mainstream university, through a combination of supports and respectful, reciprocal partnerships with Indigenous communities. The benefit is clear: through both LE,NONET and the university’s wider commitment to attract, include and retain Indigenous students, enrolment has gone from fewer than 100 students in 1999 to about 700 today — nearly 5% of whom are graduate students.

That’s a success story worth telling, and passing along.

“Success to me means that I can complete my program and while doing that acknowledge my Aboriginal background and be supported by that. And really be able to explore it, and not compromise for background for any achievements in academia.”

— LE,NONET student

2010-11 at a glance

INDIGENOUS AND CULTURAL STUDIES

Tradewinds scholarship for study of Indigenous law, Johnny Mack, a PhD candidate in UVic’s Graduate Program in Law and Society, was awarded a Tradewinds Foundation scholarship to support his work studying the legal frameworks of the Ninahchuk-thinh people of Vancouver Island. [http://bit.ly/extr6]

Linking law and Indigenous rights. In October 2011, UVic Law and the Cowichan Tribes brought together representatives from several First Nations, in a framework set by Cowichan norms, for a conference on Indigenous Law. Later that month, the Project North Run for Justice presented a ceremonial talking stick to the Faculty of Law in appreciation of this support the faculty has given to First Nations communities over the years. [http://bit.ly/extr8]

Mini-U summer camps introduce Indigenous students to campus. BC students of Indigenous ancestry from grades eight to 12 attended UVic’s eighth annual Indigenous Student Mini-University Summer Camp in 2011. The camp included campus tours, talking circles, writing exercises, whale watching and cultural performances. [http://bit.ly/extr10]

Digitizing the records of an immigrant community. A gift from the Chinese Consolidated Benevolent Association will help UVic Librarians share the association’s story with the community at large through the digitization and translation of its significant at-risk historical documents. [http://bit.ly/extr11]

Holocaust memorial field school. Students in the I-witness Holocaust Field School, launched by the Department of German and Slavic Studies, travelled to Central Europe to explore how the sights, sounds and history of the Holocaust have been preserved at historical sites, museums and monuments—and also witnessed how the lessons of that time are relevant today. [http://bit.ly/extr12]

FINE AND PERFORMING ARTS

Writing scholars enrich campus.

Three internationally recognized authors supplemented the electric environment of Fine Arts this year: multi-disciplinary artist Rebecca Belmore (work pictured), Ottawa journalist and storyteller Richard Wageman, and screenwriter and playwright Daniel MacIvor. [http://bit.ly/extr13]

Writing student wins PRISM prizes.

Third-year writing student Erin Fisher was elected as the Grand Prize Fiction winner in the 2011 PRISM International poetry and fiction contest for her 1,500-word short story “Bridges.” The first and second place awards in the previous year’s contest were also won by UVic writers. [http://bit.ly/extr14]

Legacy Gallery expanded. Reopened in August after renovations, the Legacy Art Gallery in downtown Victoria now has larger and more flexible spaces for exhibitions drawn from the university’s extensive art collections. The Legacy Gallery complements the McPherson Prints and Drawings Gallery at the MacPherson Library, and extensive installations of art across campus, in making art accessible to community members, students and scholars. [http://bit.ly/extr15]
Thirty-five years after launching one of Canada’s largest co-operative education programs, UVic’s Co-operative Education Program and Career Services reached new heights, celebrating 60,000 co-op work term placements in February 2011.

In the spring of 1976, 15 years after the launch of UVic’s co-operative education program, biochemistry student Britney Allen secured the program’s first co-op work term when she was hired by Science Venture to work as a science and technology camp instructor. She provided hands-on science, engineering and technology learning opportunities for students entering grades one to six.

‘It says ‘big kid’ on the back of my shirt, and that’s pretty much what my job is,’ says Allen. ‘It’s like sharing my enthusiasm for science with students. This experience has taught me that I might want to become a teacher, which is something that I wasn’t sure of before. I had no idea that classroom management and curriculum development could be so interesting, challenging and engaging.’

UVic’s award-winning Science Venture program conducts summer camps and classroom workshops across Vancouver Island and BC, inspiring youth to explore the possibilities of science, engineering and technology.

Putting learning into motion

Like many co-op students, Allen heard about the co-op program when she first applied to UVic, and declared co-op would be the ideal way to alternate her academic experiences with relevant real-life learning in the workplace. ‘I thought it would be interesting to try different job opportunities and add that to my UVic experience.’

Allen is one of more than 20,000 students who have pursued a co-op degree at UVic since the university’s co-operative education program was established in 1976. To date, co-op students have completed more than 15,000 years of work and have earned more than $600 million in salaries. UVic’s co-op program does more than provide students with work experience—it gives them the opportunity to work alongside professionals in their fields, explore possible career routes and put their learning into motion. The program also connects UVic to the community by forging partnerships with employer organizations. In fact, many employers use co-op as a recruitment tool and hire former co-op students as full-time employees.

‘Co-op is such a multi-faceted tool,’ says Norah McRae, executive director of UVic Co-op and Career Services. ‘It’s a learning strategy but it’s also a way to generate lifelong engagement—it gives them the opportunity to work alongside professionals in their fields, explore possible career routes and put their learning into motion.’

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A competency-based approach

Not only is UVic’s co-op program one of the largest in Canada, it’s also a trailblazer. UVic co-op is the only Canadian co-op program to use a competency-based assessment model—during each work term, students and employers assess student learning in relation to co-op competencies, as well as program-specific, professional and international competencies. All UVic co-op students began applying this model to their work terms in the summer of 2011 and competency assessment tools are now available to any UVic student or alumni at www.uvic.ca/competencies/co-op.

Co-op facts

One in four UVic students participates in co-op.

Nearly 5,600 placements are completed each year in Victoria, across Canada and around the world.

UVic’s co-op program was established in 1976 in the Departments of Chemistry and Physics. The program secured 14 placements in its first year; today it includes 15 co-op offices that provide opportunities for students in 47 academic areas.

Career support beyond co-op

Co-op and Career Services supports students in all aspects of their career development. In addition to administering 15 co-op programs, staff members provide career support to all UVic students and alumni. Services include one-on-one career appointments, help with resumes and cover letters, career preparation workshops, and access to job postings of all kinds. Support details at www.uvic.ca/coopandcareer and postings at https://learninginnovation.uvic.ca.

Three kits, hundreds of resources

Students and alumni can find more than 150 career-related resources on the Co-op and Career website at www.uvic.ca/coopandcareer.

Created in the fall of 2010, the site highlights include a career strategy kit, competency kit, and a work search kit.

2010-11 at a glance

SOCIETY AND HEALTH

Funding boost for assistive technologies. In June 2010, BC Premiere Christy Clark visited campus to announce a 2.5-million grant for two innovative projects involving technology that will help seniors and people with disabilities remain as independent as possible. CanAssist, a UVic organization dedicated to improving the quality of life and promoting the independence of those with disabilities, is a partner in both projects. http://bit.ly/uvicar71

Biomedical engineer “automates” HIV. Groundbreaking research by Dr. Stephanie Willelts has significantly advanced HIV knowledge and treatment prospects. Willelts and her team studied approximately 10,000 different versions of the virus, allowing them to locate the specific genes of the virus that provide resistance to drugs—knowledge that could help researchers develop more effective treatments for HIV. http://bit.ly/uvicar72

Protein research aimed at the future of forests and human health. In July, 2010 Dr. Christoph Bonhan, one of the world’s top proteomics researchers, was appointed the Don and Eleanor Rex BC Leadership Chair in Biomedical and Environmental Proteomics for groundbreaking biochemical protein research that is opening the door for a new generation of advances in medical testing and forestry management. http://bit.ly/uvicar73

Aging population not responsible for medical cost increases. Genetic predictions that our rapidly aging society will see a “grey tsunami” to overwhelm and bankrupt our health care system aren’t accurate, according to a study led by geronologist Nenna Chapell. http://bit.ly/uvicar74

CORE support to educational needs. The Faculty of Education launched the Centre for Outreach, Education (COE), a multidisciplinary centre dedicated to enhancing the education of children and youth in our local communities, whose mission is to not being these schools and current government programs. http://bit.ly/uvicar75

English Language Centre 40th anniversary. UVic’s ELC—which is part of the Division of Continuing Studies—is one of the oldest English language schools in Canada. It offers English programs to French-speaking elementary students in 1970, soon followed by specialized programs for Japanese university groups. Forty years later, the ELC still receives over 150 French Canadian and 300 Japanese students a year, along with students from 50 other countries around the world. http://bit.ly/uvicar76
Honours and awards
UVic is, above all, a diverse community of extraordinarily gifted people, dedicated to the pursuit of knowledge and its application in the service of society. Here are just a few of the awards and honours bestowed in the past year upon our students, faculty and graduates in recognition of their outstanding achievements.

Chris Barnes (neat fireworks Canada) Brady Medal, Microbial Societies of Canada
Shailoo Bodh and Carlie Graham (librarians) National Indicative Education Award from the Canadian Association for Community Living and the British Columbia Association for Community Living
Ashoka S. Bat (engineering) 2010 Wighton Fellowship, Sandford Fleming Foundation
Brian Bird (law student) clerkship at the Supreme Court of Canada
Daniel Péter Biró (music) Giga-Hertz

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Daniel Péter Biró (music) Giga-Hertz—

Sustainable Operations

One of Canada’s greener employers. For the second year in a row, UVic was named as one of Canada’s 10 Greenest Employers. http://bit.ly/greenest

Two more campus buildings meet gold standard. The UVic Administrative Services Building and First Peoples House were both certified as achieving LEED gold status in environmental design and sustainability. Five buildings on campus have now met this standard.

Revenues by source 2010/11

Student financial aid

Allocations of funds raised 2010/11

External research grants and contracts

Governance

Chancellor
Murley Farmer

Executive
David H. Turpin
President & Vice-Chancellor
Rebecca Truscott
Vice-President Academic & Provost
J. Howard Brunt
Vice-President Research
Valerie Rhonson
Vice-President External Relations
Julia Eastman
University Secretary
Cagle Gellit
Vice-President Finance & Operations

Board of Governors

Raw Basí (elected by students)
Joan Bowie (elected by students)
Murley Farmer
Tony Gagl
Michael Kennedy
Lindsay Lamberg
Jane Butler-McInnes
Suzan Mahnag, Chair
Erlich Mohn
Tara Paterson (elected by students)
Ray Pratt
David H. Turpin
Beverly Van Buuren
Barbara Whittington (elected by faculty)

Honorary degrees conferred

November 2010
Juan Wilkins, pioneering nursing theorist and educator
Shelma Watts-Cloutier, human rights advocate for the Inuit
Nom. Lema Harrison, sociologist, educator and former Canadian Senator
Norman Riddell, former head of the Canada Millenium Scholarship Foundation
Nom. Kevin Lynch, retired clerk of the Privy Council of Canada
June 2011
Mary-Lou Furtney, First Nations archeologist conservation
John Purves, head organizer of the 2000 Vancouver Olympic and Paralympic Games
Ralf Dietz-Hofer, scientist at the helm of the CERN subatomic physics lab in Switzerland

Makalu-Altair/“Robert “Snomy” McRabilin, leading interpreter of Coast Salish culture

Erlodius
Highlights: the University of Victoria Annual Review, has been printed using vegetable-based inks manufactured with wind power—providing the following benefits to our natural environment,

- 650 lbs. of Mohawk Options paper
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