



## Nursing professor wins national teaching award

by Ken Faris

University of Victoria school of nursing professor and associate dean of graduate studies Dr. Gweneth Doane has been named a recipient of Canada's top university teaching honour—the 2006 3M Teaching Fellowship Award.

An innovative, enthusiastic teacher, role model, nurse and scholar, Doane is lauded by her students and colleagues alike for the creative ways she connects research and teaching, especially in the area of ethical practice in nursing.

"I've had the privilege of working in a university that values collaborative teaching and research," says Doane. "I have been joined by a great many others in my efforts to enhance educational experiences for students in higher education. I truly appreciate the support of my students and associates in nominating me for this award, but it's through their collaboration that my efforts have been successful."

Doane adds the 3M award to a list of honours, including UVic's Alumni Award for Excellence in Teaching in 2004, the Award for Teaching Excellence in the faculty of human and social development in 2000, and the inaugural award for teaching excellence from the Canadian Association

of Schools of Nursing in 2000.

Doane's accomplishments include co-designing the overall nursing curriculum for 10 B.C. post-secondary institutions, undertaking educational research initiatives, consulting widely on educational technologies, co-developing interdisciplinary courses, and serving in a number of administrative positions at UVic.

An early adopter of educational technology, Doane has contributed to the development of courses throughout the school of nursing. She also helped to establish UVic's family health centre, a multidisciplinary centre for family research, family services and educational opportunities for students studying for degrees in family-related fields.

Doane joins nine other Canadian university educators in receiving this year's 3M awards. Sponsored by 3M Canada and the Society for Teaching and Learning in Higher Education, up to 10 fellowships are awarded nationally each year to recognize teaching excellence and educational leadership.

Past recipients of 3M fellowships at UVic include vice-president academic Jamie Cassels, graduate studies dean Aaron Devor, David Berry (chemistry), Tom Cleary (English) and Andy Farqharon (professor emeritus).



Andrew Jimmy, foreground, and Joseph Thomas of the Esquimalt Singers and Dancers perform at the bighouse ceremony.

## Bighouse ceremony honours indigenous grads

"The evening was one of the highest moments in my life," says Chantelle Syrette, a new graduate from the University of Victoria's school of child and youth care.

On June 9, 15 graduates from the faculties of law, education, human and social development, social sciences and fine arts gathered at the Coast Salish Bighouse in Esquimalt to celebrate their achievements with family, friends and faculty.

The students were individually presented to the audience by a faculty member, who spoke personally about each student and his or her journey toward their goal. Students responded by sharing their personal experiences and challenges.

The faculty of human and social development, on behalf of the university, has been honouring indigenous graduates with a recognition ceremony since 1998.

An address by Dt. Mary Ellen Purkis, dean of human and social development, highlighted a commitment to increasing the number of indigenous students at the university and acknowledged the contributions and unique qualities that indigenous students bring to the institution.

"Each one of you reminds us how important it is to honour tradition

**SEE GRADS P.7**

## University names new VP finance and operations

The University of Victoria has a new vice-president. Gayle Gorrill, currently associate vice-president administration at the University of Calgary, will join the leadership team at UVic as vice-president finance and operations on Sept. 1.

Gorrill, chosen after a national search, comes to UVic with a wealth of experience in budget planning, financial oversight of capital projects and the renewal of major administrative systems. She'll arrive as UVic enters one of the most significant building booms in its history and

the university implements a multi-year project to replace its stand-alone administrative systems with unified, state-of-the-art information technology.

UVic's annual revenues now total \$470 million, including external research funding that has more than doubled to \$60 million in the past five years.

"Gayle is coming to UVic at an exciting and important point in our history," says UVic President David Turpin. "Her leadership skills, combined with the significant op-

portunities in front of us, mean that Gayle will be playing a major role in taking UVic to a new level nationally and internationally."

Gorrill's references describe her as a "high-performing individual," "natural leader" and "very strategic thinker," with "wonderful interpersonal skills" and a "collegial" and "very consultative leadership style."

As associate vice-president at Calgary since 2003, Gorrill has primary responsibility for the uni-

**SEE NEW VP P.6**

DIANA NETHERCOTT



Doane



# UVic research packs a wallop

The University of Victoria has been rated a leader in “publication effectiveness” by Research Infosource Inc. Canada, publishers of Canada’s Top 50 research universities list and Canada’s top 100 corporate R&D spenders list.

The company’s Canadian University Research Publications (CUP) report analysed the nation’s publication outputs from 1999 to 2004 in the context of the three university categories (medical/doctoral, comprehensive, undergraduate).

Using a new indicator developed

for the report called “publication effectiveness”—that is, a measure of the cost of research at each university against its impact/quality—Research Infosource designates nine Canadian universities as leaders in “publication effectiveness.”

UVic places third in the comprehensive category, following SFU and Concordia.

“The report’s findings confirm that UVic is a leader in university research and that we are giving maximum value back to those who support our research,” says Dr. Martin Taylor,

vice-president research.

UVic ranks consistently among the top comprehensive universities in Canada. Its researchers were awarded more than \$80 million in outside grants and contracts in 2005-06. It leads all Canadian comprehensive universities in medical and science grants per faculty member.

For more information about UVic’s “We’re Going Places” research campaign visit [www.uvic.ca/research](http://www.uvic.ca/research). Details on the CUP report are available at [www.researchinfosource.com/univPub](http://www.researchinfosource.com/univPub).

## CFI grants fund six new UVic researchers

New drugs to combat disease, more effective online learning, new wireless technologies, improved resource management, and a greater understanding of chemical and physical processes in the oceans.

These are the long-term goals of six new UVic researchers who have been successful in the latest competition for grants from the Canada Foundation for Innovation’s Leaders Opportunity Fund. The national competition results were announced on June 21.

The six researchers—an engineer, two oceanographers, a biologist, an

educator and a geographer—have been awarded a total of \$1.02 million from the fund, which is intended to help Canadian universities attract and retain the world’s brightest researchers.

**Lin Cai** (electrical & computer engineering) will use \$152,387 to set up an advanced laboratory for research projects in multimedia wireless networking. Potential applications are expected to emerge in the home entertainment, education, health care, environmental monitoring and rural development sectors. It’s anticipated

that 65 per cent of businesses will use some form of wireless networking within the next three years to improve productivity.

**Roberta Hamme** (SEOS) will use a \$200,000 grant to establish a lab for measuring dissolved gases in the ocean. Her work will help to answer critical questions about the physical and biological processes that control carbon distribution in the ocean, and ultimately help us better predict future climate changes.

SEE CFI GRANTS P.8

## New dean takes helm of “refreshed” education faculty

The faculty of education has a familiar face as its new dean. Dr. Ted Riecken, a 17-year veteran of the faculty, took over from outgoing dean Budd Hall on July 1.

Riecken says he’s looking forward to moving the education faculty forward on some well-established tracks laid by his predecessor, including a recent refresh within the faculty.

“Budd told me that he had just completed his 30<sup>th</sup> new hire, which means almost half of our faculty members are new,” says Riecken. “I’m looking forward to welcoming them into the UVic community and building on their ideas and energy.”

A member of the department of curriculum and instruction, Riecken obtained his doctorate from UBC in 1989. While at UVic, he has served as associate dean of education for four years, as well as co-director of the interdisciplinary centre for youth and society.

Riecken’s research interests focus on the application of new media technologies and participatory research methodologies for engaging young people in community-based research.

His most recent research project brings together aboriginal youth and their teachers with graduate students and faculty from UVic to research issues of health and wellness.

“Ted is highly regarded as a teacher and a scholar, and has served in various administrative capacities at UVic,” says Dr. Katy Mateer, associate vice president academic. “The appointment committee was impressed with his enthusiasm and dedication to the faculty, his support for and understanding of its diverse programs and initiatives, and his commitment to its mission and strategic directions.”

Riecken says he’s excited about working with the university community to foster stronger relationships with local educators and administrators, and elsewhere within the broader community.

“On a personal level, this is a wonderful chance to continue to contribute to research, curriculum development and teacher training in an era of education that is becoming increasingly diverse and complex, which can broadly be described as lifelong learning,” he says.

As a practitioner and promoter of



Riecken

research in the broader community, Riecken sees an opportunity for faculty members and the more than 500 full- and part-time graduate students in the faculty of education to share ideas within the larger community.

“We can always improve our communication and one of the ways we can do that, I believe, is to strengthen our relationships with local educators and education administrators working in a variety of contexts.”



Kennedy

## Law student wins top Canadian scholarship

by Maria Lironi

The support of her peers and professors has helped a University of Victoria law student garner Canada’s premier social sciences and humanities doctoral award—the Trudeau Scholarship.

Dawnis Kennedy is one of 15 Canadian students to be named a 2006 Trudeau Scholar. Created in 2003, the program awards the largest scholarships in Canada for doctoral studies in the social sciences and humanities. Scholarships are worth up to \$150,000 over three or four years and allow winners to address major societal issues by interacting with prominent thinkers and leaders.

“I feel tremendously supported at UVic,” says Kennedy, an Anishinabe woman who is currently completing a master of laws degree at UVic. “It’s really important that indigenous students find their own approach to material. My supervisors have been amazing. I’ve been able to develop my own voice and I think this may be one of the reasons I have received this scholarship.”

Kennedy was chosen for the award based on her good grades, letters of sponsorship from her professors, and her contributions to the community. She often travels home to the Roseau River Anishinabe First Nation in Manitoba so that she can

participate in Anishinabe culture and ceremonies.

Kennedy has also been involved in aboriginal legal services in Toronto and with the indigenous law students’ associations at UVic and University of Toronto. Once she finishes her studies at UVic this fall, Kennedy will begin the PhD program in juridical science at the University of Toronto.

“I wanted to go into law because my interest and my family’s interest were very much about revitalizing our community and culture,” says Kennedy. “Canadian law has had a huge impact upon our communities. I wanted to think about ways that Canadian law could relate more respectfully to indigenous peoples and support the revitalization movement that is happening in indigenous communities.”

“Dawnis’s success reflects the outstanding quality of students and programs at UVic, and celebrates the university’s commitment to strengthening its unique relationships with First Nations communities,” says Dr. Katy Mateer, acting vice-president academic.

UVic alumna Lisa Helps (history) has also won a Trudeau Scholarship. Helps is currently pursuing her doctorate at the University of Toronto. For more information on the scholarships and winners, go to [www.trudeaufoundation.ca](http://www.trudeaufoundation.ca).

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the ring

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Bob Reimer



# "The house that Jack built"

Retiring vice-president leaves his mark on UVic's financial and capital growth

When someone leaves a key leadership position in an organization, it's acknowledged that they're going to leave a big hole to fill. In Jack Falk's case it's literally true. In fact, it's not just one hole, it's three—at the construction sites for the new social sciences/mathematics and science buildings, and the Mearns Centre for Learning.

Falk, who left office June 28 after seven years as vice-president finance and operations at UVic, has presided over what is likely the most rapid period of financial and capital growth in the university's history.

That growth encompassed: new student residences; the Technology Enterprise Facility, the Continuing Studies, Medical Sciences, and Engineering and Computer Science buildings; the various downtown properties associated with the Michael Williams estate; new artificial turf playing fields; the purchase of the Vancouver Island Technology Park and the Velox athletic complex; and the launch of a \$160 million capital plan that includes the three buildings now under construction, as well as a planned First People's House and a support services building.

Falk, a UVic master's of public administration graduate, arrived on campus in September 1999 after 13 years as vice-president administration and finance at Okanagan University College. He's leaving with the first major renewal of the campus plan in the university's history completed and in its fourth year of implementation, the updating and integration of the university's information technology systems initiated, a transportation demand management strategy to reduce traffic to campus well underway, and new entities created to manage the university's off-campus real estate holdings.

"The 'house that Jack built' at UVic is impressive by any standards," says Dr. Martin Taylor, vice-president research and a colleague throughout Falk's tenure at the university (and acting president as the *Ring* went to press).

"He's not only had the lead role in the building projects that see a suite of new residences and academic buildings either completed or in

progress on campus, but he's also been a central player in advancing UVic's rapid growth in the research area through his engagement in and support for some of our major new initiatives.

These include the VENUS and NEPTUNE projects, the proteomics centre and the Vancouver Island Technology Park. But it's on a personal level, as much as professional, that he'll be missed. His collegiality and good humour have made him a pleasure to work with. His legacy is large."

Falk says his time at the university has been a journey supported by the hard work of a wide range of people.

"The university is in the position it is today because of hundreds of people, faculty and staff, who make this place work. Whether they're in the bookstore, library, registrar's office, counselling or other offices across campus, they're the people who, through their efforts, bring this university its reputation, its quality and its name.

"They make the leadership of this university look good with all their hard work and their efforts that go well beyond the call of duty," he says.

Members of the board of governors have also given a "tremendous

amount" to the institution, he says, as have the "outstanding group of people in leadership positions" in his division and elsewhere.

Along the way there have been many great opportunities and stimulating challenges, he says, "I never knew one day to the next what challenge would present itself when I walked through the office door, but I'm now ready to let that go."

Falk, who brought a reputation as a driven individual with him to UVic, says he has learned over the years to become more reflective. And that has an impact on his future. "I'm not intending to over-plan what I do—I don't need to be 6 to 12 months ahead of the issues anymore—although that may be a little hard for me."

Falk, wife Susan, and his prize "show-room condition" 1986 Honda Shadow 1100-cc motorcycle are relocating to Vernon this summer to join family members. Born and raised on a farm, Falk is intending to "get re-acquainted with a rototiller" and join one of his daughters in growing organic fruits and vegetables.

"I'm proud to have come to a great university like UVic," he says, "and I hope I've made a contribution that has allowed it to grow in stature."



VALENTINE SHORE

Falk

## UVic helps shape cities for seniors

What does it take to make a great city for seniors? That's the issue being examined by the University of Victoria's centre on aging, the District of Saanich, and the B.C. Ministry of Health.

They're taking part in the World Health Organization's Global Age-Friendly Cities project—an international study on seniors' quality of life. The WHO has asked the 13 participating international communities to look at issues related to health, security, independence, and participation in the community.

Things such as leisure programs, accessibility to public and private spaces, affordable and accessible seniors' housing and employment opportunities will be examined.

Saanich is one of only two cities in Canada to take part in the project. Saanich has a higher concentration of seniors compared to other parts of the country. According to the Union of B.C. Municipalities, by 2010 one in five Saanich residents will be over 65 years of age.

The other Canadian community being studied is Portage la Prairie. The project also looks at locales in

Argentina, Australia, Brazil, Germany, India, Mexico, Lebanon, Costa Rica, Great Britain and the U.S.

Dr. Elaine Gallagher (centre on aging) is leading the study on Saanich. It began this month and consists of eight focus groups composed of seniors, caregivers and community leaders discussing a variety of issues that affect seniors.

"Cities and municipalities need to get ready for the fact that baby-boomers are moving into the 65 years-old age bracket," says Gallagher. "They need to prepare for that by creating environments that are safe, vital, accessible and senior-friendly. After all, a city that is safe for seniors is safer for everybody."

Gallagher's results will help the WHO develop guidelines for cities to use worldwide and will be released on the 2007 international day of older persons (Oct. 1, 2007).

The BC Ministry of Health has provided \$20,000 to cover the cost of the study. Other B.C. partners include the Union of B.C. Municipalities, the B.C. Recreation and Parks Association, and B.C. 2010 Legacies Now.

## In memoriam

**Don Wright**, music educator, composer, philanthropist and Canada's "jingle king," died on June 27. He was 97. He established more than 34 scholarships across the country, supported many charitable causes, and continued to inspire music educators through his valuable work. In 2001 he was awarded an honorary degree by UVic. In 2004 he donated \$1 million to music education at UVic to establish the Don Wright Music Education Wing. Says Dr. Budd Hall, former dean of education: "We have learned of the passing of Don Wright with great sadness—the sadness of losing a close friend, an inspirational musician and a man with a generosity and concern for others that is second to none. His support of music education at our university leaves a permanent reminder of his great belief in the role of music and the capacity of the young to change the world for the better."

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The Fall 2006 Continuing Studies Calendar is available now on our website, [www.continuingstudies.uvic.ca](http://www.continuingstudies.uvic.ca)

Look for a printed copy of our fall calendar on campus and at libraries and recreation centres beginning on August 1.



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<b>Female</b>							
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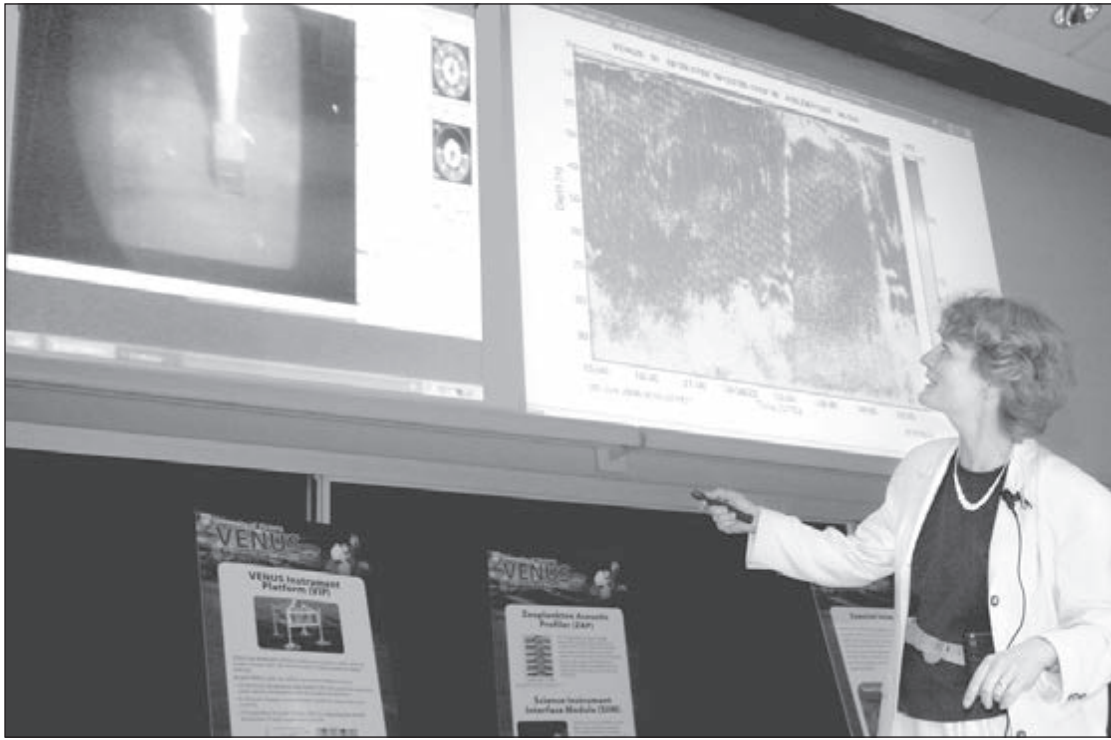
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Tunnicliffe gives a "tour" to the news media of the new VENUS data portal.



## VENUS opens data portal to the ocean

by Valerie Shore

The Pacific Ocean is now just a mouse click away. The Victoria Experimental Network Under the Sea (VENUS) facility has opened the data portal to its information management and archive system.

The portal—hosted on the new VENUS website at [www.venus.uvic.ca](http://www.venus.uvic.ca)—gives scientists and the general public access to a constantly expanding “warehouse” of images, sounds and live data from the ocean floor.

“This is a very important and exciting development providing a unique window for researchers and the public on the world under the sea, about which we have so much still to learn,” said Dr. Martin Taylor, UVic’s vice-president research, at a technical briefing for the news media on June 22.

The \$10.3-million VENUS facility offers the world’s first interactive, real time portal to the ocean. Its underwater network of fibre optic cables and instruments, which is connected to the Internet, lets us all “enter” the ocean whenever we wish, and allows scientists to operate their instruments and download data online, day or night, in real time.

The 3-km network of fibre optic cables and instruments that makes up the first leg of VENUS was installed in Saanich Inlet in February. Information has been streaming in since then. A second, 40-km leg will

be installed in the Strait of Georgia near Vancouver later this year.

At the heart of VENUS is a centralized data management and archive system that offers unrestricted access to long-term ocean observations. “It’s a very advanced software ‘structure’ that was developed at UVic and sets new standards in data capture, access and delivery,” says VENUS project director and marine biologist Dr. Verena Tunnicliffe.

The four key features of the data management and archive system are: data acquisition and storage, easy user access to data, observatory monitoring, and the control of instruments by VENUS scientists. “This is a remarkable resource and represents a year of hard work by a 13-member team,” says Tunnicliffe.

“The information we see today on the VENUS website is just the tip of the iceberg,” says Benoit Pirenne, director of the database team. “Behind the scenes, there is an extensive software and hardware infrastructure designed to collect data from the various instruments and store them for 20 or more years.”

VENUS instruments collect several gigabytes of information every 24 hours. In its four-and-a-half months of operation, VENUS has already archived more than 35 million measurements and dozens of gigabytes of acoustic and visual data. That information—and new real time data—is now avail-

able to the world.

The data management system is constantly evolving. In the near future, “software agents” will work on behalf of VENUS scientists, monitoring incoming data and alerting them by e-mail or cell phone if an unusual event or trend occurs that warrants immediate attention.

Over its 20-year lifespan, VENUS will support studies on topics such as: long-term ocean change; tides, currents and mixing; fish and marine mammal movements; seafloor community ecology; underwater noise pollution; sediment and slope dynamics; and plankton behaviour.

VENUS is funded by the Canada Foundation for Innovation, the British Columbia Knowledge Development Fund, and other contributions from federal agencies, industry and sponsors. Its data management and storage system is shared with the larger NEPTUNE Canada seafloor observatory project, also led by UVic.



## Private sector adds \$1.2 million to aboriginal chair

by Maria Lironi

Discovering ways for aboriginal people to access more jobs, create additional businesses, and have a better quality of life is just part of the job description of Canada’s first National Chair in Aboriginal Economic Development at the University of Victoria.

Last month, the chair received \$1 million from EnCana Corporation and \$200,000 in outreach support from Enbridge Inc.

“The university is very grateful to EnCana and Enbridge for providing such significant private sector support to this chair,” says UVic President David Turpin. “Establishing this chair reflects our continuing commitment to improving the lives of aboriginal peoples and supporting aboriginal communities across Canada.”

EnCana is one of North America’s leading natural gas producers and is among the largest holders of onshore gas and oil resource lands on the continent. Enbridge Inc., a Canadian company, is a leader in energy transportation and distribution in North America and internationally.

The chair, which will be based in the faculties of business and law, will

direct a program of research, relationship-building and education to advance aboriginal economic development in Canada. It will conduct independent and collaborative research, develop a repository of best practices, serve as a catalyst for, and broker of, partnerships among a range of parties, and offer students relevant learning in a supportive environment.

A symposium on issues relating to the chair and its mandate will be hosted by UVic this fall, and a national search for the chairholder will be undertaken in the coming year.

Along with \$1 million from EnCana to help launch the chair and its program and the Enbridge Outreach Fund, which will support outreach activities (such as field experiences) associated with the chair, the chair has already received \$3 million in funding. It has acquired \$2 million from Industry Canada and \$1 million from the B.C. government to create an endowment that will fund the chair’s research program.

Through years of collaboration with indigenous peoples, UVic has become a research leader in the area of aboriginal culture. An estimated 600 aboriginal students attend classes at the university.

## Ringers

The public education program of the **Bamfield Marine Sciences Centre** has won the prestigious Michael Smith Award from the Natural Sciences and Engineering Research Council for outstanding achievement in the promotion of science in Canada. Located in the village of Bamfield in Barkley Sound on Vancouver Island’s west coast, the centre is run by a consortium of five western universities including UVic. It hosts 4,000 visitors annually for field trips and other study sessions, and is a field study site for research biologists, ecologists and oceanographers from member universities and other institutions. The award includes \$10,000 to further the centre’s science education activities.

Faculty of business assistant professor Dr. **Jen Baggs** is the winner of the Robert Mundell Prize, awarded by the Canadian Economics Association. Baggs received the honour for her 2005 paper entitled “Firm Survival & Exit in Response to Trade Liberalization.” This prize is given annually to the “young” author or authors of the paper judged to be the best published in the Canadian Journal of Economics in the previous calendar year.

The faculty of human and social development has two new associate deans. Dr. **Laurene Shields** (nursing) is associate dean academic, and Dr. **Pamela Moss** (studies in policy and practice program) is associate dean research. Shields brings extensive experience in collaborative educational program planning and implementation to the position. Her research has focused on the study of community-based health promotion, women’s and children’s health, and empowerment practices. Also in HSD, Dr. **Alan Irving** joins the school of social work as its new director in August. He comes from the University of Western Ontario and was previously associate dean of the faculty of social work at the University of Toronto.

Historian Dr. **Brian Dippie** is this year’s winner of the faculty of humanities Award for Teaching Excellence. Dippie developed an interest in Western American history as a young boy and has devoted his life to studying the West, its native peoples, its pioneers and its modern 20th-century development. “Brian Dippie earned a reputation for excellent teaching soon after his appointment at UVic in 1970 and he has maintained an outstanding teaching record ever since,” states his award citation. It goes on to praise Dippie for maintaining an integral relationship between his research and teaching, using anecdotes, recordings of music, slides of paintings, and historic photographs to share his passion of the West with his students. “I would love to take another history class with Dr. Dippie. He is an inspiration. If I become a history teacher I hope I can be the same as him,” wrote one student. “Dr. Dippie is an amazing professor,” wrote another. “His classes are what university is all about. Not many professors can keep you captivated at 8:30 a.m. all year round!”

UVic’s **faculty of business undergraduate program** placed seventh out of 45 Canadian business schools in this year’s Knights School’s annual survey. Among the best practices cited is the faculty’s Sustainability Award, given out in the entrepreneurship specialization’s Innovation Project where students have only 10 days to create a new business with economic, social and/or environmental value. UVic MBA students received a nod for projects that include consulting on poverty perspectives in Senegal and a First Nations project involving organic agriculture in B.C. The annual survey ranked business schools on course work, faculty initiatives and student-led activity. For more information visit [www.corporateknights.ca](http://www.corporateknights.ca).





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# Canada Research Chairs



DIANA NETHERCOTT



Chow

## SEEING EYE TO EYE

Understanding how we see is the personal vision quest of UVic biologist Bob Chow

by Beth Haysom

When Bob Chow was a boy his mom turned a blind eye to the frogs, bugs and beetles that he brought home in his pocket. Her easy-going attitude helped to foster his enthusiasm for living things and launch his career in developmental biology.

Now Chow, as the Canada Research Chair in Retinal and Early Eye Development, is investigating the inner workings of the eye, research that eventually might lead to cures for vision disorders and blindness.

Chow and his team of five UVic scientists are focusing their research on previously uncharted territory in the retina, a paper-thin sensory structure that lines the inside of the eyes, capturing images and relaying them to the brain.

On their way to the brain, visual signals pass through an inner retina which operates like a microprocessor, using a complex set of about 30 "interneuronal" cells. Without them, we'd all be blundering around in the dark, but little is known about how they're formed, how they operate, and their implication in vision disorders.

"Now that the lab is up and running, my research team and I are moving forward to address key issues in retinal interneuron formation," says Chow. "Ultimately, a major goal of our lab is to provide the understanding necessary to develop screening tools, therapies and possibly cures for inherited vision defects."

As Chow is an eye-guy, you can't help noticing that he wears glasses. But these are for nearsightedness, he says, and not the reason he has devoted a major chunk of his career to studying eyes and the complex processes involved in seeing.

That scientific journey began long ago when Chow was growing up in southern Ontario. While not with his buddies playing road hockey (and losing teeth), Chow was out collecting bugs and beetles to peer at under his microscope. While friends built model cars, Chow carefully constructed a model of the human ear.

"I've always been interested in understanding how the body is put together, the mechanisms involved, how genes interact with other genes in developing cells. It's quite fantastic and overwhelmingly complex," says Chow. At university, he was the student who volunteered to stay behind at the end of class to wash beakers and petri dishes so that he would be allowed to assist with research projects.

Chow's unbridled enthusiasm paid dividends. While studying in a developmental genetics lab in New York City, he was a key player in the major discovery of a "master regulatory" gene for eye formation. Chow made the remarkable observation that this gene, alone, had the profound ability to generate third, fourth and even fifth eyes in tadpoles.

At Toronto's Hospital for Sick Children Chow was working with

a geneticist investigating the causes of microphthalmia, a condition that leads to children having extremely small eyes, when he pinpointed the role of a specific gene, now known as "Vsx1," in retinal development. This breakthrough serves as the basis for his current research.

Along with his early success, Chow is realistic. "Science can move at a snail's pace one moment, and then switch to a sprint in the next," he says. "For every moment of discovery there is normally a long process of constant troubleshooting and experiments that don't work." But regardless of how confounding the data appears, there is no such thing as a wrong path, he says.

Chow is glad that his own path has led him to UVic because he's enjoying being at "a research-based university with a strong science focus."

Chow is collaborating with researchers in different parts of the world who are working in similar areas. Currently, he has teamed up with scientists in Toronto, St. Louis, New York and Britain.

"This is the nature of science," he says. "We're all playing a role in a global effort to push the boundaries of our knowledge. It's collaborative. Making a living by being part of this effort is really a great privilege."

For more information on Chow's work, visit [web.uvic.ca/biology/People/chow/chow.htm](http://web.uvic.ca/biology/People/chow/chow.htm) or [www.chairs.gc.ca/web/chairholders/index\\_e.asp](http://www.chairs.gc.ca/web/chairholders/index_e.asp).

## New website breaks down knowledge borders

Insights from the brightest minds in the country are coming soon to a computer near you.

A new subscription-based website being developed by researchers at the University of Victoria encourages dialogue and idea exchange between academic researchers and managers.

Named after the Latin word for "useful," the Utilium Network is an interactive web-based tool that will help communicate the practical applications of social science research beyond the "ivory tower."

"During my PhD training, I noticed an absence of available venues to convey the practical applications of my research to managers," says business professor Dr. Michael Fern, founder and director of the project. "We're using the power of the Internet to put the latest research findings into the hands of managers."

The Utilium Network will link managers and the academic com-

munity in a fundamentally new way by allowing managers to interact online with academic researchers. The service is designed to assist managers across a range of sectors, including private, public and not-for-profit.

"The first topic Utilium will focus on is workforce succession planning, which is a major issue facing Canadian managers and their organizations," explains Dr. Cosmo Howard, who holds a joint appointment with the department of political science and the school of public administration and is the network's associate director.

"There are also tremendous benefits for participating researchers, whose work will gain greater exposure and influence as a result of our site," he notes.

A \$199,000 grant was provided by the Social Sciences and Humanities Research Council. Utilium is expected to launch in spring 2007.

## Warning: biking to work is good for you!

The Policy Peddlers (law and POLIS project), the Drips (biology, aquatic sciences research program), the Reference Riders (McPherson library) and Pass on Gas (facilities management trades and maintenance crew)—these were just some of the 56 teams and 700 people from UVic who participated in Bike to Work Week (BTTW) 2006.

The city-wide event took place May 29–June 4. UVic events included cycling support stations at a different location every day by the UVic Bicycle Users Society, free minor bike tune-ups by the UVic Bike Lab Society, free bike engraving by campus security, and a BBQ lunch for all BTTW participants.

Cycling workshops and courses were also offered. As well, the event featured prizes ranging from gift certificates to a Breezer commuting bike from Oak Bay Bikes.

"Trying another travel option doesn't have to be an all-or-nothing proposition," says Allan Dunlop, UVic's transportation demand management co-ordinator.

"You don't need to give up your car to explore the many benefits provided by alternatives to driving to work alone, such as ridesharing, taking transit, cycling and walking. Even using another travel option one day every week or two can bring you real benefits, and is a good way to explore these viable choices."



ALLAN DUNLOP

Jolie Wist (human resources) shows off the new Breezer commuter bike won by the department of human resources. The bike is being raffled off to raise funds for mobile shelters for the homeless.

According to Dunlop, the event's success was due to the dedication of many volunteers on campus who led a team, encouraged others to take part, and helped in the promotion and events. At UVic, more than one in 10 BTTW participants were cycling to work for the first time.

Free commuter cycling courses and workshops are being offered on campus this summer, including traffic safety skills, commuting tips and bike repair. For details on these sessions and information on other ways to improve your commute (including a range of driving and parking options) visit <http://transportation.uvic.ca>.



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## Paying it forward

For 10-year-old Marites Frazer, second from right, birthdays are a time for giving, not receiving. During a visit to UVic earlier this year she was so inspired by the work of the University of Victoria Assistive Technology Team (UVATT) that she asked her friends not to give her gifts on her birthday, but to give her money for UVATT. In May, she sent a \$150 donation to the team, which develops devices and technologies for people with disabilities. "I was very interested in the help that you give people," says Frazer, who brought her classmates along on a visit to the UVATT lab last month. The class later sent the team a book containing drawings and thank-you notes. "All of us were incredibly touched when we received the letter and donation from Marites," says UVATT director Nigel Livingston. "It was lovely to have the opportunity to thank them in person." Pictured with Frazer are (l-r): UVATT research scientist Leo Spalteholz and classmates Julia Klimczuk and Haddas Asfaw.

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## New VP continued from p.1

versity's budget, the budget planning process and financial services. She is also providing leadership on a major administration systems renewal project, human resource matters, and an initiative to improve administrative support and reporting systems for university researchers.

From 1999 to 2003, she filled executive positions in finance for the Calgary Health Region, including

responsibility for the planning process for a \$1 billion annual budget, financial oversight for a major expansion of hospitals in the city and the exploration of partnership opportunities with external agencies.

Gorrill graduated with a bachelor of business administration from the University of Regina in 1982 and received her chartered accountant designation in 1985.

During July and August, Kristi

Simpson, associate vice-president financial planning and operations, is serving as acting vice-president.

The vice-president finance and operations is responsible for the budget office, computing and systems services, campus security, emergency planning, facilities management, financial services, human resources, internal audit and campus planning.

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## How “protected” are B.C.’s Marine Protected Areas?

There are 130 marine protected areas (MPAs) on Canada’s Pacific coast but they may not be effectively shielding key marine ecosystems, says Dr. Rosaline Canessa, a University of Victoria geographer.

Canessa, a computer mapping specialist who studies how human activity affects the ocean environment, was one of the contributors to the B.C. Coastal Environment Project, the results of which were released last month by the B.C. Ministry of Environment.

For the project, Canessa analysed information on the status of MPAs on the coast—where they are, how big they are, what they’re supposed to be protecting, and how well they’re succeeding. Her analysis shows a mix of different types of MPAs established by several federal and provincial agencies, each with their own mandate.

“A lot of people think that MPAs are areas where no human activity can happen, but many are subject to pressures from within, such as harvesting and recreation, and threats from outside, such as forestry,” she says.

Canada’s Pacific coast MPAs are generally very small and only cover 0.5 per cent of the marine environment (defined as beyond intertidal out to the continental shelf), compared to 12.5 per cent of coastal land. Many are add-ons to protected areas on land. Most are provincially designated, but the federal government controls some activities in them, such as fishing.

“We need to monitor the marine ecosystems in MPAs so we can better assess the threats to them,” she says. “And there needs to be greater federal-provincial coordination so that their individual mandates together create more effective MPAs.”

## Calendar highlights

Events free unless otherwise indicated. For a complete list of events, see [www.uvic.ca/events](http://www.uvic.ca/events)

### At the Galleries

[www.maltwood.uvic.ca](http://www.maltwood.uvic.ca)  
721-6562

**Aluminations** Until Aug. 3. A multimedia showcase of works by graduates of the Victoria College of Art. Maltwood Art Museum & Gallery. 721-6562

**The Poetics of West Coast Modernism in West Vancouver.** July 12-Aug. 8. The exhibit consists of photographs of 18 private and public structures built in West Vancouver since the 1960s. McPherson Library, foyer. 721-6562.

### Monday, July 24

**Centre for Addiction Research Lecture** 4:30 p.m. *Is Society Training Children to be Addicts?* Dr. Stanton

Peele, New Jersey addiction and psychological consultant. HSD A240. 472-5305 [www.carbc.uvic.ca/](http://www.carbc.uvic.ca/)

### 2006/07 Ring Schedule

Calendar items should be sent by 4 p.m. on the copy deadline date shown below to UVic Communications (Sedgewick C149, fax 721-8955, e-mail [ucom@uvic.ca](mailto:ucom@uvic.ca)) or entered into the online calendar ([www.uvic.ca/events](http://www.uvic.ca/events)). For more information call 721-7636.

Publication Date	Copy Deadline
Thursday, September 7	Tuesday, August 29
Thursday, October 5	Wednesday, September 27
Thursday, November 2	Wednesday, October 25
Thursday, December 7	Wednesday, November 28
Friday, January 5, 2007	Friday, December 15
Thursday, February 1	Wednesday, January 24
Thursday, March 1	Wednesday, February 21
Thursday, April 5	Wednesday, March 28
Thursday, May 3	Wednesday, April 25
Thursday, June 7	Tuesday, May 29
Thursday, July 12	Wednesday, July 4

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## Review to set athletics course for the future

by Pete Lewis

The department of athletics and recreation and the school of physical education have embarked on a comprehensive facility assessment review of all athletic, recreation and physical education facilities.

The review will look at the internal needs of the two departments for varsity sports, student and university community recreation, and for teaching and research.

Supported by the university administration, the purpose of the facility review is to gain a thorough needs and demand assessment for all athletic and recreation facilities with students, other campus users and the Vikes varsity program, and to determine the space requirements for the school of physical education.

“This is an extremely important project for us,” says Clint Hamilton, director of athletics and recreation. “Through this process we will develop a sustainable business and operational plan for our athletic and

recreation facilities for the next 20 to 30 years.”

The process will consult with the many charity, sport and school organizations that currently use the university facilities, along with neighbouring communities. Currently, local sport organizations, community and charity groups access the facilities for more than 200 hours of use each week.

The facilities include the McKinnon Building (built in 1974), the Ian H. Stewart Complex (built mid-‘60s and acquired in 1992) Centennial Stadium (built in 1967), Wallace Field, a water-based artificial field hockey pitch (nearing completion), a full-size artificial turf playing field, the Velox field (acquired in 2004), a disc golf course, and a sailing compound located at Gyro Park in Cadboro Bay. The Vikes varsity rowing teams share the boathouse at Elk Lake as their training base and the swim teams train at Saanich Commonwealth Place.

The McKinnon Building was recently renovated to add additional academic space. The new area is the home for the Institute for Applied Physical Activity and Health Research and the Health and Learning Knowledge Centre, a national authority on the health and learning needs of Canadians. A permanent indoor training centre was also built for the Vikes men’s and women’s cross-country and track teams.

The university has retained Yates, Thorn & Associates, along with Moore Paterson Architects and G.P. Rollo & Associates, to complete the facility assessment project. Yates, Thorn & Associates and G.P. Rollo & Associates recently completed a business plan for the \$42 million expansion of McMaster University’s athletic and recreation facilities, which included an 18,000-sq. ft. fitness and weight centre.

The review will be completed later this year with a final report expected in January.

### Indigenous grads continued from p.1

and culture and celebrate our values,” she said.

More than 200 guests were treated to an impressive cultural ceremony which included a traditional feast and ceremonial dances. Many attendees wore traditional button blankets, cedar hats, ornate capes,

vests and skirts. Graduates thanked the university for recognizing them in a traditional way and for giving them the opportunity to publicly thank family, friends, instructors and staff.

Arthur Vickers, who received an honorary degree from UVic on June

7, was presented with a native banner from the school of social work and recognized for his many contributions and support. Vickers is a West Coast native artist who combines the rich traditions of the Heiltsuk and Tsimshian people with highly original artistic vision.

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# Invading bullfrogs pose new threat to native frogs

by Beth Haysom

The sonorous night-time bellowing of North American bullfrogs is sounding an alarm to two University of Victoria biologists, who fear that the invasive giants may be spreading a deadly disease to native frog species.

A recent study published in the international journal *Biology Letters* has found that non-native bullfrogs are frequent carriers of the fungus *Batrachochytrium dendrobatidis*, which is lethal to some amphibians.

The fungus, endemic to Africa, was introduced by the worldwide distribution in the mid-20<sup>th</sup> century of African clawed frogs, which were used for pregnancy tests. Although the bullfrogs are unaffected by the fungus, it appears to be rapidly wiping out many other amphibians in parts of the world.

“Serious declines have been documented in North, South, and Central America, Europe, and Australia and it’s happening fast,” says Dr. Purnima Govindarajulu, a co-author of the paper. She’s been researching the bullfrog invaders on Vancouver Island since 1997 for her PhD and post-doctoral

studies at UVic.

Govindarajulu and UVic biologist Dr. Brad Anholt have applied for funding to study the causes of the disease and develop measures for preventing its spread.

“We urgently need to find out what’s happening so that we can try and do something before it’s too late,” says Govindarajulu. “Vancouver Island has large populations of bullfrogs that are showing significantly high levels of the fungal infection. Some of the native frogs are also testing positive for the fungus but we’re not yet aware of any catastrophic declines. The time to understand the disease and prevent a crisis, if possible, is now.”

The bullfrogs are an invasive species already considered ecological bad news because they compete with or prey on smaller native frog species.

Govindarajulu has been mapping the spread of bullfrogs and testing them for the fungus in collaboration with provincial and federal biologists, and with an international team at the London Zoological Society and the Imperial College London. Some of the findings in the *Biology Letters* paper are based on data from Vancouver Island.

Bullfrogs were originally brought to B.C. in the 1930s and 1940s to be farmed for frogs’ legs. Up to 20-cm long (not including the legs) and weighing as much as three quarters of a kilogram, bullfrogs are the largest frogs in North America. They’re now well-established in ponds and lakes in southwestern B.C.

Govindarajulu hopes that public awareness will support efforts to contain the bullfrogs and the spread of the fungus. People who see or hear bullfrogs can report their location to Frogwatch at [www.env.gov.bc.ca/wld/frogwatch/index.htm](http://www.env.gov.bc.ca/wld/frogwatch/index.htm), a provincial program that is monitoring the bullfrog situation.

Biologists advise people not to move any frogs or other aquatic organisms from one pond to another, as this will only hasten the spread of the fungus and other diseases, putting other wildlife at risk.

“Amphibians are a crucial link between aquatic and terrestrial food webs,” says Govindarajulu. “Many of them are already high on endangered species lists. This [disease] adds another twist to their sad story.”



Bullfrogs captured in local lakes.

## CFI grants continued from p.2

A \$159,306 grant to **Robert Ingham** (biology) will be used to establish a lab for the study of the biochemical signals initiated within cells in response to environmental cues, and how these signals affect cellular function—a process known as signal transduction. The work will help pharmaceutical and biotechnology companies develop new drugs and treatments for disease.

**Valerie Irvine** (curriculum & instruction), along with Allyson Hadwin (educational psychology & leadership studies), will use a \$270,154 grant to set up a technology integration and experimentation research lab. Irvine studies the use of technology in integrated learning environments and distributed e-learning for health, education, and community-based learning. Hadwin develops and investigates computer-based technologies for promoting and researching strategic learning in solo and collaborative e-learning contexts.

**Jody Klymak** (SEOS/physics & astronomy) will use a \$160,000 grant to acquire a seagoing (towed) system for mapping underwater motions and turbulence in the ocean. Klymak studies the processes

that drive mixing in the ocean. The new system will lead to a better understanding of ocean circulation in near-surface and coastal waters, which are highly productive, important to tourism and fisheries, and susceptible to pollution from human activity.

**Trisalyn Nelson** (geography) will use a \$79,926 grant to launch a research centre for spatial data integration. The centre, the only one of its kind in Canada, will develop techniques and software for integrating and analysing underused spatial data collected from a variety of common sources, including global positioning systems (GPS), and GPS-enabled cell phones, depth sounders and mobile weather stations. The new techniques will support many applications, including environmental mapping and monitoring.

The Canada Foundation for Innovation is an independent corporation created by the federal government to strengthen the capacity of universities, colleges, research hospitals and non-profit research institutions to carry out world-class research that benefits Canadians.

## One step ahead

A UVic microbiologist plays a key role in the global battle against deadly viruses

by Shannon McCallum

Hardly a day goes by that we don’t hear of some scary disease in the world, whether it’s smallpox, West Nile virus, SARS or bird flu. All have the potential to threaten public health on a global scale.

University of Victoria microbiologist Dr. Chris Upton is working to combat this threat by designing software and database systems to analyse a particularly dangerous class of viruses—those that cause emerging or re-emerging infectious diseases, or that could be used as bioterrorist weapons.

Upton is a virologist specializing in the burgeoning field of bioinformatics, the science of analysing biological data using advanced computer techniques. In collaboration with researchers at the University of Alabama at Birmingham, he and his team are creating a first-of-a-kind viral database for use by scientists around the world.

Technically, a virus is a parasite that is not alive. It can only reproduce by injecting its genetic material into the cell of a host, causing the host to reproduce virus proteins instead of its own.

To fight viruses, researchers can create vaccines that stimulate the immune system, or design antiviral drugs that fight the infection once it’s underway. Both methods require an understanding of a virus’s genome—the sum of all its genetic material.

“The genomes of many of these dangerous viruses have been completely sequenced, so for the most part we can predict the proteins with some degree of accuracy,” says Upton. “The question is what do these proteins do? For many of the viruses we know the basics, but not the details.”



Upton

sible to the average microbiologist.

“Right now, we frequently depend on computer experts to analyse the data,” explains Upton. “The advantage of our system is that it will not only store the information in a central, web-based repository, but it will present it in a way that is intuitive and simple to use. In essence, we’re creating a library and a catalogue system of viral information that hasn’t existed before.”

But Upton and colleagues are more than viral librarians. “We’re adding further information about where genes are on a genome, possible functions, and the proteins that are likely to be produced,” he says. “In this sense, we’re not just putting the information into the library and saying to users ‘Here it is, go find it yourself.’ We’re supplying the tools to help them get around the library.”

Upton’s group also does bioinformatics work with the herpes and smallpox viruses. They also study insect viruses, work that may have applications in the control of forest pests.

“The exciting thing about our work is that it supports a whole series of other research centres that are do-

ing basic research on vaccine or drug design for these types of viruses.”

Upton’s work is funded by the U.S. National Institutes of Health and the Natural Sciences and Engineering Research Council of Canada.

### QUICK FACTS

The Spanish flu pandemic of 1918 is considered to be the most deadly viral outbreak in history. An estimated 50 to 100 million people died over the course of several years.

Bacterial diseases are often easier to treat than viral infections. One reason for this is that viruses mutate faster than bacteria, so drug researchers have to continually design new drugs to combat them.

Although the genome of viruses are quite small—the smallpox virus, for example, has 200 genes compared to several thousand in bacteria and 30-50,000 in humans—the function of many viral genes is still poorly understood.

  
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