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ubc reports

THE UNIVERSITY OF BRITISH COLUMBIA



In his search for ways to produce better biomaterials for use in human implants, Metals and Materials Engineering Asst. Prof. Rizhi Wang studies the shells of pearl oysters and the teeth of horses, cows, alligators, sea urchins and humans to uncover the secrets of their strength and durability. *Martin Dee photo*

Researcher searches nature for better human implants

Shells, teeth may hold clues for hip, joint replacements

by **Michelle Cook** staff writer

FROM HEART VALVES TO TEETH, replacing faulty body parts with artificial implants is becoming increasingly common. In Canada alone, there are now 37,000 hip and knee joint replacements performed annually.

The problem is that many of the clinically engineered materials — called biomaterials — used to replace or repair living tissues have a limited lifespan and will need to be replaced eventually. It's a costly and painful prospect that UBC researcher Rizhi Wang says we can avoid by designing biomaterials

that will last longer and function better in our bodies. And he says we need only look to nature for some engineering inspiration.

"You can always find some model in nature that is very close to what you are working on and in this you can find ideas and tricks to use in design solutions," says Wang, an assistant professor in the Dept. of Metals and Materials Engineering.

He calls his field of research "bio-inspired materials design and processing" because, he explains, he isn't trying to duplicate materials found in nature. He is looking for good examples of natural de-

sign interfaces that he can incorporate into the design of materials processed in the lab like plastic, polymer and titanium.

Wang's research focus is strengthening the gap, or interface, between an implant and the bone surrounding it with the goal of encouraging tissues to regenerate. Currently, most implants are made of titanium with a polymer cement or ceramic coating that may disintegrate in the body, causing the implant to loosen.

In his search for more bone-friendly materials, Wang has studied the teeth of horses, cows, alligators and even sea urchins, to examine their different surface *see Nature page 2*

Business leaders join Board of Governors

English professor elected as faculty representative

SIX NEW MEMBERS have been appointed to UBC's Board of Governors by the provincial government. They join Prof. Dennis Danielson, associate head of English, who was recently elected to the board as a faculty representative for a three-year term.

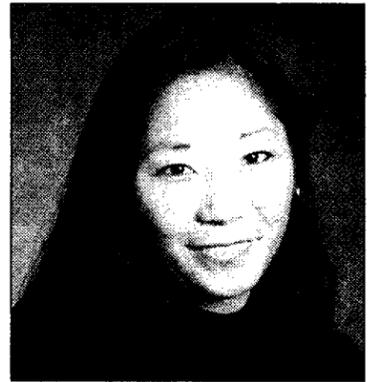
Lawyer Nicole Byres, architect Bryce Rositch, advertising executive Karen Nishi, HSBC Bank Canada president and CEO Martin Glynn, B.C. Gas president and CEO John Reid and Jay Grewal, acting president of Aimglobal Technologies Inc. have been appointed for a three-year term.

"Our board looks forward to working with all the new appointees," says board chair Larry Bell. "These are exciting and challenging times at UBC and I know each new board member will be able to further our common *Trek 2000* goal of making UBC the top university in Canada."

Bell thanked five departing board members for their service: Elsie McMurphy, Stephen Howard, Guninder Mumick, Joe Wai and Linda Crompton.

"We appreciate the rich perspective and backgrounds these members brought to our board and are grateful for their contributions," Bell says.

A UBC faculty member since 1986, Danielson is a pioneer member of Foundations, an interdis-



Advertising executive Karen Nishi



HSBC President Martin Glynn

iplinary introduction to the social sciences and humanities..

UBC's 15-member Board of Governors comprises the chancellor, the president, eight persons appointed by the provincial government, two faculty members elected by faculty, two full-time students elected by students, and one person elected by and from the full-time employees of the university who are not faculty members.

Pair tackle *Creation* for dramatic thesis

Learning takes stage for Fine Arts students

by **Michelle Cook** staff writer

IF THE PROSPECT OF DEFENDING your thesis in front of a panel of professors makes you nervous, just ask Angelina Kekich and Stephen Drover about presenting theirs to a paying audience of theatregoers — 10 nights in a row.

The double thesis project for the two Master of Fine Arts students is a production of *The Creation*, opening at the Chan Centre's Telus Studio on March 13.

Theatre Dept. faculty paired up Drover, the play's director, and Kekich, its costume designer, last September to work on staging the play, an adaptation of the medieval mystery cycles which dramatized Bible stories about man's creation, fall and redemption.

Drover chose the play in order to explore how theatre can help us understand ourselves and our relationship to God. Although the script, taken from a 1996 production staged by the Royal Shakespeare Company, is a newer version of the medieval plays, it satisfied Drover's interest in archaic texts. *see Creation page 2*

LETTERS

Loss of Calendar cause for regret, says reader

Editor:

I was dismayed to read a notice in your Feb. 7 issue stating that "UBC Reports will no longer publish the Calendar as of March when it changes from a biweekly to a monthly publication."

While I understand that a monthly calendar might be too incomplete and unreliable to be useful, the sudden demise of this service seems to me a cause for real regret.

An informal canvas of colleagues and students suggests that I am not alone on this campus in regarding the Calendar as the best reason for picking up *UBC Reports* and using it as my main guide to extra-curricular academic events.

We are told that "Members of the campus community are welcome to submit events information to Athlet-

ics and Recreation's LiveAtUBC online calendar at www.liveat.ubc.ca." Surely even in this so-called Information Age some distinction might be kept between academic programming and sports, if only for the sake of tax-payers' perceptions of what goes on at UBC?

The final sentence of the notice announces that "Public Affairs is currently working with other campus groups to consider improvements in how the university's events listings can be accessed online." Which groups?

Neither of the university's two graduate colleges, which between them have accounted for a large share of listings in recent years, had been consulted at the time the notice appeared.

And why is it assumed that online media by themselves satisfy all calendrical needs? (Has the daily consultation of refrigerator doors declined in recent years?)

A university that makes as much fanfare about "learning communi-

ties" and "interdisciplinarity" as ours does these days ought not so carelessly to discard its best means of convening groups of people outside classes, courses, and the routines of established disciplines.

Even if we can only afford a monthly newspaper, please may we at least have a bi-monthly printed calendar?

Assoc. Prof. Mark Vessey
English Dept.

Creation

Continued from page 1

"I'm interested in theatre's roots as a form of ritual, story telling and myth telling. It was a rich period of theatre," Drover says.

In addition to learning "a million" small things about directing a cast of 13 actors and a production crew of 45, Drover says his most valuable lesson has been discovering how to tell an original story on stage.

"A story like this comes with hundreds of years of interpretation and opinion," Drover explains. "These are Bible stories that we hear all our lives, and the actors and I bring that baggage to the

play. I had to drop that and find the play's human qualities."

Kekich's collaboration with Drover began with a series of meetings to discuss his vision for the presentation, including the lighting, music, characters and what they would wear.

"As a costume designer you do what the director wants. You have to be able to read his mind," Kekich explains.

An experienced fashion designer with film work under her belt, Kekich relished the challenge of creating 40 original costumes with a timeless look that would not be adapted from already existing stage costumes.

For her research, Kekich looked at Byzantine, early Gothic, Cambodian and Tibetan clothing styles and scoured fashion magazines for modern influences.

In addition to conceptualizing the look for *The Creation* with hand-drawn and computerized sketches, Kekich's thesis work has included managing a costume design budget, and working with fabric dyers, cutters and sewers in the Frederic Wood Theatre's costume shop.

"People think costume design is a hokey pokey thing," Kekich says. "They don't realize the work and research that it takes. It's a long process."

Nature

Continued from page 1

structures and how effectively these act as an interface. He's also explored the pearl oyster's ability to produce a strong protective nacreous layer, the material responsible for creating a lustrous pearl.

Shiny, brittle human teeth have also yielded up some valuable lessons for Wang. He discovered that although a tooth's surface is covered in cracks, it is still able to function because of a thin, soft area between the tooth's hard, outer shell of enamel and inner core of dentin. Called the enamel/dentin junction, it performs much like a bumper for cracks.

In addition to continuing his studies on the interfaces found in mammal and human teeth and other biological systems, Wang hopes to gain a better understanding of how and why bones and teeth become deformed or fracture by examining them on a nano-scale. He will also conduct research on how surface patterns can help improve the fit between biomaterials and bone and teeth.

Staff.

The April 4 issue of *UBC Reports* will feature stories of UBC staff. Story suggestions are welcome.

UBC Reports also welcomes letters to the editor as well as opinion piece submissions from *UBC* faculty, staff and students.

E-mail the editor at janet.ansell@ubc.ca.

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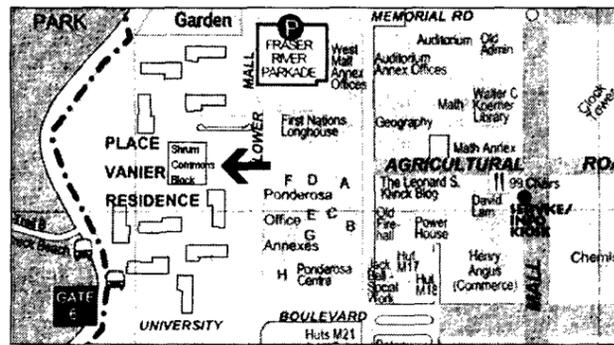
on the

Tec De Monterrey -

UBC House Student Residence

Monday, March 11, 2002, 6-8 p.m.

Shrum Lounge in Vanier Commons Block,
1935 Lower Mall



To present and review the schematic design for the Tec De Monterrey - UBC House Student Residence proposed to be constructed on the Place Vanier site, adjacent to Northwest Marine Drive. The proposed building is a six-storey, 175-200 unit single student residence.

Subject to Board of Governors approval, construction is anticipated to begin in Summer 2002 with occupancy in August 2003.



For information regarding access for persons with disabilities in the Vanier Commons Block, please call Gisela Haarbrucker at 604-822-9560 seven days before meeting date. FREE PARKING will be available in the Fraser River Parkade - please pick up a parking pass after the meeting in order to exit the Parkade without charge.

Questions or for further info: Contact Jim Carruthers, Campus Planning, at 604-822-0469

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Study puts educators in touch with blind

Aim to establish guidelines for graphic representations

by Michelle Cook staff writer

THE INCREASING USE OF GRAPHICS in high school and university textbooks is proving to be a challenge for visually impaired students, but with the completion of a study on tactile graphic educational materials, researchers in the Faculty of Education hope to help establish guidelines for producing high-quality maps, graphs and other representations for the blind.

The Graphic Research and Standards Project was a two-year study, sponsored by the Canadian Braille Authority (CBA) and the Braille Authority of North America (BANA), to examine how visually impaired students respond to the first kinds of tactile graphics. The first research of its kind undertaken in North America, it looked at which production methods and materials best meet the users' needs and personal tastes.

"Textbooks today contain more graphic material than ever before. Students who are blind or visually impaired must have access to graphic material in text and consistent production methods would help teachers prepare students to interpret this complex information," says project leader Assoc. Prof. Cay Holbrook, director of UBC's training program for teachers of visually impaired children and the only faculty member in Canada specializing in literacy for the blind.

It's an area of research that is only just starting to receive attention, adds Amedeo D'Angiulli, a SSHRC and Killam post-doctoral fellow who assisted with the project.

For the study, Holbrook, D'Angiulli and other researchers recruited 19 Canadian and American students aged 13-23 — all life-long braille readers — to compare six sets of tactile education materials. Produced by CBA, BANA and other organizations, the sets include braille-like dots, raised lines, textured backgrounds, and moulded forms.

The students had to determine what information the graphics conveyed and their personal usage preferences. Tactile graphics producers will use their feedback to determine what graphics are most effective when developing tactile representations of things as diverse as mountain ranges and oceans on relief maps to muscle and skin on biological diagrams.

Among the study's main findings were that graphic size is important because symbols can become too small for fingers to interpret. Researchers also found that tactile pictures of subjects like animals and plants were of little use.

"We found that without context, a graphic representation of a picture of a lion isn't meaningful to a person who is blind. It may look like what it should look like, but it doesn't feel like what it should feel like," Holbrook explains.

"The blind student needs to have experience with the real thing, the actual object or something that can transfer that knowledge."

With the study completed, Holbrook and D'Angiulli both hope to continue researching the use of tactile graphics in educational materials for the visually impaired.

"Graphic material must be included in textbooks for students who are blind," Holbrook says. "If they are eliminated, the blind child will be at a disadvantage to his class peers."



Women's Studies Prof. Veronica Strong-Boag is among the UBC researchers whose work will be celebrated at the Celebrate Research gala next week. Her current research investigates the history of adoption in Canada from the mid-19th to late 20th centuries. *Martin Dee photo*

Vision researcher, historical scholar, among honorees

Northern lights the theme for Celebrate Research gala

UBC RESEARCHERS WILL be honoured at a gala event with a celestial theme to be held at the Chan Centre for the Performing Arts on the evening of Thursday, March 14.

Called Celebrate Research, the evening includes a sound and light sculpture by Fine Arts Assoc. Prof. Richard Prince called Aurora Borealis and musical entertainment by pianist Music Prof. Rena Sharon with the Borealis String Quartet.

Those being honoured include Educational Studies and Women's Studies Prof. Veronica Strong-Boag

and Biochemistry and Ophthalmology Prof. Robert Molday.

Strong-Boag has spent more than 30 years devoted to interdisciplinary historical scholarship.

Her publications have ranged from a consideration of class in shaping working class women's employment to studies of Canada's post-war suburbs and the nation's abused and dependent children.

"I've always been intrigued by what it means to be Canadian, especially what it means for women, workers and First Nations peo-

ples," says Strong-Boag who headed up UBC's Centre for Research in Women's Studies and Gender Relations until 1997.

The recipient of numerous honours for her work, Strong-Boag received the Killam Research Prize at UBC and is a fellow of the Royal Society of Canada.

Coming to UBC from Cal Tech in 1975, Molday is an expert on age-related macular degeneration (AMD), the leading cause of legal blindness in people over 50 years of age and a significant health concern as huge numbers of baby boomers age.

The Canada Research Chair in Vision and Macular Degeneration, Molday looks at how light interacts with photoreceptor cells in vision and investigates how mutated genes cause inherited vision disorders such as AMD.

Recent Canada Foundation for Innovation funding will help Molday establish and direct a Centre for Macular Research at UBC.

"Canada is a leader in this type of science," he says. "We are well-poised to be the prime research unit in the country."

Recently named a fellow of the Royal Society of Canada, Molday is currently investigating the development and application of gene therapy to correct inherited retinal degenerative diseases including some forms of macular degeneration.

There is reserved free seating at the gala which is part of Research Awareness Week, March 9-16. For information visit www.research.ubc.ca/raw.htm or e-mail celebrate.research@ubc.ca.

For a forum on the role of research in the knowledge-based economy by vice-president, Research, Indira Samarasekera, visit www.publicaffairs.ubc.ca/reports

Sex hormones' link to stress, depression explored

Connection may explain some disorders' gender balance

by Hilary Thomson staff writer

IF THE SEX HORMONE testosterone is powerful enough to produce puberty changes such as hair growth and sex drive, how does it affect the body the rest of the time?

Victor Viau, an assistant professor of Anatomy, is exploring the role of sex hormones and how they affect our response to stress. He aims to find where in the brain the interface between sex hormones, stress and depression occurs.

"We know that sex steroids and their receptors show up everywhere in the body including the brain, but we don't know their role," says the Montreal native, who came to UBC in 2000 from the University of California at San Francisco.

"We also know that there are gender differences in stress-related illnesses and variations in hormonal levels associated with those

illnesses. I hope to better understand the interaction between these various systems."

He wants to reveal the pathways, transmitters and cellular mechanisms that testosterone uses to alter the brain circuits that relay stress-related information. His work may help to diagnose and treat depression and other sex dependent disorders including cardiovascular and metabolic diseases.

Viau's focus is the hypothalamic-pituitary-adrenal (HPA) axis, an important hormonal system that controls the secretion of the steroid cortisol from the adrenal gland.

Cortisol protects us from the effects of acute stress by regulating processes such as blood pressure and immune function. When the body is subjected to chronic stress, however, the steroid is implicated in causing disease such as depression.



Asst. Prof. Victor Viau

Testosterone acts on the HPA axis to inhibit the release of the stress steroid cortisol, which may explain why males react differently to stress than females. Viau notes that many men with depression show reduced testosterone levels, suggesting that naturally occurring variations in testosterone levels may have a bearing on

the cause of depression.

Case studies show that where the patient is not responding to antidepressant medication an alteration in testosterone levels may lead to improvement. Also, the incidence of suicide among pubescent males may be connected with both cortisol and testosterone levels.

"Stress listens to what is going on in the reproductive system — there is functional cross talk between sex steroids and the adrenal system," he says.

The connection to sex hormones may help to explain why some disorders linked to stress are seen more commonly in one sex than the other. Depression is more commonly found in women; schizophrenia and cardiovascular disease in men.

Although the research questions are simple, they must be attacked in a multi-disciplinary way, says Viau, who draws on expertise from the fields of neuroscience, psychology and endocrinology.

THE VANCOUVER INSTITUTE

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- March 9 **UBC EXCELLENCE IN RESEARCH LECTURE**
Professor Bob Hancock
 Department of Microbiology & Immunology, UBC
NEW APPROACHES TO TREATING INFECTIONS
- March 16 **Professor Domna Stanton**
 Distinguished Professor, City University of New York
THE NATION AS ITS OTHERS: PROTESTANTS AND WOMEN IN THE AGE OF LOUIS XIV
- March 23 **Dr. Burton Richter**
 Nobel Laureate in Physics, Stanford
ENERGY IN THE 21st CENTURY
- April 6 **Professor David Suzuki**
 Department of Zoology, UBC
THE CHALLENGE OF AN ECOLOGICAL MILLENNIUM: SETTING THE BOTTOM LINE
- April 13 **Professor Sherrill Grace**
 Head, Department of English, UBC
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Saturdays at 8:15 p.m. in Lecture Hall No. 2 of the Woodward Instructional Resources Centre at UBC.
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Drug advertising may pose health risk warns researcher

Requests for advertised drug influence MDS, says study

by Hilary Thomson staff writer

WHEN MARKETING MEETS UP with medicine, results can be harmful to health, says a UBC researcher.

Barbara Mintzes, a PhD candidate in the Dept. of Health Care and Epidemiology, led a study of how advertising affects prescribing practices in Vancouver and Sacramento, Calif. The study was published last month in the *British Medical Journal*.

Doctors were more likely to prescribe a drug that a patient had seen advertised and specifically asked for even when the doctor was uncertain about its appropriateness for that patient, according to Mintzes and co-investigators from UBC's Centre for Health Services and Policy Research, York University and the University of California at Davis.

"One of the big concerns about this kind of advertising is you're pushing people to use very new drugs before we know very much about either their risks or their longer term benefit," says Mintzes, who has worked for Health Action International, a non-profit global group interested in a more rational use of medicinal drugs.

The study of 78 primary care physicians and 1,431 patients used questionnaires to determine the

frequency of patients' requests for prescriptions and of prescriptions resulting from requests.

Findings showed that physicians prescribe drugs in response to almost three-quarters of requests and that doctors are ambivalent about their prescription decision in about half of cases where they are responding to patient requests for an advertised drug. They reported ambivalence in only about one case in eight when not prompted by a patient request.

The study looked at drugs having the 50 biggest advertising budgets in the U.S. or which had been covered by Canadian media.

Only the U.S. and New Zealand allow advertising of drugs directed at patients. U.S. pharmaceutical companies spent \$2.5 billion US in advertising prescription drug products to the public in 2000, says Mintzes.

Although this amount is less than 20 per cent of the total advertising budget, it is the fastest-growing budget item, she adds. Retail drug sales in 2000 totalled \$145 billion US.

The Pharmaceutical Advertising Advisory Board, part of Health Canada, prohibits such advertising but enforcement is lax, she says.

She points out that Canadians still get the messages through American cable and satellite TV, magazines and the Internet. In addition some ads are allowed that fall between the cracks of regulations concerning promotion, such



Researcher Barbara Mintzes

as disease-oriented ads that advise patient to see their doctor.

"It's very clear that the industry has been pushing the limits of the law," she says.

Even if it is not explicit, it is still promotional activity posing as education, she adds.

Critics of the research say it does not address the key question of how the advertising-influenced prescribing affected patients' health.

"Medicines have prescription-only status because they are judged to be too risky to be used without the advice of a physician. We are concerned that the protection offered by prescription-only status is being seriously eroded if patients request drugs in response to advertising and doctors prescribe requested drugs in spite of being ambivalent about the choice of treatment," says Mintzes.

For more information about the study, visit the *British Medical Journal* Web site at bmj.com/cgi/content/full/324/7332/278



RESEARCH AWARENESS WEEK

MARCH 9-16, 2002

Saturday, March 9 8:15 p.m.

VANCOUVER INSTITUTE LECTURE:
 Professor Bob Hancock, Dept. of Microbiology & Immunology
"New Approaches to Treating Infections"
 Woodward Instructional Resource Centre Lecture Hall 2
 Contact: peter.nemetz@commerce.ubc.ca

Monday, March 11 4:00 - 5:00 p.m. (reception to follow)

CELEBRATE RESEARCH LECTURE SERIES:
 Dr. Dennis Danielson, Dept. of English, and Dr. Jaymie Matthews,
 Dept. of Physics & Astronomy
"The Arts and Science of the Cosmos"
 4.00 pm, Dodson Room, Main Library
 Contact: sidkatz@interchange.ubc.ca

Thursday, March 14 7:00 - 9:00 p.m.

CELEBRATE RESEARCH AWARDS EVENING
 The Chan Centre for the Performing Arts
 Tickets still available, contact: celebrate.research@ubc.ca

For a full list of events associated with Research Awareness Week visit our website at www.research.ubc.ca and click on Celebrate Research

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 9:30-10:30 am Lecture on symbology of music
 1:30-2:30 pm Lecture on musical structure

Apr. 10 9:00-10:00 am
 Meditation at UBC First Nations House of Learning

Apr. 11
 9:00-12 noon Information, Sand Mandala
 7:00 pm
 Public Lecture UBC First Nations House of Learning

Apr. 12
 9:00-12 noon Completion of Sand Mandala
 8:00 pm Performance at UBC Chan Centre

For further information, please call (604) 822-4688 or visit our website <http://www.iar.ubc.ca>

Compassion heightens workplace performance, research suggests

Caring companies make for loyal employees, say scholars

by Helen Lewis staff writer

THE RESPONSES to the tragedy of Sept. 11 were poles apart.

When seven Tjx employees died aboard one of the planes that hit the World Trade Center, the president and CEO acted quickly. He gathered his staff and broke the news, called in grief counsellors and chartered a plane to bring the victims' relatives to the company's Massachusetts headquarters.

Employees were offered time off, but most chose to keep working and supporting each other following the attacks.

By contrast, the heads of a publishing company close to ground zero declared "business as usual" immediately after the disaster, giving scant support to employees. One editor was called at home early on Sept. 12, her bosses demanding to know why she was late for a meeting. Her loyalty to the company, she says, began trickling away that day.

How companies like these show — or fail to show — compassion to employees in pain is being studied at CompassionLab, a joint project of UBC and the University of Michigan (UM).

CompassionLab — a diverse group of researchers rather than a bricks-and-mortar facility — includes UBC Commerce Prof. Peter Frost, UM Business School Prof. Jane Dutton, UBC Commerce Asst. Prof. Sally Maitlis, and Jason Kanov, Monica Worline and Jacoba Lilius of UM's Psychology Dept.

CompassionLab examines the importance and the effects of compassion in the workplace and it's an area of research that is increasingly in demand, says CompassionLab co-founder Frost.

"These days we depend on people's intellectual and emotional capacity to get a competitive edge, so we need to look at people as an investment, not a cost. And if you're investing in people you must invest in the whole person, not just their hands or their brains," he says.

"A growing body of research shows when organizations put people first, their performance on almost all indicators is better. In times of trauma, people aren't focused on their job or their organization — they're focused on the pain. But if people are cared for when they're vulnerable, it makes it possible for them to move on more quickly and become productive again."

CompassionLab's work does not focus solely on responses to Sept. 11. Pain in the workplace existed long before that, the researchers say, and comes in different forms.

On an individual scale, an employee may be diagnosed with cancer, lose a family member or face divorce, while examples of larger-scale trauma include natural disasters, fire destroying a manufacturing plant or mass lay-offs.

The lab's "subject" organizations



Sally Maitlis (left) and Peter Frost

have been chosen by recommendation — Cisco, Newsweek and Macy's were identified as organizations showing compassion — and by direct invitations from companies.

"It's early days but we've got rich data and some very provocative hypotheses which we'll be able to take further with the extensive data we're collecting in organizational sites," Frost says.

For more information about CompassionLab and compassionate workplaces, visit www.compassionlab.com.



GREEN COLLEGE THEMATIC LECTURES

Green College is pleased to announce three new Thematic Lecture Series for 2002-2003:

"Engaging Civil Societies in Democratic Planning and Governance: Re-Examining the Theory and Practice of Community-Building"

Co-convenors: Leonora C. Angeles and Penny Gurstein, School of Community and Regional Planning

"Reckoning with Race: The Concept and its Consequences in the 21st Century"

Co-convenors: Brian Elliot and John Torpey, Anthropology and Sociology

"TITLE IN THE TEXT: Biblical Hermeneutics, Colonial and Postcolonial Pre-occupations"

Co-convenors: Mark Vessey, English, Sharon V. Betcher and Harry O. Maier, Vancouver School of Theology, Robert A. Daum, Classics, Near Eastern and Religious Studies

These series will begin in September 2002 and run throughout the academic year. Speakers and schedules will be announced in late summer. For further information: cmtander@interchange.ubc.ca or 604-822-1878.

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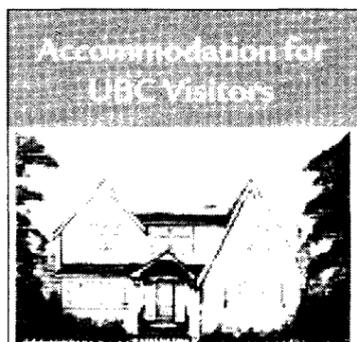
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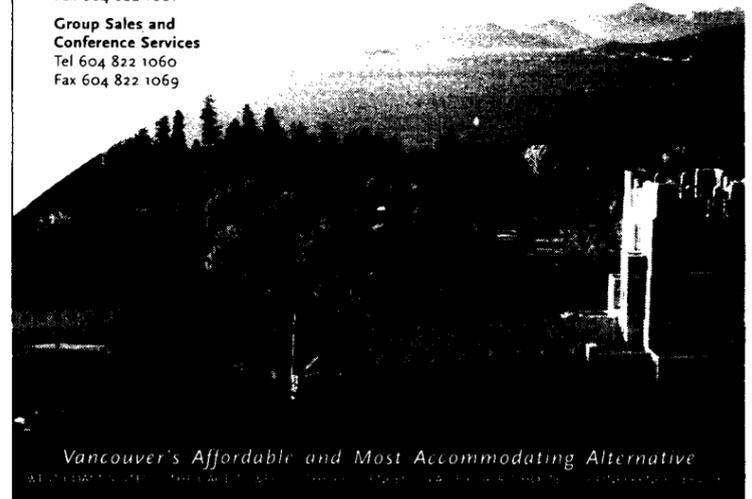
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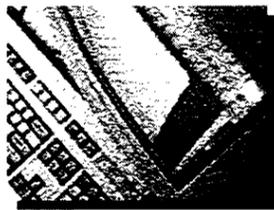


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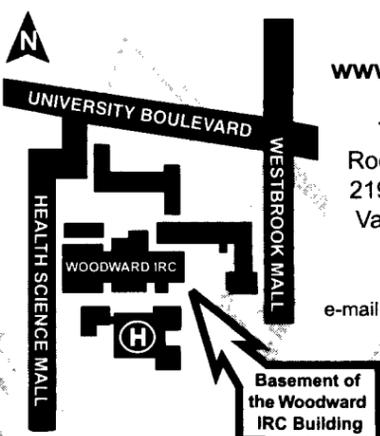
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Events

WEDNESDAY, MARCH 13

UBC Authors Week

UBC Authors From A To Z. Prof. William New, English; Prof. Peter Hochachka, Zoology. Main Library - Dodson Room, from 12:30-1:30pm.

THURSDAY, MARCH 14

UBC Authors Week

Ways Of Seeing: UBC Filmmakers Showcase Recent Productions. Main Library - Dodson Room, 12noon-1pm.

FRIDAY MARCH 15

UBC Authors Week

Recent Compositions By UBC Composers. Main Library - Dodson Room from 12noon-1pm.

Festival

Festiva 2002. International House, 5pm to 11pm. Advance tickets, \$5 at International House. Call 604-822-5021.

MONDAY, MARCH 18

Lecture

The Role of Researchers In Responding To The Current Crisis Of Cutbacks In Social Services, Social Assistance And Health Benefits. Prof. Dara Culhane, Anthropology, SFU. Main Library, Dodson Room, 12 noon to 2 p.m. Visit www.learningexchange.ubc.ca/.

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Beat goes on all weeklong

Bring your bongos to the lunchtime 'Jamarama'

A PERFORMANCE BY UBC's Balinese Gamelan Ensemble and the chance to come and bang your own gong are some of the highlights of the School of Music's first festival of drumming taking place March 19-27.

The weeklong celebration kicks off March 19 with an invitation to bring your djembes, bongos and shakers to a lunchtime Jamarama at the Student Union Building. The free two-hour jam session gets underway at noon.

The following day, the Izume Taiko Ensemble brings the power-

ful sound of Japanese drumming to the School of Music Recital Hall, also at noon. Tickets are \$4 at the door.

The festival concludes March 27 with a colourful noon-hour showcase of Balinese dance and music. Led by dynamic young Indonesian artist Dewa Ketut Alit, UBC's 27-member Gamelan Gita Asmara ensemble will perform a free concert of traditional and new works that Alit has composed for them.

Alit, who hails from a family of traditional Balinese musicians, is on campus this year as a Faculty of

Arts Andrew Fellow to share his extensive knowledge of gamelan, a percussion ensemble common on the Indonesian islands of Bali and Java.

Alit, Music Assoc. Prof. Michael Tenzer and the rest of the ensemble will be playing on a hand-forged set of gongs, bronze kettles, metallophones, bamboo flutes, drums, and cymbals that Tenzer brought back with him from Bali.

For more information on times and, for some of the performances, ticket prices, call the UBC School of Music at 604-822-5574 or visit www.music.ubc.ca.



THE UNIVERSITY OF BRITISH COLUMBIA
CENTRE FOR
JAPANESE RESEARCH
DIRECTOR

The Institute of Asian Research is seeking applications from within the University for the post of Director of the Centre for Japanese Research. Applicants should hold academic appointments at UBC and have a demonstrated record of research on Japan. The successful applicant will be expected to take up the appointment on July 1, 2002.

The successful candidate will be expected to develop research programs focusing on Japan, seek funding from external donors for the programs of the Centre for Japanese Research, organize conferences and seminars on the Centre's research interests and projects, administer the budget of the Centre, and chair the Centre's management committee. The Centre Director will be expected to collaborate with the Director of the Institute of Asian Research in developing inter-Centre and interdisciplinary teaching and research initiatives. The Centre Director will also serve on the Council of the Institute.

UBC hires on the basis of merit and is committed to employment equity. We encourage all qualified persons to apply.

The appointment will be for a fixed term of three to five years. The deadline for applications is March 31, 2002. Applicants should send a letter describing their interest in the position, a curriculum vitae, and the names and postal and e-mail addresses of three references to:

Pitman B. Potter, Director
Institute of Asian Research
C.K. Choi Building, Room 251
1855 West Mall, UBC V6T 1Z2.
Tel: (604) 822-4688
Fax: (604) 822-5207
e-mail: potter@interchange.ubc.ca

DIGEST

Vocational pursuits

The Faculty of Education has launched Canada's first ever master's degree program in Vocational Rehabilitation Counselling.

The two-year program, operating from UBC's Point Grey campus and UBC at Robson Square, will train students in a broad spectrum of rehabilitation services including disability management in order to help people with disabilities effectively integrate or re-integrate into the community and workforce.

Its interdisciplinary focus will bring together instructors from the faculties of Medicine and Education and the School of Rehabilitation Sciences.

The Workers' Compensation Board of B.C. contributed to an endowment fund to support the new program. Another major sponsor is Great-West Life Assurance Company. The program will be co-ordinated by Assoc. Prof. Izabela Schultz in the Faculty of Education.

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Honour Roll

Dr. Julio Montaner, a professor of Medicine, has been awarded \$1 million from international pharmaceutical company Boehringer Ingelheim Canada. Montaner is applying the funds to endow a professorship in health outcomes research in HIV/AIDS.

The award is one of the largest single awards of its kind in Canada and was given in recognition of Montaner's contribution to HIV/AIDS.

Brent Sauder has been appointed director of the Office of Research Services effective June 1.

A UBC Forestry graduate, Sauder is currently executive director of the B.C. Advanced Systems Institute.

He previously held various positions in forestry research at MacMillan Bloedel and served as a director for the New Media Innova-

tion Centre, Science Council of British Columbia, and the Greater Vancouver Economic Partnership.

Richard Kerekes has been appointed the first holder of a new Paprican Professorship in Pulp and Paper Engineering.

The professorship, created by the Faculty of Applied Science in collaboration with the Pulp and Paper Research Institute of Canada (Paprican), will be funded from a \$1-million endowment created by UBC and Paprican.

Kerekes is the founding director of UBC's Pulp and Paper Centre.

The Alumni Association's *Trek* magazine won silver in three categories at the recent CASE (Council for the Advancement and Support of Education) District VIII competitions. The awards were received for best writing ("The Striptease



Record-breaking Arts student Brian Johns. For story, see www.publicaffairs.ubc.ca.

Project"), best design and best overall magazine. The magazine is edited by the association's **Chris Petty** and designed by **Chris Dahl** in UBC's Public Affairs Office.

UBC's Public Affairs Office won bronze in the Special Audiences-Annual Report category for UBC's 2001 Annual Report, "Out There." The report was designed by Leap Creative.

The Public Affairs Office also won silver in the Special Audiences-Fundraising Booklet category for the Brain Research Centre case statement. The booklet was designed by Tandem Design Associates.

Both publications were developed by **Karen McDonald** in the Public Affairs Office.

CASE District VIII includes member colleges, universities and independent schools in Western Canada and the U.S. Pacific Northwest.

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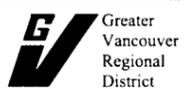
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PROFILE

*Who says you can't DJ with CDs?
Not graduate student Tim Beamish*

The right mix



by Helen Lewis staff writer

TIM BEAMISH WAS THE ONLY KID in Trinity, Nfld., with a passion for hip-hop music in the early '90s — he knows that for a fact.

After all, even in a busy summer there are only 200 people in the tiny fishing village where he grew up working in his family's whale-watching operation.

Living three hours from anywhere, Beamish got his DJing start when he spent every cent from his eighth-grade summer jobs on two turntables, a mixer and a rare second-hand drum machine, and began scratching records in his room.

It was hard to keep the dream alive, being the 0.5 percent of the population who shunned Bryan Adams and Mötley Crüe in favour of Public Enemy and Rap City.

But now his obsession is set to pay off for DJs everywhere.

These days Beamish is combining DJing — his passion and part-time job — with his talent for Computer Science in a unique master's degree project at UBC.

His thesis involves creating a new DJ set-up to mix and compose music in a digital environment.

"I'm looking at ways of incorporating the standard DJ setup (two turntables, a mixer and a crate of records) into a digital realm where

Computer Science and a passion for DJing come together in Computer Science student Tim Beamish's research project. D'Groove, a digital turntable system Beamish has developed, allows DJs to do with digital music what they once did only with LPS. Martin Dee photo

the DJ can use digital MP3 and CD music and effects without losing the performance aspect," he says.

"DJs currently use vinyl records largely as a means of control — it's really important that they can use their hands to get an instant reaction in what happens to the music.

I want to make a direct, hands-on approach to digital music possible."

Beamish studied the tasks a DJ performs in the traditional set-up and then set out to make those easier through his research.

The result is D'groove, a digital turntable system that allows DJs to play digital music while keeping the look and feel of a traditional turntable and offers more creative options than traditional vinyl records.

D'groove uses two turntable devices attached to a computer running a media player. Two-way communication between the turntables and the computer means both devices can "talk" to each other.

MP3 and other digital music from the computer is controlled by the turntable. The turntable, in turn, can be controlled both by the computer and the DJ's hands.

"The software I developed can make the turntable stop, or spin at a certain speed, or spin backwards, or spin to a specific position and then stop and spin back," Beamish says. "This means the music will stop, or spin at a certain speed, or play backwards because the action of the turntable controls the music.

"This system also uses haptics, a new form of Computer Science that provides information from the computer through the sense of touch," Beamish adds. "D'groove gives haptic force feedback to the DJ, making the turntable harder or easier to move, or giving bump, bounce or spring-back effects. I can also keep my hand on it and

"I want to give DJs more options and help increase their level of creativity so they can express themselves better," Beamish says.

"I don't want to fully automate what the DJ is doing. It's possible to get a computer to mix music accurately, but you miss out on the little human nuances and the flair, which is an important part of why we love to see DJs perform.

"I don't want to take the process out of the DJ's hands — I'm a DJ and I don't want to become obsolete. I like what I'm doing, but I want to overcome the limitations and give DJs more to play with."

The work has been challenging — Beamish had no previous experience in hardware elements so he had to learn about circuitry, optical encoders, motors, input/output boards and writing software drivers in order to bring his vision to life.

He is closely in touch with the music scene outside the lab, DJing in clubs on Commercial Drive and dealing with the deluge of e-mails from DJs giving feedback and asking when D'groove will be commercially available.

And in the summer, Beamish returns to Newfoundland and performs for more receptive crowds than he ever found during his teenage years.

He still spends the days guiding whale-watching tours and helping his father, a UBC Marine Bioacoustics PhD alumnus, to conduct research on communication with humpback whales.

"It's the best job in the world," he says. "You get up around 5 a.m. and you never know what you'll do that day — you could be hiking, or going out in the boat, or helping rescue a humpback whale from a cod-fish net. You do all kinds of crazy stuff."

Beamish is constantly improving D'groove, sharing the progress through his Web site (www.cs.ubc.ca/~tbeamish) and researching the many other facets of DJ work open to improvement.

"I'm overflowing with the number of things I can work on in this area," he says.

"I could spend a lifetime working on cool toys to improve a DJ's music."

For the rap-mad kid from tiny Trinity, that would be a dream come true.