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coming up



BCIT Photo Contest

Last chance to enter!
Deadline: Fri., Dec 3.
See page 6 for more info.

Wave of the Future Luncheon

Thurs., Dec. 2, 1130-1300
BCIT Downtown Campus
Get info on the Information Technology Professional (ITP) program.
No charge to attend.
RSVP Kim Morgan: 432-7621 or e-mail itp@bcit.ca
More info: 412-7687

Staff Service and Recognition Ceremony

Fri., Dec. 17, 1330
Town Square A & B
More info: 432-8398



Board of Governors and President's Annual Christmas Reception

Fri., Dec. 17, 1430-1800
Town Square Cafeteria
More info: 432-8398

BCIT's Annual Retirement Dinner (rescheduled)

Thurs., Jan. 27, 1800
More info: 432-8398

Winter Awards and Convocation

Wed. Feb. 17, 17:00 and 19:00
Willingdon Conference Centre
More info: 435-8398

BCIT launches \$1.67 million research initiative

BCIT is embarking on a \$1.67 million research initiative as a result of three different proposals developed by the Technology Centre.

In June 1999 the Canada Foundation for Innovation

awarded BCIT nearly \$700,000 towards the three projects: an Internet engineering lab, a photovoltaic research lab and a centre for rehabilitation engineering. All three research teams have

applied to the provincial government for matching funds.

"This really signals BCIT's coming of age in applied research," says Norman Streat, director of the Technology

Centre and dean of Applied Research. "We're in some very prestigious company in winning these grants," he says.

Each of the following BCIT projects breaks new ground in its field.

BCIT Internet Engineering Lab

Michael Hrybyk's vision for an Internet Engineering Lab at BCIT is about to become a reality. Thanks to a grant from the Canadian Foundation for Innovation, and other financial support from the provincial government and industry sponsors, construction is underway on the first floor of NE-25.

As director of the Technology Centre's Group for Advanced Information Technology (GAIT), Hrybyk is the principal architect for the BCIT Internet Engineering Lab. Once complete, the lab will be a state-of-the-art facility equipped by multiple vendors. As such, it will create an environment for the high tech industry, including Internet service providers, equipment vendors and Internet technology developers, to perform complex routing, performance, and interoperability tests on existing, as well as new and emerging Internet technologies.

"The BCIT Internet Engineering Lab will be the first of its kind in Canada," says Hrybyk. "Other facilities housing similar equipment are typically sponsored by a single vendor or operated by a closed corporate entity and are not available to the high technology community at large."

Hrybyk also claims that the lab will create tremendous opportunities for research and development at BCIT. "Access to a facility of this type is in huge demand by the high tech community. BCIT will have an opportunity to collaborate on projects with industry leaders in the Internet Engineering field as well as groups from universities and other higher-education institutions across the continent."

The lab will also benefit BCIT students. With access to an international quality facility for Internet engineering, students will be able to develop



Michael Hrybyk, director of GAIT and the principal architect for the BCIT Internet Engineering Lab

much-in-demand skills in this rapidly developing field and gain exposure to emerging Internet engineering technologies and their developers.

Fully operational by 2001, the BCIT Internet Engineering Lab will bring BCIT and British Columbia to the forefront of Internet engineering research, testing and training.

Centre for Rehabilitation Engineering and Technology that Enables



Nancy Paris-Seeley of the BCIT Technology Centre and Dan Leyland of the Neil Square Foundation - partners in development of CREATE

BCIT's new Centre for Rehabilitation Engineering and Technology that Enables (CREATE) is a full partnership with the Neil Squire Foundation, an organization with a long track record of applied R&D for the disabled, particularly in robotics and communications.

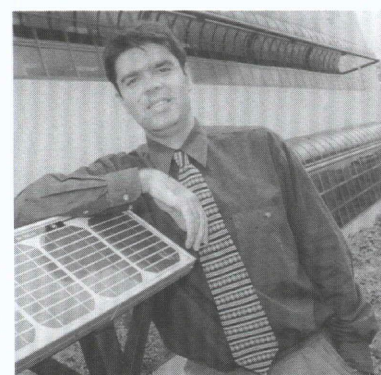
CREATE, a \$350,000 initiative, was awarded 40 per cent of its funding from the Canadian Foundation for Innovation (CFI). The Centre will be a unique research facility in B.C. devoted to development of devices, technologies, and products for people with disabilities or those recovering from injury or illness.

"There is a tremendous need for this type of facility in B.C. Although useful, many of the assistive devices currently on the market are quite primitive. There is lots of room for refining design and developing new products. With an aging population, CREATE will make a huge impact on society," says Silvia Ursula Raschke, principle investigator.

The partnership between Neil Squire and BCIT will allow the two research teams to share resources and collaborate on projects. To take full advantage of the partnership, the Neil Squire Foundation has moved part of their operation onto the BCIT campus.

"At BCIT we have expertise in all areas of medical device R&D. CREATE will provide enormous research opportunities for faculty from the Health and Engineering programs. As project results are published and commercialized, BCIT will become recognized internationally for its commitment to health R&D," says Raschke.

The funding from CFI is dispersed over four years. This year the money will go toward preparing the allocated space in building NE-3 and purchasing a rapid prototyping machine. CREATE should be up and running early in the new year.



Ljubisav Stamenic, R & D head of PEARL

Photovoltaic Energy Applied Research Lab

The BCIT Technology Centre formed its Photovoltaic Energy Applied Research Lab (PEARL) in September 1997. Since then, Ljubisav Stamenic, R&D head of PEARL, and his team of researchers have been working on a steady flow of projects for industry involving photovoltaics and other renewable energy technologies.

In the last month PEARL was awarded two notable research grants. The Canada Foundation for Innovation (CFI) awarded the lab funds for a new state-of-the-art facility for applied research and development in photovoltaics.

PEARL also won a grant from the federal government's TEAM (Technology Early

Action Measures) program for reducing greenhouse gas emissions. Under this program, BCIT will develop various Building Integrated Photovoltaic (BIPV) demonstration projects. The first is a BIPV Grid-Connected system that will be installed on the new Technology Place

did you know

How we get to work

The BCIT 1999 Staff and Faculty Transportation Survey results are in! Some of the findings include:

Travel to work

69.1% drive alone or motorcycle (this number dips to 50.5% for Burnaby and New Westminster residents)
13.6% participate in carpool/vanpool
8.2% take public transit
2.8% walk, jog, or rollerblade
2.3% cycle

Top 3 Reasons for not taking public transit more often

Transit takes too much time: 46.4%

Need car for errands or personal reasons before/after work: 41.2%

Like independence of having car: 23.7%

Average distance travelled

- If driving alone: 20 kms
- Driving a carpool: 27 kms
- Riding in carpool: 21 kms
- Taking public transit: 18 kms
- Cycling: 9 kms
- Walking, jogging, rollerblading: 2 kms

Where do we live?

Vancouver19%
Tri-Cities17%
North Shore17%
Burnaby/New West.....15%
Fraser Valley13%
Surrey/White Rock10%
Delta/Tsawwassen5%
Richmond.....4%

Other facts

- 31.5% of BCIT respondents say they would share a ride to work if they had help finding others to carpool with.
- 20.6% say they would take transit to work if they received subsidized monthly transit passes.

take note

Santa is coming! He's making a list...

The holidays are coming. Tell us what you would like Santa to bring you. If you don't believe in Santa but have a wish for the season, please let us know what it is. Your answers will be printed in the Dec. 14 holiday issue of Update.

E-mail responses to ikolic@bcit.ca or fax 436-5762 (deadline: Dec. 3).



Aviation program remembers

A short Remembrance Day ceremony was held by BCIT Aviation at the Aerospace and Technology campus in Richmond, on Wednesday Nov. 10 – the last Remembrance Day of the millennium.

The ceremony was held in the main entrance hallway of the building in front of 150 staff and students. It began with a short speech by Dave Mitchell, the associate dean of Aviation, who spoke briefly on the reason for holding annual Remembrance Day ceremonies. He emphasized the work of the Commonwealth War Graves Commission, who look after numerous war cemeteries throughout the world where

those who died in both World Wars were laid to rest. Mitchell also pointed out that many of the Aviation graduates will be given the chance to travel world wide, and should take this opportunity to visit the cemeteries in Korea, Hong Kong, Holland, France, Belgium, Italy, and North Africa. A lament on bagpipes followed by Doug Grant, Aviation instructor, and a piper with the Delta Police Pipe Band. Also present was Trevor Castle, Aircraft Maintenance Engineer instructor, who represented the Royal Canadian Legion.

– from John MacGillivray



Trevor Castle (on the left), Aircraft Maintenance Engineer Program instructor, and Doug Grant, Avionics instructor

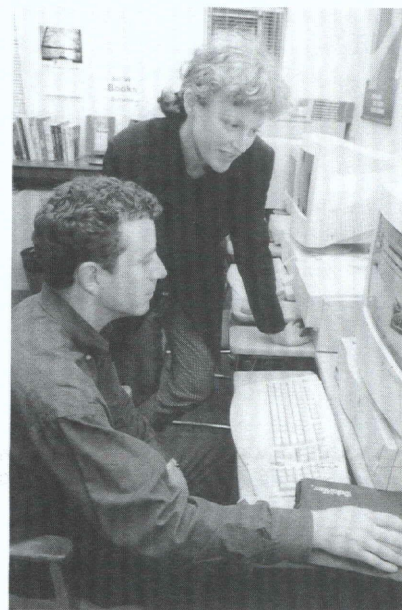
Learning for Success

The final article in a series for the Educational Resource Centre for Students with Disabilities.

When a student struggles with coursework, it may be due to an inefficient and underdeveloped approach to learning. It is essential that adults become self-regulated learners and to do this, the learner must have a well-developed set of learning skills and strategies along with the ability to adapt them flexibly and efficiently to new learning situations. The Learning for Success program has been designed to assist BCIT students in becoming efficient and self-regulated learners. Particularly those with learning disabilities or other undiagnosed learning difficulties. It is a terrific resource for students who are experiencing academic difficulties and is open to all students at BCIT.

Learning for Success is not a study skills workshop, in that the course has a strong practical component with one-to-one support. In small classes, as well as in a resource room setting, students select and apply newly learned strategies directly to their current academic tasks, thus having an opportunity to build and refine skills with individual support from the instructor. Some of the topics covered are critical thinking, study reading strategies, memory techniques, concentration, listening and note taking, time management, building academic confidence, and stress management.

Many students have made the most of their Learning for Success experience and gone



Kathy Musial assists a student

on to successfully meet the challenges of studying at BCIT. BCIT instructors can refer to

Learning for Success, any students who are experiencing difficulty learning academic content and need to improve their approach to studying. The instructor is Kathy Musial, from BCIT's Educational Resource Centre for Students with Disabilities (ERC). Referrals can be made to ERC reception at 451-6963. The cost of participating in the Learning for Success program ranges from \$100 to \$400 and funding may be available through ABESAP (Adult Basic Education Student Assistance Plan) for qualifying students.

– from the Educational Resource Centre

HARASSMENT AND DISCRIMINATION

Discrimination and graffiti

This is the second in a series of nine articles exploring issues that affect our campus.

The following three scenarios could happen at any campus, anywhere in North America.

Scenario One: You arrive for work one morning and approach your office, keys in hand. You're about to insert the key into the lock when, right at eye level, you notice a black swastika, written in felt marker, on your office door.

Scenario Two: You're rushing down the stairs, to a meeting, and you turn the corner. On the wall, right by the landing, are the words, "Steve's a queer."

Scenario Three: You're a female student in a traditionally male-dominated field. On the wall of your classroom there are several questionable drawings involving females, probably scribbled years ago. No one even notices it anymore. Sometimes even you don't.

In each of the instances above, how would it make you feel? In reality, your reaction –

both emotional and intellectual – would be complex. In Scenario One, you would probably feel hurt, confused, and violated. In Scenario Two, you may be offended, or perhaps not even react, although someone else's message has managed to interrupt your thoughts for a few moments. In Scenario Three, you are reminded daily, subconsciously, that as a woman, you are in a minority and therefore have less power. But you believe that complaining may only alienate you from your classmates and future co-workers, so you don't say anything.

Grffiti is the willful defacement of someone else's property by writing words or drawing with paint, pen, or any other marking substance. Graffiti affects everyone who sees it. Someone has to pay for its removal – usually you, through tax dollars. *Everyone* has to pay for it, if the message is a hateful one.

Bill Graham, harassment and discrimination officer for BCIT, points out the political and social messages that come from graffiti, "A person who draws a swastika has very different intentions from a person who draws a happy face. Each one wants to elicit a reaction. It's important to remember that the person who draws something like a swastika is actually a very small minority, imposing their views on the majority through graffiti," Graham explains.

Every campus, indeed every community, experiences graffiti. In certain urban environments, although not welcome by private property owners, some graffiti is regarded as an art form and an act of political subversion. An entire subculture and vocabulary base has developed around graffiti.

However, encountering graffiti in the places we work, play, and live, has serious and unavoidable consequences.

By not removing graffiti immediately, it attracts others to add to it. Leaving it there justifies it.

"BCIT's stand on graffiti depicting racist, sexist, or other discriminatory messages, is that it is not tolerated," says Graham. "Persons found to be responsible for messages of that sort will be subjected to the student conduct policy and the BCIT policy on harassment and discrimination."

What you should do:

When you see someone defacing BCIT property it should be reported to security immediately. If you can, identify the individual. If you see the graffiti, but haven't seen the person responsible for it, advise Physical Plant immediately so they can remove it.

As citizens, we can act against graffiti by expressing our disapproval of it, reporting it when we see it, removing it if we can, and certainly by not creating it ourselves.

TECHNOLOGY CENTRE SPECIAL EDITION

Message from the director

Looking at a bright future with research and development

Last year, when the Technology Centre Special Edition of Update was published, I was on leave visiting colleges in Canada and former polytechnics in the UK who are implementing applied research programs. I learned that although the number of Canadian colleges and institutes engaged in this activity is relatively small, applied R&D is a growing trend. I was also pleased to discover that BCIT's accomplishments in this area have become well regarded and widely known. In the UK I saw how former polytechnics have successfully moved their institutional cultures from teaching to teaching plus research.

When I returned to BCIT last January these experiences played a large part in shaping a new focus for the Technology Centre – one that makes people our priority. Over the past year we have directed our efforts at developing the

capabilities of people within the BCIT community, and creating programs and initiatives that support their efforts in applied research and development. As a result, more BCIT teaching faculty are involved with the Technology Centre, in a variety of capacities, than ever before.

Many instructors took advantage of our new BCIT Staff Applied R&D Fund and took leave from their regular teaching duties in order to undertake applied research activities. In addition, several joint appointments were made this year with teaching departments for staff whose job responsibilities will include both teaching and applied R&D, and some Technology Centre staff are now teaching part-time.

This fusion between BCIT faculty and the Technology Centre will be further promoted by the Technology Centre's achievement in

winning all three of the applications submitted to the Canada Foundation of Innovation's (CFI) College Research Development program. The Technology Centre staff and other BCIT employees who prepared these applications did an outstanding job of developing concepts for three unique facilities for applied research in: Internet engineering, rehabilitation engineering, and photovoltaics. They also formed powerful teams with research partners in industry, universities, and other organizations.

Looking towards the future, there is little doubt that the three areas that have received CFI funding will now advance rapidly in terms of attracting project support from industry and government agencies. They also provide a model that can be followed by other developing areas at BCIT (forensic chemistry, food technology, electronic



Norman Streat, director of the BCIT Technology Centre

engineering, advanced vehicle systems, aerospace, and others).

All in all, our initiatives and accomplishments over the past year will create tremendous opportunities for the BCIT community and will strengthen BCIT's commitment to an institutional plan that includes applied research and development. The future indeed looks bright.

Faculty receives more than \$100,000 for applied R&D

During the past year the Technology Centre awarded BCIT Staff members more than \$100,000 to conduct Applied R&D projects. The money comes from the BCIT Staff Applied R&D Fund established by the Technology Centre to encourage staff involvement in research and development.

The objective of the fund is to encourage BCIT staff to take leave from their regular duties to undertake applied research activities. "The Technology Centre covers 50 per cent of the total cost of an individual's leave of absence to a maximum of \$25,000 in any one fiscal year. Applicants must obtain the other 50 per cent from one or more sources outside the Technology Centre," explains Norman Streat, director of the Technology Centre.

The successful candidates received funding approval in January and began conducting

research projects in a variety of areas this September. They include:

Brian Giffen, from the Small Business and Entrepreneurship program was awarded the funding for a six month release from his regular

The objective of the fund is to encourage BCIT staff to take leave from their regular duties to undertake applied research activities.

teaching duties. Giffen's proposal is for a study of the possible audiences for BCIT Entrepreneurial Skills Training, and development of a three year commercialization strategy to reach these markets.

The Technology Centre awarded **Lian Gu**, of Mechanical Design & Manufacturing Technology, with funding to supplement his

Professional Development (PD) leave. Gu will be working with a company that prefabricates modular and panelized buildings to identify and correct a problem with the heating and ventilation of school trailers manufactured by the company.

While on leave from her teaching duties in Food Technology, **Anne McCannel** will be working with several different food processing companies including Yves Veggie Cuisine, a producer of a line of soy-based products, and St. Lawrence Technologies, Inc. a small company which researches new ways of processing agricultural products.

Don Wilson, program head of Plastics Technology received funding approval for a project involving the development of a second generation insect trap for the forestry industry. Licensed to Phero Tech Inc., the original trap was introduced in 1984 and

has since become the standard for bark beetle research.

The Technology Centre is now reviewing applications submitted for the Oct. 29 deadline of this competition and will be accepting applications again in January 2000. If you are a full-time regular BCIT staff member with an exciting research and development project in mind you are eligible to apply. Application forms can be obtained from the Technology Centre. Watch your e-mail in January for announcements regarding deadlines for proposal submission.

If you would like more information about the BCIT Staff Applied R&D Fund and how to get involved in applied research at BCIT contact Norman Streat, director of the Technology Centre, at tel. 432-8815 or e-mail nstreat@bcit.ca.

– from Kelly Gervais

Photovoltaic Energy Applied Research Lab continued from page 1

building at BCIT's Burnaby campus. The second is the development and installation of BIPV Ventilation System at the Telus building in downtown Vancouver. The third scheduled project is construction of an energy efficient house that will be built in cooperation with the Canada Mortgage and Housing Corporation (CMHC).

"With a new state-of-the-art facility and a number of

demonstration projects to show-off, we will attract more industry projects requiring specialized equipment and extensive lab space," says Stamenic.

In addition to conducting applied research projects for their industry clients, the Technology Centre is working with BCIT Electrical & Electronic Technology to develop a program in photovoltaics. The new lab and the demonstration projects

will provide excellent opportunities for students to acquire hands-on training.

Stamenic's enthusiasm and passion for his work is unmistakable. In a relatively short period of time PEARL has attracted attention and acclamation from B.C. industry and other educational institutions. In fact, researchers from SFU and UBC are presently conducting projects under the PEARL umbrella.

Members of the PEARL research team have represented BCIT at major international conferences on photovoltaics and delivered presentations on project results.

"Photovoltaics is a relatively new field with huge global potential. It is vital that research into various alternative energies continue," says Stamenic.

– from Kelly Gervais

take note

The Technology Centre has undertaken a wide variety of applied research projects with industry. The involvement of BCIT faculty and staff has been crucial to the success of many of these initiatives. The following is a list of faculty and staff who have contributed to applied R&D at BCIT in 1999.

Mark Angelo
Renewable Resources

Art Bailey
Computer Systems Technology

Errol Borsky
Occupational Health and Safety

Paula Brown
Forensic Sciences Technology

Danny Catt
Renewable Resources

Anthony Chan
Biomedical Engineering Technology

Edwin Chan
Forensic Sciences Technology

John Emes
Basic Health Sciences

Mary Sue Fairbairn
Health Sciences

Brian Giffen
Small Business & Entrepreneurship

Lian Gu
Mechanical Design
& Manufacturing Technology

Bob Gunn
Renewable Resources

Dean Hajum
Computer Systems Technology

David Hamilton
Communication Department

Ernie Hamm
Wood Products Manufacturing

Ernie Hancock
Electrical & Electronics

Bruno Jaggi
Biomedical Engineering

Emanuel Kulhanek
Mechanical Engineering

David Lewis
Mechanical Engineering

Anne McCannel
Food Technology

Steve McClain
Computer Systems Technology

Jeff Melnyk
Manufacturing Technology

Rob Neilson
Computer Systems Technology

Laura Penner
Operations Management Technology

Ed Pretzlaff
Plastics Technology

Barry Pointon
Physics Department

Sylvia Rashke
Prosthetics and Orthotics

Gary Rosberg
Renewable Resources

Bill Rutherford
Computer Systems Technology

Gary Sandberg
Food Technology

Ted Simmons
Electrical and Electronics

Randy Taylor
Broadcast Communications

Gordon Thiessen
Robotics and Automation

Paul Tinari
Environmental
Engineering Technology

Don Wilson
Plastics Technology

Ken Wong
Mechanical Technology

TECHNOLOGY CENTRE SPECIAL EDITION

take note**Professional Development Workshops**

For more information and complete course descriptions, see the Web site at www.bcit.ca/~lru/ProfDev/ or call 432-8927 or e-mail develop@bcit.ca to register.

Activities for Large Classes

Wed., Jan. 12, 1200-1400, SE-6, Room 204

Participants will hear about a series of interactive activities that can be used in large classes to promote student participation, retention of information, and attention span. Activities include word problems, simulations, small-group work, and games. Facilitator: Suzanna Heubsch, Computing and Academic Studies.

BCIT: no charge. Non-BCIT: \$25. Lunch provided.

Instructional Skills Workshop (ISW)

Tues., Feb. 15, 1700-2000

Wed., Feb. 10, 1700-2000

Sat., Feb. 19, 0900-1600

Sat., Feb. 26, 0900-1600

Sat, Mar. 4, 0900-1600

NE-21, Room 112

Do you want to improve your teaching skills? Give interactive and interesting lessons and improve your lesson plans? This workshop will help increase your confidence and repertoire. The ISW is credited toward the Provincial Instructor Diploma Program as course 102A. Small class size. Facilitator: TBA. BCIT: no charge. Non-BCIT: \$750

Workshops are funded through the Instructional Development Fund, established in 1989 through an agreement between BCIT and its Faculty and Staff Association. Any BCIT staff member may attend.

take note**Attention all students!**

The Tech Centre is launching a new program for B.C. post-secondary students who have developed an assistive device prototype deemed to have commercial potential. Twelve students will have the opportunity to participate in "mentoring" activities designed to help understand the complexities of the product commercialization process. The program is free to accepted students. For more info contact James Watzke, tel 412-7419, or e-mail jwatzke@bcit.ca

BCIT Staff Applied R&D Fund

The Technology Centre will be accepting applications for the BCIT Staff R&D Fund in January. For an application, or more info, call Norman Street at 432-8815, fax 436-0286, or e-mail: nstreet@bcit.ca

Living Laboratory

With the objective of preventing injuries to home care workers, the Workers' Compensation Board awarded the Technology Centre a \$40,000 grant to conduct a study of the effectiveness of portable transferring devices designed to help workers perform routine client transfers in the home setting.

The project is now underway in the Downtown campus' Dr. Tong Louie Living Laboratory, a state-of-the-art facility designed for research and development of age and disability sensitive environments and products. The Technology Centre's Health Applied R&D team built a standard bathroom within the lab and are observing and studying 24

different workers as they perform typical client transfers (i.e. from bathroom floor to bathtub or toilet) with a variety of assistive devices.

Using the lab's PEAK motion analysis system, researchers can study biomechanics and calculate the amount of stress being placed on the back during routine transfer tasks. They can then determine if any of the devices reduce the stress and therefore prevent injury," explains Nancy Paris-Seeley, director of the Centre's Health Applied R&D Program. Test subjects are also being interviewed to obtain qualitative data on their perceived stress rating and their individual evaluations of each device.

The final analysis will provide an in-depth evaluation of the devices, and which features are the most effective, as well as and where the devices could be improved. "This project is important because the results are transferable from the home to institutions such as hospitals and long term care facilities. Manufacturers can also use the results to improve existing devices and in developing new ones," says Paris-Seeley.

— from Kelly Gervias



Health care worker performs a typical client transfer in Living Lab Study

Safety by design

At present, there is one type of syringe-needle attachment for both intravenous (IV) and intrathecal (spinal) drug administration. This means that all syringes fit into the hub (or opening) of both intravenous and spinal needles, allowing for the possibility of medical error when administering drugs.

Recognizing a need for improvement, the Children's & Women's Health Centre of B.C. approached the Technology Centre for help in developing a new syringe-

needle system for spinal drug delivery that would be incompatible with that for IV drug administration.

Using Stereo Lithography (SLA), a method of rapid prototyping that can create an actual prototype from a 3D computer model, the research team conceived three different concepts and developed three scale prototypes. The prototypes were then evaluated for the functionality and ergonomics of each design.

"Each of the three concepts involves changing the tip of a

standard syringe and the hub or opening of a standard needle in ways that make it impossible for the new syringe tip to fit into an IV hub, or an IV syringe tip to fit into the hub of the new spinal needle," explains John Emes, project leader and program head of Basic Health Sciences.

"By making the two systems incompatible, the possibility of error while administering IV and spinal drugs is eliminated," adds Emes.

The Children's & Women's Health Centre of B.C. has selected one of the designs and

the research team is in the process of conducting a final design review. Once the final design is approved, the research team will begin developing a set of peripheral accessories to complete the new system.

"The project is scheduled for completion early next year, at which time we will select a manufacturer and begin production of the entire system. Our ultimate goal is a change in the instrumentation and protocol, world-wide," exclaims Emes.

— from Kelly Gervias

Focus on Research

At BCIT, faculty and staff who wish to conduct applied research and development have the opportunity to receive support from the Technology Centre. Several faculty have become involved in exciting projects by taking partial leave from their teaching duties or by incorporating their R&D activities into their teaching programs. The enthusiasm and initiative shown by instructors and staff has resulted in an impressive list of R&D projects over the past year, including:

Bruno Jaggi was vice-president and chief engineer at Xillix Technologies Corp. before joining the BCIT faculty in Biomedical Engineering this year. He is now working on an applied research and development project with the Tech Centre for Xillix providing direction in the development of cancer detection technology.

As program head and research associate of Forensic Sciences, **Edwin Chan** and **Paula Brown** are conducting a

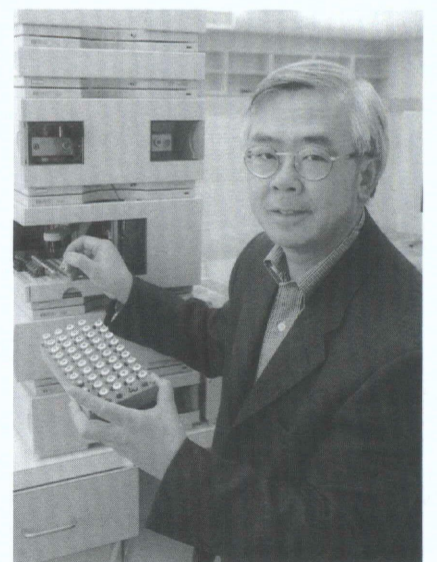
research project with the Health Protection Branch of Health Canada (HPB) to determine the integrity of herbal products sold for consumption in Canada. Their role involves providing test data and analysis of samples to validate the analytical methods being used by the HPB to identify toxic components and determine the quality of active ingredients in herbal products.

Ernie Hancock, Electrical & Electronics instructor, was instrumental in developing the successful proposal for funding to the Canada Foundation for Innovation (CFI) for a "Photovoltaic Energy Applied Research Laboratory." CFI granted the research team \$140,000 to establish improved and unique facilities and infrastructure at BCIT. Hancock has also been involved in several other photovoltaic projects including developing a novel concept for a solar charger and the grid-connected PV system mounted on the south facade of NE-25 (the Technology Centre).

Marsonn packaging has enlisted the expertise of **Gary Sandberg**, Food Technology instructor, to help them identify a safe thermal process for producing shelf stable food products in pouches.

Art Bailey, Computer Systems Technology faculty member, is working with the Technology Centre to develop research projects embedded systems technology. Bailey is presently working on several project proposals including development of a hand-held local area network analyzer for NETSentry Technology Inc.

In addition to leading the ongoing Burnaby Lake System Project which continues to leading the way in watershed restoration in urban environments, **Mark Angelo**, program head of Fish, Wildlife and Recreation, has spearheaded several new projects in 1999. These projects are aimed at restoring or improving a number of local



Edwin Chan, program head of BCIT Forensic Sciences.

streams and re-opening several of Vancouver's lost streams. His team also launched the Watershed Pledge Program to encourage residents and businesses to formally commit to practices that will benefit local waterways. The program has received widespread support from government and industry and is the first initiative of its kind in Canada.

— from Kelly Gervias

TECHNOLOGY CENTRE SPECIAL EDITION

BCIT's new ITA links business and technology

Stefan Joseph has a busy year ahead of him. As the new Industrial Technology Advisor (ITA) for the National Resource Council (NRC), Joseph is part of an NRC program called the Industrial Research Assistance Program (IRAP). This program is set up to provide companies, with a support structure for technological development. The IRAP employs 280 advisors, or ITAs, who work in their respective regions, and working with the local business and industry environment.

Two of these ITA positions are located at the Technology Centre. Nick Fong, a former instructor and program head of Biomedical Engineering, has held one of the positions since 1989. The second position, currently held by Joseph, is rotated annually among BCIT faculty and staff as a professional development opportunity.

As an ITA, Joseph's job is to visit companies regionally, and scope out what they are doing, and how they are doing it. Because of his technical expertise, he can gauge where they may need help, and in some cases, provide the help directly. In other cases, he may recommend to the company that their operations or project may benefit from NRC funding, and suggest that they apply. But not all the funding pertains to technology. "Most of the funding goes into applied R&D," Joseph explains, "but the NRC also has a new program, called Precommercialization Assistance (or PA). This program provides assistance that is less research-focused, and addresses the final stages of a product, such as marketing aspects."

Joseph is looking forward to the marriage of business and technology, both from an operations standpoint, and also

from personal development. "Business and technology are always intertwined," he points out. "I'm interested in the strategic development of a company, looking at the financial and economic aspects. It's very important to make the right alliances and establish the right strategic directions – even if you do have the appropriate technology."

Joseph has the right background for the job. He has completed Master degrees in both Electrical Engineering and Computer Science, as well as having completed the Management Skills in Advanced Technology (MSAT) from Simon Fraser University. He has been working at BCIT for 6 years at the Technology Centre as project leader of the Group for Advanced Information Technology (GAIT) team.

Now he hopes to bring it all together. "I'm looking forward



Stefan Joseph, Industrial Technology Advisor

to helping companies, to making new contacts – in industry, and also with other ITAs and associates, and other institutes. I hope to be of value to the industry people that I visit. I also hope to extend the network that I have already and bring some projects back to BCIT," Joseph says, then adds, "but, I have to be unbiased, of course."

New fertility product seeking FDA approval

As many as one in six couples take a year or more to conceive and these delays in becoming pregnant may simply be a result of bad timing. In March of this year an innovative new product designed to help women determine the best time for conception was introduced to the Canadian market.

The concept of salivary ferning as an indication of fertility has been reported in medical literature for more than ten years. Now, a specially designed, reusable miniature microscope is available in Canada and many other countries, in the form of the LUNA Fertility Indicator. With this device any woman can monitor her fertility with a drop of her saliva in the privacy of her home.

Fertile and non-fertile days are demonstrated in several ways, one of which is a change in content of hormones and minerals in the saliva. "When samples of dried saliva during different stages of the menstrual cycle are observed under a microscope, the samples taken during fertile days resemble "ferns," explains Nancy Paris-Seeley, director of the Technology Centre's Health Applied Research and Development Program.

In-home alternatives to the LUNA Fertility Indicator, such as urine tests, are less convenient and are not reusable. "This makes testing expensive, as more than one test is often required each month," says Paris-Seeley.



Nancy Paris-Seeley, director of the Centre's Health Applied R & D Program, demonstrates the LUNA fertility indicator

Similar to monitoring temperature fluctuations, to achieve the best chance of identifying a fertile window, saliva should be monitored

every day of a woman's cycle and be used in conjunction with other tested markers of fertility. However, investigators do not recommend that salivary ferning be used as a method of avoiding pregnancy.

LUNA Products Inc. would now like to launch the product in the U.S. and has contracted the Technology Centre to help them gain FDA approval. Paris-Seeley is currently in negotiations with the FDA. The Technology Centre's Health Applied Research and Development team is prepared to undertake any product testing or improvements required by the FDA.

– from Kelly Gervias

Rick Hansen Foundation funds CD-ROM Project

The Rick Hansen Foundation, through their Injury Prevention Neurotrauma Initiative Grant, has funded a CD ROM project to provide spinal precaution training to health care professionals in a way that is both accessible and facilitates retention of information.

Spinal cord injury afflicts 30 to 50 people per million each year. In the early stages of care, the spinal cord client is especially vulnerable to further (and devastating) spinal cord damage.

Currently, spinal precaution training is occasionally provided as on-site workshops by nurse educators from the spinal cord unit at Vancouver Hospital.

According to Diane Belyk, project content expert and instructor in Nursing at BCIT, this method of delivery is inefficient in both accessibility and in terms of learning retention.

Peter Fenrich, project leader at the Technology Centre, agrees. "This type of training is not easily available. There are only a few specialists at Vancouver Hospital who are qualified to train the skills, so most of B.C. doesn't get this kind of training."

"This project takes advantage of the increased availability of computers for training in health care facilities. Learners will be able to access

the learning when and where it is needed," says Belyk.

Fenrich describes how the CD-ROM will be designed. "The program is designed with learning outcomes, step-by-step approaches to each skill, including graphics, photographs, video, and sound to teach and reinforce each procedure, as well as questions and detailed feedback to guide learning."

Belyk is looking forward to Spring 2000 when the CD will be evaluated. The development process has been a rewarding one. "I have had a long interest in computer-based learning and this project provides another opportunity to continue to

develop computer-based learning materials. Peter supports my efforts to bring technology into the classroom. He has expertise and a proven record in computer-based training, which gives me confidence that we will design and develop an effective, high quality product," Belyk says.

The CD-ROM will be distributed for free by the Health Employers Association through a direct mail out. It will not be sold. "Currently, it will be available only in B.C., but the Rick Hansen Foundation can explore other distribution options at a later time, if they choose to," Fenrich says.

staff news

Kathy Campbell is the new manager of the Call Centre of Excellence. She has an impressive record of business development and call centre management. She has been a part-time instructor and industry advisor at BCIT for the past two years. Welcome, Kathy!

Dave Stewart, Sheet Metal instructor since 1986, has recently been awarded the Presidents Award from the Ridge Meadows Hospital Foundation for "significant contributions toward the improvement of the community and the welfare of the people of Maple Ridge and Pitt Meadows." Dave has been involved in the Maple Ridge-Pitt Meadows Scouting district for more than 20 years. He currently serves as Area Commissioner for the Fraser Valley Region. An article in the Pitt Meadows Times describes him as a "role model who has had a positive impact on hundreds of youth..." Congratulations Dave!

The BCIT Foundation has a new director. **Laurie Clarke** brings many years of fundraising experience, having served as executive director of Development Disabilities Foundation, and in senior fundraising positions at the University College of the Cariboo. Welcome Laurie!



On Oct. 17, Bryce Robert MacGregor was born - a son for **Carrie and Rob MacGregor** (from Admissions and Automotive, respectively). Bryce weighed in at 6 lb, 13 oz. Congratulations to the new parents!

Process, Energy and Natural Resources welcomes **Monica McCormick** as their new operations manager. Monica is backfilling Terry Suen from October 1999 to July 2000 while Terry is away on maternity leave.

Phil Cunningham has been appointed as acting director for Construction. Congratulations Phil!

continued on page 6

staff news

continued from page 5

Dale Hunter has joined Human Resources as a human resources advisor. Her former position of operations manager, Business programs, will have a replacement soon. Congratulations Dale!

Sherry Lipp is the new operations manager for Health Sciences. Congratulations Sherry!

Leah Ibbitson joins BCIT as Community Relations' new desktop production coordinator. Welcome Leah!

classy finds

For sale - "Axiom" bike trailer, fully covered with windows, tows easily, handles two kids, yellow clr, gd cond \$145. Call 574-5006 or 432-8235.

For sale - Lion's Christmas Cakes. Comes in a decorative tin with a Christmas scene on it - a great gift idea! All proceeds go to the kids, and these cakes are the best you've ever tasted. \$13 each or \$25 for two. Call Mike Thomas (Automotive) at 432-8240 for free delivery.

For sale - Shoe rack, holds 27 prs of shoes on nine 12x23" shelves, but takes up just one foot of space. Used 6 mos. Cost \$250, sell for \$125. Call 263-7600.

For sale - Vertical blinds (60 in total), off-white fabric, shade vanes, 3½ x 85½" L (can be shortened), w weights & chains, but no valence. High qual, just one yr old. Orig cost \$10 ea, sell all for \$150. Call 263-7600.

Missing - Could the person who purchased Volume 8 of the Children's Encyclopedia at the Library's Book and Bake Sale on Oct. 20 please sell it back? I purchased what I thought was the whole set, and am now trying to track down Volume 8 to complete my set. Please call Merilee at local 8647 if you have the missing volume. Many thanks.

Wanted - Business cards. My daughter is collecting business cards in the hopes of getting into the Guinness Book of World Records. Please pass on single copies of new or old business cards from your office and home of people you will not be referring to again, to Peter Fenrich, Technology Centre. Thank you.

BCIT Open House 2000



Kim Boeckler, student director of marketing communications

Marketing Communications: Juggling skills required

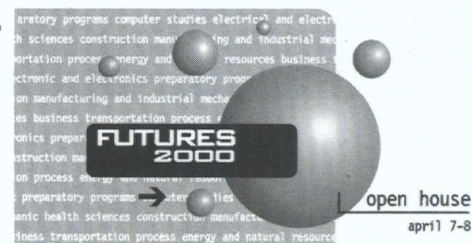
I am in the second year of the Marketing Management/Communications program. I am very excited to be a part of the BCIT Open House 2000 team and I look forward to helping make the event a huge success.

I know the importance of campus life at BCIT: hence the juggling. In addition to Open House, I am actively involved with the AMA and the Vancouver Board of Trade, manage to work 20 hours a week, and still maintain a first class standing.

My involvement with the Open House team and the hands-on industry experience I will gain in the upcoming months will play an invaluable role in my future. I look forward to seeing everyone in April.

Hopefully come May, I will be able to add a social life to my juggling!

Kim Boeckler
Student Director of Marketing Communications



Saying farewell to a "student of life"

Vince Piva, Automotive instructor, joins many British Columbians in expressing his sentiments over the loss of Greg Moore. Update received the following piece as a tribute to the Maple Ridge race car driver who inspired many, and volunteered his time at BCIT for a cause that was important to him. We will miss you, Greg.

On a rainy, overcast autumn day, we said good-bye to Greg Moore - the twenty-four year "young" race car driver from Maple Ridge, and a student of life.

Greg died doing what he loved to do - racing. He died on Lap 10, coming off Turn Two at 350 kms per hour. His car lost traction and slammed against an infield concrete wall, erected (ironically) to protect the driver. He was pronounced dead at 1:21 p.m. on Oct. 31 - before the race was over.

I was invited to attend the private funeral, held at St. Andrew's Wesley United Church, in downtown Vancouver. "Private" is a loose word, as the church was overflowing with mourners - more than a thousand, I was

told - from all over the U.S., Europe and Canada.

Rev. Sharon Moore-Cook conducted the memorial service, with readings from Scripture. Tributes were many, including those by CART's CEO Andrew Craig, and fellow drivers Jimmy Vasser, Max Papis, and Drio Franchitti, as well as representatives from Player's Florsythe Racing and Rogers Penske of Penske Corp. Greg's best friend Alan Robbie and his brother James and sister Annie, all spoke as well. His father, Ric Moore, spoke last. "I know Greg is in heaven; he has the "pole" and Senna (Greg's racing idol, who suffered a similar fate in 1994) beside him." - Poignant words pronounced by a man with a broken heart.

I had the good fortune to know Greg since his early days when he drove open wheels cars with 1600cc engines. He proceeded to climb the ladder of bigger and faster cars at an incredible pace.

Greg was a student of life. Anything new to him he learned and retained. He learned from friends the importance of friendship, from his elders, understanding and compassion; from his family, the importance of love and togetherness. From racing, Greg learned a bit of patience - I say "a bit", because on the race track, he was quick, very quick; he did not like being behind anyone. Behind the wheel, Greg was a natural - driving at 200 miles per hour was normal. He could adapt to changing

speed in the blink of an eye - this is mind-warping; ordinary people cannot fathom this; but then again, Greg was not ordinary.

As a young person, he taught us to savour and love every moment of life, because you do not know when it will end.

Thanks for the memories. Thanks for devoting your free time at BCIT for your cause at heart: the "Don't drink and drive" campaign. Thanks for being Greg. I know I will miss you, the echoing of your voice saying "What's up, Vince?" will no longer be there. I'll miss that.

Anyway, if you can give me a buzz Greg, I'll be listening. Arrivederci!

- from Vince Piva

Last chance for fame

Time is running out to enter the Great BCIT Photo Contest! The deadline for entries is **Fri., Dec. 3**. Everyone on campus is welcome to participate. Let's see your creative side!

Categories

- People and Pets
- Nature
- Urban Landscapes
- On Campus
- Abstract

All photos are automatically entered into a special Readers' Choice category. Photos will be displayed in the Great Hall during the first two weeks of December for judging by the BCIT community at large. Winning photos will be printed in the Jan. 11 issue of

Update. All other categories will be judged by a panel. Prizes for each category will be awarded.

Enter your submission as a 4x6" print, colour or black and white, with your name, department, local, and photo category clearly printed on the back, to:

Isabel Kolic, Update Editor
NW-1, Room 140

BCIT, 3700 Willingdon Ave.
Burnaby, B.C. V5G 3H2

Interoffice mail submissions are acceptable. Photos will be returned. Call local 8656 for more info.

The **BCIT Update** is published throughout the school year by the Community Relations department within External Affairs.

Ideas, tips, faxed or written submissions are welcome, and should be forwarded to the editor by **the Monday, two weeks prior** to publication. The editor reserves the right to edit for brevity, libel and accuracy.

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