SPECIAL EDITION

Computing and Academic Studies

update

A newsletter for the BCIT community.

March 30, 1999
VOLUME 6, ISSUE 15

The mission of BCIT is to provide British Columbians with world-class, job-ready skills for career success.

inside

coming up

Retirement Planning Seminars

April 8, 15 & 22 (1500-1800)
April 13, 20 & 27 (1800-2100)
To register, and for more info, call Staff Training and Development at 432-8333, or 432-8476.

The Mad Hatter Tea Party

Sat., April 10
BCIT Downtown campus
A celebration of music, art, food and fun plus a fashion designer hat show! Come check out BCIT staff and grads in performances and demonstrations. Tickets $25, proceeds going to the Greater Vancouver Food Bank. More info: Anne Glover, tel. 412-7779, e-mail aglover@bcit.bc.ca or Michelle Traynor at 432-8398, e-mail mtraynor@bcit.bc.ca.

Regional Skills Canada Competition (Secondary Schools)

Sat., April 10, Campus-wide
Featuring competitions in Construction, Transportation, Manufacturing and Industrial Mechanical, and Electrical and Electronics programs.
More info: Anne St. Eloi, tel. 432-8233

Education Council Elections 1999

April 19 to May 7
(see page 2 for more details)

BCIT Eco-Fair

Wed., April 14
Great Hall (from 1100) and Campus Square (from 1000)
More info: 451-7060

Biggest Information Session

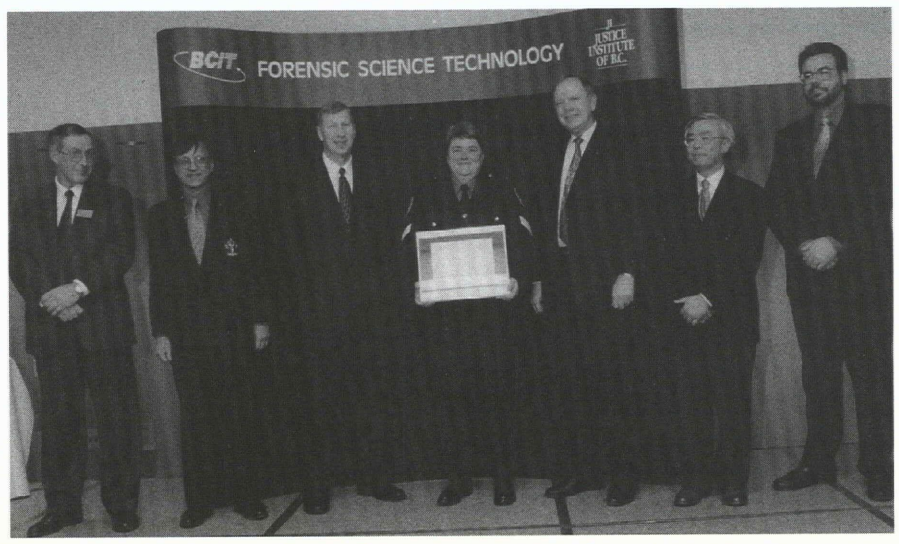
Wed., May 5, 1830-2030
BC TEL Theatre and Great Hall

Forensics program gets notice from Canada's top cops

Examined under a microscope, the names of BCIT's Forensic Science instructors read like a "who's who" list from the industry; and, like the real life puzzles they solve, program head Edwin Chan has assembled this all-star team one piece at a time.

"Before I came to BCIT I was a Forensic Toxicologist for the Vancouver Police Department. Over the years I came to know a number of forensic scientists. When I approached them and invited them to become instructors, they responded with a lot of enthusiasm," says Chan, and adds, "Some of our instructors are very well-known internationally."

Instructors like Gail Anderson, James Ferris, and David Sweet have worked on solving international crimes, while others like Joe Bellows, Kim Rossmo, Tim Howley, and Ron Parks have been involved with many high profile B.C. cases.



(from left to right) Mal Stelck (vice president of Education), Arun Garg (Chair, BCIT Board of Governors), Steve Watt (director of Police Academy, JIBC), Fiona Weller (Forensics grad), Chief Constable Peter Young (New Westminister Police Dept.), Edwin Chan (program head, Forensic Science), Mark LaLonde, (program coordinator of Contract Law Enforcement programs, JIBC).

Background

The Forensic Science Technology program graduated its first class earlier this month. From diverse professional backgrounds, most of the graduates serve in law enforcement, but the program is not restricted to this field. Graduates go on to become traditional forensic scientists, investigators of economic "white collar" crimes, detectives, or coroners.

Partnering with the Justice Institute of B.C. (JIBC), this program was approved in April 1997, and now offers an Advanced Specialty Certificate in Forensic Science.

"This program provides much needed training in the area of forensic science and related technologies, and because of the expert instructors from the many areas of forensic science, our students will benefit greatly from their experience and skills," says Chan.

Structure of the Program

In its simplest form, the program is divided into two categories: Forensic Science Studies, and Economic Crime Studies.

Students begin by taking the essentials of criminalistics with courses in science, forensic science technology, criminal investigation and the law. They will move towards advanced forensics science studies utilizing a scientific approach to the forensic field.

"In the past there was hardly any formal training in the area of economic crime. It was all learned on the job," says Chan.

In fact, the economic crime component of this program is one of its most unique features. With the advent of the Internet, and computerized accounting programs, students will learn how to investigate computer crimes associated with these new areas. They will examine computer security and networks, Internet investigation, accounting and financial crimes.

Trip to Ottawa

This unique approach to the study of forensic science has caught the eye of Canada's national police force in Ottawa. The RCMP's Economic Crime Section have contacted Chan and arranged a meeting with Chan and Ken Takagaki, dean of Computing and Academic Studies.

"I think we will become a major player in providing distance education to the RCMP officers and investigators across Canada," says Chan.

— from Harold Simons

E-Jobs makes its debut

In the olden days, pounding the pavement, resume in hand, was the only way to look for work.

In mid-February, BCIT Employment Services launched E-jobs, an on-line resume-posting, job-posting Web site. The site is updated constantly as students and employers alike exchange information and set up interviews. Dawn Whitworth, Employment Services manager, points out the speed of job hunting in the information age, "It's been known to happen that students get jobs on the same day as posting their resumes. And some students have said, 'An employer has already called me and all I've ever done was post my resume!' "

The site was only two weeks old at the time when Whitworth was interviewed, yet it already had more than 100 jobs and almost 150 resumes, all without any hard sell," Whitworth says enthusiastically. "The potential is huge."

E-Jobs is an extension of the Jobs Line, a telephone-based employment service, initially spearheaded by Amanda Hill (who is now with the NOW Project). Taking the service to the web was a natural progression for this successful project. The next step is to get the word out.

Employers benefit by having first dibs on BCIT students who are trained to hit the deck running in the work force. Faculty scouting for jobs for their students also find the site useful. But the biggest impact is probably on the students themselves. E-Jobs is a powerful job hunting tool that provides specific job information in the industry of their choice.

Check out E-jobs on the Web at www.bcit.bc.ca/~stuserv/employ.html and click on E-Jobs.

And because the Web site is used by employers as well, students know their resume will get seen.

Currently, the service is free for full-time students, and $25 per year for part-time students and alumni. Employers pay a fee for downloading resumes and posting positions. The service is intended to become self-sustaining.

Jim Mitchell, Student Services director, is pleased with the positive response E-Jobs is already garnering, and points out that BCIT is leading the way in serving students with such instant and up-to-date job information. "We believe that there isn't anything else like it, from an institutional standpoint, in the country," he says.

take note

Education Council Elections

April 19 to May 7

Also referred to as EDCO, Education Council is a governing body of the Institute that was established by the Institute of Technology Act. It has an advisory role to the BCIT Board of Governors and sets policies related to examinations, curriculum content. It also sets criteria for awards, academic standing, appeals, etc.

Elections for those nominated in March will take place from April 19 to May 7, 1999. You are only eligible to vote in a single category. There are six categories that fall under FSA Faculty and Professional Staff (Regular and Temporary employees), three in GEU Instructional, one Part-time Studies, two in GEU Support staff and four students.

Check the Education Council web site **(http://www.bcit.bc.ca/~presoff/edco.htm)**, and for more details about the election procedures **(http://www.bcit.bc.ca/~presoff/elections.htm).**

Further information to follow. If you have questions phone 432-8848 or 432-8215.

Open House 2000 Logo/Theme Contest

BCIT Open House, to be held next year, needs a strong logo and theme to reflect BCIT as a leading trades and technology institute launching into the new millennium. The contest, held March 30 - April 16, is open to all faculty, staff and students. Entries should be submitted on 8.5 x 11" paper, in colour, to the Student Association Office in the Great Hall. E-mail mtraynor@bcit.bc.ca for more information.

campus news

Order in the court

If you came to work on the weekend of March 13-14, and saw a number of big white vans in front of NW-1, it was because they were filming a courtroom scene in the NW-1 boardroom. The scene will be used in a pilot TV series, The Export. It was not the first time the handsome, panelled boardroom has been transformed into a courtroom. The last time was for a Tom Selleck made-for-TV movie, Broken Trust, in 1995.

Program Advising gives high school counsellors the whole picture

"Outstanding!"

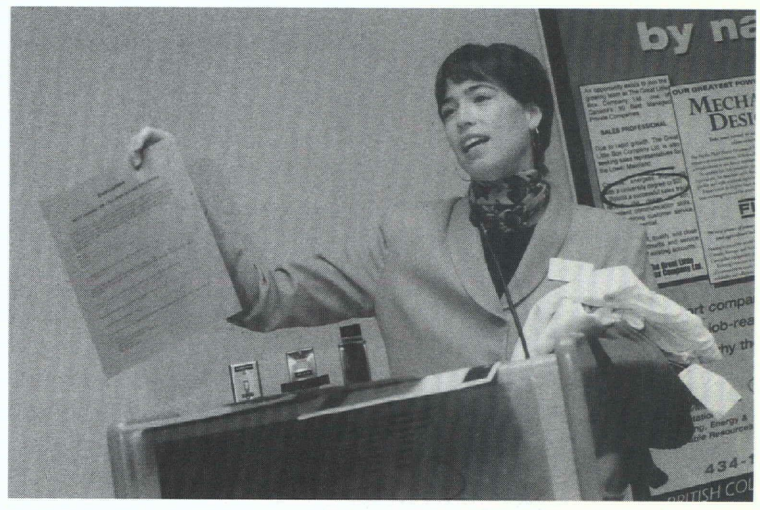
That was the enthusiastic response of Glen Payne, a teacher at Johnston Heights Secondary School in Surrey, over this year's High School Update at BCIT.

The event, organized by Program Advising, was created to give B.C. high school counsellors, teachers, and career advisors a better, more complete understanding of the options available to young people today.

With 99 per cent of BCIT's new students coming fresh out of high school, it's important that they have all the facts. Harry Mouratidis agrees. As a science teacher at York House, a private girls' school in Vancouver, he finds many of his students come from affluent backgrounds where university holds a traditional place in one's education. Traditional, yes; but not necessarily the most practical option in today's job market, depending on a student's choice of career direction. "Most girls at private schools wouldn't consider BCIT," he admits. He sometimes bumps into his former students, and doesn't like to see them disappointed with their choice. "I appreciate the flexibility and opportunities BCIT gives students. I encourage my own students to look at every option available to them."

Even when students know what they want, parents are the ones who often need convincing. The pressure when graduating from high school can be hard to bear, and parental influence is strong. In many cultures, universities still hold prestige – and this perception by the parents prevents students from pursuing choices that they've explored and know to be the most viable route.

Joan Raworth, a Career Information Advisor at John Oliver Secondary in East Vancouver, concedes that it is definitely more difficult to make career and education choices today. "Counsellors don't always give students all the options," she says. Helen Jung, an advisor at Vancouver Technical Secondary School in East Vancouver adds that the increased competition between schools adds to the confusion students experience when trying to make choices. Raworth agrees, "There's a lot more choices that students have to make now."



Janeen Alliston gives a presentation at the 1999 High School Update for B.C. counsellors.

Program Advising is trying to alleviate some of this confusion, and educate counsellors, students, and parents, on the BCIT advantage. "The importance and value of our alliance with business and industry speaks directly to career advancement," says Janeen Alliston, program advisor. "Our instructors have come from industry, and know what is needed to thrive in their industries. This is a big value to our learners. They get a hands-on approach, and learn incredible team work skills."

The all-morning event received rave reviews from the 150 counsellors who attended. Counsellors attended seminars and program tours, and witnessed demonstrations in various areas of study. Program advising would like to see it become a regular event. "We'd like to make it different each time, to keep it creative and innovative," Alliston says.

The sign of things to come

The 1999 Transformation Update showed us how BCIT is transforming, right before our eyes.

On March 4, BCIT celebrated the efforts the many areas on campus are putting into "transforming" their respective departments – and ultimately, BCIT – by implementing new ideas, programs, projects and initiatives.

Organized by Deanna Rexe, project coordinator, the Transformation Update encapsulated nearly 70 different endeavours, and gave those who attended a better idea of the direction BCIT is heading in.

With hands-on exhibits, questionnaires, and representatives on-hand to discuss their projects, the event had plenty of interaction between diverse areas of the Institute.

The majority of those whose projects were outlined in the Transformation Report were present at the event. 11 different projects were demonstrated. The event was successful in representing a broad spectrum of the BCIT community.

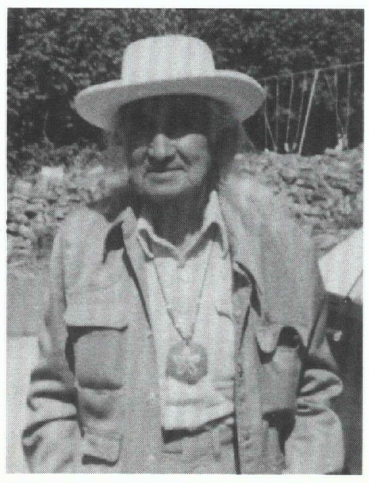
Those who attended appreciated was the laid back atmosphere at the event. "The feeling was positive and upbeat, and they appreciated the element of humour involved," Rexe said.

"I think it was a tremendous success," she continued. "I was flooded with e-mails afterwards."

For a complete overview of the various changes that are "transforming" BCIT, contact Deanna Rexe at local 6992.

Neil Howard, vice president of External Affairs, congratulates Deanna Rexe for organizing the Transformation Update.

It's a Good Day – Honouring Chief Dan George



Chief Dan George in an undated photograph.

It was a good day to be part of the screening of Loretta Todd's new film "It's a Good Day – Honouring Chief Dan George", in celebration of First Nations Awareness Week (March 1 – 6, 1999). The afternoon began with an honour circle and blessing led by Chief Dan George's son, and BCIT First Nations elder Bob George, followed by a delicious feast of Native cuisine prepared by Salishan Catering. We were all in a good humour as the film started rolling.

Todd's film weaves classical narration, vintage film footage and personal recollections of the George family to tell the story of Chief Dan George. He was a dynamic individual with a commitment to excellence, "not because I wanted fame and fortune, but because I wanted to raise the standards of Natives in Canada." From early "Centennial" episodes on the CBC to his pivotal role in "Little Big Man", Todd's film documents George's achievements on the screen and his involvement in a unique time in Canadian history.

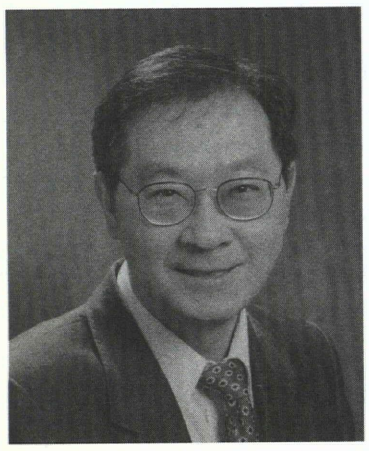
Chief Dan George strove to share his belief in the good of man and the purpose of Mother Nature, elements of First Nations culture that he believed to be of benefit to us all.

For more information on Chief Dan George, go to www.indians.org/welker/dangeorg.htm

—from Kathleeen Moynahan

COMPUTING AND ACADEMIC STUDIES SPECIAL EDITION

MESSAGE FROM THE DEAN



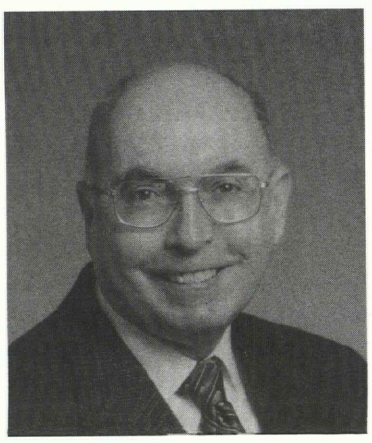
Ken Takagaki, dean of Computing and Academic Studies.

It is both an honour and a pleasure for us to be the subject of this special edition of Update.

Day School programs, Part-time Studies, Partnership programs, Computing, Forensic Science Technology, Access programs such as Engineering Technology Entry, Writing and Communication, Mathematics, Physics and Chemistry are all part of Computing and Academic Studies. The articles which follow showcase the tremendous range and diversity of our Operation Unit, some exciting projects and initiatives, and most of all, the people who provide the ideas, skills, drive, and energy to make it all happen.

Speaking for myself, I feel privileged to be a member of one of the best groups of academics, professionals, and dedicated staff members that I have ever worked with. I hope you will enjoy reading this Update as much as we have enjoyed putting it together.

MESSAGE FROM THE ASSOCIATE DEAN



Kent Yakel, associate dean, Academic Studies.

I am very pleased to have Academic Studies included as part of this special edition of the Update. Our division consists of the Chemistry, Communication, Mathematics and Physics departments. In addition to courses in these areas, we also offer extensive upgrading pre-entry courses through Part-time Studies, plus the full-time Engineering Technology Entry (ETE) program. We also offer the new Forensics Studies certificate program, in partnership with the Justice Institute of B.C.

Our faculty and technical staff share a common commitment to providing the very best learning opportunities for our students, and are able to relate their subjects to the specific needs of each technology area.

Our staff is also involved in finding more ways to help students, besides the traditional lecture/lab format. In response to larger class sizes, many staff members have become actively involved in providing Web based learning resources. I encourage readers of the Update to explore these Web sites, starting at the Academic Studies home page.

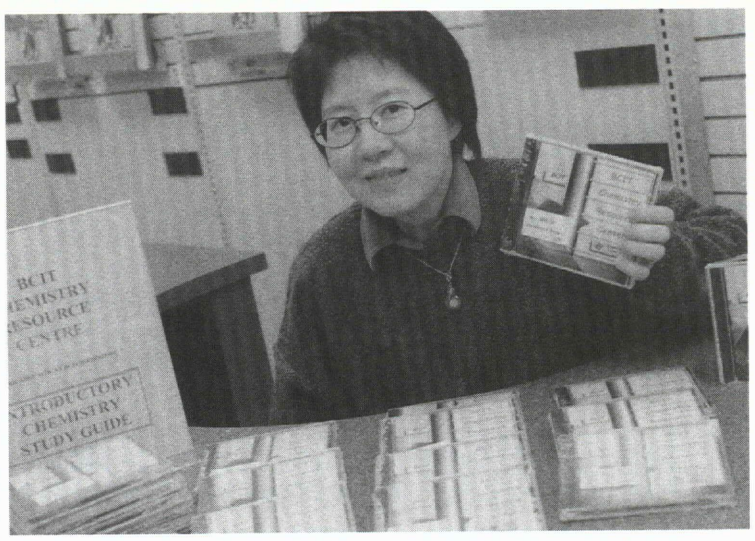
Academic Studies has similar demographics to the rest of BCIT, in that many staff members have retired in the last few years, and more will do so in the future. We have made strong efforts to improve and refine our selection processes for new staff members, and to plan for the future needs of our departments. The newer members of our instructional team are making a great contribution to BCIT, and some of their activities are included in this Update edition.

BCIT-developed Chemistry CD-ROM an effective learning tool

In September 1998, BCIT Chemistry launched their Resource Center CD-ROM. This CD, now available at the BCIT Bookstore, is the result of my fascination with the Internet. In particular, the on-line learning aspect of the Internet allows me, as an instructor, to extend learning beyond the restricted hours of the classroom. When the Internet is used in conjunction with a CD-ROM, the portability of course material translates to convenience for learners, reduces access delays and ISP charges, promotes tutoring interactions via various built-in on-line activities, and makes learning fun!

The Chemistry department Resource Centre CD-ROM features the following interactive learning environments:

- the Chemistry department Resource Centre Web site (at http://nobel.scas.bcit.bc.ca/resource/)
- a study guide which provides the chemistry basics required for admission into BCIT first-year programs
- more than 500 interactive activities which guide learners through various chemistry topics
- access to a database of more than 400 assessment questions allowing learners to create on-line assessment tests to evaluate their chemistry skills instantly.



Rosmaria Fong makes chemistry more accessible with a recently launched CD-ROM, developed by the Chemistry department of BCIT.

In the past three years, student evaluations on these interactive Web sites have been extremely positive. Students cite these sites' abilities to make more effective use of their study time by helping them focus and bringing resources together. These opportunities for guided chemistry practise provides an incentive to monitor and improve their understanding of the subject.

As the author of many teaching Web sites, I feel that the Web is more than a convenient method for disseminating information to students. The Chemistry department's home page (www.scas.bcit.bc.ca/scas/chem/) demonstrates other cool features such as:

- a Web-enabled administration database to make the site searchable by user-input parameters.
- a multi-media presentation using virtual reality to showcase a chemistry laboratory.

Check back and visit the chemistry sites often.

Lastly, the Chemistry department would like to thank BCIT and Computing and Academic Studies for their support through various grants and hardware purchases. Our goal is to continue to use Web technology to develop teaching Web sites to better serve our students.

— from Rosamaria Fong

campus news

Forensic Science industry training

Forensic Science Technology program hosted the following industry training: DNA Typing for Lawyers (March 5-6), which 11 crown and defense lawyers attended; and, Hackers and Crackers – How Vulnerable Are You? (March 17), which was intensive training for computer security professionals. 20 RCMP and municipal police investigators, three banking professionals, and 14 telecommunications professionals took part. The program also has a training session in May for lawyers dealing with Application of Forensic Alcohol in Criminal and Civil Cases.

Physics learning material goes digital

The Physics department has been developing and testing new modules for their Distance Education programs. They contain diagrams, photographs, articles about scientists and other features. Eventually the intention is to include video clips, Internet links, and other useful references.

Since the project will be in digital format, it will be easy to adapt to meet textbook requirements in many standard physics courses. Hopefully, the material will form a foundation for future development of physics materials at BCIT and serve as a useful resource for students. In addition, the royalties from the completed work could become a source of income for the physics department.

— from John Betts

web sites

Academic Studies
www.scas.bcit.bc.ca/scas

ETE/TEWELT
www.bcit.bc.ca/Programs/Upgrading/UP_Academic/Courses/ete_aca_fly.htm

Information Technology Professional program
http://itp.bcit.bc.ca/

Multimedia Software Development
www.multimedia.bcit.bc.ca

Forensic Sciences
nobel.scas.bcit.bc.ca/forensic

Bachelor of Technology in Computer Systems Technology
http://wwwbtech.scas.bcit.bc.ca/

campus news

Voice recognition software

Phase 1 of a voice recognition software project has recently been completed as a joint effort between the Communication department, the Educational Resource Centre for students with disabilities, and the Technology Centre. The project, which explored the feasibility of voice-recognition software for student use, revealed that the new technology was useful for dictation, although the accuracy of the program left much to be desired. It was particularly useful for students with disabilities that hindered them from using the keyboard or mouse.

Phase 2 begins this term, where a larger group of students will explore how well voice-recognition programs can be used with Word, Excel and other Microsoft Office programs, among other objectives. This phase is funded jointly by Computing and Academic Studies and by the Technology Centre.

— from David Hamilton

Multimedia software for pre-entry level math

Four instructors in the Mathematics department are using multimedia software to teach mathematics at the pre-entry level (Grades 11/12). Tony Webb, with assistance from Arch McFarlane, John Smith, and Michael Chen, began using "Interactive Mathematics" from Academic Systems Corporation with the January intake students of the Engineering Technology Entry program (ETE). Regular lectures are supplemented by scheduled periods in computer labs, where the students work on the software at their own pace, with instructor support. The students can also access the multimedia lessons from home via the Internet.

The software uses video, animations and audio to provide comprehensive mathematics instruction in a rich interactive multimedia environment. The product was selected because of its proven track record of improving student pass rates and reducing dropout rates at other campuses. Its effectiveness at BCIT is being evaluated in pre-entry level courses by both the Mathematics department and the Operations Management division of Business.

The Web site for Academic Systems Corporation is www.academic.com

— from Tony Webb

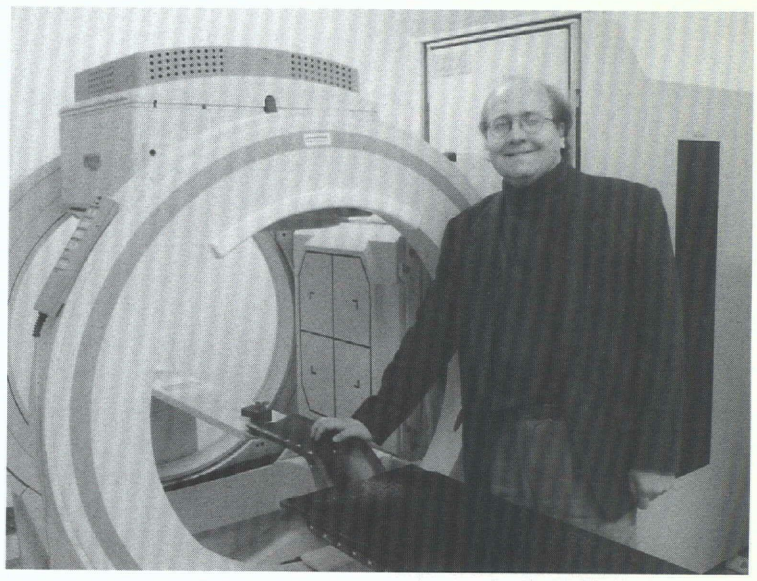
Research by BCIT Physics instructor may lead to improvements in cancer detection

Detecting cancer with antimatter sounds like science fiction. However, this is the technology used in positron emission technology (PET). Recently, Barry Pointon of the Physics department was able to begin research and development in a new type of PET imaging device with help from Computing and Academic Studies and the BCIT Technology Centre. Although PET Imaging has been around for almost 30 years, it is very expensive and, in Canada, is only used for research.

Last year, Lions Gate Hospital in North Vancouver became the first site in Canada to acquire a new, less expensive form of PET imaging system which could make this technology more widely available. This device, known as an MCD camera is less expensive because it is available as an upgrade to a camera being used in a hospital's nuclear medicine department. The MCD system is being evaluated for use in detecting breast cancer and the recurrence of other cancers.

Using a half-time leave provided by Academic Studies and the BCIT Technology Centre, Pointon is now collaborating with the nuclear medicine department at Lions Gate Hospital and scientists from the UBC/TRIUMF PET program to test and improve this device. Barry's job is to model the camera performance with computer simulations and investigate possible improvements. Other research includes actual experiments on the camera as well as designing modifications. He hopes that his work will lead to practical modifications which will improve the ability to detect lesions in patients.

"It is wonderful that BCIT supports me in this research," Pointon says. "If we can improve the clinical performance of this camera and show its value, it has the potential of bringing high technology to bear against difficult-to-detect cancers." He cites the story of one breast cancer survivor who had suspected recurrence. "The PET scan was able to find the sites of recurrence when CT scans showed nothing." Pointon also finds that the practical research experience helps him in teaching physics to the Nuclear Medicine Technology students in Health Sciences.

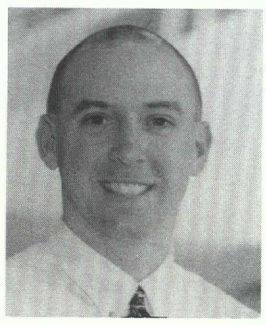


Barry Pointon's work in medical imaging systems will make it more affordable for hospitals to use this technology.

— from Barry Pointon

New program launched to fill IT skills void

The Information Technology Professional program (ITP) was successfully launched in January of this year after eight long months of planning and preparation. Notable attendees on the first day included Brian Gillespie, Ken Takagaki, Gordon Farrell, Lorna Shapiro, and Duke Dukowski. Combining business, interpersonal, and technology skills, the ITP program aims to address the IT skills shortage by graduating holistic individuals who have the business and technical knowledge to work in the high-tech industry.



Dan Pontefract is the facilitator of the ITP program.

The program is sponsored in part by the Software Human Resource Council (SHRC) and is run at other institutes, colleges and universities across the country. Students can graduate with highly sought-after technical designations including the MCSE, CLP, CAN and A+ certifications. What makes the ITP program different, however, is the simulated business that students run throughout the 12-month study period. "Learning by doing" is the program motto.

The program is held several times a year at the Downtown campus for 30 students at a time. Students embark on a three-month work term at the mid-point of the program and suggestions for placements are welcomed from the BCIT community.

Please visit the program on the Internet at http://itp.bcit.bc.ca or contact Dan Pontefract at tel. 412-7687 or e-mail dpontefr@bcit.bc.ca for more information.

— from Dan Pontefract

Practicum is the capstone in Computer Systems degree program

One of the major components of the Bachelor of Technology program in Computer Systems is the practicum. Students are expected to specialize in an area of concentration through course work, and then apply the knowledge to a major project. Since most Bachelor of Technology students in this program are already in the IT industry, they are encouraged to use a real work project for the practicum component. Larry Coglan is one such student. His experiences are outlined below. Anyone who may have a project suitable for students in the Computer Systems Bachelor of Technology program should contact Benjamin Yu, program head, for more details.

The practicum is one of the most important aspects of the degree curriculum because it brings together all the skills learned into one course. It requires skills such as planning, system analysis and design, implementation, programming and technical documentation skills. To successfully complete the practicum, one must have a solid foundation of all the courses taught in the Computer Systems program.

For my practicum, I co-implemented a field user facilities management program. The Transmission division of BC Hydro needed a program which would allow field personnel to manage transmission facilities from an environmental, production, heritage, vegetation management, and property perspective. This required writing a program that combined graphics and database information into one easy to-use program. The project was initiated by the Survey and Photogrammetry department which I was working for.

My overall contribution to this large project was doing the needs analysis (accomplished through interviews and prototyping of a system called Lap Map) and writing the specifications for the databases and the GUI graphical interface. In addition, I was responsible for implementing the graphical interface, documenting the programs, overall coordination of the technical aspects of the project and training for the end users. The project took approximately four months to complete and initially comprised of 20 users, which has now grown to more than 40 users.

The practicum reinforced skills learned and led to further responsibilities on larger projects. My employer was very supportive and allowed me to juggle both my course load and the project.

The Bachelor of Technology degree from Computing and Academic Studies has given me the skills and confidence to tackle large systems projects and my employer has shown confidence in me by putting me on another large project. Without the practicum, I feel I would not have had the skills or the confidence to be involved with my current work project. I feel the practicum portion of the Computer Systems degree is essential to acquire the necessary skills which employers are looking for, and require.

—from Larry Coglan

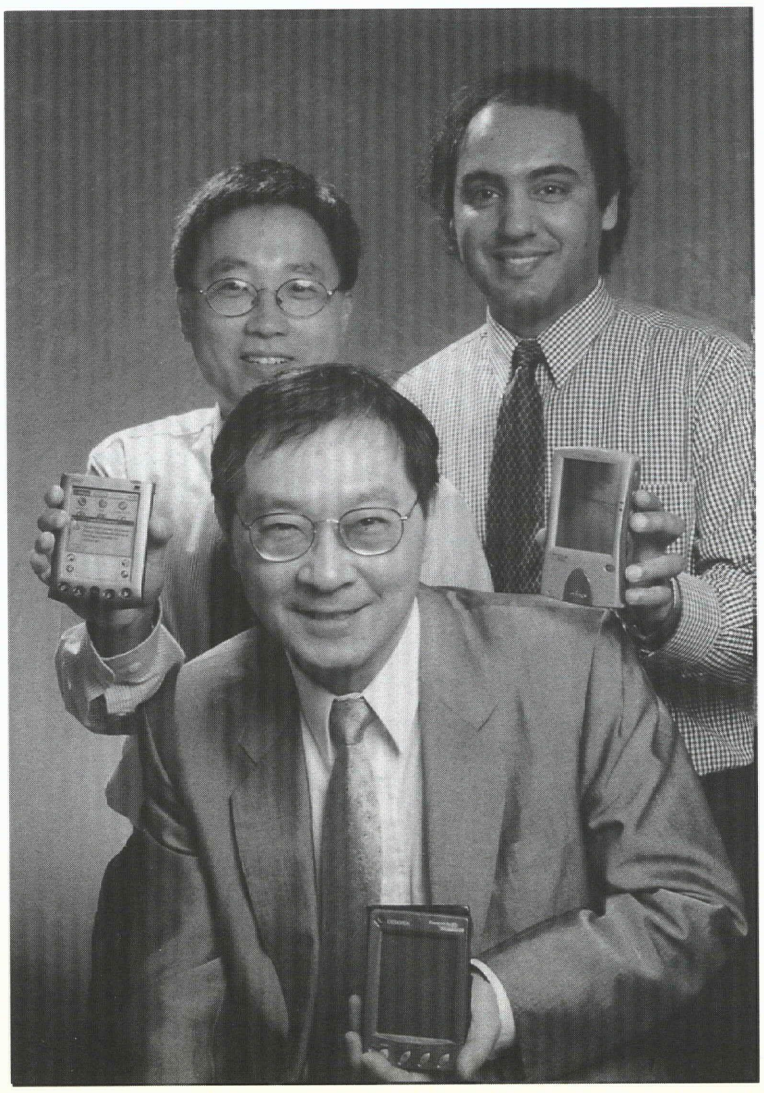
A world connected by "small systems" computers just around the corner

When we think of computers, we tend to think of desktop computers, servers, etc. But there are actually thousands of computers we use every day, and which are integral to our day to day living. For example, a car nowadays can consist of 10 to 80 computers. Similarly, VCR's, microwaves, and cell phones, all consist of computing devices. We don't usually call these items "computers", but essentially they perform like a general purpose computer in that they continually repeat a cycle of fetching, interpreting, and executing programmed instructions.

Computer Systems Technology at BCIT is considering offering courses on application development for small systems (as they are called) in both diploma programs and the Bachelor of Technology program. This will include software development for the popular Palm Pilot (which is by far the most popular Personal Digital Assistant (PDA) on the market, as well as gaming machines like Nintendo 64 and Sega Dreamcast, among others. Kim Dotto, program champion for this specialization area in the diploma program, remarks, "The design of applications for these non-traditional systems such as PDAs, gaming systems, and embedded systems (consumer products and instrumentation) provides another area with great job opportunities for CST graduates."

Faculty member Benjamin Yu, in collaboration with Ken Takagaki, Tejinder Randhawa, and Aman Abdulla, is doing research in the area of combining wireless communication with PDAs which run the Windows CE operating system. He foresees that in the near future, these devices will be tightly integrated in a world filled with sensors and small systems. Wireless communication will be one of the many ways users will be connected in this world of information.

Yu commented, "Imagine getting stuck in traffic, and through the use of PDA, you can be connected to the latest traffic information which is picked up by sensors all over the city. You can then pick an alternate route through the geographical information fed to your mobile device by the global GPS system." The technology for this, and other, applications is available even now, and the integration between PDA with wireless communication will soon bring these to reality.



(Clockwise from left) Benjamin Yu, Tejinder Randhawa, and Ken Takagaki, are conducting research in the area of "small systems" computers, such as Palm Pilots.

Anyone interested in having applications developed for handheld devices should contact Benjamin Yu for more details.

— from Benjamin Yu

Developing new ways to assist English as Additional Language students

The Communication department and Computing and Academic Studies are currently researching and developing new means of providing educational support for English as an Additional Language (EAL) students. This support is both timely and necessary, particularly since the closure of the English and Communication department Learning Centre.

The Learning Centre previously provided assistance to EAL students through two full-time staff. However, as a result of budget reductions, the Learning Centre was closed and a major source of EAL student support was lost. After the closure, Communication instructors observed that many EAL students were having problems with the reading, writing and speaking skills that are required for success in business.

Consequently, an ad-hoc committee consisting of Communication department members and the associate dean of Computing and Academic Studies was created in October 1997 to examine ways in which BCIT could support EAL students. The committee found that Learning Centre support had contributed strongly to student success, and that research was needed into providing accessible and cost-effective EAL materials for students.

...many EAL students were having problems with the reading, writing and speaking skills that are required for success in business.

The Communication department has worked actively since the completion of the committee's work in April 1998 to improve both access and success for EAL students by:

- developing systematic assessment and placement procedures;
- including a language component in a Part-time Studies course for EAL students which is equivalent to a first-term Communication course; and
- offering a Part-time Studies course, Language Skills Development, in the Wednesday three-hour break.

Computing and Academic Studies has also granted part-time Professional Development leaves for 1998/99 to Linda Pashka and Frank Schnurr of the Communication department to develop ways of increasing student access to EAL-specific educational materials. Their research to date suggests that increased access can best be achieved if EAL materials are provided in both paper-based and electronic formats.

To increase access to paper-based materials, Pashka is currently developing a database management system for materials used previously in the Learning Centre. When completed, the database will be available to Communication instructors, who can then provide students with these documents as supplementary materials for their course.

To increase access to electronic materials, Pashka and Schnurr are involved in a series of related tasks, such as surveying what other post-secondary institutions are doing in this regard, surveying other EAL Web sites, and developing a prototype Virtual Learning Centre that could incorporate various materials.

The development of the database and the electronic resources will significantly increase access to EAL materials, and, to some degree, compensate for the closure of the Learning Centre. Databases and electronic programs cannot compensate entirely for the physical presence of a well-trained teacher; however, the resources under development are cost-effective and have the potential to reach a much broader audience than a physically located Learning Centre.

— from Linda Pashka and Frank Schnurr

campus news

Multimedia Software Development

As a two-year diploma program offered within CST, Multimedia Software Development (MMSD) shares its first year curriculum with the CST diploma program.

MMSD students spend their second year at the Downtown campus, addressing creativity, programming, and technology. This is the first "full" year as part of a four-year roll-out started in 1995. The program is successful; employers are competing for our grads, the grads are getting good jobs, and we are developing a good reputation. Our program is unique – no local or regional competitors – with its focus on creativity as well as technology.

— from Jim Parry

Data Communications

The Data Communications option in the CST diploma program provides students with extensive training in the design and development of Internetworking applications. Emphasis is placed on multimedia communications strategies that will provide innovative wired and wireless communications to serve as the backbone for advances in media interfaces and user applications. Aman Abdulla, option head, said, "The Internet has become the most important factor in the entire multimedia application infrastructure."

Students have been working on leading edge projects, one of which involved sending a student to Singapore to present to Motorola's customers.

This option's curriculum is continuously evolving on extensive consultation with industry.

— from Aman Abdulla

campus news

Power outage

A vehicle hit a power pole on Willingdon, just in front of BCIT's main entrance, late Monday afternoon, March 15. The accident caused the main cable to be severed, causing a power outage across the south end of the Burnaby campus until Tuesday morning.

Kudos go to BCIT electricians **John Rehaluk** and **Alan Ross**, and Manager of Maintenance, **Abdul Said**, who worked with BC Hydro for more than 12 hours through the night to restore power to critical equipment such as labs, fish tanks, etc.

Fortunately, no one was hurt in the accident.

in memory

With fond memories

Debbe Lynn Gervin
Oct. 1, 1954 – Feb. 4, 1999

"She floats through the air with the greatest of ease, a daring young woman on a flying trapeze."

staff news

...received from Computing and Academic Studies

In January, **Kim Boswell** was seconded from Business to instruct in the IT Professional program. Kim acts as CEO of the simulated company in which the students work throughout the year.

Bill Howorth would like to announce his recent wedding to Carol Ebner (from Douglas College) on Nov. 6, 1998, in Maui.

In February, **Donna MacDuff** worked with the Ministry of Education in Victoria on work related to the Grade collection activities for Physics 11 and 12. Donna was part of the original team who worked on the new IRP for these courses in 1995.

Barry Pointon and his wife, Fiona Avakumovic, would like to announce the birth of their first child, Isabelle Solange Bodil Aletheia Ava-Pointon on July 27, 1998.

David Sabo and **Stela Dumitrescu** of the Mathematics department participated in a conference sponsored by Pacific Institute for Mathematical Studies, in late February at SFU. The focus was on the integration/application of math into traditional and non-traditional subject/life areas.

Kevin Soulsbury, Chemistry instructor, gave a presentation at the BC Regional Mass Spectrometry Discussion Group User's Symposium in early March.

In February, **Kent Yakel,** associate dean of Academic Studies, celebrated 30 years of working at BCIT.

Upgrading programs get rave reviews

Engineering Technology Entry (ETE) and Technology Entry with English Language Training (TEWELT)
Upgrading programs give students stronger bearings at BCIT

Since 1990, more than a 1000 students have enrolled for academic upgrading through ETE and its sister program, TEWELT. Originally developed to prepare students for Engineering, these upgrading programs provide courses that meet prerequisites for Engineering, Electronics, and some Health Sciences programs. Currently, 22 BCIT programs accept ETE/TEWELT graduates.

Although the focus is on academic preparation, many students find that these programs provide a more holistic preparation for BCIT technology programs. Some students and instructors write:

"Many students who used to have to go elsewhere to prepare for entry to BCIT technology programs can now enrol in the TEWELT program and get the language and communication skills they will need to communicate effectively at BCIT. Our students may already have technical backgrounds and definitely have an interest in engineering technology programs, but need additional language support before they are ready for BCIT."
Dale Fitzpatrick, TEWELT and ETE Communication instructor

"...ETE introduced the basic ideas that would be expanded upon in later courses and allowed me to get my study skills in place before entering the Electronics program. ETE was also a great introduction to BCIT technology programs in general, allowing students to experience a day in their chosen technology before actually committing to the program. ..."
Glenn Holt, Electronic Engineering student

"When I recently decided to change professions...it had been several years since I last attended school and I was apprehensive about going back. However...the friendly and supportive environment in the ETE program has made the adjustment easy.... I believe the ETE program will provide me with the fundamental academic skills essential for my continued success at BCIT."
Adam Patterson, current ETE student

"I took the ETE program because I needed to meet the physics and math prerequisites for the technology I wanted to get into. I could have done this through a college in my hometown, but I also wanted to get to know my way around the campus and to adjust being in school full time, before actually starting my technology program."
Wendy (last name withheld), Geomatics student

"I feel very strongly that ETE prepares students much better than any other upgrading program or course..."
Lars Larsson, former program head of Occupational Health and Safety

"...I think the ETE program is great because it prepares me for my technology program. I also like it because it is very structured, unlike most universities, and you move with the same people so you make good friends, and can form study groups."
Natalie Motta, ETE student

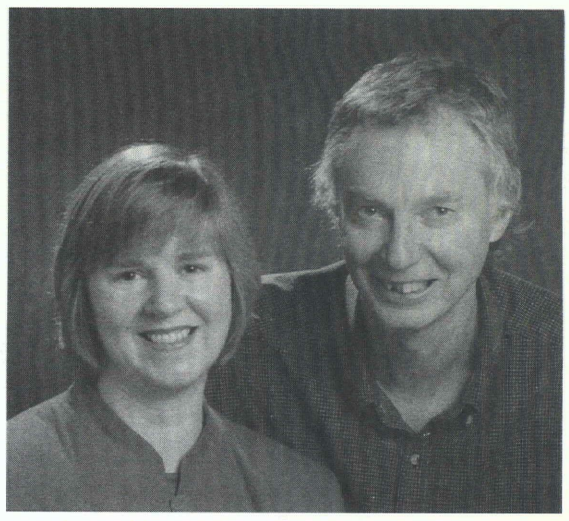
"The success rate of ETE students in the Civil and Structural Engineering (C&S) program has improved. The C&S program looks forward to continuing our relationship with the ETE program. The recent initiatives brought forward, most notably the "Be a Technology Student Day", not only prepares students academically but helps the ETE students prepare for the stresses of a full-time technology program."
Chris Niwinski, program head of Civil and Structural Engineering Technology

Team building the subject of faculty-authored book

Are you working with student teams? If so, you may be interested in "Teaching Teams that Work: A Faculty Guide" which will be available soon at the BCIT Bookstore. Co-authored by Keith Hartley and Lorraine Robson, the faculty guide is a companion book to their earlier work, "Teams that Work: A Teams Skills Handbook for Students." Both books offer practical ideas on how to integrate team skills training with your regular course content to create an enriched learning environment.

Lorraine is also creating an instructional/documentary video about the developmental process of team skills training and the value of assessment in enhancing learning. Ian Cameron [of Audio-Visual] has been wonderful in sharing his expertise in video production," said Lorraine. "My Operations Management students feel a little camera shy, but their insights into what it takes to work well together often delight me." The video, showcasing BCIT's work on this essential employability skill, will be distributed to all post secondary institutions in B.C. through the Learning Outcomes Network sponsored by the Centre for Curriculum, Transfer, and Technology.

Faculty at Northwest Community College in Terrace have invited Lorraine to design, develop, and deliver a six-hour workshop on integrating team skills training with one's regular course content. The approach, piloted at BCIT with the Operations Management program, allows instructors to layer team skills training over whatever they normally teach. Students receive a value-added education without the expense of adding a separate stand-alone course on team skills into an already crowded curriculum. Team skills appear consistently in the top three abilities that employers value most.



Lorraine Robson and Keith Hartley co-authored a book on team building for faculty use.

—from Lorraine Robson

Pre-entry Communication course registration on the rise

With BCIT increasingly becoming the first choice for job-focused post-secondary training in B.C., the demand for Pre-entry Communication courses has more than doubled in the last four years. In 1994, we had 638 registrations in Pre-entry COMM courses; in 1998, registrations rose to 1433: a 125 per cent increase.

Pre-entry COMM courses are structured specifically for students wishing to do a full-time program at BCIT. These courses open up access to BCIT, and are instrumental in a smooth transition from low language skills to being BCIT-ready. Our students usually have core subject and profession-specific prerequisites, and need only this upgrade of their English skills to register. On completion of the English 12 equivalent course COMM 0005, Pre-entry COMM "graduates" register into a full-time diploma, degree or certificate program.

In addition, Pre-entry COMM courses are tailored to equip students with the learning abilities required in the BCIT classroom. They help familiarize learners with the BCIT environment and expectations of BCIT students.

Because the Lower Mainland is one of Canada's preferred locations for new immigrants, we have students with diverse language backgrounds strongly motivated to improve English skills to be job-ready for local employment.

—from Nargis Abraham

STAFF PROFILE

Instructor wants to make math as easy as "pi" for his students

Michael Chen is the quintessential BCIT instructor. His mantra: Love what you teach, but make sure it gets used. As a technical mathematics instructor in Computing and Academic Studies, Chen speaks of numbers and equations using phrases like "the beauty of math". It's clear he loves the complexity and challenge of his chosen field. But the theory of mathematics is not enough for Chen.

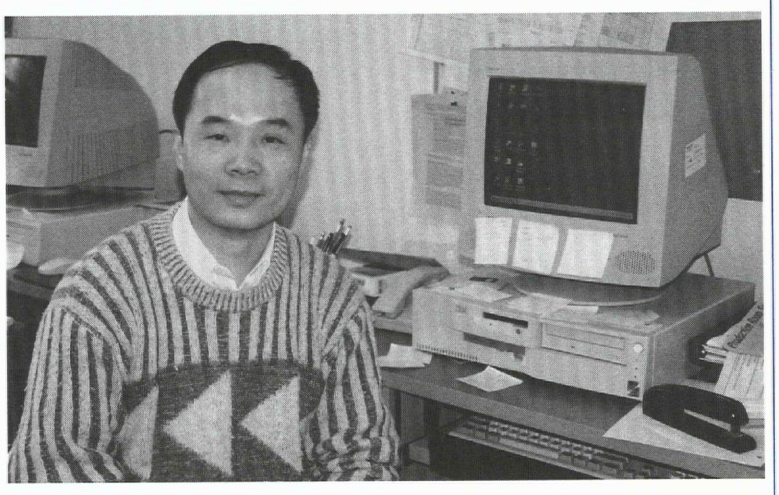
"When I saw the advertisement for the instructor's position, the BCIT slogan, 'Knowledge that Works,' really caught my eye," Chen remembers. "The best thing about math is applying the theory to practical problems in engineering and physical sciences. I show the students how they can use the math in reality – that's why I like BCIT, and the math taught at BCIT."

In order to help his students learn more effectively, Chen has painstakingly created a Virtual Learning Centre on the Web. Using this Web site helps BCIT students get additional help in technical math. By completing a series of exercises on the learning centre, students have their work graded and evaluated for areas of weakness, automatically. The grades earned from virtual quizzes can also be applied to their final marks. Not only that, but students can also use the learning centre as a "real time" forum for discussing math challenges.

The Web site is popular. Some weekends, the site gets over 300 hits and during midterms it can be hard to get on. Improvements are constantly being made. The Web site, just like Chen's teaching style, focuses on the practical. "I don't always follow a textbook approach," says Chen. "Our math students are unique compared to other schools, so often I have to do something special."

Chen's background is in Experimental Physics. He spent three years in research at SFU before coming to BCIT, but before that, his career took him through three radically different cultures.

Growing up in China during the Cultural Revolution often meant learning very little at school, and it was impossible to get into universities without the right political affiliations. When Chen graduated from high school, he went to work in a plastics factory, and learned on the job, instead. With a natural aptitude for math and physics, learning came easily for him. Later on, when the Cultural Revolution was over and the post secondary education system was reopened in China, Chen entered university with entrance exam results of 99 per cent.



Michael Chen has developed a Virtual Learning Centre for technical math students at BCIT.

While in university, he became a physics instructor, then received an opportunity to participate in an exchange with City University of New York. Going to school right next to the fierce urban reality of Harlem was an enormous culture shock for Chen.

After completing his Ph.D. in experimental physics, he ended up in Vancouver, which he is happy to call home. If he wasn't teaching technical math, he jokes that he might be coaching ping pong. "I'm pretty good at that," he understates, as Val Sawadsky (who was listening in) pipes up, "He's too modest to tell you that he was a regional champion in ping pong in China."

Ultimately, Chen would probably be teaching, no matter what. "It was the career I was looking for long ago," he says. "I'm doing something that I really want to do."

Virtual Learning Centre Web site:
http://calc.soe.bcit.bc.ca/bcitvlc/home.asp

Portrait of a benefactor

When you start with nothing, you have an affinity for those who are struggling to make a success of their lives, and try to do what you can to help.

Those of a younger generation have their own struggles, certainly, but those who are older – who have overcome world wars and depressions, and done what they could to help others along the way – deserve a special respect.

Pam Bastien and her late husband, Jerry, were such people. Through an endowment they established at BCIT, they have helped a total of 182 students achieve an education and establish a career.

The Bastiens know what it is like to struggle, and to achieve. Pam Bastien was a young woman in England when she met her husband. "Back in those days, people didn't think education was as important as it is today. I left school when I was 15 and went to work. I was doing all sorts of things I didn't like," she recalls. Jerry Bastien was a Canadian soldier stationed in England. The two eventually married and moved to Canada, and started a new life together.

"We had two small children," she remembers, "and no possessions. Jerry had received a car from the government – in those days it was hard for anyone except veterans to get a car. He sold it, and invested the money in a business." Bastien traveled for years on public transit to make up for his investment capital, but his risk paid off. He eventually built a number of businesses in B.C. and Alberta, and as Pam Bastien affirms, "provided well for his children."

One day, the Bastiens decided to invest in the future again – this time, the investment was for others. They started the Pam and Jerry Endowment Fund, the earnings of which would be directed toward awards for BCIT students in trade programs. BCIT was chosen because the Bastiens had a friend whose son had done very well by going to BCIT.

One of the students the Bastiens have helped was Trenton Reisinger, a pre-apprenticeship student in Electricity and Industrial Electronics. Reisinger received an entrance award from the Pam and Jerry Bastien Endowment Fund, and he says it has made all the difference. "Without it, basically, it would have meant dropping out," Reisinger says. "The student loan didn't cover all my needs, but every little bit of money helped."

Reisinger is looking forward to graduating in June. "When I first started the program, I thought, 'I have so far to go!' but two years have gone by quickly. I'm really looking forward to becoming an electrician."

Reisinger's gratitude is typical of recipients of such awards. Bastien indicates she has received dozens of letters from students, thanking her. "I really enjoy receiving these letters, and meeting the students for tea at the award presentations. I get great satisfaction out of it. They really do appreciate it," Bastien says.

Mrs. Pam Bastien presents the Pam and Jerry Bastien Entrance Award to Trenton Reisinger, Electricity and Industrial Electronics.

staff news

Julie Koel has joined Special Events as the new 2000 Open House Student Coordinator. As a first year Marketing Management student (in Marketing Communications option), Koel has also worked in a communications and customer service capacity for Rogers Cable for a number of years before returning to school full time. Her first task as coordinator: to form a committee, and establish a logo and theme for Open House (see page 2). Welcome, Julie!

Gail Mitchell, assistant to the vice president, Education, recently performed at the Chandos Pattison Auditorium in a musical entitled "Let Yourself Go" as part of the Westcoast Harmony Chorus. The performance also featured the international champion quartet, Rumors. Approximately 24 BCIT-ers were present for the matinee and evening shows. We are looking forward to an encore, Gail!

— from Andrea Labe

take note

Be the "green" apple of BCIT's eye

Nominations are now open for BCIT's annual Earth Apple Award for individuals or departments who have done something good for the planet. You, your department, or someone you work with could win the Earth Apple Award plus other prizes for reducing waste, reducing the use of materials, eliminating or cleaning up a source of pollution, or just plain exhibiting environmental behaviour like cycling to work every day. Deadline for nominations is April 9. Call Shirley Freistadt at 432-8397 or e-mail sreista@bcit.bc.ca for more information.

BCIT Bookstore closed

For fiscal year-end stock-count, BCIT Bookstore will close at 12:00 p.m. on March 30, and re-open at 8:30 a.m. on April 1st. During this time, telephones and e-mail will not be answered. Your co-operation is appreciated.

eco tip

Soap Chips

You can make a soap scrubber by placing bits of leftover soap in a square of nylon netting. Fold the netting over a few times over the soap, and stitch the edges under. Great for scrubbing stains or cleaning hands.

take note

Update deadlines

Clip out this list of Update deadlines for the rest of the year. Keep in mind that submissions are always welcome! Be sure to take photos of your events, and send them to Isabel Kolic in Community Relations.

Edition	Deadline
April 27	April 12
May 11	April 26
May 25	May 5
June 8	May 21
June 29	June 14

classy finds

For sale – 8000 lb warn winch c/w push bar and halogen fog lights $1000 obo; Rainbow vacuum $1000 obo. Both in exc working order. Call Judi at loc. 8796 or tel. 533-1958, or jwright@bcit.bc.ca.

For sale – Compaq Presario 433, 486 SX/33 Microprocessor, 16 MB RAM expandable to 20 MB, 200 MB hard drive, 3.5" disk drive, Windows 3.1 installed, processor can be upgraded, and CD ROM can be added. Monitor/CPU all one unit. $250 obo. Call Michelle at loc. 8574, or 879-1233.

For sale – House by owner: 4 BR, 2 full baths, kitchen, living, dining, family, office, 2009 sq ft total, 49.5 x 122 lot in Upper Lonsdale. 46 years old, lots of renovations done 5 years ago. Suite potential downstairs. Sep double garage $379,000. Call 990-8937.

Photo albums – Interested in learning to organize your photos and get them into safe albums in a creative way? "Creative Memories" will help you do it. Call Carroll at 298-6855 or loc. 8553 for information.

Wanted – Business cards. My daughter Shannon is collecting business cards in the hopes of getting in the Guinness book of World Records. If you have any single copies of your old cards or of contacts, please send them to Peter Fenrich, Technology Centre (or I could pick them up). Tel. 432-8817.

Car pool – Have car and am looking for people to commute with me from Fort Langley/ Walnut Grove/Port Kells/Fraser Heights areas, to BCIT. Start and end times are flexible. Call Gordon at loc. 7428.

For rent – Apartments and villas in Bucerias, Mexico (north of Puerto Vallarta). Call Sherry at 299-0908, or e-mail smcarna@bcit.bc.ca. Include your fax number and I will forward descriptions.

Hollywood gets behind Theodosia Dam

The initiative to dismantle the Theodosia Dam, coordinated by BCIT's Mark Angelo program head, Fish, Wildlife and Recreation, has recently received support and recognition by Pierce Brosnan. Brosnan, a film actor *(James Bond, Mrs. Doubtfire)*, will soon star in the upcoming film *Grey Owl* about the famous conservationist, is actively involved in environmental issues himself.

In a letter to Mark Angelo, Mr. Brosnan wrote, "the Grey Owl production is proud to be associated with such a cause and is very supportive of the efforts of Mr. Angelo as well as the Sliammon First Nation to protect and restore the Theodosia River."

The campaign to dismantle Theodosia River (located 15 kms north of Powell River, B.C.) could restore one of the most productive fishing streams in British Columbia. The dam, which provides marginal economic benefits, has had severe environmental impacts since 1956.

Angelo comments, "The dismantling of the Theodosia Dam would do much to right a past wrong and the river conservation community in B.C. is very pleased with the interest that both Pierce Brosnan, and the film's producer, Jack Eberts, have taken in this issue."

The film, *Grey Owl*, will be released in September.

Pierce Brosnan, and Mark Angelo, at a recent fundraiser for The Grey Owl Trust, an environmental preservation organization.

Eco Fair 1999 is a "must-see" for more reasons than one

World scientists are warning us that we're on a collision course with nature. We're starting to see signs of this with severe climate disruptions, record-breaking temperatures each year, the collapse of ecosystems, species extinctions, and other threats to our health and happiness here on planet Earth.

There is something we can do. Through widespread education, improvements in technology, and changes in behaviour, together we can correct our course. As a "group project", environmental protection is an exciting challenge. Industry can no longer afford to ignore this issue, either, because a healthy, sustainable economy depends on a healthy environment. It is also spurring some of the most promising growth industries of the next century, such as photovoltaics (solar energy), which is growing at an annual rate of 30 per cent.

Come see a positive approach with the latest in products, technology, ideas, and career paths at BCIT's Eco Fair '99 on April 14 (see page 1 for time and location). There will be lots to see all day, and many people to network with, including BCIT grads, advisors, and staff with some great ideas.

A sample of the fun: Exciting consumer and industrial products and services; clean energy showcase with photovoltaic, wind, and solar thermal energy; the GVTA/Ballard hydrogen-powered bus (until 2:00 p.m.); the Sustainable Living Bus, electric cars and other alternative transportation; manufactured wet lands; and toxins in the home.

—from Greg Helten

Attend any of the following seminars:

The Big Picture and the Future of Work with Dr. Bill Rees, UBC (12:30 p.m.); **The Business of the Environment** with Robert Abbott (1:30 p.m.); **Healthy Housing: A Sustainable Approach with Mark Salerno**, CMHC (2:30 p.m.); **Possible Futures of the Lower Mainland with the new QUEST Modeling Software** (4:30 p.m.).

For more information, call 451-7060.

Campus Crime Stoppers

Beware the Laser Pointer

Recently, a person standing at the front of a classroom at BCIT was nearly hit in the eye by the beam from a laser pointer, which could have caused serious eye injury. The sale of laser pointers is not restricted in any way, and anyone – any age – can purchase one. It's important to remember that a laser pointer used in any way to threaten, or actually injure another person, can be considered a weapon by law, and a criminal act.

Tips when using a laser pointer:

- Recognize laser pointers can cause serious injury.
- Only point at the object you intend to highlight; i.e. overhead projection, chalkboard, etc.
- Make sure it is "off" when turning away from the object you were directing it towards.
- Make sure no one is behind, or too near, the area you are pointing the beam.
- Never point into a mirror.
- Do not leave where children or irresponsible people can access it.
- Recognize you are responsible and liable for any injury caused by you.

This is an information item from Campus Crime Stoppers. Please call 669-TIPS if you have information about a crime you may have witnessed. Callers never have to reveal their identity.

—from Donna Montgomery and Gord McLean

Dive right in!

PMTC offers Learn to Dive course for BCIT staff

Since PMTC started offering commercial diving courses in partnership with the Canadian Diving Group (CDG) there has been a deluge of inquiries from faculty and staff requesting a basic course enabling them to become certified divers. In response to this, CDG has agreed to offer a basic diving course once a month at PMTC for BCIT staff and their family members (age 12 and older).

The course consists of five evening classes including classroom and swimming pool development, and then culminates in a weekend of diving in the ocean. CDG has some of Canada's most experienced and expert instructors – a tremendous motivator for those who may be a little timid about venturing underwater for the first time.

Graduates will receive an internationally recognized certification card; so, for those adventurous members of the BCIT family, now is the time to take the plunge! Classes are limited in size and early registration is highly recommended.

The $300 tuition includes all equipment and textbooks. Please note that this course is not subsidized by the Institute and participants are responsible for paying full tuition.

Special offer: Free T-shirt for those who register for March and April!

For more information call Geoff Greenwell, Canadian Diving Group at 985-0622 ext. 335.

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.

Update is produced on Adobe Pagemaker Desktop Publishing software and printed on recycled paper.

Please recycle your BCIT Update in the White Paper Recycling Bin

Managing Editor
Carol Dion, 432-8865

Editor
Isabel Kolic, 432-8656
ikolic@bcit.bc.ca

Distribution
Mary Murray, 432-8410

Design, layout, and prepress
Marcel Da Silva

Photographers
Bert Schendel, Harold Simons

Contributors
Arman Abdulla
Nargis Abraham
John Betts
Larry Coglan
Rosamaria Fong
David Hamilton
Andrea Labe
Greg Helten
Gord McLean
Donna Montgomery
Kathleen Moynahan
Jim Parry
Linda Pashka
Barry Pointon
Dan Pontefract
Lorraine Robson
Harold Simons
Frank Schnurr
Tony Webb
Benjamin Yu