

SCIENCE contours



UNIVERSITY OF
ALBERTA

VOLUME 12, NO. 2 FALL 2003

FACULTY OF SCIENCE ALUMNI MAGAZINE

Leaving her mark on campus

On October 4th, the National Research Council of Canada's (NRC) broke ground for the National Institute for Nanotechnology (NINT). The \$40-million building will be located in the heart of the University of Alberta campus and is projected to be one of the world's most technologically advanced research facilities.

While the inside of the building will house some of the Faculty of Science's finest researchers, the outside will reflect the vision and expertise of a Faculty of Science alumnae.

Donna Clare, who graduated in 1979 with a Bachelor of Science (First Class Honors), is a partner at Cohos Evamy,

responsible for the architectural design group in the Edmonton studio. She is also the Project Architect for NINT.

She credits her science degree for teaching her how to be rigorous about problem solving. "Design," she notes, "whether it is a scientific experiment or a building, starts first from seeking to understand the question being posed."

After receiving her B.Sc. Donna went

to work for Dr. Robert Hodges as a Research Technologist in the Biochemistry Department at the University of Alberta. Although she found Biochemistry interesting and challenging, she knew it was not her passion.

It was following

a trip to Europe that she found her calling.

"Cities and their architecture fascinate me," she says. "After my trip I knew it was something I wanted to pursue as a career." And she did.

Donna was the Gold Medal recipient of her 1987 Bachelor of Architecture graduating class from the University of Toronto. From there she moved to La Jolla, California to work for James Alcorn & Associates, and in 1994 she joined the Cohos Evamy Partners, a fully integrated architectural, interior design, and engineering firm, employing 200 people in Edmonton and Calgary.

NINT will be 20,000 square metres, and

through exacting technical specifications will make this facility Canada's quietest research space. Features of the laboratory space include ultra low vibration, minimal acoustical noise and electro-magnetic interference, and constant temperature and humidity. "This project is unique on so many levels," explains Donna. Working on the design of NINT has drawn on both my training in science and my training in architecture - a unique and rare opportunity for an architect."

Donna has her handprint on many buildings around Edmonton. She was the design architect for the Winspear Centre; the project and design architect for the Odysium, and the Transalta Arts Barns/Fringe Theatre Adventures. She has also made her mark on campus; the Electrical & Computer Engineering Research Facility (ECERF) and the Markin/CNRL Natural Resources Engineering Facility (NREF), and now NINT.

"To be able to contribute to the university campus at this level has been a truly wonderful opportunity for me personally", adds Donna. "In some sense, I grew up on campus; I lived in HUB my first year and the University became my world. To be able to give something back to the campus that has played such an important role in my life has been a highlight of my career."



Donna Clare



Ministers Victor Doerksen & Anne McLellan break ground.

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Building momentum

I am pleased to announce that on September 26 the Board of Governors approved Phase 1 of the Centennial Centre for Interdisciplinary Sciences. As you know, this will be a world-class facility that will serve as the educational home for the scientific, business and community leaders of tomorrow positioned at the interface between traditional disciplines and paving the road to innovation and discovery.

The final naming of the building, Centennial Centre for Interdisciplinary Sciences, is a reflection of the upcoming centennials of both the Province of Alberta (2005) and the University of Alberta (2008). This signature building on the University Quad will provide a lasting legacy to commemorate the

anniversaries of both the province and the university.

The site chosen for the CCIS development is the current site of the Department of Physics, replacing the Avadh Bhatia Physics Building, including the current V-Wing, and extending through the area south of the Biological Sciences Building. Construction will proceed to two operational phases.

Phase 1 is set to begin in early Spring, 2004. It will be a two-storey sub-surface facility nestled in the courtyard of the Biological Sciences Building and extending towards the Physics Building. It will involve the construction of approximately 2700 – 3700 m² net assignable “basement” space. It will be designed to operate as a stand alone component until integration



with Phase 2.

Completion of Phase 1 of the Centennial Centre for Interdisciplinary Sciences is anticipated for August of 2005. At that time, construction will begin on Phase 2 of the CCIS. Phase 2 will address the primary program needs of the Faculty of Science and deliver the benefits described above.

To keep up to date with the progress of the CCIS, please visit our website, www.science.ualberta.ca.

Gregory Taylor
Dean of Science

Psychology receives two Canada Research Chairs

The Department of Psychology has become home to two newly established Canada Research Chairs (CRC). Dr Douglas Wong-Wylie now holds a CRC in Behavioural and Systems Neuroscience and Dr Roger Dixon, who was recruited from the University of Victoria, is now a CRC in Cognition and Aging.

“The appointment of Drs Dixon and Wong-Wylie as Canada Research Chairs attests to the outstanding quality of the research being conducted in the Department of Psychology,” comments Dr Doug Grant, department chair. “Dr Wong-Wylie’s research expertise in the neuroscience of motion perception is attracting international attention, and he is a vital component of our Neuroscience Program”.

Dr Wong-Wylie’s research is focused on examining those parts of the brain involved in the processing of optic flow that results from self-motion. By providing a comprehensive description of the physiology and anatomy of the visual system, he will provide a better understanding of the functional

organization of the system, in particular, those pathways concerned with motion analysis.

This research has the potential to improve the quality of life and health for many. Numerous patients exhibit locomotor, postural, and oculomotor problems due to optic flow and visual-vestibular dysfunction. Difficulty with spatial navigation due to the impairment of optic flow analysis is characteristic of syndromes in the aged, including Alzheimer’s disease.

In addition, a portion of this research will be aimed at developing a new diagnostic tool used for early detection of Alzheimer’s using a Video Oculography Eye Movement Recording System.

“The appointment of Dr Dixon adds considerable research excellence and research breadth to our Applied Developmental Science (ADS) Program,” adds Dr Grant. “This addition results in our ADS program now covering the life span from preschool children to octogenarians.”

Dr Dixon conducts research on profiles

and predictors of cognitive development in adulthood, especially during the middle-to-late-life period. Relatively little is known about actual cognitive changes across late adulthood. The most common research design, termed “cross-sectional”, compares younger with older adults. However, it is research that follows the same adults over time, termed “longitudinal” designs, that can offer direct evidence regarding actual cognitive change.

As Principal Investigator of the Victoria Longitudinal Study (VLS), a project that has laboratories at the University of Alberta and the University of Victoria, Dr Dixon can investigate important facets of cognitive aging. Featuring sequences of longitudinal designs, this study is gathering of complementary data pertaining to age differences, age changes, and individual differences in change.

Dr Dixon will nurture the VLS to expand and refine its cutting-edge research in cognitive aging. He will use his existing and growing longitudinal data set to selectively extend and expand the investigation of actual cognitive changes with aging.

Bill Samuel honoured for wildlife research



Dr Bill Samuel has spent more than 40 years studying wildlife disease. From moose ticks to parasites causing neurological disease in wildlife, there has been no shortage of research material over the years. In early August, Dr Samuel, a professor in biological sciences, was recognized for his outstanding contributions in the field by the Wildlife Disease Association with the Distinguished Service Award. Dr Samuel is the first recipient from Alberta, and only the seventh Canadian to receive the award.

"I was quite surprised," smiles Dr Samuel. "When Paul Barrows, the President of WDA, was describing the recipient of the award I was looking around the room trying to figure out who it was. Turns out it was me."

The WDA represents the field of wildlife health worldwide and the award is the highest award of the association. It honours a WDA member of long standing who has made a noteworthy contribution furthering the aims of the association through research, teaching and other activities.

"Dr Samuel has achieved all of this", comments Dr Tonie E. Roche, an epizootologist at the National Wildlife Health Center in Wisconsin. "His long career and body of work in the field of wildlife disease is very impressive, surpassed only by his enthusiasm and keen passion for teaching and student mentorship", she adds. "The WDA has benefited considerably by Dr Samuel's affiliation and his outstanding commitment, and the Distinguished Service

Award is a very fitting tribute to an excellent scientist, teacher, and mentor."

Dr Samuel joined the Faculty of Science in 1969 as a post-doc. Since that time he has received many awards and accolades, published over 130 papers, supervised numerous graduate students and held various administrative roles. He has been an active member in WDA since 1964, and has held various executive positions including a term as Vice-President.

In addition to his current role as Associate Dean (Research) of the Faculty of Science, he is acting leader of the Alberta Cooperative Conservation Research Unit (ACCRU) and former coordinator of the Alberta Conservation Association Grants in Biodiversity.

His research on winter ticks invading moose has been featured on programs such as the Discovery Channel, and in 2001 he and a former PhD student, Dr Margo Pybus, completed the 2nd edition of *Parasitic Diseases of Wild Mammals*, a widely referenced textbook.

"It is an honour to be recognized," reflects Dr Samuel. "I love what I do, and this award is icing on the cake."

Vargo chair honours passionate teachers

A new professorship at the University of Alberta, the Vargo Distinguished Teaching Chair, honours U of A professors who combine excellence and a passion for teaching with an established record of substantive research.

Dr Tom Chacko of the Department of Earth and Atmospheric Sciences, along with professor Ehan Erkut of the U of A School of Business, have been named recipients of the first Vargo chairs.

"I was pleased and honored to learn that I had been selected," commented Dr Chacko. "There are plenty of excellent teachers in our Faculty and at the University, and I am grateful to my colleagues for nominating me."

The Vargo chair distinction, which is sponsored by the U of A Office of the Provost and Vice-President (Academic), includes a \$12,000 annual stipend for salary or research and \$15,000 to hire a graduate teaching assistant. It lasts for five years and may be renewed once. More Vargo chair recipients will be announced in the next two years, after which there will likely be between four and six professors holding a Vargo chair at any one time.

The chair is named after Dr Jim Vargo,



a U of A alumnus ('68 BA, '70 MEd, '72 PhD) and former professor in the U of A Faculty of Rehabilitation Medicine. A much-loved and respected scholar, he taught for 23 years at the U of A before retiring in 1998. Vargo died in January this year.

Dr Gregory Taylor, dean of the U of A Faculty of Science, is pleased that Chacko was honoured. "We strive to be a leader in interdisciplinary science education," Dr Taylor said. "And seeing Dr Chacko receive this well-deserved Vargo Distinguished Teaching Chair acknowledges the significant contribution he has made to the enrichment of learning for his students."

"Both of our inaugural Vargo chairs are top-notch scholars," said Dr Gretchen Hess, U of A Vice-Provost. "Both of them could be

Canada Research Chairs based on the quality of their research, but they combine their research skills with a true and deep passion for teaching, and that's why they are being honoured."

"Perhaps the most gratifying aspect of the Vargo Chair is that it is a clear and tangible indication that the University values teaching as much as it does research," commented Dr. Chacko. "I believe that this is part of a positive trend at the University."

Interestingly, the increased appreciation of teaching seems to coincide with a sharp rise in the University's research profile at the national and international level. "I've always felt that those two things, teaching and research, go hand in hand," adds Dr Chacko. "It charges my batteries to discover new things or gain some new insights on how the Earth works. However, I get equally excited about explaining a concept to a student and seeing that look of understanding in their eyes, or seeing a group of students become enthused about the same things that interest me. To me, it's that balance between teaching and research, and the opportunity to do both, that is the joy of being a professor."

Sand and sun, science and space – The NASA experience

by Deepti Damaraju

Imagine living in Cocoa Beach, Florida, with the sand and surf less than a minute's walk away from your front door. Imagine being able to stand on the beach and see, off in the distance, some of the most remarkable assemblies ever built by man. Imagine being at the Kennedy Space Centre, surrounded by inspiring and motivating peers and mentors, and spending six weeks working on key research in the space and life sciences fields. During the summer of 2003, I was able to experience all this and more as part of NASA's Spaceflight and Life Sciences Training Program (SLSTP), a rigorous course designed to put students head-first into the exciting world of biology in space.

As one of two Canadian students in a total group of 29, the experience was quite an adventure. It was remarkable to meet so many talented and driven young people, and indeed, it was the social experience that made this program unforgettable. Moreover, to be able to work with these students and with Kennedy Space Centre researchers on projects ranging from plant growth studies

to molecular genetics truly showed me how teamwork and ingenuity, more than anything else, were responsible for sending man to the moon. The task today is no different: the research being done at Kennedy Space Centre is just one part of much larger efforts to discover how man can be sustained on long-term space travel. It was thrilling to be a part of these efforts!

However, this experience was much more than just life sciences research. To be within the very heart of aerospace history, to see President John F. Kennedy's famous words inscribed in Headquarters, to take in the magnificence of the Saturn V rocket that sent men to the moon, to see Cape Canaveral from the sand on Cocoa Beach,



inspired me, and in the process make friendships and develop valuable skills. It is amazing how, when pointed in the right direction just as the Space Shuttle points toward the stars, one can achieve their highest potential.

Lake reveals evidence of pre-Incan silver industry

Sediment at the bottom of a lake high in the Bolivian Andes suggests an active silver mining industry existed in the region earlier than anyone had previously imagined, even predating the Incas.

Dr Alexander Wolfe, from the department of Earth and Atmospheric Sciences, and Dr Mark Abbott from the University of Pittsburgh, took samples from lake sediments deposited near the major silver deposit of Cerro Rico de Potosi, Bolivia. From concentrations of metals associated with smelting, such as lead, they inferred the history of smelting from the mountain's rich ores, proving that an active metallurgical industry existed well before the Incas discovered the mountain—as far back as the 11th century. The research is published in the current edition of the prestigious international journal, *Science*.

"We began seeing high levels of lead,

which are heavy and not mobile in sediments and therefore make good markers for air pollution and for monitoring metallurgical activity," said Dr Wolfe. The Incas used a lead-containing flux to extract silver and to regulate the temperature of smelting, and that substance provides a reliable marker in the lakebed sediments.

The team was able to compare the sediment samples with metals in the naturally occurring background from several thousand years ago and map out a chronology that shows when smelting took place. "We found a gross mismatch between the amount of silver apparently smelted from the mountain and the scant regional archaeological evidence in the form of silver artifacts that have survived," said Dr Wolfe.

The lake sediment record shows "no previous evidence for the intensity of metallurgy in the pre-Columbian times," he added.

Although it is impossible to determine how much silver was extracted from Cerro Rico, the research team's data implies that several thousand tons of silver were produced in pre-Incan times. There are two possibilities for the missing silver artifacts manufactured during the pre-Incan era: the silver has not yet been located by archaeologists or, more likely, subsequent cultures have looted the artifacts.

"Although major new archaeological discoveries in the Andes remain a distinct possibility, the likelihood seems equally probable that most of this silver was recycled and transported elsewhere in the Americas before conquest, or eventually exported overseas by the Spanish," the paper states.

The research also shows that early Andean cultures faced many challenges often associated with modern times. They were quite advanced technologically—so much so that they were capable of severely polluting the atmosphere, as illustrated by the lead levels.



The Royal Llama, American Museum of Natural History

University

- **Rik Tykewski** (*Chemistry*) – Martha Cook Piper Research Prize
- **Jens Roland** (*Biological Sciences*) – Killam Annual Professor
- **Dennis Hall** (*Chemistry*) – Petro Canada Young Innovator Award
- **Stan Boutin** (*Biological Sciences*) – McCalla Professorship
- **Pawel Gburzynski** (*Computing Science*) – McCalla Professorship
- **Jeffrey Stryker** (*Chemistry*) – McCalla Professorship
- **Brian Jones** (*Earth & Atmospheric Sciences*) – C.R. Stelck Interim Chair in Petroleum Geology

National

- **David Schindler** (*Biological Sciences*) – Killam Prize (Canada Council)
- **Liang Li** (*Chemistry*) – Rutherford Memorial Medal (Royal Society of Canada)
- **Andy Liu** (*Mathematics & Statistical Sciences*) – Adrien Pouliot Award for Mathematics Education (Canadian Mathematical Society)
- **Jillian Buriak** (*Chemistry*) – Principal Research Officer, Materials and Interfacial Chemistry Group, NINT
- **Hicham Fenniri** (*Chemistry*) – Principal Research Officer, Supramolecular Nanoscale Assembly Group, NINT
- **Andrew Waskiewicz** (*Biological Sciences*) – Canada Research Chair in Genetics of Vertebrate Development
- **Robert Wolkow** (*Physics*) – iCORE Chair in Nanoscale Information and Communication Technologies. Principal Research Officer, Molecular Scale Devices Group Leader, NINT

International

- **Margaret-Ann Armour** (*Chemistry*) – Award for Encouraging Women into Careers in the Chemical Sciences (American Chemical Society)
- **Charles Wong** (*Chemistry*) – Early Career Award for Applied Ecological Research (American Chemistry Council)

Each year at a gala ceremony, the University of Alberta Alumni Association recognizes outstanding alumni and their contributions to society. The Alumni Pride Awards celebrate the diverse accomplishments of alumni and the recognition they bring to the University.

The **Distinguished Alumni Award** is the Alumni Association's most prestigious award. A maximum of four of these awards are conferred each year to recognize living University of Alberta graduates whose truly outstanding achievements have earned them national or international prominence. Alumni who are chosen to receive Distinguished Alumni Awards are also inducted to the Alumni Wall of Recognition.

Maria M. Klawe, '73 BSc, '77 PhD

A role model for women in science and engineering, Maria Klawe has established a strong research record in theoretical computer science and discrete mathematics while becoming a highly respected university administrator.

Among her numerous accomplishments, Klawe has held the NSERC-IBM Chair for Women in Science and Engineering and established the software company Silicon Chalk, Inc. In addition, she is credited with contributing to the IBM Almaden Research Centre's leading stature in the world of computing science.

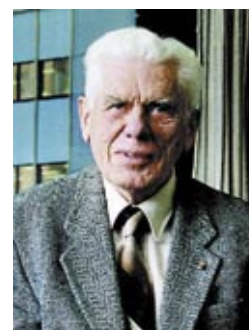
Klawe is known for her unique ability to promote interdisciplinary research, and her administrative talents led her to the University of British Columbia where she served as head of the Department of Computer Science, as vice-president of Student and Academic Services and then as Dean of Science. In 2003, she was appointed dean of Princeton University's School of Engineering and Applied Science. She is currently the President of the Association for Computing Machinery and chair of the Board of Trustees of the Institute for Women and Technology.



The **Alumni Honour Award** recognizes the significant contributions made over a number of years by University of Alberta alumni in their local communities and beyond.



John C. Demco, '73 BSc, '75 MSc, created the original registry for the Canadian Internet domain .ca, managed it as a volunteer for 13 years, and helped to establish the Canadian Internet Registration Authority. He is a founder of the Canadian Internet, setting up one of the first Canadian links to the United States. In recognition of his pioneering work and service to the Internet, he was inducted into the Canadian Internet Hall of Fame in 1997.



Walter Harris, '38 BSc, '39 MSc, '91 DSc (Honorary), is respected as Canada's foremost "Dean of Analytical Chemistry," having served the chemistry department at the University of Alberta for 44 years. During his career he contributed to 25 scientific advisory councils and played a leading role in the proper disposal of Alberta's hazardous wastes. Highly regarded for his research, teaching, and public service, he has received the Order of Canada, is a Fellow of the Royal Society of Canada, and received two honorary degrees.

Diamonds are a researcher's best friend



Dr Thomas Stachel and Richard Molyneux

The University of Alberta officially opened Canada's first-ever diamond research laboratory in September.

The De Beers Laboratory for Diamond Research will be headed up by Dr Thomas Stachel, a professor in the Department of Earth and Atmospheric Sciences and holder of the Canada Research Chair in Diamonds.

Dr Stachel studies the chemical and physical properties of diamonds, and the

geochemistry of their mineral inclusions. The lab has been established with the aid of diamond giant De Beers Canada, which provided \$100,000 to equip Dr Stachel's laboratory with state-of-the-art research equipment, previously unavailable in Canada.

Richard Molyneux, president and CEO of

De Beers Canada, said the investment will help contribute to scientific knowledge as well as economic prosperity, as Canada's young diamond mining industry begins to thrive.

"Canada is well on track to becoming the third-largest producer of diamonds by value in the world and this industry will make a significant contribution to the national wealth of Canada," he said. "The

development of a leading-edge diamond research capability in Canada is therefore both logical and significant. This laboratory will make a valuable contribution to our scientific understanding and support the Canadian diamond industry."

In learning more about diamonds, part of Dr Stachel's research can be applied to helping industry find diamonds. In order to do so, he tries to identify the conditions in which diamonds are usually formed, what minerals are found near them and what that information reveals about the quality of diamonds in any given area.

The new imaging equipment allows for high-spatial resolution. It can help researchers to determine age and, more importantly for Dr Stachel's research, try to understand how diamonds are formed.

"With the breadth of upper mantle and diamond research underway in this department, we are positioned as the top lab in the country, if not around the world," Dr Stachel said.

Partnership delivers virtual reality in real time



Dr Pierre Boulanger and Minister Anne McLellan

In recent years, new media applications have expanded from simple web browsing and e-mail to new dimensions such as video on demand, collaborative video games, grid computing, tele-immersion, remote tele-operation, industrial tele-monitoring, and much more. Currently most large bandwidth networks are designed to deal with intermittent transmission of large data files such as streaming audio and video. Unfortunately these networks are plagued

by latency problems that make real time new media applications difficult, if not impossible.

Research into solving these latency problems has received a huge boost with a \$1.5-million partnership between Western Economic Development, BigBangwidth, a U of A spinoff company, and the U of A. The partnership will allow real-time 3-D virtual reality interactions to take place via the Internet.

Minister Anne McLellan was on hand for a demonstration of new technology that allows researchers from the U of A and across Western Canada to hold virtual meetings in real time.

"This is the most fun I've had in a long time," she said. "It's like science fiction, but it's real!"

The problem in achieving real-time virtual reality exchanges online has always been that networks or the Internet itself

are just too slow.

"It's terrible--there is so much delay," said Dr Pierre Boulanger, a professor in the Department of Computing Science and director of the U of A Advanced Man-Machine Interface Laboratory (AMMI). "All the promise of the Internet bringing us this new multimedia world can't come about unless it is enabled. The problem is networks are full of buffering, and that kills real-time applications."

New technology developed by BigBangwidth will operate behind the scenes in the computing science department and will detect high bandwidth and "low latency" or "delayed" operations, such as 3-D virtual reality work, and ensure it neither disrupts nor is disrupted by other work being conducted on the network.

The new technology will also take advantage of supercomputers powered by WestGrid, a \$40-million supercomputer network that connects researchers from the U of A, University of Calgary, University of Lethbridge, the Banff Centre, Simon Fraser University, University of British Columbia, TRIUMF, and B.C.'s NEWMIC.

University Cup winner has humble roots

Dr. Tony Lau, chair of the Department of Mathematical and Statistical Sciences and winner of this year's prestigious University Cup Award, wasn't born to greatness. And even though he has achieved international renown as a researcher and teacher, it's unlikely he considers himself great, at all.

The odds seemed stacked against Lau in the beginning. Born into a family of little means in Hong Kong, Lau was part of a small group of students who impressed their teacher so much that she arranged for them to continue their education in the U.S. Dr. Evelyn Eaton taught Lau when he was a child in Hong Kong and brought him to America.

"That was probably the best fortune I ever had," Lau says of having Eaton as a teacher. Because she saw something special in Lau and three of his friends—the four went to school and were Boy Scouts together—Eaton found families in the U.S. who would take the boys in so they could continue their education. Lau eventually earned his BSc at Berkeley and his PhD at the University of British Columbia.

Dr Lau is internationally recognized for his mathematics research in the field of abstract harmonic analysis. "I don't study numbers," he explains. Rather, he examines functions or measures

on sets of matrices or real numbers.

"I think he is regarded as the father of this field," said Dr. Monica Ilie, a post-doctoral student from Romania who studies with Dr Lau. "His classes are really enjoyable."

It's no surprise then that Dr Lau is regarded as an outstanding teacher as well. In fact, he's a previous recipient of the Rutherford Award for excellence in undergraduate teaching, among his many professional accolades.

"At UBC, I was given the chance to teach right from my first year. I really like it," said Dr Lau, who still teaches first-year math even while serving as department chair.

"First-year students are so innocent, so eager to learn," he said. The challenge, he added, is teaching students whose understanding of math varies.

"I never address just the top students," Dr Lau said. Some of his classes

have as many as 250 students whose abilities in math range from "some just barely passing" to others who aced international baccalaureate programs.

To keep his lessons fresh, Dr Lau never simply recites lessons he taught a year ago. "I don't use my own notes," he said. "I destroy them. I just start from scratch each year. It forces me to be creative."

Some of Lau's graduate students have achieved greatness. Lau's first PhD student, Dr. Keith Taylor, is Dean of

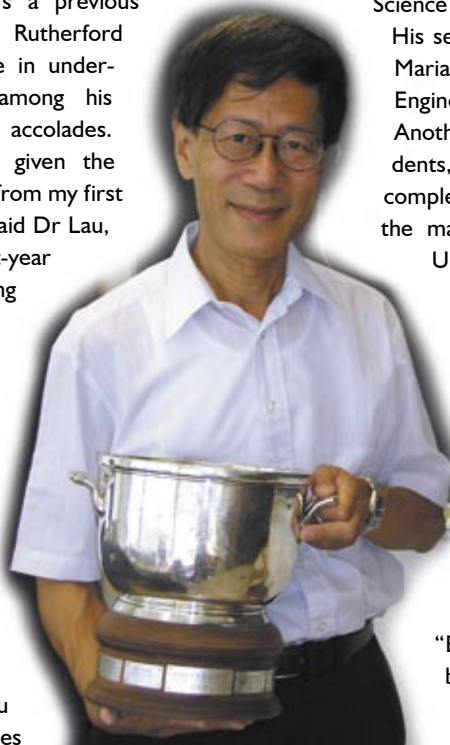
Science at Dalhousie University.

His second PhD student, Dr. Maria Klawe, is Dean of Engineering at Princeton. Another of his former students, Brian Forest, recently completed a term as chair of the math department at the University of Waterloo.

Dr Lau keeps in touch with his old students and with his old teacher.

Eaton, who is now in her 80s and living in Fresno, Ca., is undoubtedly proud of her former pupil. "I send her cards at Christmas," said Lau.

"But she doesn't write back often anymore—she says I'm all grown up now."



STAY IN TOUCH

This is your opportunity to re-connect with former classmates and one of the finest science faculties in the country. Let us know where you are and what you are doing.

Tear off this portion and mail it to:

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T6G 2E9

Or email contours.science@ualberta.ca

We want to hear from you!

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Yes, please contact me for further information.

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The University of Alberta Alumni Association has more than 50 active branches that extend the boundaries of the University community to the far reaches of the province, the country and the world. Here is a list of upcoming events. For more information please visit the Alumni Association website, www.uofaweb.ualberta.ca/alumni.

November 23, Vancouver

Annual Alumni Christmas Celebration

November 27, Lethbridge

Guest Speaker: Dr. Clare F. Forestell,
 '81 MD, FRCPC
 "Medicine in the World"
 Alumni Dinner

December 7, Calgary

A Christmas Carol Event at Theatre Calgary (Only 100 seats available) along w/ reception.

December 7, Victoria

Annual Alumni Christmas Celebration

————— **2004** —————

January TBD, Calgary

Young Alumni Networking Event with select U of A alumni as panel guests.

January 29, Silicon Valley
Guest Speaker: Dr. Gregory Taylor
 Alberta Innovation & Science Buffet Reception hosted by Minister of Innovation and Science and U of A Alumni Reception

February 5, New York

Alumni Skating and Pasta Party in Central Park

March 4, Lethbridge

Guest Speaker: Dr. Franco Pasutto
 Annual Alumni Reception
 Lethbridge Lodge

March 6, Phoenix

Guest Speaker: Dr. Breay Paty (Edmonton Protocol/Islet Team)
 Annual Alumni Brunch
 (alumni in Tucson will be invited to Phoenix)

March 19, Grande Prairie (Peace Region)

Annual Alumni Reception & Theatre Event

March 27, Hong Kong

Guest Speaker: Dr. Rod Fraser
 Alumni Lunch
 Previously Annual Hong Kong Reunion Dinner

April 3, Bonnyville

Guest Speaker: Dr. Franco Pasutto
 Annual Alumni Brunch

April TBD, Washington, DC

All Canadian Alumni Dinner (last year hosted by University of Toronto)

April 24, Victoria

Guest Speaker: Dr. Ian Morrison
 Annual Alumni Brunch

April 25, Vancouver

Guest Speaker: Dr. Ian Morrison
 Annual Alumni Brunch
 Royal Vancouver Yacht Club

Science Contours is published twice a year by the Faculty of Science Office to provide current information on the many activities of the Faculty. The newsletter is distributed to alumni and friends of the Faculty.

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Science Contours

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