

INTERFACES

CHEMICAL ENGINEERING AND APPLIED CHEMISTRY, UNIVERSITY OF TORONTO



Volume 2, Number 2 Fall 2004

Contents

- 1** Message from the Chair
- 2** Undergraduate News
- 6** Graduate News
- 8** Faculty News
- 10** Alumni News
- 14** Family News
- 16** Upcoming Events

“Students who are passionate about learning, or could become so, do exist. Faculty members who love their subjects passionately and are eager to teach what they know and to plumb its depths further also exist. But institutions devoted to respecting and fulfilling these needs as their first purposes have become rare, under pressure of different necessities.”

Jane Jacobs

Dark Age Ahead

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Welcome to the fourth issue of INTERFACES, and thanks to all of you who have contributed news and photos. INTERFACES is about the Department community: students, alumni/ae, faculty, staff, partners in industry and government, and friends. We are delighted to welcome two new faculty members, Roger Newman and Edgar Acosta, both exceptional scholars. We extend a hearty welcome to our latest colleagues and their families.

In this issue, we celebrate the achievements of students, staff, and alumni/ae. Some of our students are artistically inclined, their remarkable accomplishments in music, photography, and art complementing their engineering interests. In remote Nepal, the exceptional work of Sophie Walewijk and Tommy Ngai (both Chem 0T1) uses chemical engineering technology to provide safe drinking water. The many alumni/ae getting married and producing babies are featured on the family page.

In concert with the University, we have created a new Strategic Plan for 2004-2010. We have a vision: “We will be among the top ten chemical engineering departments in the world, educating leaders of tomorrow.” We have articulated our mission, our values, and our operating principles. Our priorities are to

- campaign for external resources,
- renew the faculty complement,
- renew the undergraduate and graduate curricula,
- establish “Leaders of Tomorrow,” an initiative to enhance the student experience,
- renovate strategically important undergraduate laboratories,
- play a major role in the University’s development of an undergraduate collaborative program in bioengineering/systems biology and of a graduate/research initiative in biosystems.

In moving forward, our education system faces the daunting “pressure of different necessities,” as Jane Jacobs so forcefully argues in *Dark Age Ahead*, recommended reading for all those disquieted by the erosion of culture and values. She speaks to the central concern of our University and our Faculty: the future of education, the professions, science, and cities.

To achieve our vision, we need the participation of all the members of our community. To win resources for our cause, we must campaign to fund undergraduate scholarships, special professorships, special programs like Leaders of Tomorrow and Lectures at the Leading Edge, and the renewal of facilities such as undergraduate labs, the student services suite, and our premier lecture theatre. I am delighted to report strong alumni/ae support for the renovation of the Undergraduate Common Room, which will be officially opened on September 16. Please call, write, or e-mail us today.

Our cause is worthy. Please join us.

DOUG REEVE

*Frank Dottori Professor
of Pulp and Paper Engineering,
Professor and Chair,
Department of Chemical Engineering
and Applied Chemistry*



Artistically Talented Undergraduates

Miranda Liao (Chem 0T7) has a gift for music, obtaining a level 5 certificate in piano playing. She has a strong interest in architecture and has studied charcoal drawing and Chinese painting for several years.

Karina Lorenzo (Chem 0T6) entered university at the age of 16. She is equally precocious in the arts. Karina enjoys painting and drawing, especially drawing portraits in pencil. She is also talented musically. In addition to playing the guitar, she was a member of the chorus in an opera theatre and has sung in choirs, most recently in the Engineering Choir. She speaks English, Spanish, and Catalan fluently, has acted in amateur productions, and has written a novel entitled *Tizones entre Cenizas (An Ember in the Ashes)*, which she hopes to publish.

Andrew Mancini (Chem 0T5) finds photography a rewarding pastime because it enables him to explore the world from a different perspective. He enjoys capturing a moment in time through the lens of his camera and notes that digital technology has made it possible for even inexperienced photographers to create their own images. Andrew encourages other students to broaden their horizons by reanimating hobbies they have put aside.

Sona Saeidi (Chem 0T5) has painted since she was in preschool. She took drawing classes for about eight years and then began to work on her own, exploring different media, including charcoal, coloured pencils, and oil. She enjoys portraiture, landscape, and still life painting. She was awarded a certificate of excellence for calligraphy by the Association of Iranian Calligraphers, and she has continued to practice the art. Sona, who is also musical, plays the piano, flute, and violin. She has taken violin lessons both privately and through the Royal Conservatory of Music.



(L to R): Karina Lorenzo, Nicholas Wood and Sona Saeidi

Nicholas Wood (Chem 0T6) is active in the music scene. A trained pianist and saxophonist, he now plays the bass in a jazz band called Marieve and Her Midnight Blues. The band performs at weddings and other functions and in cafes around Oakville. Nicholas dabbles in electronic music, which he records on his computer under the name N!K. Recently, he was a runner-up in a competition sponsored by Toronto Computes Magazine (now Hub Canada), winning for an original composition.

The Summer Leadership Program

The Summer Leadership Program is a relatively new initiative whose goal is to build leadership capability among undergraduates by enhancing their professional skills. The program, which began with sixteen students in 2002, now has an enrolment of almost fifty. The majority of the participants are undergraduates in the Department working on summer research projects for Chemical Engineering professors. This year's cohort also included three students from Engineering Science.

The program is structured around science information sessions, team building sessions, student planned events, and Departmental issue focus groups. The science and information sessions involve informal presentations and lab tours by professors who lead clusters within the Department. This summer, the students learned about the Biosystems and Informatics clusters. The team building sessions included a Meyers-Briggs assessment of leadership style and workshops organized by the students, who also planned four trips. At the Xerox Research Centre Pilot Plant in Mississauga, **Paul Szabo**, Manager of Scale-up Engineering (and recently named

Adjunct Professor in the Department), gave them a tour of the facilities, demonstrating how chemical engineering is applied to xerography. The Departmental issue focus groups centered on strategic planning and the undergraduate curriculum. The students offered suggestions for curriculum improvement and gave feedback about student needs.

Another important element of the program is participation in team projects. In summer 2003, the students redesigned the undergraduate common room and prepared posters describing some of the Department's research clusters and the undergraduate and graduate programs. The posters are displayed on the wall opposite the Undergraduate Office. This summer's projects included a survey of student needs, the preparation of posters describing additional clusters, the redesign of a computer studio, and the renovation of the Unit Operations Lab.

A summer leadership executive consisting of ten students was formed to guide team project progress reports, facilitate presentation workshops, coordinate trips, oversee strategic planning for summer 2005, and map out the future direction of the program.

Back Row (L to R): Nicholas Wood, Saif Khan, Andrew Biksa, Dan Bolintineanu, Kevork Hecat, Ryan Doell
Middle Row (L to R): Tony Tsui, Sona Saeidi, Katherine Choi, Judy Ue, Kyla Bellavance, Lillian DeMelo, Sabrina Francey, Yaser Maniyali, Sam Orr
Front Row (L to R): Saja Al-Dujaili, Karina Lorenzo, Leah Windisch, Esther Huh, Rina Goldberg and Daniel Cicero



U of T Toastmasters

Toastmasters International was launched eighty years ago by a group of Californians whose goal was to improve their public speaking and leadership skills. Today, the organization operates in all parts of the world.

Nicholas Wood (Chem 0T6) and **Karina Lorenzo** (Chem 0T6) founded the U of T club in 2004. They were inspired by the Department's undergraduate communications course, which helps students gain insight into the art of speech making through hands-on practice. The club secured funding and currently has almost thirty members and a waiting list. They hope to become an official Toastmasters International club in the near future.

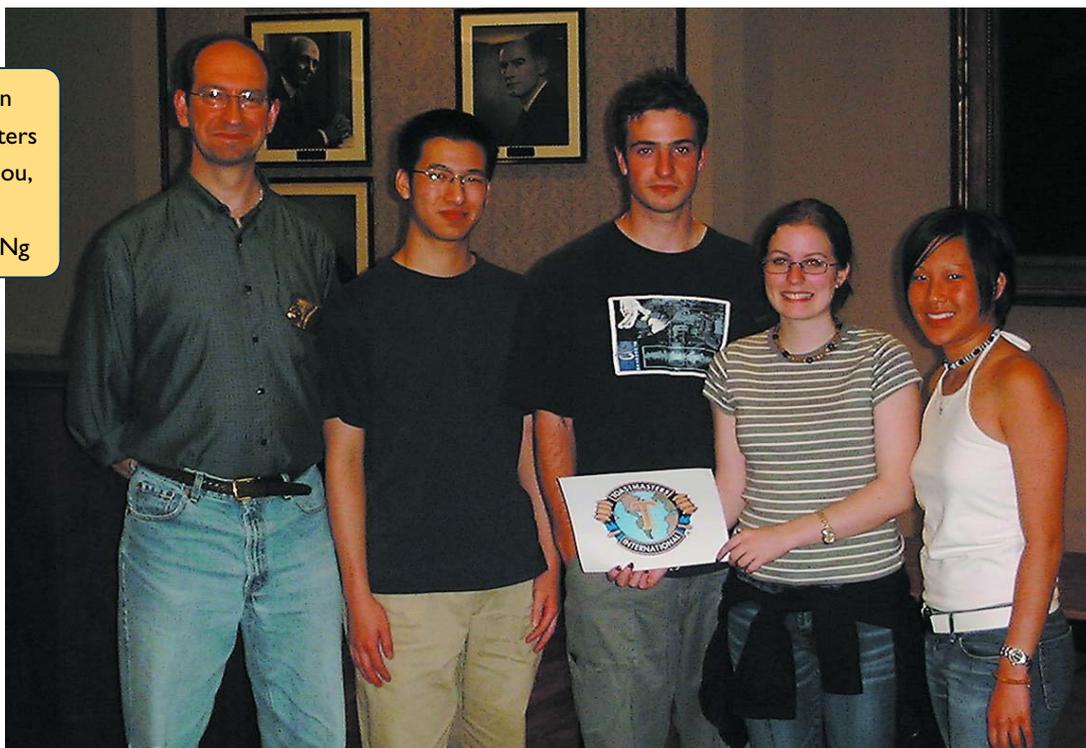
The executive committee of U of T Toastmasters consists of third-year Chemical Engineering students, all of whom took the second-year Communications course. President

Nicholas Wood and VP Education **Karina Lorenzo** enjoy the collaboration of VP Public Relations **Adrienne Ng**, Secretary **Brian Zhou**, Treasurer and VP Membership **Lauren Kreiger**, and Sergeant at Arms **Susan Kapetanovic**. At the moment, Chemical Engineering students comprise the largest proportion of the club's membership. The hope is to enhance diversity by attracting participants from a broader range of engineering disciplines.

A typical meeting includes a speech on a controversial issue, followed by two or three responses and a rebuttal. At the end of the session, every member has the opportunity to make a one-minute impromptu speech. The club's ultimate goal is to enhance the academic performance of its members and to give them a competitive edge in the job market.

The U of T Toastmasters Club website is www.toastmasters.skule.ca, and they can be contacted at toastmasters@skule.ca.

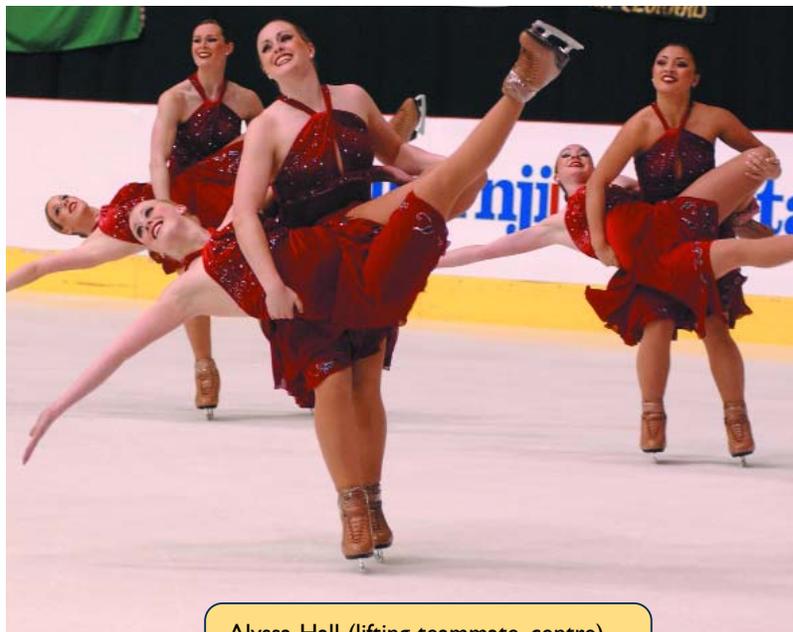
(L to R): Brian Robinson (representing Toastmasters International), Brian Zhou, Nicholas Wood, Karina Lorenzo and Adrienne Ng



Alyssa and Canada II Compete in Zagreb

Alyssa Hall (Chem 0T4) has successfully met the demands of her academic program while excelling in competitive figure skating. Despite her rigorous training schedule, she will complete her degree in fall 2004.

Alyssa skated for the varsity team in 2001-2002 and 2002-2003 and then joined FUSION, a National Senior Synchronized Skating Team. FUSION placed fourth in the North American International Synchronized Skating Competition and second at the Canadian Championships. This allowed the team to attend the World Championships in Zagreb as Canada II. They placed sixth, beating Canada I. The Zagreb locals were so impressed with Canada II that they asked the team members for their autographs.



Alyssa Hall (lifting teammate, centre) competes at the World Championships in Zagreb



Brain Teaser

As it enters a ferry, a minivan containing a family and all their luggage is weighed; the scale reads 2000 kg. The boy in the back seat has a toy helicopter which weighs 1 kg. When he turns on the switch, it lifts off and hovers above his seat. What is the reading on the scale now?

Would it make any difference if it were an open pickup truck instead of a minivan?

Please visit our website www.chem-eng.utoronto.ca for the solution.

Student Technology Tour to Brazil

The biannual Pulp & Paper Centre Graduate Student Technology Tour took place from May 15 to May 30. The objectives were to visit key industrial and academic sites in the emerging Brazilian pulp and paper industry, to present student research projects, and to explore the vibrant landscape and culture of Brazil.

The tour was organized entirely by students, from fund-raising to logistics, and was coordinated by **Claudia Gonçalves** and **Chris Goode**. Ten students participated, along with two professors, **Pierre Sullivan** and **Ramin Farnood**.

The group was given comprehensive tours of a number of sites, including Voith Paper, Votorantim Celulose e Papel (VCP), International Paper do Brasil Ltda, Kvaerner, Aracruz Celulose S.A., Universidade Federal de Viçosa, and Cenibra. Student presentations led to interesting discussions and new avenues for future collaboration.

Eucalyptus nurseries and plantation tours provided insight into Brazil's most important



Students on tour at Votorantim Celulose e Papel

competitive advantage: trees which grow five to ten times faster than those in North America. Due to the rapid expansion of the Brazilian pulp and paper industry in the past five years, the participants were able to view cutting-edge technology in pulp and paper unit operations. Of course, no trip to Brazil would be complete without a visit to the Rio de Janeiro beaches to soak up the rays.

Back Row (L to R): Tayebeh Behzad, Yuefeng Zhang, Ayan Chakraborty, Chris Goode, Estanislau Zutaatas (Votorantim Celulose e Papel), Professor Pierre Sullivan (Mechanical Engineering, U of T), Claudia Gonçalves, Mohammad Pouran, Mischa Theis, Sandeep Bhardwaj
Front Row: Lateef Olayiwola, Teresa D'Souza



Awards and Distinctions

The late **Dr. John R. Brown** was a professor in the Department of Environmental Health, an associate member of the Institute for Environmental Studies (IES), and a principal investigator of many research projects at IES during the 1970s. Under the terms of an endowment established by **Mrs. Helen M. Brown**, an annual prize of \$1000 is awarded to a graduate student for the best applied research project dedicated to the analysis and improvement of occupational and environmental health.

Satyendra Bhavsar, a Ph.D. student in the Department working under the supervision of Professor **Miriam Diamond**, won this year's John R. Brown Award, presented by the IES on Research Day. Satyendra's research, which links metal emission to toxicity, involves multimedia multispecies metal movement models and their applications to natural and urban environments.

This work opens the door to establishing alternative criteria which will ensure that environmental policy, regulations, and decision making pertaining to metals and metal compounds are based on sound scientific information.

David Balke (M.A.Sc. 9T4) won first prize at the Canadian Institute of Food Science and Technology (CIFST) national conference held in Guelph, May 17-18, for the best student oral presentation. A Ph.D. student working under the direction of Professor **Levente Diosady**, David presented a paper entitled "Production of Food Grade Protein from White Mustard Flour Using a Fully Aqueous Process."

Asghar Khalajzadeh, a Ph.D. student with Professors David Kuhn and Honghi Tran, won the Best Paper Award at the 2004 International Chemical Recovery Conference held in



Asghar Khalajzadeh at the top of the Entrained Flow Reactor

Charleston in June. Asghar's work measures the composition of carryover particles formed in the Entrained Flow Reactor (EFR) at the University of Toronto and determines how it is affected by black liquor composition, particle size, gas composition, and temperature.

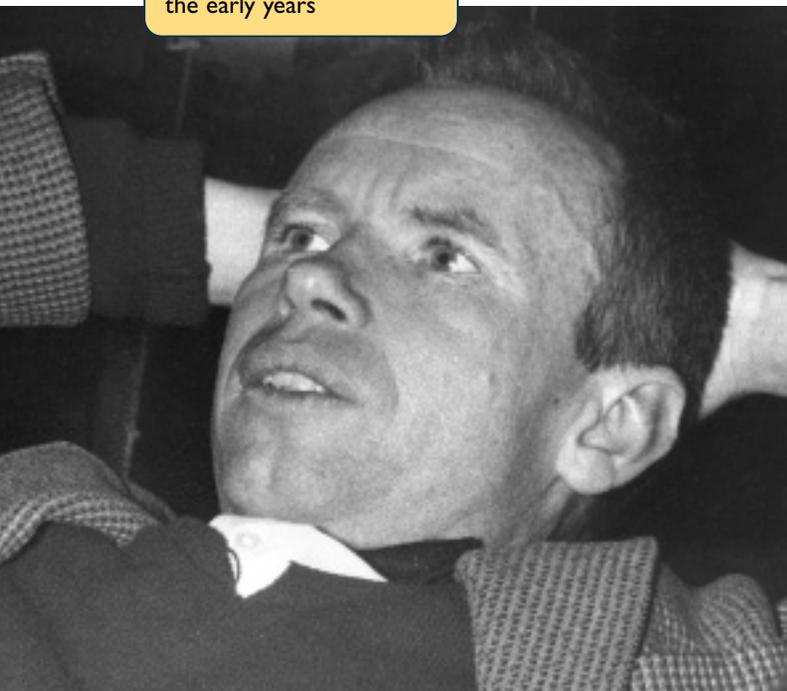
Burgess Celebrates 50 Years with the Department

At this year's Chemical Engineering Dinner, Professor **Mark Kortschot** paid tribute to Professor **Bill Burgess** on the occasion of his fiftieth anniversary as a teacher in the Department. The two first met in the fall of 1980, when Mark was a nervous first-year student in Professor Burgess' Physical Chemistry Class.

The most interesting stories from Bill Burgess' early career involve **Bill Graydon**. Apparently, if one of them was lecturing in WB219, it was not uncommon for the other to open the classroom door and zing a projectile at the board, disappearing before impact. By the time Mark arrived, first-year chemistry was taught by **Bill Dowkes** and Bill Burgess. The students had taken over Professor Graydon's role, occasionally hurling projectiles at the board (Mark strenuously denies ever having been involved), but Professor Burgess' commitment and enthusiasm soon won the respect of the class.



Professor William Burgess, the early years



Mark Kortschot joined the Department as an Assistant Professor in 1988 and felt honoured when asked to teach CHE150 with Professor Burgess. They collaborated for several years, and, after Professor Burgess' retirement, Mark continued teaching the course. The students find it amusing that Professor Burgess is now the Teaching Assistant.

Bill Burgess is a dedicated TA, scheduling extra tutorials and running an "Under 50 Club" for those most in need. Students respect him for the breadth of his knowledge and are drawn to him because he is deeply concerned about their welfare. Professor Burgess leaves a legacy of thousands of grateful students who hold him in the highest regard.

Awards and Distinctions

Professor **Kim Woodhouse** has been named Associate Director of the Advanced Regenerative and Tissue Engineering Centre (ARTEC), a \$14 million dollar initiative.

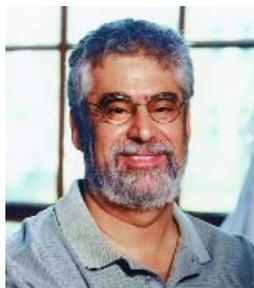
The Southern Ontario Centre for Atmospheric & Aerosol Research (SOCAAR), directed by Professor **Greg Evans**, received one of thirteen recent Canadian Foundation for Innovation (CFI) awards. SOCAAR is based in the Wallberg Building, with additional labs in the Gage Building.

Professor **Charles Jia** was appointed by the Ontario Minister of the Environment to sit on the Industrial Pollution Action Team, a seven-member advisory panel which provides recommendations on preventing spills and harmful air emissions.

Professor **Vladimiro Papangelakis** received the Sherritt Hydrometallurgy Award of 2004, established in 1976 by Sherritt Gordon Mines Ltd. (now Sherritt International Corporation) in recognition of significant contributions to the field of hydrometallurgy.

The Michael V. Sefton Symposium in Celebration of Excellence

In recognition of the appointment of **Michael Sefton** to the position of University Professor, the Department of Chemical Engineering and the Institute of Biomaterials and Biomedical Engineering (IBBME) jointly organized a symposium, which was held in April. Professor Sefton was introduced by his former student **Michael May** (Chem 9T1 and Ph.D. 9T8). The two are cofounders of Rimon Therapeutics, a company engaged in the development of novel cardiovascular, wound healing, and cosmetic products and the enhancement of existing medical devices through the use of a portfolio of drug-like medical polymers. Sefton is Chief Scientific Officer at Rimon. Ironically, as President and CEO, May is now his boss. In his speech, May outlined the highlights of Sefton's career and paid tribute to his former professor, an excellent mentor who was always willing to spend time with his students.



As an undergraduate (Chem 7T1), Sefton was president of the Engineering Society. He then pursued graduate studies at MIT, where he met his wife Cynthia. Sefton joined the Department as Assistant Professor in 1974 and became Full Professor in 1985.

Professor Sefton's research falls into three main areas. The first concerns cell transplantation and drug delivery. To facilitate transplantation, cells are microencapsulated within a biocompatible polymer membrane which is permeable to glucose and other nutrients, thus allowing the cells to function normally. Because the membrane is impermeable to higher molecular weight antibodies, the cells are not

rejected when implanted. Professor Sefton's group was the first to be able to preserve cell viability during encapsulation with a biocompatible membrane. Potential applications include the encapsulation of pancreatic islets for the treatment of diabetes and of dopamine-producing cells for the treatment of Parkinson's disease, and the use of genetically modified cells for gene therapy.

The second area involves biomaterials, specifically blood compatible materials. Polymers cause clotting and the interactions among the many cells in blood that contribute to it. Special techniques must be used to disperse clots or prevent their formation in artificial hearts, vascular grafts, catheters, and other devices that are used in contact with blood. Anticoagulants such as heparin may lead to excessive bleeding. Initially, the Sefton group covalently immobilized heparin onto the material surface through a polyvinyl alcohol (PVA) coating layer. While this approach was effective in preventing adherent clots, embolization and the consumption of platelets continued to be a problem. The current focus is on understanding why PVA is reactive and on developing alternatives to PVA that can be heparinized but are less reactive. Rimon's polymers emerged as Sefton and his colleagues began thinking about materials as "three-dimensional" drugs.

Professor Sefton is also active in the University of Toronto initiative in tissue engineering, which involves the development of a new generation of materials or devices capable of specific interactions with biological tissues. Tissue engineering exploits advances in a number of technologies and also relies on enhanced understanding of the features that control cell behaviour and wound healing. Potential applications include organ tissue replacement and delivery vehicles for gene therapy. Professor Sefton's work is a multidisciplinary effort, involving scientists, engineers, and clinicians.

Hong Kong Alumni Patrick Fung and Henry Wu

The May 4 reception for Professor **Doug Reeve** and engineering graduates and now members of the U of T Alumni Association Hong Kong Branch, was hosted by **Dr. Patrick Fung** (Chem 7T1), Chairman and CEO of the Wing Hang Bank. **Henry Wu** (Chem 7T9), Chairman of the Hong Kong Stockbrokers Association and Executive Director of Lee Cheung Gold Dealers Ltd., also attended. Since graduating from the Department, both have built stellar careers in the financial sector.

Dr. Fung, who retains close links with Toronto, home to his brother and sister, joined the Wing Hang Bank in 1976, becoming Chairman and CEO in 1996. The Wing Hang Bank is now the sixth largest listed bank in Hong Kong.

Dr. Fung's impressive CV reflects his diverse interests. In addition to serving as Vice-President of the Hong Kong Institute of Bankers, he is also a member of the Court and the Council of the Hong Kong Polytechnic University, and a Co-op Member of the Planning, Development and Conservation Committee of the Urban Renewal Authority.

Like Dr. Fung, Henry Wu is involved in a broad range of activities. After graduating from Harbord Collegiate, he obtained a B.A.Sc. and

an M.A.Sc. from the Department. Under the supervision of Professor John Hewitt, he completed a thesis in nuclear engineering and then worked for AECL and Ontario Hydro.

When he returned to Hong Kong to help manage Lee Cheung Gold Dealers Ltd., he continued his involvement with nuclear engineering, accepting an appointment to the safety board of a nuclear power station. Bringing to bear his expertise as Chairman of the Hong Kong Stockbrokers Association, Henry Wu serves as representative of the financial services industry in the Hong Kong Legislative Assembly.

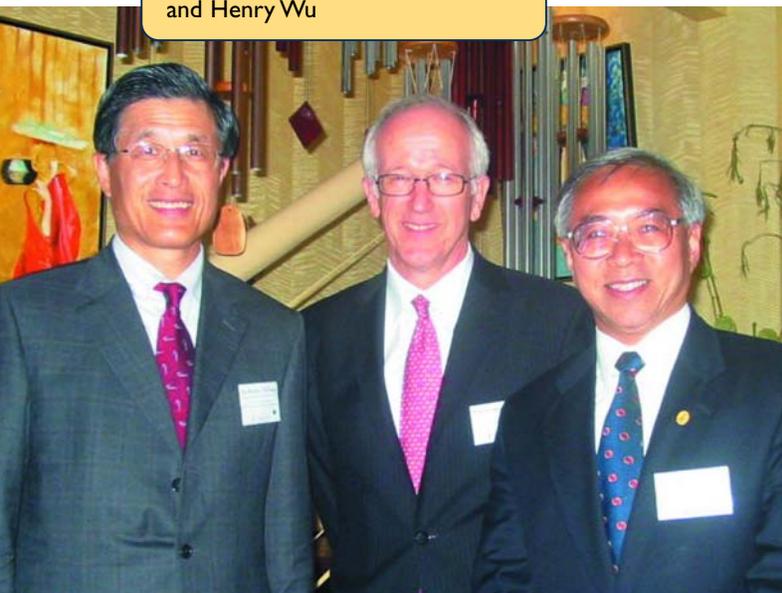
Arsenic Mitigation in Nepal

Many villagers in the rural Terai region of Nepal lack access to safe drinking water. Tube well drinking water sources in a number of districts are contaminated with arsenic and often contain fecal bacteria. Villagers continue to use the wells, suffering from preventable water-borne diseases including diarrhea, stunting, skin lesions, and cancer.

In 2002, an innovative household water filter, the Arsenic Biosand Filter (ABF), was developed by a collaborative effort involving the Massachusetts Institute of Technology (MIT) and two local water supply agencies in Nepal, the Environment and Public Health Organization (ENPHO) and the Rural Water Supply and Sanitation Support Programme (RWSSSP). The filter, which provides simultaneous arsenic and pathogen removal at the household level, can be built using locally available materials and local labour. A pilot study showed excellent performance and high user acceptance.

The ABF won an award from the World Bank at its Development Marketplace Competition 2003. The US\$115,000 grant will provide start-up capital for promoting the ABF in arsenic affected districts in Terai. The project will run from February, 2004 to October, 2004

(L to R) Patrick Fung, Doug Reeve and Henry Wu





Tommy Ngai, Sophie Walewijk and Nepalese friends

and will be managed by a three-member network consisting of representatives of MIT, ENPHO, and RWSSSP.

The beauty of the ABF is the simple underlying principle. Arsenic particles are adsorbed on the surfaces of rusted iron nails. Larger pathogens are trapped on a sand layer by physical straining, and smaller pathogens are removed by predation by microorganisms residing in the sand. Moreover, operating the ABF does not require a technical background.

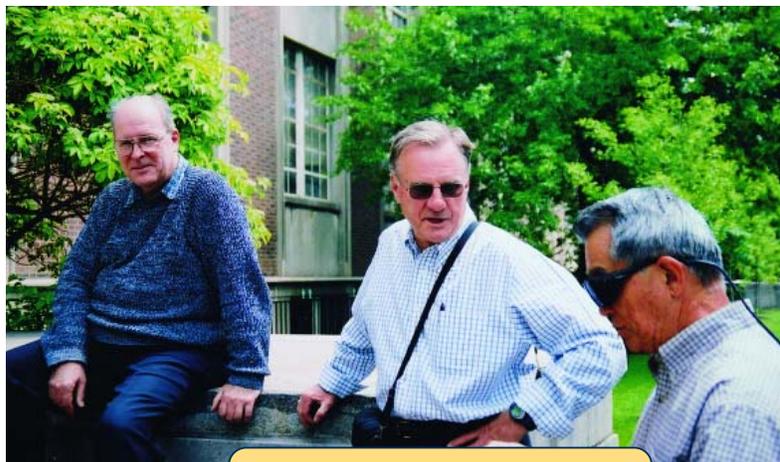
Two of the participants in the project are **Sophie Walewijk** (Chem 0T1) and **Tommy Ngai** (Chem 0T1). Sophie, now a graduate

student at Stanford, was a member of the MIT team. She continues to work on the Nepal arsenic project while pursuing her Ph.D. in Civil and Environmental Engineering. An honours student who completed the environmental option, Sophie was one of the founders of the Department's chapter of **Engineers Without Borders**.

Tommy earned a Master of Engineering degree from the Department of Civil and Environmental Engineering at MIT, where he is now a lecturer and researcher. He is supervising the implementation of the ABF project in Nepal until its completion in October.

David Colcleugh and the Class of 5T9

Once again, there was a strong turnout at the annual meeting of the Chemical Engineering class of 5T9. This year marked their 45th reunion. From June 3 to June 5, twenty-two classmates renewed old friendships while enjoying a host of activities, beginning with a round of golf at the Bushwood Golf Club. On Friday night, they held a dinner at the University Club to pay tribute to Professor **Bill Burgess**, who taught them when they were undergraduates. On Saturday, **Dave Colcleugh** was inducted into the Engineering Hall of Distinction. After the ceremony, some members of the group participated in a tour of the Department led by current students and recent graduates, who showcased leading-edge research in Informatics, Environmental Engineering, and Biomedical Engineering. The group also met with student representatives of the Chem Club,



(L to R): John Mathews, Alec Munro and Kimi Shikaze

Toastmasters, and the Canadian Society for Chemical Engineering (CSCChE), sharing their experience and expertise with the new generation of chemical engineers.

(L to R): Bruce Millar, Janice Colcleugh, Ron Cook, Joyce Monro, Eileen Millar, Mrs. Bolhuis, Jane Olvet, Mrs. Cook, John Mathews, Carl Bolhuis and Kyla Bellavance



Class of 5T4 Reunion

The class of 5T4 held their fiftieth reunion on Friday June 4th at the Granite Club in Toronto. The guest of honour was Professor **Bill Burgess**, their beloved teacher. Twenty-eight classmates attended. They flew in from as far away as Texas, Vancouver, and Connecticut, eager to reminisce and catch up with old friends. At the end of an afternoon filled with old Skule™

stories, they were joined by Professor **Doug Reeve**, who presented them with a class composite of their first year in Chemical Engineering.

Kyla Bellavance (Chem 0T4) represented the current generation at the event. She was honoured to meet with fellow alumni who are richer in life experience by fifty years. The class is already preparing for their fifty-fifth reunion.

The class of 5T4 celebrates 50 years



Two New Professors for Chemical Engineering

Appointed to an NSERC/UNENE Senior Industrial Research chair, Professor **Roger Newman** recently joined the Department as an expert in the corrosion of metals, with a particular interest in the nuclear industry. He has had a distinguished career at the University of Manchester Institute of Science and Technology (UMIST). His wife, Gregmar, who worked for the oil industry in her native Venezuela, is pursuing a Ph.D. in the cleaning of industrial systems. She plays the bongos and the conga drum. Their four-year-old son Anthony is looking forward to making new friends when he starts school in September.



Professor **Edgar Acosta**, a specialist in the formulation of linker microemulsions, recently accepted an appointment in the Department. Applications of his research include the remediation of contaminated sites and the recovery of crude oil.



A native of Venezuela, Professor Acosta was a Fulbright scholar at the University of Oklahoma, where he completed an M.S. and a Ph.D. in environmental engineering. His wife Yasmine studied computer programming, and his four-year-old daughter Michelle loves to dance.

Future Chemical Engineers Are Born

Congratulations to **Sonia De Buglio**, nee Pittioni (Chem 9T4, M.A.Sc. 1998) and husband Vittorio on the arrival of Martina on Friday, March 5, 2004. Martina weighed 8 lb, 7 oz at birth. Mom, Dad, Nonna and big brother Evan are all pleased with the new addition to their family. Sonia, the Managing Editor of INTERFACES, is currently on maternity leave.



Lynn Couillard, nee Ewanusiw (Chem 9T3), and husband Ray are proud to announce the arrival of Leah Nicole on April 1, 2004. Big sister Kaitlyn Margaret will be three in August.



Philip Gbor (Ph.D. 2003) and his wife Ruth are thrilled to announce the arrival of another precious gift, Benjamin, who was born on April 16, 2004, weighing 6 lb, 11 oz.



Olive Yuan Yuan (currently an M.A.Sc. student with Professor Ramin Farnood) and her husband Freeman Yufei Huang had their first child, Gavin Jiayuan Huang, on February 5, 2004. He weighed 6 lb, 15 oz at birth.



Congratulations to **Sandy Owega**, Research Associate with Professor **Greg Evans**, and his wife Sylvia on the arrival of their daughter, Amber Owega. Amber made her debut on February 11, 2004, weighing 8 lb, 7 oz.



Denise Tong (Chem 9T4) and Hong Yeung are pleased to announce the birth of their son, Yeung Mo Mo, on May 22, 2004 at Queen Elizabeth Hospital.



Tina Lawton, nee Haase (Chem 9T3), had a daughter on October 17, 2003. Elise Anne Lawton, a happy, healthy, energetic baby, weighed 6 lb, 2 oz at birth.



Elizabeth Gonzalez (Chem 9T3) and husband Pablo Torre de Trassie had a daughter, Lydia, on September 11, 2003.



Jim Rodgers (M.A.Sc. 1996) and his wife Lisa are the proud parents of Quinton Earl James, who was born on February 27, 2004, just seven minutes after his parents arrived at the hospital. Quinton weighed 7 lb, 2 oz at birth.



Jennifer Vallbacka (M.A.Sc. 1998) and Mike Wark are the proud parents of a baby girl, Sarah Clare Vallbacka Wark. Sarah, who was born on February 13, 2004, weighed 6 lb, 10 oz and was 20 in long.



Xintong Lu (Ph.D. 1999) and **Hai Hui Lin** (Ph.D. 2002) had a baby girl on June 17, 2004. Angeline Xinyi Lin weighed 7 lb, 8 oz at birth. She is seen here with her older sister Emelyne.



Wedding Bells Are Ringing

Martha Miller (Chem 9T7, Ph.D. 2004) and Jeff Adams (Chem 9T5 and currently a Ph.D. student with Professor Vladimiro Papangelakis) were married on March 13, 2004.



Elisabeth Anne Gilmore (Chem 0T0, M.A.Sc. 2002) married Bryan Andrew Kerr on June 19, 2004 in Ottawa

Doris Lee and **Lawrence Yu** (both Chem 9T9) tied the knot in June 2004 in Toronto. Seen with them are maid of honour Livia Lau and best man Kenneth Wong (both Chem 9T9).



Kyla Augustine, nee Bellavance (Chem 0T4) and Darryl Augustine were married on August 27, 2004 in Barrie.



Deaths

Harrison F.M. Scheak (Chem 2T8) passed away on Thursday, March 4, 2004 in his hundredth year.

It is with great sadness that we announce the passing of **Dr. David Cameron**, who died of cancer on April 1, 2004 at the age of 48. David was a researcher at Tembec Inc., working on the development of technology related to the environment and to Tembec's bioethanol process. Recently, he was made an Adjunct Professor in the Department. At Tembec, he was a staunch supporter of the Department and of the Pulp & Paper Centre. David was also actively involved in environmental research at the University and was an industrial advisor to the Department's fourth-year Chemical Plant Design course. Many of our students and faculty members benefitted from his expertise and intellectual generosity. We extend our deepest sympathy to his family.

To contribute family news, please contact

Kyla Augustine.

Telephone: 416-978-8770

Email: kyla@chem-eng.utoronto.ca

Upcoming Events

Mark your calendars. Whether you want to expand your mind or reunite with old classmates or professors, we hope to see you at one or more of these events.

September 2004 to April 2005, the Department will host its lecture series under a new name, **LECTURES AT THE LEADING EDGE**. We hope you will join us as we hear about a broad spectrum of international cutting-edge research. For more information, please visit our website www.chem-eng.utoronto.ca and look for the new poster.

LECTURES AT THE LEADING EDGE
CHEMICAL ENGINEERING AND APPLIED CHEMISTRY, UNIVERSITY OF TORONTO

2004

September 15	Professor Martha Salcudean, University of British Columbia Mathematical modelling of transport phenomena applied to industrial processes
September 29	Professor Stanislav Shvartsman, Princeton University Computational modelling and genetic approaches to cell signalling in development
October 13	Dr. Ken Petrunik, Atomic Energy of Canada Limited AECL and CANDU: an electricity supply solution
October 20	Professor Christopher Yip, University of Toronto Probing molecular landscapes: from computation to visualization and manipulation
November 3	Mr. Venkatesh Mannar, The Micronutrient Initiative Fortification of foods to alleviate vitamin and mineral deficiencies
December 1	Professor Don Mackay, Trent University Managing chemicals of commerce in the 21 st century environment
December 8	Dr. Arthur Carty, National Science Advisor to the Prime Minister of Canada Science and technology for the 21 st century: challenges, opportunities and priorities for Canada

2005

January 12	Professor Elizabeth Edwards, University of Toronto Bioremediation of ground waters
January 26	Professor Ulli Krull, University of Toronto Confronting the challenge of design of selectivity for DNA biosensors and biochips
February 2	Professor Jonathan Dordick, Rensselaer School of Engineering High-throughput bioprocessing for drug discovery and the synthesis of functional materials
February 9	Professor Jan Veizer, University of Ottawa/Ruhr-Universität Bochum, Germany Celestial climate driver: a perspective from four billion years of the carbon cycle
March 30	Professor Gregory Stephanopoulos, Massachusetts Institute of Technology Applying the art of pattern discovery to the design of antimicrobial peptides and in vitro metabolic engineering
April 6	Professor Frank Bates, University of Minnesota Twin Cities Block copolymers—designer soft materials

All seminars will be held at 12:30 pm in room 116 of the Wallberg Building, 200 College Street, Toronto, Ontario

LECTURES AT THE LEADING EDGE are supported by alumni and friends of the Department www.chem-eng.utoronto.ca

October 28, 2004, the Engineering Alumni Association will host the **Annual Alumni Awards Night**. This year, two Chemical Engineering graduates will be honoured:

- **Frank Dottori** (Chem 6T3), President and CEO of Tembec Incorporated and member of our Board of Advisors, will be inducted into the Engineering Hall of Distinction.
- **Levente Diosady** (Chem 6T6, M.A.Sc. 1968 and Ph.D. 1972), Professor of Chemical Engineering and Applied Chemistry at the University of Toronto, will also be inducted into the Engineering Hall of Distinction.

March 18, 2005, the Department will host the **20th Annual Chemical Engineering Dinner**. Last year, we had an excellent turnout, with over 300 alumni/ae, students, staff, faculty and company representatives in attendance. Alumni/ae from all years are welcome.

Mentorship Program

Chem Club is initiating its new Mentorship Program uniting undergraduate students with Chemical Engineering alumni/ae.

If you would like to get involved, please send the following information to Jennifer Aiello, Chair of Chem Club 2004-2005, checlub@ecf.utoronto.ca

Last name: _____

First name: _____

Preferred method of contact:

Email address: _____

or Phone number: _____

Year of graduation: (e.g., 7T8 or M.A.Sc. 1990)

Career title/description: _____

Thanks to Our Alumnilae and Friends

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**We invite inquiries, comments
and suggestions from readers.**

Please contact:

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