Dear friends,

Greetings. This is my first letter to you as Director.

I am truly grateful for the trust that members of the Queen's School of Computing have placed in me when nominating me for this position. It is indeed a true privilege and a joy to serve such an exceptional group of people.

Past Director Jim Cordy and past Associate Director Pat Martin did a great job leading the School from 2002 to 2007, and on your behalf I would like to thank them for their efforts and all that they have achieved.

As you undoubtedly know, the academic year 2007-2008 has been a difficult time at Queen's, with budget cuts and many other challenges. Yet, the last twelve months have also been a period of significant accomplishments for the School, and of this we can be proud. Please allow me to share some highlights with you.

**Reviews** Between 2006 and 2007, the School underwent two reviews. The first review was conducted by external consultants selected by the Ontario Council on Graduate Studies. The second was an Internal Academic Review and consisted in visits by two teams of reviewers, one external to the University and one internal. Both reviews examined the state of the School – its people, its resources, and its research and academic programs. The reviewers have now submitted their reports, and I am happy to let you know that the School passed with flying colors. The reports make some recommendations for improvement, the most prominent of which being the School's need for additional physical space. It is a fact that, among all computer science departments in Canada of its size and importance, the Queen's School of Computing is the only one without a building of its own.

**Faculty** The School was fortunate to welcome two new professors who joined us in the summer of 2007. Dr. Gabor Fichtinger, formerly of Johns Hopkins University, is a world expert on computer-integrated surgery. His specialty is robot-assisted image-guided needle-placement procedures, primarily for cancer diagnosis and therapy. In the fall of this year, Gabor will teach two new undergraduate courses on computer-integrated surgery, for the first time ever at Queen's.

Dr. Ahmed Hassan received his Ph.D. from the University of Waterloo in 2005. He spent the early part of his career helping architect the Blackberry wireless platform at Research In Motion (RIM). At Queen's he leads the Software Analysis and Intelligence Lab. Ahmed's research aims at developing techniques to support practitioners who are producing, maintaining and evolving large scale complex software systems.

In January of this year, Professor David Rappaport was appointed Associate Dean of the School of Graduate Studies and Research. This appointment is in recognition of David's experience and knowledge of graduate studies issues, having served as Graduate Coordinator in the School of Computing, and then at the University level as Chair of Division IV and Chair of the Fellowship Committee.

**Staff** Nancy Barker, the School's capable Research Administrator for many years, retired in July 2007. We will miss her experience, loyalty and high standards, and wish her well in her future endeavours. I am very pleased to introduce to you our new Research Administrator, Karilee Reinbold, and let me assure you that our researchers are in excellent hands. Karilee is doing a superb job of finding research funding opportunities, overseeing the preparation of grant proposals, and following through to submission and beyond.

This year, we were thrilled to learn that for the fifth time a member of the School staff was a recipient of the highly coveted Queen's Special Recognition Award. Amid thunderous applause and cheering in Grant Hall, Wendy Powley received the award in recognition of outstanding contributions to the learning and working environment at Queen's University. Wendy is a valuable member of the database laboratory and a co-founder of the group Women in the School of Computing.

CONTINUED ON PAGE TWO
This year has been a whirlwind of activity; it’s hard to believe that my term will be completed in a few months and already there’s hushed whispers of candidates vying to represent our students. In early March of last year two ambitious projects to engage prospective students began. The first of these was the distribution of an envelope containing information about the School of Computing community, COMPSA events, orientation week and last year’s version of this newsletter to prospective students early in the admissions process. The second was the creation of a video targeted at first years introducing them to the COMPSA executive members in a fun way including such random things as lightsabre battles, a cat, “nerdcore” music and a houseplant.

September brought with it the much anticipated arrival of the class of 2011 on campus who were welcomed with a fantastic Orientation Week featuring tours of some of the School of Computing research labs and Professor talks which have gone a long way to addressing the uncertainty about career and research possibilities that new students in our interdisciplinary programs often have. This year’s incoming class has shown their enthusiasm with an unprecedented 10% of them running in the election for first year representative, a record voter turnout rate and continued interest in events and projects such as the newly launched buddy program. Speaking of elections, this year a pilot project was launched to develop an online voting system and the result has been an increase in the voter turnout rate and engagement of a previously overlooked group – students on internship. The project was successful and has attracted attention from several other student governments on campus including ASUS which will be using it in the winter election.

Long standing and well-loved events such as Coffee with Profs and the Wine and Cheese continue alongside new activities like Paint ball. The new year will bring the charity LAN Party, several conferences, competitions and end of year banquet. One of the milestones reached this year was the distribution of the first refurbished computer by our Computers for a Cause program.

The remainder of the year will focus on continuing to encourage student involvement and the creation of an improved foundation for future years through improvements in the transitioning process and the creation of a multi-year plan which will help in achieving goals that cannot be fully realised in a single Executive’s term. I encourage you to make suggestions in this process by e-mailing me. To keep up to date on COMPSA events and activities, please visit our website at compsa.queensu.ca.

Cheers,

Tim Ginn
COMPSA PRESIDENT, 2007-2008

Students

Like most computer science departments in North America, the School continued to experience low undergraduate enrolments. But what our students lacked in numbers, they more than made up for it in quality. Our undergraduates are consistently among the best in the country. This year, graduating with a record-breaking average, Maria Pashuk (BCMPH SSP CSCI’08) is the School of Computing Medal recipient. Mireille Gomes (BCMPH SSP BMCO’08), having won three major national awards, is on her way to Oxford University for graduate studies with a full scholarship.

In the fall of 2007, the School’s graduate program boasted the largest full-time cohort at Queen’s. Our graduate students are fully engaged in the School’s research agenda. They are involved as co-authors on almost every research paper published by the School. They write book chapters, organize conferences and edit conference proceedings. Our students shine at every opportunity, receiving internal and external scholarships, and winning international prizes and best paper awards. Over the last three years, two of our Ph.D. graduates were selected by Queen’s as the university’s nominees for the NSERC Doctoral Prize.

Research

Researchers in the School have continued to produce results of the highest calibre in our areas of expertise. We have strong ties with industrial partners (Bell, BMW, IBM, RIM, and Xerox to name a few), and our work is funded by the major granting agencies (NSERC, SSHRC, CIHR, CFI, ORF, OCE, and NIH, to name a few). Our colleagues in Biomedical Computing have recently been granted Group status by the University, in recognition of their impact on the field. Dr. David Skillicom’s work on the development of software tools that analyze text for signs of spin, deception, and negotiation was widely reported in the media.

The shortage of lab space was significantly alleviated by the acquisition of two research facilities on campus, one for Dr. Roel Vertegaal’s Human Media Lab, the other for Dr. Nick Graham’s lab EQUIS (Engineering Interactive Systems at Queen’s University).

Teaching

Our undergraduate programs are renowned for their exceptional quality, diversity, innovation and reach. In the fall of 2008, the School launches its newest program in Computing and the Creative Arts. This unique multidisciplinary program brings the School of Computing together with the School of Music and the Departments of Art, Drama, and Film. It is geared towards art students interested in learning about computers, and computing students with a penchant for artistic applications. We are very excited about this collaboration, one of the first such programs in the world.

Finally, it is my pleasure to inform you that Dr. Juergen Dingel is this year’s winner of the Howard Staveley Award in Recognition of Teaching Excellence, a well-deserved honour for a dedicated and inspiring teacher.

To conclude, the School of Computing continues to be a wonderful place – a stimulating environment in which to work, learn, and discover. I have high hopes for the future. The road ahead will not be easy; but with your help and support we intend to turn every obstacle into an opportunity.

Best wishes,

Selim G. Akl

TIM GINN
PRESIDENT, 2007-2008
COMPUTING STUDENTS’ ASSOCIATION
COMPSA@CS.QUEENSU.CA

WWW.CS.QUEENSU.CA - SCHOOL OF COMPUTING - ENTREPRENEURSHIP, INNOVATION, CREATIVITY, EXCITEMENT
New Faculty Profile: Gabor Fichtinger

Dr. Gabor Fichtinger joined the School of Computing faculty as an Associate Professor in 2007. He joins us after several years with Johns Hopkins University, most recently as an Associate Research Professor. Dr. Gabor is cross-appointed to three other departments: electrical and computer engineering, mechanical engineering and surgery. With his strong research background in biomedical computing, he is a welcome addition to our academic program.

Dr. Gabor’s work is in computer-integrated surgery, including surgical visualization, modeling, planning, execution, monitoring and the system-level integration of all these. He is funded by NSERC, the National Institutes of Health (NIH) and recently received a Queen’s Teaching & Learning Enhancement grant to incorporate hands-on surgical experience for students into the curriculum.

New Faculty Profile: Dr. Ahmed Hassan

Also last year, Dr. Ahmed Hassan joined the School of Computing faculty as an Assistant Professor. He was previously with the University of Victoria and prior to that, completed his Ph.D. at the University of Waterloo. Although Dr. Hassan has just begun his research career, he has already received strong support from both the University of Victoria and Queen’s University as well as from NSERC, CFI and his industrial partner, Research in Motion Limited (RIM).

Dr. Hassan’s work encompasses both systems and software engineering with expertise in distributed systems and performance engineering. At Queen’s, he has created the Software Analysis and Intelligence Lab (SAIL) where he and his research group will work on solving problems related to the production, maintenance and evolution of large-scale, complex software systems.

WEBSITE

When you visit the School of Computing website, you’ll notice dramatic, exciting changes. A new, sleek, modern look, quick access menus, and a dynamic new presentation of the School’s research and information make a visit to the website almost as good as being there. There are new pictures of faculty and staff, as well as students at work and play. The Highlights section includes an exciting new program, Computing and the Creative Arts (COCA,) ground-breaking research facilities (EQUIS LAB,) and significant events such as the Ian Lawson Van Toch Memorial.

We’ve added an Events calendar, a News section, an Employment opportunities section, as well as a Seminars Calendar, all with RSS feeds to keep you informed about what’s going on at the School.

There are new links to current research topics in Human Computer Interaction, Biomedical Computing, Software Technology, Networks, and many others. Keep your eye on the News for updated stories about innovative research, faculty, and students at the School.

For new or prospective Undergraduate and Graduate students, program information is front and centre – available at the click of link under the main menu heading or on the main page itself.

Thanks to the School of Computing Technical Staff members for their initiative and hard work in the design and implementation the new website.
ALUMNI PROFILE

Alex Bewley, BSc’94

On the fourth floor in an office building located in downtown Toronto, is a well established, successful company called Uptime software. One of the founders of Uptime is Alex Bewley, a former Queen’s student who graduated with a bachelor degree in computer science in 1994. Upon graduation, Alex worked for a small database company in Kingston for eight months. This, later on introduced him to the famous Sun Microsystems company where he worked for two years. Working for Sun, meant moving to Toronto and being a part of a large company. This was challenging, because “you are new to the industry, city, and put in a place where problem solving is crucial. You are basically a newbie at everything”. Alex and one of his colleagues decided to leave Sun and start their own business. Risky as it may seem, the benefits of a successful company are irresistible, “money, and independence of a boss”; anyone’s dream.

The company however, did not start as Uptime software, but rather as a small consulting company which specialized in performance analysis. A year later, Uptime was born. Starting Uptime software was not an easy task. One of the major obstacles was “being recognized and taken seriously. Because when you are a small company, no one wants to deal with you since you are a high risk entity and of an unknown quality”. So in order to succeed, you “have to make yourself look a lot bigger than you actually are, because no one wants to deal with a four or five person business”. Currently, Uptime software is composed of 45 people and has 900 customers in 32 countries.

As for the software, up.time is a system management tool specializing in performance, availability, and capacity reporting that belongs to an industry dominated by four large companies: HP, IBM, BMC, and CA. However, their system management tools are "expensive, require large amount of consulting and support, and are hard to use". Uptime software is one of the few companies in its tier that is growing and gaining market share. What makes Uptime’s tool unique is that it’s “fast, easy to use and platform independent”. Uptime was developed so “you can have it up and running within fifteen minutes, and retrieve the information you want easily”. At Uptime software the end user is always kept in mind, and usability is always the major concern.

Being a platform independent tool is what really makes up.time shine. Since, most of the tools in the market are platform specific. This tends to be a problem for any business which doesn’t constrain its systems to a single platform. Therefore, using up.time would save those companies large sums of money as they wouldn’t need to buy different system management tools for each platform. up.time became the “one stop shop” for system management tools.

Uptime software is growing at a rate of 70% a year and is the proud receiver of the ‘techWorld IT product of the year’. This indicates that Uptime software is a dominant player in the market. Uptime’s upscale success should be an encouragement for Queen’s students to become innovators. However, there are many points to keep in mind. Alex recommends that, “you have to think about what your product is going to offer to the market and how it is going to solve a problem, rather than making something technically cool with no business advantage”. Also, “you should recognize your own weaknesses and to grow, you have to hire people who have the strengths you don’t have”.
followed by a workshop on biologically inspired computations. To close the day, conference participants enjoyed Fort Henry’s breathtaking sunset ceremony. Lila Kari began Thursday by lecturing on self-assembly in nanocomputation systems. Problems and challenges in ad hoc and sensor networks were presented in the afternoon by Hossam Hassanein. The day closed with a friendly banquet accompanied by a jazz quartet, where animated discussion was a hallmark of the night. Tal Mor furthered consideration of quantum computing when he presented his work on algorithmic cooling. UC’07 closed Friday on a lively note when the floor was opened for discussion on the week’s presentations. In tune with the week, ideas were exchanged on the exact nature and power of computations – despite the various inputs, no universally accepted answer was computed.

Keynote Lectures: How Neural Computing Can Still be Unconventional After All These Years, Professor Michael Arbib, University of Southern California; Organic User Interfaces (Oui!): Designing Computers in Any Way Shape or Form, Professor Roel Vertegaal, Queen’s University; Nanocomputing by Self-Assembly, Professor Lila Kari, University of Western Ontario; Algorithmic Cooling: Putting a New Spin on the Identification of Molecules, Professor Tal Mor, Technion–Israel Institute of Technology. Tutorials: Quantum Information Processing, Professor Gilles Brassard, Université de Montréal; Wireless Ad hoc and Sensor Networks – Challenges and Opportunities, Professor Hossam Hassanein, Queen’s University. This conference was sponsored by the Fields Institute, MITACS, IEEE Kingston Section and Queen’s University. This report was prepared by Krista Kostroman, School of Computing, Queen’s University.
Wendy Powley, Research Associate in the Database Systems Laboratory, was named a recipient of the Queen’s Special Recognition for Staff Award in December. Wendy, along with seven other exceptional Queen’s staff members, were in the spotlight during the Principal’s Holiday Reception in Grant Hall.

Aside from her numerous contributions to research, Wendy spearheaded an initiative that resulted in the current Women in the School of Computing (WISC) group. The group encompasses all women in the School, including staff, faculty, adjuncts, graduate and undergraduate students. Wendy’s vision for WISC not only provides support within the School but also includes encouragement for younger women to consider computing careers. This outreach program seeks to dispel the “geek” myth associated with computing and receives support from the NSERC Promoscience program.

The Principal, listing Wendy’s lengthy contributions to the School of Computing and to Queen’s, said that “Queen’s is honored to recognize these and other contributions you bring to enrich work environments here and with partner institutions elsewhere.” We agree wholeheartedly and are proud to count her amongst our staff.
EQUIS = COLLABORATIVE RESEARCH  FROM THE QUEEN’S GAZETTE, APRIL 9, 2008

Research in human-computer interaction, graphics, software design and video game development, at both the undergraduate and graduate level, is happening in a unique new facility called EQUIS, located in a university-owned home on Collingwood Street. The lab, under the direction of School of Computing professor Nick Graham, is performing research into computer-aided exercise to determine whether video games – an activity that many children love – can be combined with exercise that improves the children’s health. The EQUIS Lab’s grand opening featured video games created by graduate students in the School of Computing (CISC864 Video Game Development) and undergraduate Fine Art students (ARTF338 Time-based Media). This is the second year that this course project has been offered by Dr. Graham in collaboration with Art professor Kathleen Sellars. Pictured here, PhD Computing student Tad Stach designs game software while third-year Fine Art student Ye Dong works on 3D visual models.

ALL EYES ON SURVEILLANCE  FROM THE QUEEN’S GAZETTE, MAY 12, 2008

“Weird Wired World: Surveillance, Security and Society” was the theme of a recent Queen’s Media Fellowship hosted by Communications and Public Affairs. The event, intended to support the work done by media in informing the public about important and complex issues, brought together some of Canada’s leading journalists with university experts in the area of surveillance and security. (Clockwise from front): Post-doctoral fellow Jason Pridmore (Sociology), CBC The National reporter Paul Hunter, Computing professor David Skillicorn, Globe and Mail reporter Colin Freeze, CBC The Current producer Aaron Brindle, Ottawa Citizen reporter Don Butler, Toronto Star reporter Kerry Gillespie, university communications officer Nancy Dorrance and Computing professor Roel Vertegaal. Other Queen’s presenters were: David Lyon, Elia Zureik, Jason Pridmore, Dan Trottier and Midori Ogasawara (all from Sociology) and Art Cockfield (Law).
COMPUTING FUND

Monthly Contributions to our Annual Fund can make a real difference!

The School of Computing at Queen’s was recently ranked fifth in the country by external reviewers. For a School that is one third the size of our fourth place competitor, we are doing extremely well.

However, each year, we are faced with making difficult budgetary decisions. We have to choose between state of the art computing facilities or student scholarships, teaching assistantships and offering specialized courses. Government grants and student tuition are no longer adequate. Although our reputation is strong, we are at risk. We want to create and support the best level of education and research programs possible. We need your help to succeed.

Over the past five years, the School has developed new, cutting edge undergraduate programs: Biomedical Computing, Cognitive Science and Software Design. In 2008, we launch a Computers and the Creative Arts program, bringing together Computing, Arts, Drama, Music, Film and Media Studies. These programs introduce the science of computing to an entirely new generation of Queen’s students.

Gifts like yours help the School in many ways, enriching our educational and research programs and securing a productive future. They allow us to be innovative and to create exciting educational opportunities.

Donating to the School has never been easier. There is a new online system and the School is specifically identified under the list of departments.

Alternatively, cheques can be made out to: Queen’s University, Computing Fund 882-170.

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- $500 a month allows a student to focus on and conduct important research
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BREAKING NEWS

James Cordy Wins 2008 IBM International Faculty Award

Professor James Cordy of the School of Computing has been recognized with a 2008 IBM Faculty Award. Only fifty winners of these highly competitive international awards are selected from leading universities worldwide each year in recognition of the quality of faculty research programs and their importance to industry. Dr. Cordy is one of only nine Canadian recipients in 2008.

Dr. Cordy, who is also an IBM Visiting Scientist and has previously received a number IBM Innovation and Center for Advanced Studies collaborative research awards, has a long history of industrially relevant research in programming languages and software engineering that has been carried into practice by IBM and others. His current research with IBM focuses on code patterns, the problem of finding and categorizing common fragments in computer software with the aim of automatically adapting computer programs to rapidly changing hardware configurations and capabilities such as multi-core processors.

While primarily intended to recognize worldwide researchers" who have an outstanding reputation for contributions in their field, or in the case of junior faculty, show unusual promise", the awards come with a small unrestricted cash donation to the recipient’s research program which is often matched by the institution.

In keeping with the goals of “fostering collaboration between researchers at leading universities worldwide and those in IBM research, development and services organizations” or alternatively “promoting courseware and curriculum innovation to stimulate growth in disciplines and geographies that are strategic to IBM”, nominations for global faculty awards can only be made from within IBM. More information on Dr. Cordy and his research program can be found here: http://research.cs.queensu.ca/~cordy/

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