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WATERLOO ENGINEERING

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Olga Pawluczyk is the president of P&P Optica Inc., a company that develops advanced spectrometers for biomedical and other purposes. The systems design engineering alumna sees the technology being used in the future for everything from diagnosing depression to detecting water pollution.

PHOTO: Bryn Gladding



PHOTO: Bryn Gladding

FROM THE DEAN

If you've visited our Waterloo campus in the last few weeks you'll have noticed that the construction workers entering and exiting Engineering 5 have been replaced by students and faculty members making their way to state-of-the-art classrooms, offices, research facilities and the student design centre.

I'm extremely pleased that the doors to Engineering 5 are now open. The building provides much-needed space to mechanical and mechatronics engineering and systems design engineering, as well as electrical and computer engineering's growing research teams. Our student teams are already designing future award-winning vehicles and projects in the innovative 20,000-square-foot student design centre.

Engineering 5 is a concrete illustration of just one of our many recent accomplishments.

In June, our first nanotechnology engineering class graduated. Even before the 63 students received their iron rings, they were making a difference. A number completed co-op terms at research centres such as CalTech and Harvard University — and published academic papers with leaders in the field. Confirmed students for the program are approximately 40 per cent higher than our targets, with 156 students registered for the fall term. One of the top graduates from the inaugural class is profiled on page 9.

Our undergraduate numbers continue to remain very high. Across the board we have 20 per cent more confirmations, which proves that Waterloo remains an attractive place for students to study engineering. We're also doing well in attracting international students. Our numbers have skyrocketed to over 200 international

students beginning engineering this fall — up from zero only a few years ago. In fact, today 12 per cent of our engineering students come from countries other than our own. We're also attracting more graduate students than ever before, actually doubling the number of students within the Vision 2010 plan period.

Earlier this year, the PDEng Renewal Task Force released its report that recommended sweeping changes, including a phasing out of the existing program and developing a new professional development program for engineering students called WatPD-Engineering. To be launched as early as January 2011, the program will feature new course content and method of delivery. Gordon Stubley, a mechanical and mechatronics professor and one of our most distinguished teachers, has been named to the new position of academic director for WatPD-Engineering.

Something else we'll be drafting and launching during the next year is a new plan that will help guide us into the future just as Vision 2010 has successfully done during the past five years. An important part of shaping the plan will be input from alumni, faculty members, staff and students. Each group will be asked to keep in mind one important question: How do we keep moving towards becoming recognized as one of the best engineering schools in North America?

Just as Vision 2010 was linked to resources, so will our new academic plan. Academic plans that are not so linked are just dreams. I'm certain that with our innovative students and dedicated faculty, staff and alumni our new plan will become a reality and help us to continue strengthening our future.

Sincerely,

ADEL SEDRA

Dean, Faculty of Engineering

PHOTO: Rob Taylor



Directors and graduating students of the first nanotechnology engineering class from left to right: Fred McCourt, acting director of nanotechnology engineering, Thomas Lever, Teddy Mamo, Mike Murkovic, Anne Gaspar and Marios Ioannidis, director of nanotechnology engineering. Ioannidis is currently on sabbatical.



Olga Pawluczyk employs Waterloo co-op students and graduates. From left: Pawluczyk, computer science student Tzu "Sam" Hsuan Ling, researcher Arash Rohani (PhD '06, Elect) and chemical engineering student Dora Chen.

PHOTO: Bryn Gladding

GREAT OPTICS FOR ENDLESS POSSIBILITIES

Olga Pawluczyk describes her best kind of day on the job as involving white lab coats in the morning and hard hats in the afternoon.

"My favourite day is when I spend the morning looking at the brains of mice to detect cancer and the afternoon in a pulp and paper mill looking at the quality of pulp to make newsprint. That's what I love about our products — they can be used for so many applications," says Pawluczyk.

The Waterloo systems design engineering graduate is the president of P&P Optica Inc., a Kitchener-based company that develops advanced spectrometers for biomedical purposes and much more.

Earlier this year, P&P Optica received a \$1.3 million loan from the federal government to expand global markets for its advanced spectrometer that is used for blood analysis and to increase staff from its current complement of 11 to about 50 in five years. "The loan is a real boost for the company," says Pawluczyk. "Any money we've made so far has gone back into research and not into increasing sales or staff members."

The advantage of the company's spectrometer for blood analysis is that it can quickly analyze multiple components in blood, such as cholesterol and glucose that appear in small concentrations, without having to add expensive reagents to test for each substance. It saves money and time because doctors can do a number of tests on the spot with just one vial of blood.

And while the government loan is specifically earmarked for the company's blood analysis research, the applications of the

company's spectrometers are virtually endless, according to Pawluczyk. She sees the technology being used in the future for everything from diagnosing depression to detecting water pollution.

P&P Optica was started in 1995 by Pawluczyk's father, Romuald, a Waterloo chemistry adjunct professor, and her brother Rafal, who has since left the business to start another company. Pawluczyk joined P&P Optica in 2000.

The company built its first spectrometer in 2003 for the Ontario Cancer Institute. The institute has since purchased several more systems that are used to identify the risks of breast cancer.

Breast cancer research has been an ongoing interest of Pawluczyk's — after completing her engineering degree at Waterloo in 1998, she did a graduate degree in biomedical physics at the University of Toronto, where her research focused on using breast volume density as a risk assessment tool for breast cancer.

While she has also earned an MBA, she says that it's her systems design engineering background she often comes back to when faced with a challenge. "Systems design taught me bits and pieces of all sorts of engineering and also how to approach problems systematically."

She also hasn't forgotten her Waterloo roots when it comes to finding people to hire. She has three students working for her company, which she calls a "permanent co-op employer", including one from Waterloo chemical engineering and one from Waterloo computer science. Arash Rohani, who graduated with a PhD in electrical engineering from Waterloo in 2006, is employed by the company as a researcher. "Having good people is essential," says Pawluczyk. "It just makes sense to hire from Waterloo."

FACULTY NEWS

CBET RENAMED FOR BUSINESS LEADER

The University of Waterloo has honoured philanthropist Manfred Conrad and his family by naming the university's business, entrepreneurship and technology centre the Conrad Centre for Business, Entrepreneurship and Technology. This spring CBET received \$3 million from Conrad, the founder of The Cora Group and developer of three buildings in Waterloo's Research and Technology Park, including the Accelerator Centre where CBET is located. That donation, along with a past \$2 million gift to CBET from the Conrads, will help the centre expand its activities in Canada and around the world.

CONVOCATION HONOURS

Amit Chakma, the university's vice-president, academic, and provost for eight years, received one of five honorary doctor of engineering degrees at Waterloo Engineering's spring convocation. Chakma, who was also a Waterloo chemical engineering professor, is now president and vice-chancellor of the University of Western Ontario. The other recipients included Tayeb Kamali, vice-chancellor of the Higher Colleges of Technology in the UAE; Indira Samarasekera, president of the University of Alberta; Vijay Singh, internationally known for his work in water resources and environmental systems engineering; and Jan Carr (MAsc '70, PhD '72, Elect), founding CEO of the Ontario Power Authority. Robert MacPhie of Waterloo's electrical and computer engineering received the distinguished professor emeritus title.

RECOGNITION FOR GRAD SUPERVISION

Mohamed Kamel of electrical and computer engineering and Alex Penlidis of chemical engineering received the Award of Excellence in Graduate Supervision at spring convocation. The award recognizes exemplary faculty members who have demonstrated excellence in supervising graduate students.

PROJECTS RECEIVE ONTARIO RESEARCH FUNDING

Waterloo Engineering researchers have been awarded \$11.4 million from the Ontario Research Fund for three Waterloo-based projects. The project teams are headed by Raafat Mansour and Guang Gong, both of electrical and computer engineering, and Amir Khajepour of mechanical and mechatronics engineering. Mansour's project will use new engineering developments to create the next generation of nano devices; Gong's will develop security solutions for ad hoc communication and embedded systems; and Khajepour's will research the green transportation paradigm.

The funding of over \$20 million for six campus-wide projects was announced earlier this year at the university. The funding is part of a larger investment in research that will support at least 214 scientists across Ontario, said John Milloy, the Minister of Research and Innovation. "We are demonstrating, once again, that our government understands the value of science to our economy today and for creating the jobs of the future."

PHOTO: Chris Hughes



Leeanna Pendergast, Liberal MPP for the riding of Kitchener-Conestoga, came to the campus earlier this year to announce ORF funding. To her left is Adel Sedra, dean of engineering, and to her right is Amir Khajepour of mechanical and mechatronics engineering and the Canada Research Chair in Mechatronic Vehicle Systems.

REN AND SIVOTHTHAMAN AWARDED RESEARCH CHAIRS

Carolyn Ren, a Waterloo mechanical and mechatronics engineering professor, has become the new Canada Research Chair in Lab-on-a-Chip Technology. Ren heads the Waterloo microfluidics laboratory, which is involved in the development of lab-on-a-chip devices. Canada Research Chairs were renewed for Perry Chou of chemical engineering and Susan Tighe of civil and environmental engineering. Chou is the Canada Research Chair in Biomanufacturing and Tighe is the Canada Research Chair in Pavement and Infrastructure Management.

Siva Sivoththaman, a Waterloo electrical and computer engineering professor, has been appointed the Ontario Research Chair in Renewable Energy Technologies. Sivoththaman's research program will develop technical approaches and provide guidelines in setting standards to ensure health and safety in the manufacturing, use, and end-of-life phases of renewable energy technologies.

FIRST STUDENT DESIGN CENTRE DIRECTOR NAMED

Peter Teertstra, a Waterloo mechanical and mechatronics engineering professor, has been appointed the inaugural director of the student design centre in Engineering 5. "As the first director, he will help bring to life an important element of our Vision 2010 plan — providing our students with a world-class design facility," said dean of engineering Adel Sedra in announcing Teertstra's new position.

40 UNDER 40 HONOURS

Chemical engineering professor Leonardo Simon's name has been added to Canada's prestigious Top 40 Under 40 list for 2009. Simon is a lead investigator with Ontario's BioCar project which researches how to take agricultural products such as wheat straw to develop plastics used in car parts manufacturing.

Matthew Stevens, a Waterloo chemical engineering doctoral candidate and former captain of the university's alternative fuels team, is one of The Waterloo Region Record's 40 Under 40 for 2010. Stevens is chief executive officer of CrossChasm Technologies, a company he founded with Waterloo Engineering classmates to accelerate the design of next-generation vehicles.



PHOTO: Michael Seliske

WEEF celebrated its 20th anniversary this year.

WEEF AND ESQ MARK ANNIVERSARIES

The Waterloo Engineering Endowment Foundation turned 20 this year and celebrations were held outside of POETS in CPH twice — once in March and once in June — to ensure engineering students in both streams had a chance to mark the occasion. The founder of WEEF, John Vellinga (BASc '91, SD and MSc), took part in the festivities. Since its founding in 1990, WEEF has contributed about \$4.5 million to various faculties and student teams. The fund now has a principal of more than \$8.5 million.

Engineering Science Quest will also turn 20 this year. It was founded in the fall of 1990 with the goal of exposing children in Grades 5 and 6 to engineering and science in a fun and innovative hands-on manner. During its first summer ESQ's eight camps attracted 200 campers.

A lot has changed since that first year. Today ESQ is no longer simply a camp, but is now a year-round learning experience. It employs over 50 staff and offers several distinct camps for children entering Grade 1 to high school. In addition to this, ESQ offers a technology camp and a satellite program which runs camps in rural Ontario. From September to May, ESQ offers a variety of weekend workshops, in-school workshops and a March Break camp. ESQ is regarded by many as a leader in hands-on engineering, science and technology activities in southwestern Ontario.

ADDING INTELLIGENCE TO ONLINE SHOPPING

Although U.S. shoppers have been snapping up everything from shoes to toasters from the comfort of their homes for years, Canadians have been slower to catch on to online shopping.

But Wishabi Inc. is set to change all that soon. The Toronto company, launched by a group of 2004 Waterloo computer engineering graduates less than two years ago, not only lists items in over 1,000 categories to buy on its wishabi.ca site, but helps users find the best deals from approximately 500 merchants across Canada and the U.S.

“If you have two stores that sell the same item at the same price, how do the stores actually differ? We want to add some intelligence to the process,” says David Au-Yeung, co-founder and lead developer.

With the help of Au-Yeung, Wehuns Tan, David Meyers and Matthew Cheung, Wishabi analyzes market conditions, pricing trends and merchant services to let users know if they’re actually getting a good price.

Say, for example, you want to buy a Prada Saffiano & Tessuto Tote but can’t tell if the price, \$1,237.99, is reasonable. Wishabi lists where the bag is (Sacks Fifth Avenue), what its cross-border shipping and import fees would be (\$21.20 and \$123.80, respectively) and compares it to the average price: \$1,856.19.

The savings? An impressive \$473.20.

“A great purchase! The best deal I’ve ever analyzed. A real bargain at 26 per cent below fair market price,” the site reads beside a graph showing how much the item has cost over time.

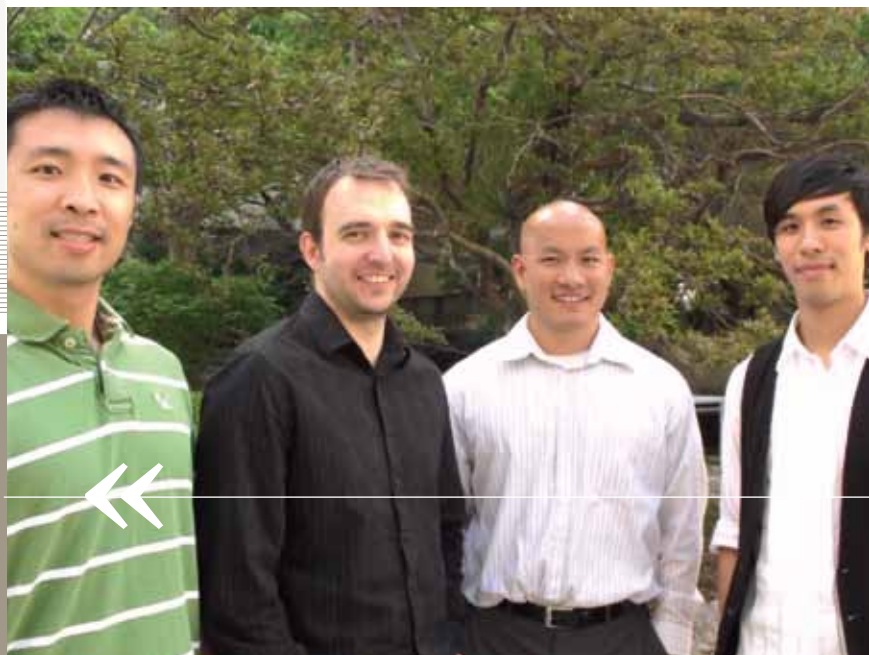
Creating informed shoppers can only be a good thing for merchants and consumers in the under-served Canadian market, says Meyers, also a developer. No wonder the site has been doubling its traffic every three months since it went live and signed on retail merchants including HBC, Canadian Tire and Apple Inc.

Other online heavyweight companies are taking notice of the 13-employee-strong business. In the spring of 2010, Wishabi signed a partnership deal with MSN to power its online shopping site. The site launched in early June.

The group of friends from Waterloo, who after graduation used to get together every month, still feel connected to their Alma Mater. Not only have they recently hired another classmate, they often have at least one Waterloo Engineering co-op student on board.

“Having been friends with these guys since 1999, we have instant trust with each other,” says Au-Yeung.

“If you have two stores that sell the same item at the same price, how do the stores actually differ? We want to add some intelligence to the process.”



The founders of Wishabi include from left: Matthew Cheung, David Meyers, Wehuns Tan and David Au-Yeung.



“I’m really passionate about creating some kind of positive change. That motivates me every day.”

AN ENGINEER OF CONSIDERABLE INFLUENCE

Whether she’s on an academic exchange in Switzerland, teaching villagers about safe source water in rural West Africa, or maintaining an A average in civil engineering, Vicky Lounder embodies excellence.

But it was her time playing on Waterloo women’s field hockey team — not to mention the 6 a.m. wake up calls for practice — that acted as the glue to keep her life together as a civil engineering undergraduate.

“I was hooked on the discipline. The team brought me a lot of structure,” says Lounder, now a civil engineering master’s student at Waterloo who studies fluvial hydraulics and river mechanics.

With Lounder’s do-it-all attitude, it’s easy to see why the Ontario University of Athletics Association this year recognized her, along with other top women scholar-athletes, as a Woman of Influence. Her athletic participation aside, Lounder’s CV is bursting.

Vicky Lounder, shown at far left, balances playing field hockey and volunteering with completing her master’s degree in civil engineering.

For instance, with a 93 per cent average, she was honoured with the University of Waterloo’s top 2008/09 Athlete Academic Honour Roll award — an amazing feat considering all the mornings of training with the women’s field hockey team. As well as going to school and playing field hockey, she was the volunteer co-ordinator for the university’s Engineers Without Borders chapter. She also spent two terms in Switzerland on an academic exchange and two months in West Africa where she volunteered with an NGO educating people on how to protect their village water.

“I’m an A-Type personality and I’m not ashamed of that!” she says, laughing.

Lounder adds that playing sports isn’t just about fun and games. Not only does it give her a way to socialize with other women on campus, it’s a stress reliever. And if she’s calm, she can focus.

“When I’m working, I’m working. But I’m not one to stay in the lab until three in the morning, that’s for sure,” she says. “If I go to school and plan to work for eight hours, I’ll work for eight hours.”

It’s a philosophy that works in the lab and on the field. And now that the end of writing her thesis is within sight, she’ll take her love of environmental protection and social development to the next level, perhaps with a PhD.

“I’m really passionate about creating some kind of positive change. That motivates me every day,” says Lounder.

FINDING NEW WAYS TO USE OLD BUILDINGS

For months, when Kyle Elderhorst and Vents Pavlov walked past 15 Fraser Street in the Galt section of Cambridge, Ontario they barely gave the abandoned building a second glance. The structure, not far from where they lived, was once part of the Tiger Brand Knitting complex, empty since the company's closing nearly a decade earlier.

But the two architecture master's students soon spent days thinking about the building when they agreed to design a plan for adapting it for re-use as part of an elective class project.

"It was a complete empty shell of a building. There were some columns coming down, but that's all we had to work with," says Elderhorst.

After visiting the three-storey red brick site, and pouring over documents outlining the property's limitations, the two got down to work.

They presented their plan to an audience of municipal leaders, urban planners, developers, academics and property owners at the Building Resilient Communities forum held at the University of Waterloo in April 2010. Four teams of architecture students took a stab at revamping existing Cambridge buildings, including those on Hespeler Road, Can-Amara Parkway and the downtown Hespeler section of Cambridge, to show how old buildings and vacant sites can be put to new use.

Elderhorst says he was happy to see that property owners, subsidized housing advocates and possible residents were open to the students' fresh ideas. Some will even be incorporated into the developers' existing designs.

That's good news since finding new ways to use old buildings, particularly in urban centres, makes financial sense, says Jeff Lederer, general manager of Waterloo's School of Architecture.

"Downtown decline is a liability to our cities as abandoned buildings and their related infrastructure — paid for by taxpayers — are left to crumble," he says. "If we want to revitalize our downtowns we need to consider what makes them special, whether it's historical charm, niche markets, public space or housing."

Elderhorst and Pavlov's plan keeps the old building's historical charm intact by leaving the general façade relatively untouched, with the exception of modern glass box windows. The plan turns the main floor into a public space where area residents could go to shop at a market, work in offices and enter a lobby connected to the building's floors of subsidized housing above. It even proposes a glassed-in box on the roof meant to house a gym.

But, perhaps most importantly, the team's plan nixes above-ground parking — something slated for a nearby building — and recommends creating underground parking so people could use the space to watch outdoor movies or listen to live music.

"We want to give as much of the ground level back to the public as possible. We see the development of this building as a catalyst for the redevelopment of the area and neighbourhood," says Elderhorst.

"If we want to revitalize our downtowns we need to consider what makes them special, whether it's historical charm, niche markets, public space or housing."



Two architecture students propose innovative uses for an old Cambridge building as shown in this model.



“It’s the best thing to do. You treat patients today and you do the research to discover medicines for tomorrow.”

TOP CO-OP STUDENT OPENS HARVARD DOORS

Before coming to the University of Waterloo and taking nanotechnology engineering, Tewodros (Teddy) Mamo thought he knew what he wanted to do with his life: research.

But that all changed when Mamo, one of Waterloo’s first undergraduate nanotechnology engineering class, became the first co-op student to be hired by Harvard Medical School. Instead of simply spending the entire eight months of his last co-op term in the lab finding ways to conjugate different polymer components — one aspect of designing targeted nanoparticle systems for gene and drug delivery — he shadowed doctors. He also discovered that many of the well-respected professors in his lab were also MDs.

The first doctor in particular, an HIV expert, showed him how compassionate care makes a difference.

“I could see that she really wants to help people — and it made me realize that I really want to do that too,” he says now.

Teddy Mamo was the first co-op student to be hired by Harvard Medical School.

New direction isn’t all Mamo received from the experience. In March 2010, he was named Waterloo Engineering’s top co-op student of the year, one of six campus-wide winners. Not only has Mamo opened Harvard’s door for other nanotechnology undergrads — the school is now hiring eight co-op students with plans for more — he published a review article in an international nanomedicine journal.

“I was the first author listed on the review, which can only be a good thing,” he says, grinning.

Mamo isn’t the only student who graduated from the first nanotechnology engineering class this past June to be making a difference.

“Students in this class have proven to be bright, motivated, ambitious and hard working,” says Fred McCourt, acting director of nanotechnology engineering. “Many of them have shown themselves to be adept learners and able applicators of their acquired knowledge and skills to the workplace during their co-op work terms.”

A number of the class of 63 students have found positions in University of Waterloo laboratories and at other universities such as CalTech, University of Toronto, University of British Columbia and Technion-Israel Institute of Technology.

Mamo is actually in the process of writing another research paper with his Harvard-MIT lab contacts and will go back there next year. Eventually he plans to follow both his passions and combine scientific research with medical training.

“It’s the best thing to do. You treat patients today and you do the research to discover medicines for tomorrow,” he says.

A HOME RUN AT PITCH COMPETITION

When Andre Hladio stood up to face the judges at Ontario's Next Top Young Entrepreneur Start-Up Pitch Competition at the Metro Toronto Convention Centre in May, he was ready for them.

And no wonder. Hladio and his team of fellow Waterloo 2008 mechatronics engineering graduates had been developing their company, Avenir Medical Inc., since they were undergraduates. Their product, PelvAssist, is an innovative tool intended to be used by orthopaedic surgeons performing hip replacement surgery. Typically, a patient comes out of the surgery with one leg longer or shorter than the other. PelvAssist aligns the pelvis to eliminate the problem.

The pitch competition used a *Dragon's Den* format, made popular by the CBC's venture capitalist television show, and teams were given a strict seven minutes to pitch before answering the judges' rapid-fire questions.

"With seven minutes the pitch has to be air-tight. You almost memorize it — but you don't want to sound like you've done so," says Hladio, now a Waterloo master's student in electrical and computer engineering.

Doing their homework worked for Avenir Medical's team members who, besides Hladio, include Armen Bakirtzian, Richard Fanson and Ara Hasserjian.

Their recently incorporated company took first place, which included a loan for \$18,000 to launch their business over the next six months. Although PelvAssist is still years

away from making it into an operating room, the loan will keep Avenir Medical heading down the path to commercializing its product.

But Avenir Medical wasn't the only Waterloo Engineering winner that day. In fact, grads and students of various engineering departments and disciplines took the top three awards at the competition organized by the Impact Entrepreneurship Group on behalf of Ontario's Centre of Excellence for Commercialization of Research.

Tim Jackson, associate vice-president of commercialization and CEO of the Accelerator Centre, says the university's culture of risk-taking and innovation drives its big thinkers to succeed.

"I think it's fantastic they won, but I'm not surprised. There's an entrepreneurial spirit that runs through every program and everything that happens on the Waterloo campus," he says. "So it's always nice when there is external recognition of that."

"There's an entrepreneurial spirit that runs through every program and everything that happens on the Waterloo campus, so it's always nice when there is external recognition of that."



Avenir Medical team members pitch their product PelvAssist shown at the bottom. From left: Richard Fanson, Andre Hladio and Armen Bakirtzian.



The Glass Telepresence team celebrates its win. From left: Jaewoo Kim, Jarazet Altamirano, Gabriel Tomescu, Teresa Thomas, Mohanad Darwish and David Farr.

GLASS TELEPRESENCE PRESENTS

Teresa Thomas, a Master of Business Entrepreneurship and Technology (MBET) student, pitched Glass Telepresence as part of her practicum with fellow MBET student Gabriel Tomescu. They won second place for promoting the benefits of the company's product — a revolutionary telepresence system that allows people to communicate remotely as if they're both in the same room. A camera and projector sit near the screen of specialized glass, which can then be recorded through and projected on at the same time.

"It offers you a high-definition, life-sized, realistic interaction with very natural eye-to-eye contact," says Thomas.

It's easy to see why Glass Telepresence ranked so high — users can use body language to communicate, the product cuts down on expensive business travel, and, as Thomas describes, it's simply "very cool."

The company is expected to have a customer pilot ready to install by the end of this year and a product ready for sale by mid-2011.

The Glass Telepresence team, which also includes MBET students David Farr, Jarazet Altamirano, Mohanad Darwish and Jaewoo Kim, headed back to the office with a certificate for \$5,000 worth of services from Deloitte LLP in hand. Although the financial support is nice, the experience was worth even more.

"These competitions give you a platform to get out there and share your idea with the world," says Thomas.

TALKMESH TAKES THIRD

A Beta test is also in the works for third-place winner, TalkMesh, which offers an application that allows groups to keep in touch without resorting to social networking pages, Google groups or email.

For instance, instead of sending a "reply all" email out to friends to plan a Saturday night or opening up the invitation to 200 people on a Facebook page, someone can fire up TalkMesh instead, says Anton Lopyrev, a 2010 Waterloo software engineering graduate.

"We try to establish that boundary. We're all about privacy and the idea that you can have conversations with your close groups of friends," says Lopyrev. He pitched the company with teammates Francis Ian Mendiola and Prabhdeep Gill, who both also graduated from software engineering this year, plus Lopyrev's brother Artem, a Waterloo mathematics and business student who graduates next month.

The idea came to the team back in November 2009 when the entrepreneurship bug bit. At the time the proactive fourth-year students simply wanted to experience building and launching a project, and that initiative paid off. Not only did the team get to pitch their idea, they won lunch with Robert Koturbash, managing director of Maple Leaf Angels, who brought an expert in social media with him. The team had 1.5 hours to pick their brains and hone their pitch.

"It's one thing to know your idea, but it's much harder to explain that idea and make other people believe in it. But by the end of our lunch, we could see they really understood what we were trying to do," says Lopyrev.

ENGINEERING INVESTMENT ADVICE

Ten years ago, when Canadian investors socked away money in their RRSPs, many looked beyond Canada's borders for good investment deals that would pay a better rate of return.

What a difference a decade makes, says John Stephenson (BASC '86, Mech), senior vice president and portfolio manager with First Asset Investment Management Inc., and author of *Shell Shocked: How Canadians Can Invest After The Collapse* (Wiley, 2010).

"Now you want to be more concentrated in Canada's investment products rather than less," he says from his Toronto office.

That isn't to say investors should avoid traditional advice about how to invest in a down economy. It still makes sense to invest in utilities, telecommunications stock and consumer staples such as Shoppers Drug Mart. But it also pays to think ahead.

If you want to get in on the Asian boom but don't know how to start, Stephenson recommends buying shares on the Shanghai Stock Exchange or buying a mutual fund that specializes in that region.

"This trend is so persuasive and so important, it will impact evaluations of everything," he says.

Mechanical engineering at Waterloo still has an impact on Stephenson's work today, despite deciding to follow his passion for finance. At school he learned how to gather and analyze data, draw inferences and develop a plan of action.

"That should be the basis for good investment decisions too," he says.

"If you believe the developing world is going to grow at a healthy clip, then you want to look at the commodities sectors."

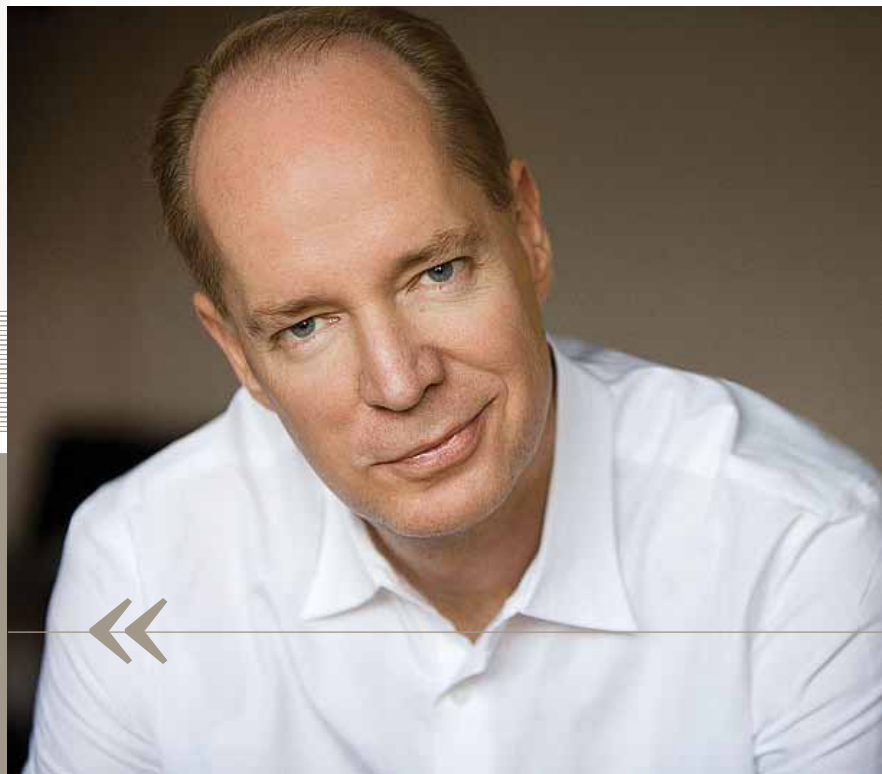
On just about every measure, Canada is coming out ahead of other G8 countries, Stephenson says. We avoided a housing crash, held onto our banks, and now, with China and developing nations amassing commodities to industrialize and develop, Canada could be the next big winner. In short, we have what other countries need.

"If you believe the developing world is going to grow at a healthy clip, then you want to look at the commodities sectors," says Stephenson.

STEPHENSON'S TIPS FOR INVESTING

1. Buy only investment vehicles you understand.
2. Always have a thesis when you invest. In other words, have a reason to choose an investment.
3. You don't have to be right all the time, you just have to be right some of the time.
4. Educate yourself. Read the paper. Watch money shows on TV. Pick up Stephenson's book or check out money blogs.
5. No one cares as much about your money as you do. Be in charge of your own finances.

Mechanical engineering alumnus John Stephenson is the author of Shell Shocked: How Canadians Can Invest After The Collapse.



CLASS NOTES

1960

CLASS REUNION
September 25-26, 2010

1964

Lawrence Baker (Elect '64, '65) says "After 27 years with IBM, I took an early retirement package in 1991. With three kids in school I couldn't fully retire, so I did some teaching at Seneca and Centennial Colleges. Then in 1996, I joined Waterloo Engineering as an engineering co-ordinator based in my home office working with employers in Toronto. In May 2009 I finally retired, sold my house and moved to a condo in the heart of downtown Toronto."

larrybaker@bell.net

1965

CLASS REUNION
September 25-26, 2010

Donald Steele (Elect '65) reports that "Doreen and I live in Parry Sound District on Buck Lake where we burn wood for heat. We have 70 acres of bush where we enjoy fishing, hunting and maple syrup in the spring. We're celebrating our 48th wedding anniversary this year and are both retired, happy and healthy. We have two granddaughters — Sarah, 11 and Jamie, 8. Our only son Gregg is an Air Canada pilot and graduated from RMC in electrical engineering."

1967

Peter Catania (Chem '67) says "Even though I am retired from the Faculty of Engineering at the University of Regina, I am still actively involved with the International Energy Foundation in the development of the foundation and the development of international energy congresses on all continents. I am also honoured to be a consulting fellow with the World Innovative Foundation, headquartered in the United Kingdom."

pjcatania@can.rogers.com

Howard Sale (Mech '67) retired from Agfa in January 2002. He's working with his wife, Maggie, on her photography business and volunteering at various organizations, such as DAREarts, which helps children.

1968

Felix Makau Luti (Mech '68, '72) reports that he's on a post-retirement contract. He says "Over and above my normal duties, I'm currently busy coordinating a postgraduate program for the Thermo Group founded on energy management for people coming from industry."

fmluti@uonbi.ac.ke

1969

Owen Redford (Civil '69) is completing the project management of the Shaw Ocean Discovery Centre in Sidney, British Columbia. It opened on June 20, 2010 after five years of planning, fundraising, design and construction. Owen enjoys singing in the Arion Male Voice Choir, being a member of the James Bay Athletic Association, golfing and enjoying the paradise of Vancouver Island.

1970

CLASS REUNION
September 25-26, 2010

Dean Flathmann (Mech '70) retired from Shell Canada in 2010 after almost 33 years in various engineering and technical jobs.

dean.flathmann@shaw.ca

1971

Michael Blamire (Elect '71) reports "I'm still happily married to Ruth. Our one daughter is married with two children, and our one son is engaged to be married in 2010. Both Ruth and I are experimenting with retirement. We've made trips to Scotland, Germany, France, Belgium, Holland, the Bahamas and the U.S. over the last three years. Building a cottage on Kashwakamak Lake keeps me busy."

1972

John Grant Barron (Chem '72) reports "Nan and I have moved to Kuala Lumpur for the Weda Bay Nickel Project and plan to be here for a few years. It's a big change from the oil and gas industry to mining/nickel refining but I'm looking forward to the technical challenges as well as a new culture experience."

jbarron@technip.com

1973

Larry Westlake (Chem '73) started a home-based health and safety consulting business in 2008. The focus of the business is noise testing, OHS audits, emergency management and custom training.

1974



Keith Farndale

(Civil '74) continues to live and work in the Toronto Beaches neighbourhood providing project management consulting and

training across Canada with a small team of consultants. He also enjoys being a sessional lecturer in project management with the University of Toronto's Faculty of Engineering.
Farndale@procept.com

Michael Gourgon (Elect '74, '78) is now retired and living in Kingston, Ontario.

F.G. Wyman Jones (Civil '74) was one of the first recipients of the U.S. Transit Safety and Security Program Award. He was recognized by the Rail Transit Industry as an expert in rail accident investigation and by the Los Angeles Fire Department as an expert in rail transit tunnel ventilation. He is a certified safety and security director for rail in the World Safety Organization and currently lives and works in California.

Richard J. Rush (Civil '74) was the founder of Canviro Consultants Ltd. and co-founder/ex-president of XCG Consultants Ltd. He enjoys running and cycling as well as playing golf and tennis. He completed an IRONMAN Triathlon in 2003 and spends winters in Costa Rica studying Spanish.

Wayne Schlote

(Chem '74) reports his chemical engineering class



celebrated its 35th anniversary September 25-27, 2009 in Heidelberg, Ontario. "Despite the dodgy weather on Saturday, the official golf tournament took place at the Elmira Golf Club, a fourth-year haunt. Don Linkert, Gord Pearson and I were joined by Dave Morgan, Gerry Sullivan and our class professors Don Spink and JJ Byerley. JJ wrested the Chem '74 low gross trophy from Gord with a smooth 80. Don, 86, continued to teach his students how to hit the ball by example, and we were honoured by the presence of two of our favourite profs. On Sunday morning, the celebrating wound down with breakfast at the Cedar Barn, fond farewells, and a vow to meet again at our 36th anniversary."

In photo from left to right: JJ Byerley, Don Spink, Dave Morgan, Gord Pearson, Gerry Sullivan and Don Linkert.

» 1974

Bryan Webb (Elect '74) works at Norton Scientific Inc. NSI is a start-up company focused on the commercialization of a tested detector design for use in early-stage drug discovery research and bio-pharmaceutical QC/QA applications. The first unit, the NS4910 PAM tool, has been developed to study how proteins aggregate in solution.

bcw@norsci.ca

» 1975

CLASS REUNION
September 25-26, 2010

David Buck (Civil '75) volunteered for the 2010 Winter Games as a field of play access supervisor. His role involved overseeing security on the players' benches and in the dressing rooms. He was thrilled to work at the gold medal hockey game and most others. David is currently president of the Pacific Coast Amateur Hockey Association, which had 19,500 registered players in the 2009-2010 season.

dbuck111@gmail.com

David Green (Elect '75) left the corporate world this past summer and "semi-retired" from Fluke Corporation. He now works out of his home in Collingwood, Ontario. His new business, StratMarc Associates, provides contract services in strategic planning and marketing communications for B2B and technology clients. His wife, Anne, is still wondering when the semi-retired part of travelling and doing more around the new house starts. David and Anne have a one-year-old granddaughter, Mattea.

david_hugh@rogers.com

John T. Reid (Elect '75) says "Wow, the 35th reunion for our class is this year! I have the honour of sharing reunion class rep duties again this time around. Those of us who attended the 30th reunion in 2005 are still grinning. It was like being 25 again, but with less hair."

john@grey-zone.ca

» 1976

Harold McCausland (Mech '76) says "My feet are up as I recently retired from Petro-Canada after 30 years!"

Don Town (SD '76) has retired after 33 years with Procter & Gamble in Belleville. Don will remain in Belleville to pursue his interests in astronomy, flying and fishing.

donald.town@gmail.com

» 1977

Michael McCartney (Chem '77) has been certified as a building design specialist with Professional Engineers Ontario. He practises in the area of mechanical systems design (HVAC, plumbing, refrigeration, energy efficiency) through his two engineering companies, AEGIS Engineering and M. E. McCartney Engineering Ltd., as well as a design-build mechanical contracting firm, Techaire Systems Canada Inc. He also handles some forensic assignments as sub-consultant to Giffin and Koerth Forensic Engineers in Toronto.

Thomas Smith (Elect '77) says "Earlier this year I left my previous employer and began a new consulting venture intended to help electronics manufacturers through the increasingly complicated maze of regulatory approvals. I provide assistance in areas of product safety, EMC and international approvals.

tsmith@tjstechnical.com

» 1978

Gerry Pageau (Chem '78) has begun "ramping down" to retirement by working part-time at Howe Sound Pulp and Paper, where he has been for 31 years. During his days off, he provides remote technical support on projects all over the world for BTG in Switzerland. Being able to work in the comfort of his own home is a long-time dream come true for Gerry and wife Deborah.

dpageau@dccnet.com

George Whitelaw (Civil '78) is leading a precision machining company specializing in the manufacturing and assembly of customer designed products for the defence, aerospace, nuclear and energy sectors. He's married to Mary and they have three adult children — Jonathan, Lisa and David. He lives near Ottawa.

» 1979

Brian Stevens (Mech '79) says "I have a career change coming with the closure of Eurocan, so I will be leaving the engineering world to join the ranks of high school teaching. In July 2010, I started teacher's college at the University of Sunshine Coast in Queensland, Australia. I'm looking forward to having my son Evan graduate from McMaster as a bio-chemical engineer in May 2011.

brian.bw.stevens@gmail.com

» 1980

CLASS REUNION
September 25-26, 2010



Jim Estill (SD '80) says "The best way to keep track of me is by looking at my blog at www.jimestill.com."

Wayne Shaw (Mech '80) reports that he retired from a 24-year career with Honda of Canada Mfg last December. He is now doing some consulting work on Japanese manufacturing management.

wasshaw@rogers.com

» 1981

Vinit Nijhawan (Elect '81) has joined Boston University as a lecturer and special assistant to the vice-president of research to help define a new strategy for the university's technology commercialization activities.

» 1983

Peter Agnew (Mech '83) reports "I'm still here at GM. I'm empty-nesting in Whitby about to celebrate 27 years of marriage and 27 years since graduating from Waterloo."

William (Bill) Chisholm (Elect '83) along with Masoud Farzaneh are delighted to announce that their book, *Insulators for Icing and Polluted Environments*, is now available from IEEE/Wiley. The book summarizes many of the unique Canadian contributions to the problem of electrical flashover on extra-high voltage insulators. It contains results from major test programs at Kinectrics, the former Ontario Hydro Research Division, and from Hydro-Québec that have never been published before.

W.A.Chisholm@ieee.org

» 1984

Kevin Beckett (Mech '84) has returned to a management role in Huntsville, Ontario after working in the U.S. for 12 years. Since Kevin returned, he married Virginia, who has four children 17 to 25 years in age and together they are in the process of adopting a son.

kbeckett@kcc.com

Robert DesChamp (Civil '84) renewed his contract with the King Faisal Foundation in Riyadh, Saudi Arabia.

Paul Good (Civil '84) says "I live in Maple Ridge, British Columbia, which is about 50 km east of Vancouver. I live with my wife, Lynn, two children, ages 8 and 10, two cats, one dog and two guinea pigs."
paulgood@telus.net

Anthony Green (Mech '84) was elected Fellow of the American Society of Mechanical Engineers in July 2009.
anthonygreen@alumni.uwaterloo.ca



Ronald Kessel (Elect '84, Physics '89) reports that after receiving his degrees from Waterloo, he went on to the University of Victoria to obtain a PhD in physics in 1996 and

completed his post doc in 1999 at the School of Earth and Ocean Sciences. He's currently living on the coast of Italy and working on international maritime security.

Robert Notley (Mech '84) says "I'm still living in New Jersey, eking out a living as a full-time construction and building commissioning executive, part-time college instructor and occasional driver for my wife's flower shop. I recently became a LEED-accredited professional."
rnotely@greyhawk.com

Tim Peever (Chem '84) is living in Sarnia with his wife, Susan, and their two children, Thomas and Natalie.

Daniel Plumb (Elect '84) has worked as an electrical designer, systems engineer and a project engineer on aerospace projects for the last 25 years at Honeywell. He worked on the electronic controllers/systems for various aircraft including: V22 Osprey, C17 Globemaster, Joint Strike Fighter, F15, Boeing 777, J-UCAS. Daniel and wife, Karen, have a daughter who is 2.
dan.plumb@honeywell.com

Anita Rossall (Civil '84) invites anyone in her class to contact her if interested in obtaining a Class of '84 *Lord of the Rings* engineering yearbook. She has several copies available.
rossall@telus.net

1985

CLASS REUNION
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Warren Cope (SD '85) is married and has four children. He moved to the Kansas City area in 1992.

Dave MacLean (SD '85) says "If you're interested in developing apps for Android phones (aka Google phones), check out the book I co-authored, *Pro Android 2*, at <http://apress.com/book/view/1430226595>."
davemac327@gmail.com



Robert Moore (Mech '85) says "I'm married with two teenage boys, Sean and Neil. I started a plastic extrusion business in 2008 specializing

in acrylic and polycarbonate for the lighting, transit lighting, and display markets."
rcdmmoore@rogers.com

1986



Joseph Hachey (Civil '86, '87) says "I married Lita right after final exams in 1986. I stayed on and did a master's degree, graduating in 1987. Then, I

moved to Calgary to join Golder in 1987. Kids followed quickly — Simon in 1987, Erica in 1989 and Megan in 1991. I transferred to the Seattle office of Golder in 1991."
jhachey@golder.com

Steve McCallum (Elect '86) recently started working for Thales, a French-based conglomerate (69,000 employees, \$20 billion in annual sales) that has dealings in the defence, aerospace and transportation markets. Steve is working in the transportation division of Thales, which is based in Toronto and focuses on automated subway control solutions that are made up of integrated hardware/software/wireless communications systems and professional services.
mccallum.steve@gmail.com

1987



Paul Dowsett (BES '84, Arch '87) reports that a successful project with client David Daniels led to a new business. David hired LEED-accredited Paul

to design an ambitious "green" renovation of his 1930s Deco home. The renovation was so successful that when Paul set up his own "green" practice, David suggested they join forces in Sustainable.TO Architecture + Building. Since June 2009, Sustainable.TO has grown to five architects and designers, including Waterloo co-op students.
paul@sustainable.to

1988

Kenneth Taylor (Chem '88) says "I'm still doing fun stuff — flying, riding, hiking, and building my second airplane, an RV9."

1989

Bradley McRoberts (Civil '89) says "In 2005, I moved back to Ontario after being on the east coast of Canada for over five years. I now reside in Owen Sound, working for the City of Owen Sound. My wife, Jody, and I have two children: Riley, 11 and Regan, 9."

John Ruigrok (Mech '89) reports that he's been living in Saint John since 1994 with wife, Michelle, and daughters Alexandria, born in 1997, and Victoria, born in 2000. He's working in computer software development (IP TV and network monitoring products) with Mariner Partners.

1990

CLASS REUNION
September 25, 2010

Hal Beck (Civil '90) says "Wow, lots of career opportunities for University of Waterloo engineers despite the recession! I've chosen a new role at Schaeffers Consulting, where I'm building on past experiences."
hal.beck@hotmail.com

William Chiang (Comp '90) says "I am now running my own business, Infield Professionals, in the HR discipline out of Hong Kong. We provide recruitment services and training programs for high-tech companies in the Asia-Pacific regions. Hobby-wise, I am an antique collector."
<http://www.linkedin.com/in/williammkchiang>

Ravi Mehta (Civil '90) reports that he, his wife and two children live on a lake near the Gatineau Hills.

1991

Greg Cook (Civil '91) continues to operate his own engineering practice, Cook Consulting Engineers Limited, in Aurora, Ontario.
greg@cookengineers.com

1992

John Vieth (SD '92) says "Life is good in Canada's Technology Triangle. Angela and I are pleased that two of our children are now also Waterloo alumni."

1993

Jeff DiBattista (Civil '93), his wife, Traci, and children Alyssa and Nick are cycling across Canada this summer to raise money for cancer research and the support of those impacted by its effects. Check out their blog at:

<http://convio.cancer.ca/goto/teamdibattista.jeffdi@shaw.ca>



Gary Lee (Civil '93) reports "I enjoyed a great summer with my family — Audrey, 9 and Matthew, 11.

The "DIRT" Class get together in July 2009 at my place turned out well. I look forward to our next meeting."

glee888@yahoo.com

1995

CLASS REUNION September 25, 2010

Jaimie Handscomb (Mech '95) says "I made another change. I moved back to Waterloo to work for Stantec Consulting in Kitchener. My wife, Tiffany, is now working at Equitable Life in Waterloo. For those on LinkedIn, I have created a LinkedIn Group for Waterloo Engineering alumni. It's located at:

<http://www.linkedin.com/e/gis/56527/2D39FF6D6739>.
jrhandscomb@rogers.com

1997

Kevin O'Keefe (Comp '97) lives in Mississauga with his wife and two daughters.

1998

Matthew Davidson (Mech '98) and his wife, Susan Yates, are pleased to announce the birth of their daughters Beatrix Callie and Mary Josephine in June 2009 in Kingston, Ontario. Matthew is working as a professional engineer at Applied Kinetics Inc., a machine design and mechanical engineering firm.
mdavid@alumni.uwaterloo.ca

Gary Rosenberg (Civil '98) says "I settled down in Acton with my wife, Mireille, and son Jaret, 6. Still waiting for the Leafs to win the cup or make the playoffs."



Scott Donald Sharabura (Chem '98), his wife, Kim, and son, Douglas, 3, are happy to welcome Constance Mary Sharabura (Connie), who was born in November 2009 in Grapevine, Texas.

Scott is a principal with Booz & Company, a management consulting firm with a focus on oil and gas. He and his family will be temporarily relocating to Calgary in the new year.

scott.sharabura@booz.com

1999

Mark Bensted (Mech '99) says "After nine years in the automotive industry with Magna International, I will be returning to school this fall to complete an MBA/MEng degree at the University of Alberta. I hope to enter the field of renewable energy, smart grid development or other CO2 reduction initiatives."

markb850@hotmail.com

David Haigh (Mech '99) is engaged to be married.

Alexis Jay (Chem '99) says "Ana Leonor and I are moving to Ann Arbor at the end of the year. Work is going well, and doing an MBA at the University of Michigan is keeping me busy." alexisjay@yahoo.com

Robert Sarkar (SD '99) graduated from medical school in 2003. He practised in Saskatchewan before moving near Brisbane, Australia. He loves to travel and has been to Thailand, Qatar, Turkey, Costa Rica, South Africa, Zambia and the outback of Australia.



Kevin Whiteley (Enviro-Civil '99) and Claudine are happy to announce the birth of their baby daughter, Lauren Nicole

Whiteley, in September 2009.
kevinwhiteley1@gmail.com

2000

CLASS REUNION September 25, 2010

James Chang (Comp '00) is the founder of Mapagogo.
www.mapagogo.ca

Yash Mody (Comp '00) says "My wife, Tejal, a Waterloo accounting alumna, and I are the proud parents of a beautiful daughter, Teya Mody, who was born in October 2009. Teya is now eight months old and loves to sing incomprehensibly".
yashmody@hotmail.com



Shabbar Sagarwala (Arch '00) says "Since graduation in June 2009 from a post-professional degree specializing in urbanization and

housing at Harvard University, I have taught urban design at Harvard Graduate School of Design and then spent a month in Thailand, mostly in Bangkok and Phuket. During my trip, I found out I had been selected for the 2010 Monbukagakusho (MEXT) Research Studies Scholarship. I have since been accepted as a postgraduate international researcher at the School of Architecture, department of engineering at the University of Tokyo."

shabbar@alumni.uwaterloo.ca

2001

Ruth Allen (Chem '01) is married with twins and is living in Mississauga.

2002

Shawn Jackson (Elect '02) says "I have five wonderful children ages 14, 8, 6, 1 1/2, and 3 months, plus two step children ages 8 and 5. It's a full house!"



Justyna Kopytek-Swenty (Elect '02) and Ryan Swenty (BMath '01) welcomed their first child, Hannah Eleanor, in December 2008. They are living

in Toronto and Justyna works at Ontario Power Generation - Darlington Nuclear in the reactor safety department.
jsweny@gmail.com

2003

Timothy Berezny (SD '03) is working as a healthcare business consultant in the re-engineering healthcare area.
www.togotrip.blogspot.com

Joseph Tam (Mech '03, '05) says "I'm back from backpacking for 10 months across 14 countries with my wife, Sam. Currently, I'm in search of project management and systems design opportunities in sustainable/renewable technologies or automation/manufacturing."
jsftam@gmail.com

2004

Vincent Cheng (Elect '04) is the assistant conductor of the Toronto Philharmonia as well as the founder/artistic director of Vocal Horizons Chamber Choir.

vcheng@vocalhorizons.com



Siva Rajan Sarathy

(Chem '04) says "After graduating from Waterloo, I moved to Vancouver for grad

school at UBC. In December 2008, I married Ayesha Kapoor from London, Ontario. Our wedding took place in Pushkar, Rajasthan, India. I completed a PhD in August 2009 and have moved to London with Ayesha. We plan to spend some time here but eventually want to move back west to settle down."

siva@sarathy.ca

2005

**CLASS REUNION
September 25, 2010**

Graham Finch (Civil '05, '07) is the recipient of the 2009 CMHC Housing Studies Achievement Award for his project entitled *The Performance of Rainscreen Walls in Coastal British Columbia*. Only six of these awards are given every two years to master's or PhD students across Canada for theses that directly contribute to improving housing in Canada.

Adrian Pollitano (Arch '05, Arch '08) is the recipient of the 2009 CMHC Housing Studies Achievement Award for his design entitled *Building on Toronto's Main Streets*.

2006



Maria Ly (Comp '06) says "I am the founder of Skimble, a start-up based in San Francisco.

Skimble strives to

be the best way to track and share all your sports activities. We provide a location-based social iPhone and web application to motivate you to be active. You can compete on the leaderboards and win prizes just for being active! We automatically remember your 'personal bests' and help you monitor your progress over time."

2007

Zikai Wang (Enviro '07) says "I was the project manager of a top-ranked consulting firm. Now I'm planning to tour China by foot, bike and train. Let the road trip begin!"

zkdwang@gmail.com

IN MEMORIAM

John W. J. Armstrong, Elect '69, '80

Vincent F. Au, Comp '05

Shawn Carrigan, Chem '97

Alan G. Davenport, DEng '86

Leslie J. Eskritt, Civil '62

Thomas C. Fischer, Chem '67

John Hamel, Elect '89, '92

Gary D. Havard, Mech '95

Gerardus G. Hillhorst, Elect '82

Albert C. Hillier, Civil '82

Trygve Bjorn Hveding, Mech '69

Albert Jaksts, Elect '73, '77, '85

Jack E. Leisch, Civil '71

Detlef Mueller, Civil '72

David R. Ross, Civil '77

Heather Stewart, Civil '99

Terrence L. Sullivan, Chem '72

William Weber, SD '75

UPCOMING EVENTS

CLASS REUNIONS

Dates: September 25 and 26, 2010
for the Classes of '65, '70, '75, '80 and '85

Date: September 25, 2010
for the Classes of '90, '95, '00 and '05

Reunions are a great time to catch up with your classmates, relive memories of your university days and see how the campus has changed since you last visited. This year's reunion coincides with the University of Waterloo's Homecoming, offering you additional programming and family-friendly activities. Register for reunion events at engineering.uwaterloo.ca/alumni/reunions.

GO ENG GIRL

Date: Saturday, October 16, 2010

Time: 9:00 a.m. to 3:00 p.m.

Location: Rod Coutts Engineering Lecture Hall,
University of Waterloo

Go ENG Girl is a free annual event hosted by schools of engineering across Ontario for girls in Grades 7, 8, 9 and 10. The Waterloo event includes special guest speakers, an information fair, opportunities to meet current women Waterloo Engineering students, cool hands-on activities and a free lunch. To find out more, contact Rohini Wittke at rwittke@uwaterloo.ca or 519-888-4567, ext. 35239.

WATERLOO ENGINEERING ALUMNI SKI DAY

Date: January 21, 2011

Time: 8:30 a.m. to 4:30 p.m.

Location: Osler Bluff Ski Club, Collingwood

Hit the slopes and join us for this annual event hosted by Steve Vokes (BASc '77, Civil). The day includes skiing, timed runs, lunch and prizes at this private ski club with virtually no lift lines. Register by email to eng_alumni@engmail.uwaterloo.ca or by phone at 519-888-4567, ext. 37827.

WATERLOO ENGINEERING ALUMNI CURLING BONSPIEL

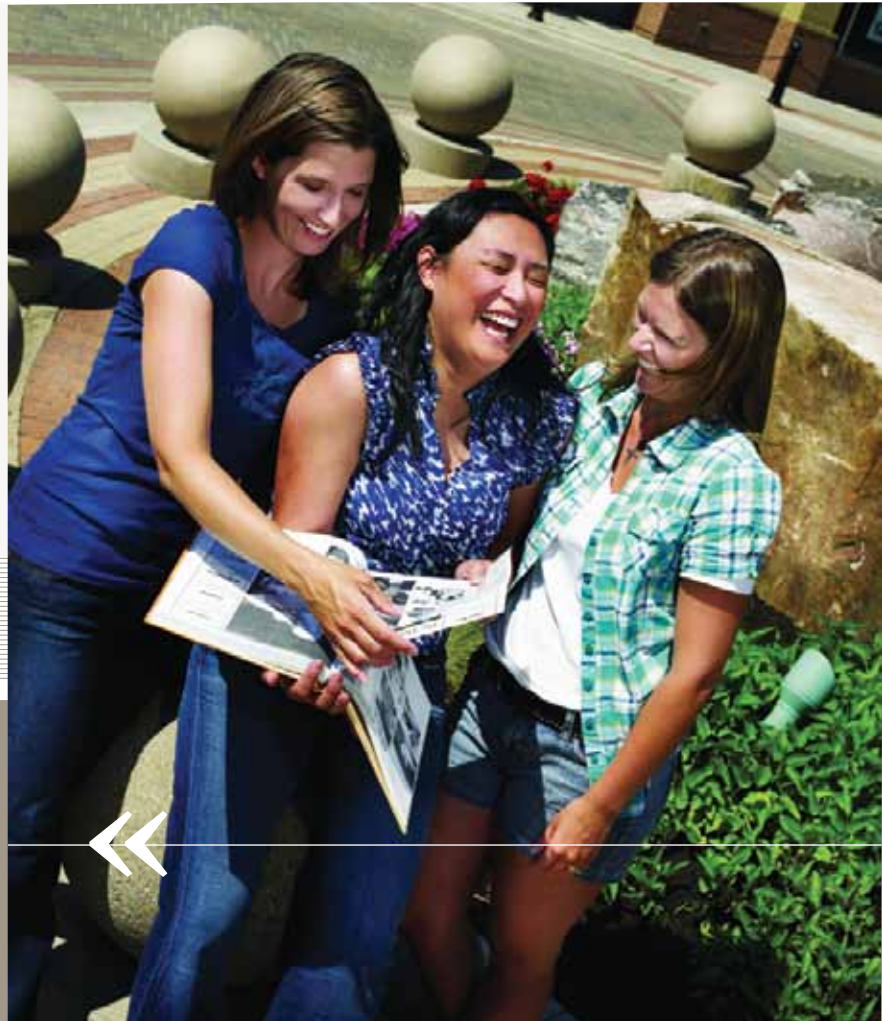
Date: Saturday, February 26, 2011

Time: 10:00 a.m. to 6:00 p.m.

Location: High Park Club, Toronto

Curlers of all levels are encouraged to come out to this fun-filled day spent on the ice with fellow classmates. Singles, couples and teams may enter and beginners are welcome! Register by email to eng_alumni@engmail.uwaterloo.ca or by phone at 519-888-4567, ext. 37827.

PHOTO: Bryn Gladding



From left, Lin Javier, Andrea Pitura and Lisa Kean Dobson (all BASc '00, Civil) have stayed in touch since graduation. They're looking forward to catching up with the rest of their classmates at this month's reunion.

CLASS REPS WANTED!

Register to be a class rep for your class reunion in 2011 by emailing eng_alumni@engmail.uwaterloo.ca or calling 519-888-4567, ext. 37827.

CLASS REUNIONS FOR 2011

Dates: September 24 and 25, 2011

for the classes of 1966, 1971, 1976, 1981 and 1986

Date: September 24, 2011

for the classes of 1991, 1996, 2001 and 2006

Mark your calendar!

GREETINGS ALUMNI

While September is always an exciting time at the University of Waterloo, this year it is especially so. Our systems design and mechanical and mechatronics engineering departments and electrical and computer engineering research teams recently moved into Engineering 5, our newest building. This impressive structure also includes a unique new home for our student design teams.

At the end of the month, Waterloo Engineering alumni will return to the university for their class reunions and Homecoming. I encourage you to take the time to come back to reconnect with your classmates and take a look at our constantly changing campus.

Besides the events listed here, we have many others planned for this fall and winter in Waterloo and throughout the world. Check www.engineering.uwaterloo.ca/alumni regularly for a full list.

I am missing engineering yearbooks from the following years: 1970, 1971, 1972, 1973, 1974, 1975, 1976, 1977, 1978, 1979, 1980, 1985 and 1991. If you are able to donate a yearbook from any of these years to engineering's archives, please contact me at mbrestov@engmail.uwaterloo.ca or by phone at 519-888-4567, ext. 36838.

I look forward to seeing you at an upcoming event.

Sincerely,



GOSIA BRESTOVACKI

Alumni Officer



ZEROFOOTPRINT AT WATERLOO

How big is your building's carbon footprint? That's the question Zerofootprint, a Toronto-based organization, is answering. And Ron Dembo (PhD '75, MSci), its founder and CEO, is using his specialized software to use that information to help structures go green.

Dembo's organization helps companies, schools and even individual people measure, track and offset their carbon footprint by allowing them to see how they stack up against their peers. Zerofootprint's main software product examines a company's activities before offering analysis in the form of benchmarking against other similar companies. Zerofootprint then provides suggestions about how to change, such as reconfiguring the office or using more teleconferencing to cut down on travel.

Last year the University of Waterloo signed an agreement to partner with Zerofootprint. Using specialized software at Waterloo, the ZEROLab project will show how the university is consuming energy at the plug level. Students and researchers can then compare various buildings on campus.

Why bother using competition to get results? It's human nature, says Dembo, a Waterloo Engineering Alumni Achievement Medal winner. "People don't change because you tell them their footprint is 10," he says. "They'll change if their neighbour's footprint is five and theirs is 10."

His inspiration to create Zerofootprint came five years ago at a TED conference after he'd just sold Algorithmics Incorporated, the largest risk-management software company in the world. As the self-described former "closet environmentalist" sat in the audience he observed that although the people in the room were talking about saving the world, their own lifestyle choices were not environmentally sound.

Dembo's solution was developing software that shows people exactly how many resources they're consuming — and how to put a stop to it.

Today Dembo, a member of Waterloo's Faculty of Environment's advisory board, sees the irony of selling one risk management software company only to start Zerofootprint, which also uses software to offset risk, but he's not bothered by it. "As it turns out, both are hugely important in the environmental space," he says.

Ron Dembo



WEAL

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Publication Number 40065122