

# wea

## INSIDE THIS ISSUE

### UNLOCKING BRAIN MYSTERIES

Building the world's largest model of a functional brain is no easy feat. But that's just what Chris Eliasmith has done. The systems design engineering graduate and Director of the Centre for Theoretical Neuroscience explains how it may just revolutionize the way brain disorders are treated. [See page 3]



**FROM THE DEAN**

*"I'm not interviewing to go work for the tech giants of the world. I'm hopefully starting the next ones to come."* Stephen Lake, 2011, then a fourth-year student of mechatronics engineering, now CEO of Thalmic Labs, developer of the MYO armband.

Since becoming dean of Waterloo Engineering in July 2012, I've had the privilege of attending a number of high-profile alumni events in Canada and throughout the world. Meeting and speaking with our graduates, including Stephen Lake and many others, confirms what I already knew to be true — that without a doubt we are graduating the best and brightest engineers and our story is one of exceptional innovation and reputational excellence.

In June of this year, I was part of an alumni event hosted by Rob Chaplinsky (BASC '90, Mech) in Menlo Park, California. There, a unique new fund to kick start student entrepreneurship was announced to over 100 of our graduates living in the area. Terry Cunningham (BASC '83, Mech), President and General Manager of EVault (a Seagate Company), celebrating his 30th anniversary as a Waterloo Engineer, announced a pledge of \$50,000, challenging the group to match his donation and "help fund the next generation of innovators at Waterloo Engineering."

A first in Canada, the Engineer of the Future Trust will offer discretionary funding to budding Waterloo Engineering entrepreneurs while they are still in school. The trust will provide our students with flexible, short turnaround funding when they need it most, leveraging life-changing ideas in a fiercely competitive marketplace. Funds may be disbursed to assist students with their Capstone design projects or to help our student teams.

Many entrepreneurs making their mark around the globe graduated from our Master of Business, Entrepreneurship and Technology (MBET) program, celebrating its 10th anniversary this year. Beyond the traditional MBA, the MBET degree is designed to provide individuals with the business knowledge and experience to move ideas and innovations into commercial practice. It is the only master's degree of its kind focused entirely on entrepreneurship. As MBET graduate Farhad Mibody explains: "If you want to make a change and you're thinking big, MBET is the right place to go." The 2010 graduate works for Facebook as a media solutions manager in Toronto, putting into practise the skills he honed at Waterloo.

**MAKING A PROFOUND DIFFERENCE**

Our researchers, including Chris Eliasmith, the Director of the Centre for Theoretical Neuroscience, are also making a profound difference. Along with a team of researchers, Chris, a systems design engineering graduate and a Waterloo engineering and philosophy professor, has created Spaun, the world's largest model of a functional brain. For starters, Spaun is designed to herald in a new generation of sophisticated, more human-like computers. On the medical side, as you will read on the next page, Spaun could revolutionize the way brain disorders are treated.

At the end of this month, we celebrate the 50th anniversary of our second class of engineering graduates. I look forward to attending our reunion weekend and meeting members from the Class of 1963 and numerous other years also gathering for their reunions.

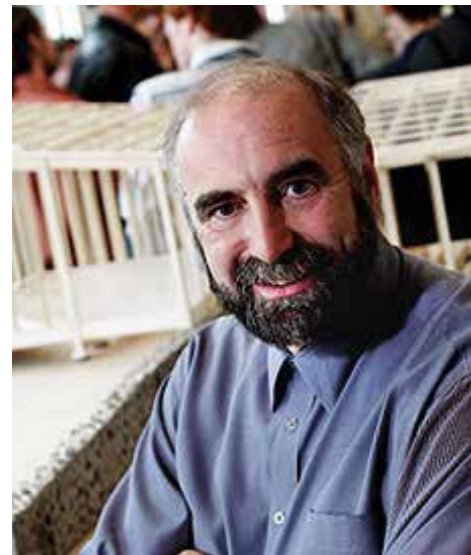
We also celebrate a very special milestone on November 30 of this year in the 25th anniversary of Rick Haldenby as the Director of Waterloo's world-renowned School of Architecture. A graduate of the school, Rick's remarkable contributions to architectural education include the founding of our highly-successful Rome program. On behalf of all our architecture and engineering graduates, I want to thank Rick for his years of dedicated service to the university. His infectious passion for architecture, his extraordinary vision for the school and his deep commitment to our Faculty are truly second to none.

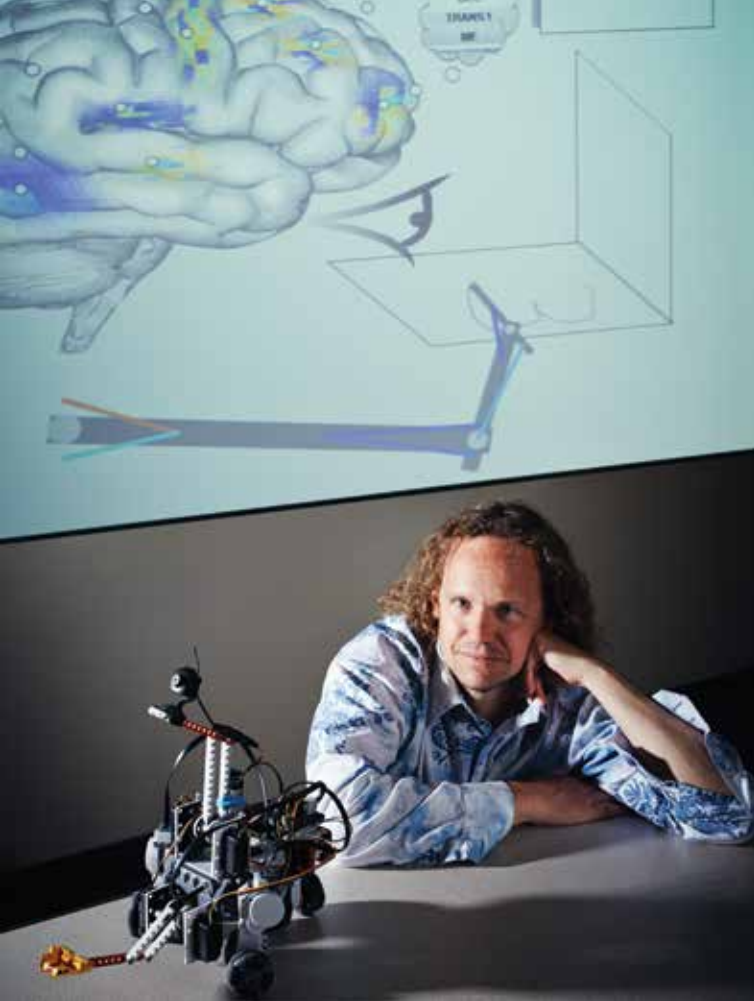
My best wishes to you for an enjoyable and safe fall.

Sincerely,

**Pearl Sullivan**, Dean, Faculty of Engineering

*A celebration of Rick Haldenby's 25 years as Director of the School of Architecture takes place November 30.*





*Chris Eliasmith (BASC '94, SD), a Waterloo systems design engineering and philosophy professor, says understanding how the brain works is inherently interdisciplinary.*

## REVERSE ENGINEERING THE BRAIN

**Want to build a working brain? Then speak to Chris Eliasmith. The Canada Research Chair and Director of the Centre for Theoretical Neuroscience at Waterloo has developed the world's largest model of a functional brain — and revealed exactly how he it did it in a recently-released book fittingly called *How to Build a Brain*, published by Oxford University Press.**

Step one was to assemble a team of students from engineering, biology, computer science and philosophy. "Understanding how the brain works and the mind works is inherently interdisciplinary," says Eliasmith, whose own education includes degrees in systems design engineering (BASC '94) and philosophy (MA '95) from Waterloo.

On the medical side, Spaun may revolutionize the way brain disorders are treated.

He and his students initially modelled different functions of the brain: vision, motor control, memory, and so on. But Eliasmith, who is both a Waterloo professor of systems design engineering and philosophy, understood that what really mattered was how these pieces worked together so he set out to create a model that could coordinate those different functions.

The result is Spaun: a computer-based simulation that can perform several activities and switch between them, just like a real brain. It consists of an eye for receiving visual input, a brain capable of performing several cognitive functions and an arm to execute a variety of tasks.

Spaun can read, answer questions, play simple games, memorize lists and draw what it sees. Like the real thing, it even makes mistakes, faltering at complex questions or tripping up when lists get too long.

### A WORLD OF POSSIBILITIES

The secret to the virtual grey matter lies in its 2.5 million simulated neurons, connected together in a way that mimics the biology and behaviour of the brain. Although it's a far cry from the 100 billion neurons of a real human brain, Eliasmith's team is already working on building hardware specifically designed to run larger-scale simulations. "The only reason we stopped at 2.5 million neurons is because computers are too slow," he says.

According to Eliasmith, those simulations bring us closer to understanding the relationship between complex brain activity and complex behaviour, opening up a world of possibilities.

For starters, it could herald in a new generation of sophisticated, more human-like computers with which interactions are much easier. On the medical side, Spaun may revolutionize the way brain disorders are treated. Using the model, researchers could simulate the impact of different drugs or mimic the damage caused by strokes or Alzheimer's to better understand what's going on and identify ways to restore brain function.

Reverse engineering the brain is no easy feat. But thanks to the work of Eliasmith and his team at Waterloo, we're now closer to unlocking one of life's greatest mysteries: how humans think.

# FACULTY NEWS

## MEDIA ACCOLADES FOR WATERLOO

Following on the February 2013 *New York Times* article that named the University of Waterloo “one of the world’s best technology schools”, the university continues to build its reputation for entrepreneurship internationally. *USA Today* referred to the area as “the most vibrant start-up community in Canada” and *Venture Beat* reported on the area’s “very high proportion of startups to population” and “unique” academic/industrial mentoring partnership.

The *Financial Post* drew attention to engineering successes including Thalmic Labs, co-founded by Stephen Lake (BASc '12, Mtron), and BufferBox, a network of 24/7 parcel pick-up stations, which began as a fourth-year mechatronics design project and was acquired by Google in 2012. The *Post* article concluded with the following high praise: “Where can you hire the best engineers and keep them? There [is] no better location than Waterloo.”

## CONVOCATION HONOURS

On June 15, 1,358 Waterloo engineers received degrees in two convocation ceremonies. Award recipients included Duane Cronin of mechanical and mechatronics engineering who was honoured with a Distinguished Teacher Award, and Jonathan Eyolfson of electrical and computer engineering who received the Amit and Meena Chakma Award for Exceptional Teaching by a Student. The Alumni Gold Medal was awarded to Zachary Robert Gowanlock and the Governor General’s Silver Medal went to Steven Derek Yang.

Jacob Apkarian received an honorary Doctor of Engineering and addressed convocation. Apkarian, a global leader in the development of real-time control systems and services for industry, founded Quanser in 1990 to enhance and advance control theory education. His work contributed to the success of prominent Canadian engineering achievements, including Canadarm I and II.

## VICTORY IN LESS THAN A SPLIT SECOND

A team of undergraduate students, comprised mainly of Waterloo Engineering students, won an international microrobotics competition and did it in less than one second.

The Mobile Microrobotics Challenge took place at the International Conference on Robotics and Automation in Karlsruhe, Germany. The Waterloo team won the Autonomous Mobility Challenge, where the microrobots must autonomously navigate a track in the shape of a figure eight.

The engineering students were supported by colleagues from arts and math. Matthew Maclean, a third-year student in software engineering, was the controller for the Waterloo team — much like being the driver for a racing team. He controlled the microrobot with computer code, and said precise movements are critical in order to avoid catastrophe.

“When you have something that small, if you are a few milliseconds too slow when controlling the robot, it could end up off the course at a distance 100 times its size,” said Maclean. “We do lose the robots from time to time when testing because it’s like trying to find a speck of dust.”

The implications of this performance could lead to progressive leaps in the development of micro-scale applications, including targeted drug delivery, minimally invasive surgery and advanced electronics manufacturing. The Waterloo team defeated six others from Canada, the United States, France and the Czech Republic. This is the second year Waterloo students have won this competition.



*A team of undergraduate students, comprised mainly of Waterloo Engineering students, won an international microrobotics competition in less than one second.*



Word is quickly spreading in global academic and industry circles.

*When the anechoic chamber opens for business this month, researchers will be able to use its equipment remotely.*

## ANECHOIC CHAMBER OPENS TO THE WORLD

**When the Centre for Intelligent Antenna and Radio Systems (CIARS) officially launches its new anechoic chamber this month, it opens the door to one of the most innovative spaces in the world to test electromagnetic devices.**

“Anechoic” means “without echo,” and the chamber, located in the Engineering 5 building, delivers just that: a space designed to completely absorb reflections of sound and electromagnetic waves. The facility, which took five years to build, is a boon for academic and industry researchers who specialize in everything from next generation wireless communications, to mobile health, car radar, satellite communication, futuristic nano-sensors and smart devices, says Safieddin Safavi-Naeini, an electrical and computer engineer professor and the CIARS director.

“The chamber and its instruments can measure electromagnetic fields radiated by objects as tiny as a human hair to as big as a car, with the highest precision over the widest range of frequency possible in any academic facility in the world,” he explains.

The chamber achieves its echo-free status with the help of multi-layers of wall, which includes outer weather-protecting material, another large box crafted from copper, and big, blue, conical, spongy absorbers that line every inch. Not only is it designed to keep out interference from other electromagnetic devices, the chamber creates an open space of infinite dimensions. In other words, it’s a room that, at least according to the instrumentation, seems to go on for infinity.

### A STEP FORWARD FOR WIRELESS

“It’s kind of cool, especially when you close the doors and you realize you’ve disconnected yourself from the rest of the world,” says Sujeet Chaudhuri, co-investigator and co-director of CIARS, who adds that neither a BlackBerry® nor a cell phone will work in the chamber. “When you speak, there’s no echo. Your voice just disappears.”

Although the chamber is set up for research at the University of Waterloo, word is quickly spreading about it in global academic and industry circles.

“We don’t have a website yet and we’re not advertising, but we already have a lot of interest locally and from far away,” says Gholamreza Rafi, the assistant director of CIARS.

Researchers in Hong Kong, Germany and the U.S. have taken notice of the extremely flexible, innovative space, agrees Chaudhuri.

“Wherever I make presentations about our chamber, people say, ‘Wow! We’ve got to see this place,’” he says. “The chamber is a big step forward for wireless communication technology in Waterloo Region and throughout Canada.”



“The MBET program attracts students who are truly passionate about taking ideas from concept to commercialization.”

## CELEBRATING A DECADE OF ENTREPRENEURIAL EXCELLENCE

**Back in 1999, when David Johnston became university president, he dared faculty members to think big. What changes could the university make, he asked, to truly differentiate itself on the international stage? Howard Armitage responded.**

The accounting professor knew Canada had a lacklustre record when it came to translating innovation into business success. He proposed to close that commercialization gap with a unique business program focused specifically on entrepreneurship — a program that could tap into Waterloo’s thriving local start-up culture and marry the best of academia with real-world expertise and mentoring.

Johnston’s response? Do it.

And so the Master of Business, Entrepreneurship and Technology (MBET) program was born. Like many new ventures, it started small: a handful of students tucked away in a basement classroom. But as graduate after graduate sung the praises of the program, word soon spread. In 2006, the program and its centre, now known as the Conrad Business, Entrepreneurship and Technology Centre, joined Waterloo Engineering.

Today, you’ll find students from every corner of the globe flocking to the MBET program. They come from engineering, business, science, computer science, applied health sciences and more. Although the program requires students to have at least one year of work experience after graduating with an undergraduate degree — co-op terms count towards this requirement — some have over a decade. All are brimming with enthusiasm.

The program offers the business basics you’d get from a traditional MBA, from marketing fundamentals to the nuts and bolts of accounting. Unlike an MBA, however, Waterloo’s MBET program is geared to the fast-paced start-up environment.

There’s lots of emphasis on soft skills: the confidence and ability to give effective presentations, work in small teams, network, negotiate and make those all-important pitches to potential investors.

But it’s MBET’s hands-on approach that really sets it apart. At the heart of the one-year program is an intense, eight-month practicum where students turn their business ideas into reality. “We’re creating an environment where they’re experiencing entrepreneurship, not just reading about it and talking about it,” says Doug Sparkes, the Conrad Centre’s interim director.

### LIVING THE ENTREPRENEURIAL LIFE

The eight-month practicum was a key draw for Georgina Divaris (MBET ’13). “It gives you the time to play around with an idea in a safe environment with a lot of support around you,” she says. Divaris and her team spent their practicum working on Milao Language, an online learning tool that allows users to practise a foreign language with an artificially intelligent conversation partner.

Through MBET, Milao Language has been making its mark in the business competition circuit, taking part in events like the TiEQuest Business Venture Competition, the National Business and Technology Conference and LaunchPad50K competition that’s organized by the Golden Triangle Angel Network.

Recently, the company earned a coveted spot in Waterloo’s Accelerator Centre, while its platform will be put to use in first-year Spanish classes starting this month. Meanwhile, Divaris’s classmate Sara Jalali (MBET ’13) is busy finalizing the design of her business, FilmBoxFestival, and talking to investors about it. Jalali arrived from Iran with a clear goal: to create an interactive online venue where independent documentary filmmakers can market their work and fans can see the films they love. MBET taught her the business skills she needed to achieve that goal, but it also gave her a whole lot more.

Jalali has made priceless contacts at Hot Docs, the Toronto International Film Festival and the National Film Board over the

course of the program. But perhaps the most important lesson she discovered was how to come to terms with the uncertainty and fear inherent in creating her own enterprise.

“We learn how to reduce risk, analyze problems and think systematically,” she explains. “But, at the end of the day, nothing will guarantee success.”

And these days Jalali is just fine with that. She has done her market research, created a clear value proposition and crunched all the numbers. Once the website design is complete, she'll be ready to launch FilmBoxFestival and put her business concept to the test. “I'm living the entrepreneurial life and loving it,” she says.



*Recent graduate Sara Jalali is featured on her FilmBoxFestival marketing materials.*

Over the program's 10-year history, MBET alumni have launched more than 50 companies, creating jobs, spurring growth and generating wealth in Canada and around the world. In total, 75 per cent of MBET grads go on to work in start-up enterprises.

Of course, innovation isn't reserved for new ventures like Milao Language or FilmBoxFestival. Intrapreneurship — the idea of driving change and creativity from within an existing company — is another core tenet of the MBET program. Take Farhad Mibody. The 2010 MBET graduate now works for Facebook as a media solutions manager in Toronto, putting into practise the skills he honed at Waterloo.

Mibody credits the MBET program for developing his ability to work in a fast-paced environment where flexibility and fresh ideas are the name of the game. Since he joined Facebook in March 2012, his team has grown from zero to 60 people.

Although he can't say where he'll be five years from now — continuing to work for Facebook, making an impact at another company, or starting his own business — Mibody is confident about one thing. “I will be part of something that will change the way people live,” he predicts. And that's exactly what his education has prepared him to do. “If you want to make a change and you're thinking big, MBET is the right place to go,” he says.

Raymond Reddy, from the second MBET class, used what he learned in the program to help build his highly-successful startup PushLife, an entertainment platform that enables users to extend their existing iTunes and Windows Media Player libraries to their non-Apple phones. In 2011, Reddy's company was acquired by Google for millions of dollars.

## ATTRACTING RESULTS-DRIVEN PEOPLE

This summer, Matt Rendall, both a Waterloo mechatronics engineering and MBET graduate, was nominated as one of the four finalists in the Ontario division of the Young Entrepreneur category of the Ernst & Young Entrepreneur Of The Year Award. Rendall is the co-founder and CEO of Clearpath Robotics, which develops and manufactures unmanned vehicles used for autonomous vehicle research and data collection on land and sea. He gives back to Waterloo Engineering in many ways, including hiring both MBET and engineering students and grads.

“The Conrad Centre has an uncanny ability to attract people who have ‘hustle’ — people who take initiative, who think creatively and who make results happen,” says Rendall. “Knowing this certainly helps us recruit strong candidates for positions at Clearpath Robotics.”

If imitation is the sincerest form of flattery, Armitage, the founding director of the Conrad Centre who was recently named the university's new Special Advisor, Entrepreneurship, should be very flattered. Since MBET's inception in 2003, many other institutions have established entrepreneurship-focused programs of their own. And though the MBET model is often emulated, it's never duplicated. Thanks to a strong emphasis on hands-on learning and the thriving start-up culture of Waterloo Region, MBET continues to fulfill David Johnston's original vision: to make the university a leader in entrepreneurial education.

*Clearpath Robotics co-founder Matt Rendall, both a Waterloo mechatronics engineering and MBET graduate, is a finalist for a Ernst & Young Entrepreneur Of The Year Award.*





*Electrical engineering graduates Victoria Brilz and Kip Fyfe of 4iiii Innovations develop technologies that improve sports performance and make the athlete's world safer.*

## ENGINEERING SUCCESSFUL STARTUPS

**It's not just our Master of Business, Entrepreneurship and Technology grads and students who are leading the entrepreneurial charge. Alumni and students from all of our Waterloo Engineering departments are developing creative business ideas and turning them into flourishing companies.**

4iiii Innovations, a groundbreaking company in Calgary, is changing the way elite athletes are taking to the roads and trails. Runners and cyclists wear the company's Sportiiiis, a device that hooks onto sunglasses and

information appears on the audiovisual display. Colour LEDs and voice prompts track heart rate, speed, cadence and power so athletes can stay in the zone and keep their eyes on the road.

Sportiiiis (pronounced Sport-Eyes) is the brainchild of Victoria Brilz (BASc '85, Elect) and Kip Fyfe (BASc '84, Elect), who married while still Waterloo Engineering students. Brilz, the company's chief marketing officer, says the company's offerings, which also include a high tech heart rate monitor, are garnering attention from coaches and athletes, including Simon Whitfield, Canadian Olympic triathlon champion.

"Any device that can shave seconds off a performance is phenomenal. But anything that can take minutes off is unheard of," she says. "That's why this is so exciting to so many high-end athletes."

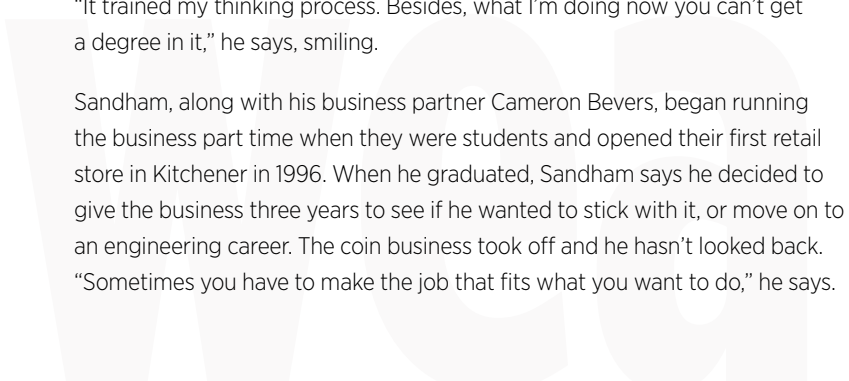
While starting businesses before or after graduation has become a fast-growing trend with current students and recent alumni, Fyfe, the CEO of 4iiii Innovations, and Brilz are just two of the Waterloo Engineering alumni and students who graduated before the past few years to become successful innovators.

## MAKING MONEY WITH MONEY

Todd Sandham is another engineering graduate who has become an accomplished entrepreneur. Sandham (BASc '98, Civil) is the founder and co-owner of Kitchener's Colonial Acres Coins, one of the leading numismatic firms in Canada. Although selling valuable coins and dollars to collectors seems like a world away from engineering, Sandham explains that his education was invaluable.

"It trained my thinking process. Besides, what I'm doing now you can't get a degree in it," he says, smiling.

Sandham, along with his business partner Cameron Bevers, began running the business part time when they were students and opened their first retail store in Kitchener in 1996. When he graduated, Sandham says he decided to give the business three years to see if he wanted to stick with it, or move on to an engineering career. The coin business took off and he hasn't looked back. "Sometimes you have to make the job that fits what you want to do," he says.



## FUND TO SPARK ENTREPRENEURSHIP

A new trust fund to encourage student entrepreneurship has been introduced to help fund Waterloo Engineering innovators. A first in Canada, The Engineer of the Future Trust will provide discretionary micro-seed funding for budding student entrepreneurs at Waterloo Engineering.

"The fund addresses the challenge to incubate student success in a fast evolving global economy," says Engineering Dean Pearl Sullivan.

The funds may be disbursed to assist students with their Capstone design projects or accessed by Waterloo Engineering teams.

*Terry Cunningham  
(BASc '83, Mech), the  
President and General  
Manager of EVault  
(a Seagate Company)  
launched our Engineer  
of the Future Trust with  
a pledge of \$50,000.*





## CHOCOLATE SELLS

Brian Luptak (BASC '13, Mtron) knows what success smells like: chocolate. He, along with Andy Vopni, Ben Cousins and Nima Majidifar, who also all graduated with degrees in mechatronics engineering in June, developed 3D Chocolateering as their fourth-year design project.

The group created the first Selective Laser Sintering 3-D printer that can form solid objects by thermally bonding chocolate powder. Luptak imagines there will be demand for personalized chocolate from chocolate makers and cake decorators. Ontario Premier Kathleen Wynne even crossed a crowded room at the Ontario Centres of Excellence Discovery Conference in May to check it out and ask questions.

"Chocolate sells," Luptak explains. "If we had used plastic or another material, I don't think so many people would be interested. It doesn't hurt to have 'chocolate' in your name!"

## HITTING A MARKETPLACE PAIN POINT

After Beth Nenniger and Laura Austin graduated from the School of Architecture this year, they moved into the VeloCity Garage and got straight to work building their startup. DraftingSpace connects homeowners who are looking to renovate with freelance designers through an open competition platform. Designers submit entries and the homeowner chooses a winner and pays out the prize money.

Although still in its initial stage, Austin says the pair is already receiving positive feedback.

"Even with no advertising, homeowners are finding our website and requesting contests, which really proves we've hit a pain point in the marketplace," she says.

## CREATING OPPORTUNITIES

Not all startups are businesses. Minna Allarakhia, who earned her master's degree and PhD in management sciences from Waterloo and is a management sciences instructor, launched BioEndeavor in 2102, a registered non-profit organization. The think tank studies and enables innovation in the life sciences in places such as Tanzania, Kenya, Uganda and India.

A goal is to ensure that a scientist in, for example, Tanzania, who may not have an infrastructure to support new ideas and research, can still contribute knowledge and collaborate.

"It's about innovation at the bottom of the pyramid and creating opportunities to really make a difference," she says.



*For four 2013 mechatronics engineering graduates, 3-D Chocolateering is delivering sweet results.*

## PUSH MEASURES STRENGTH

Like Brilz and Fyfe at 4iiii Innovations, Rami Alhamad (BASC '08, Mtron) and Suresh Joshi (BASC '08, Mtron), founders of PUSH in Toronto, are also coming up with ways to make a difference for athletes. But rather than focus on speed, their product tackles strength. The PUSH band is a hardware device that tracks and analyzes weight-training performance and can show users how they've improved over time. The idea came to Alhamad a few years after he graduated and his former classmate, Joshi, joined him soon after.

If he were to give advice to young entrepreneurs, Alhamad suggests taking entrepreneurship courses at school.

"Don't think twice! If you have a cool idea, talk to others about it and don't keep it locked in a drawer. Don't forget to talk to your professors as well. We have some of the best ones in the world at Waterloo," he says.

*Architecture graduates Beth Nenniger and Laura Austin's new company helps homeowners connect with freelance designers.*



## RAISING THE WATERLOO BRAND IN ASIA

**Hong Kong may seem a world away from Waterloo, but Jason Chiu is bringing the locations together through his entrepreneurial drive.**

Chiu (BASc '94, ECE) is chief executive officer of The Cherrypicks Group, a leader in mobile marketing in Hong Kong and the Asia-Pacific region that connects marketers and brands directly with customers. It's also a Red Herring Asia 100 and Deloitte Technology China Fast 50 company and the winner of multiple media and technology awards.

Chiu's professional success can be traced back to his co-op terms where he worked at hardware, software and consulting firms before he took a job at Deloitte Consulting after graduation. He earned the trust of CEOs as part of Deloitte's Hong Kong/Asia Pacific High Tech and Telecom Industry Group and picked up invaluable training. Still, rather than offering strategic advice, he wanted to put it into practise.

"My real passion lay in creating an original product or business with a vision that can provide a positive impact on people's lives," he says.

That vision also has to deliver fun. One of the company's most recent products is iButterfly, a coupon entertainment app where consumers download coupons with a flick of a smartphone to capture digital butterflies. So far, over 300 million iButterfly coupons have been distributed in 12 countries.

Even with his busy schedule, Chiu has found time to give back to the University of Waterloo. Two years ago, he helped University President Feridun Hamdullahpur open the new Waterloo office in downtown Hong Kong to support the 1,500 Waterloo graduates living and working in Hong Kong, as well

as the more than 2,800 Asian students enrolled at Waterloo. In July, he travelled to Silicon Valley, Victoria BC and Waterloo primarily to meet and recruit University of Waterloo engineering students and graduates for his company. It was his first trip back to campus in over 16 years.

"It seems that Waterloo is one of the best kept secrets in Asia-Pacific," he says. "I wish to keep raising the profile and brand of our great school."

### A NEAT SYNERGY BETWEEN BIKES, AIRPLANES AND ENGINEERING

Antony Pringle (BASc '92, Mech) is another engineering graduate living and working in Hong Kong, although you're just as likely to find him flying down the road on his bike in a foreign country or above the clouds in an airplane's cockpit.

Pringle's interest in mechanics and passion for speed led him to engineering and he's now an Airbus A330 and A340 pilot with Cathay Pacific Airways spending 15 days a month in the air. The rest of time is spent recuperating from jetlag — and working as one of the busiest certified bike fitters in Asia, helping athletes hit their riding goals by fitting the best bikes for their body movements.

"There's a neat synergy between bikes, airplanes and engineering," says Pringle who owns Bike Energy Lab Ltd. "Bike fitting is about ergonomics, which I studied at Waterloo. And the fitting of man to machine, another engineering discipline, is an essential facet of aviation."

Pringle stays up to date with Waterloo Engineering by connecting with former classmates through Facebook. His next goal? To attend one of the Hong Kong alumni events.

"I've been meaning to," he says. "And I soon will!"

"It seems that Waterloo is one of the best kept secrets in Asia-Pacific."



*Jason Chiu, left, chats with Paul Rondeau, an electrical and computer engineering student, at the VeloCity pitch competition held on campus at the end of July.*

# CLASS NOTES

## 1960

**John Roper** (Elect '62) continues to sail the coastal seas of British Columbia as a skipper and instructor on a 37-foot cutter based at Gibsons Landing, near Vancouver.  
[www.sailcruise.net](http://www.sailcruise.net)

## 1963

**CLASS REUNION – 50 YEARS**  
**SEPTEMBER 27-29, 2013**

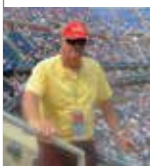
## 1964



**Robert Korol** (Civil '64, '67) lives in Dundas, ON. A civil engineering faculty member at McMaster University from 1967 to 1998, he is now a professor emeritus. His

research interests have been in the area of structural mechanics and steel structures. He investigated the sudden collapse of Fredericton's conical-shaped water tower in 1990 and is currently identifying ways of preventing similar disasters from occurring.  
905-628-2677

## 1966



**Robert Tribe** (Civil '66) who lives in Anmore, BC with his wife of 49 years, Camille (MA '66, History), retired in 2002 as a member of the office of the president of SNC-Lavalin.

Robert and Camille spend much of their time on their boat enjoying BC's West Coast.  
[rctribe@gmail.com](mailto:rctribe@gmail.com)

## 1968

**CLASS REUNION – 45 YEARS**  
**SEPTEMBER 28-29, 2013**



**Ralph Haas** (Civil '68) retired in 1996 as Norman W. McLeod Engineering Professor and Distinguished Professor Emeritus from Waterloo. Still involved with research and

graduate student supervision, he has authored or co-authored 10 books and over 400 technical papers, and consults and lectures widely. He is a Member of the Order of Canada, and is a fellow of the Royal Society of Canada, the Canadian Academy of Engineering, the Engineering Institute of Canada, the American Society of Civil Engineers, and the Canadian Society of Civil Engineering.



**David Shaver** (Elect '68) retired after more than 30 years at Black & Decker. A self-described "closet crowbar" he is now repairing old mechanical clocks and enjoys seeing 100 plus-year-old clocks come alive again.

## 1969



**Tom Clyde** (Civil '69) says he and his wife Nina have both been "fired" by their oncologist. Now officially retired, they live in the Murray

Hills above Trenton, ON and travel south at least once every year.



**Bob Jonkman** (Mech '69) retired this past summer after 43 years of working for Fiberglas Canada/Owens Corning in various capacities. He is now enjoying his seven

grandchildren, helping out his children and doing the many home improvement projects he has put on hold for several years.  
[bgjonkman@rogers.com](mailto:bgjonkman@rogers.com)

## 1970

**Wes Darou** (Mech '70, '73) retired from the Canadian International Development Agency and reports his retirement speech has logged over 3,200 hits: <http://community.eldis.org/wesdarou>

**Allan Faubert** (Mech '70, MSci '81) retired in October 2012.  
[allanfaubert2001@rogers.com](mailto:allanfaubert2001@rogers.com)



**Dean Flathmann** (Mech '70) worked for 33 years as an engineer in Ontario and Alberta for four different companies in the petroleum business. He retired as an engineer in 2010

and now works part time at a Lowe's Home Improvement store in Calgary. He and his wife look forward to traveling much more than they do now when Dean retires a second time!

**Raj Gupta** (Elect '70) retired from a solar energy company in 2007. He reports that in 2012 he was diagnosed with early stage pancreatic cancer, but was successfully treated for it. He says his wife, son and daughter provided psychological support during his treatment.  
[rkg2020@yahoo.co.in](mailto:rkg2020@yahoo.co.in)



**Jostein Hellesland** (Civil '70) retired in February 2013 as a professor of solid mechanics at the University of Oslo, a position he had held since 1988. Bridges, offshore structures

and development of design recommendations have been among his key research interests.  
[jostein@math.uio.no](mailto:jostein@math.uio.no)



## A MEDAL-WINNING LOCAL HERO

Just as **Tom Boughner** (BASC '70, Chem) was beginning to enjoy the third summer of his retirement with his wife on Vancouver Island, he received a call from a good friend and former colleague that swung him from relaxation mode directly into recovery management.

Brian Vance, the CAO of Slave Lake, contacted Boughner in May 2011 to ask him to help out after wildfires destroyed a third of the Alberta community, resulting in \$700 million in damage. Boughner, of Arbutus Ridge, Cobble Hill, BC, said yes and became Town Recovery Manager for Slave Lake.

"My friend had previously been second-in-command of my management team for nine years," says Boughner, who for 35 years served in leadership roles in chemical pulp mills across Canada. "He needed someone to accomplish what he'd seen me do while we worked together."

The anticipated one to six weeks of work turned into 12 as Boughner organized recovery action plans, as well as the restoration of water, sewer, gas, electric and other services — all on top of boosting the morale of the citizens of Slave Lake. "It was an intense, energizing and life-altering experience," he says. "But all along I felt it was simply the right thing to do."

For his efforts, Boughner was recently awarded the Queen Elizabeth II Diamond Jubilee Medal and the Slave Lake Medal of Honour. Called a "local hero" by his area newspaper, Boughner has returned to retirement, but with a new role — he's now an emergency preparedness crusader for his community.



**Larry Koehle** (Civil '70) was active in the American Public Works Association for over 35 years, serving as its president in 2010. Larry recently retired to golf and winter in Florida.  
[ltk@rogers.com](mailto:ltk@rogers.com)



**Jan Koreska** (Civil '70, Mech '72) lives with his wife Margrete in Paso Robles. In 1992, Jan established Jantek Engineering Inc., which specializes in biomechanics and pediatric

orthopedic implants. He has worked in designing and developing the implants at The Hospital for Sick Children in Toronto and the Shriners Hospital in LA. Now manufactured in Burlington, ON, the implants are distributed to children's hospitals worldwide.  
[jan@koreska.net](http://jan@koreska.net)

**Andy Kramer** (Chem '70) moved to St. Stephen, NB a year ago when his wife accepted a teaching position at St. Stephen's University. Before the move, Andy had been working for a small environmental engineering firm in Ontario for 12 years. He spent two weeks volunteering on Staten Island, helping to restore houses that were damaged by Hurricane Sandy.



**Ole Kristensen** (Mech '70) has retired and is living in Florida.  
[olek911@aol.com](mailto:olek911@aol.com)

**Bruce Morgan** (Civil '70) is winding down his Ottawa-based patent practice. While preparing for retirement in 2014, he is ramping up his work as Canadian President and International Director of AIPPI. His family now includes four mature children, four grandchildren and four dogs disbursed between Ottawa and Toronto.  
[bruce.morgan@gowlings.com](mailto:bruce.morgan@gowlings.com)



**Brian Ross** (Elect '70) is a member of two committees — Discipline and Professional Standards — with Professional Engineers Ontario. He is also a member of a CSA Canadian

Electrical Code sub-committee. Earlier this year, he completed an electrical construction management assignment as part of the revitalization of Union Station in Toronto.  
[l.b.ross@sympatico.ca](mailto:l.b.ross@sympatico.ca)

## 1971



**Bob Pronovost** (Elect '71) semi-retired last year after a long career in the mining industry. Bob says Waterloo's co-op program was pivotal to his career

because it instilled in him the true value of applied engineering. Bob and his wife Judy are now enjoying travelling and visiting their grand and great-grandchildren.



**Pakhal Reddy** (Elect '71) worked for the Indian Space Research Organization, Government of India for 29 years before retiring in December 2001. He lives in

Bangalore, India.  
[pkreddyind@yahoo.com](mailto:pkreddyind@yahoo.com)



**Michael Whittaker** (Mech '71, '74) retired in December 2011. He and his wife now spend their summers at their home on Grand Island near Buffalo, New York and their winters in

Florida. Michael keeps busy with his current hobby — restoring a 1969 corvette.

## 1972

**Norbert Bell** (Chem '72) officially retired in July 2011 after 50 years of professional practice. His company requested that he stay on and work part time and so he is now employed half time.



**Eric Bierman** (Elect '72) retired from Nortel in 1997 after 35 years and now stays busy with volunteer work. He spends his winters in Cuernavaca, Mexico and

summers in Ottawa.  
[bierman@annmanor.ca](mailto:bierman@annmanor.ca)



**Bill Crawford** (Mech '72) retired in 2012 after 35 years as a research scientist at the Institute of Ocean Sciences in Sidney, BC. He lives with his wife Angelica near Victoria, BC and continues to stay active in the ocean sciences community when he is not golfing.



**Tom Donnelly** (Chem '72) moved with his wife Gail to their summer home in Mckellar, ON, near Parry Sound after retiring from

full-time teaching in 2002. He now teaches part time for Canadore College at its Parry Sound campus.

## 1973

**CLASS REUNION – 40 YEARS  
SEPTEMBER 28-29, 2013**



**Ron Glowe** (Civil '73) is still active as a blasting engineer. He recently returned from Mauratania in North Africa where he was hired to prepare a four-day drilling

and blasting course on North American mining practices to present to engineers working at the SNIM iron mines that are 650 km inside the Sahara desert. He is now working with Nalcor on the Muskrat Falls hydro project in Labrador. Ron is semi-retired and enjoying his first grandson named Mathieu.

**James Hogan** (Chem '73) has been working as a co-op student adviser at the University of Waterloo for over a year and says he loves every minute of it.



**Bill McCurdy** (Chem '73, '75) and his wife spent a week in January enjoying the desert and mountain scenery in Death Valley National Park. He reports that it was thrilling

to walk among sand dunes at dawn and then have lunch on the summit Wildrose Peak.



**Robert Miller** (Civil '73) recently retired as manager of research and development for Harsco Rail in Columbia, South Carolina after 42 years of co-op

and full-time employment. He says he's looking forward to yard work, working as a church youth adviser, travelling and volunteering.  
[rmiller84@sc.rr.com](mailto:rmiller84@sc.rr.com)

## 1974



**Keith Farndale** (Civil '74) continues to lead his project management consulting and training practice Procept Associates. This year, his business took him to training

assignments in Ghana and Trinidad. He and his wife Sue are investigating potential future retirement locations in Mexico and other southern locations.



**Dave Morgan** (Chem '74) has settled in Arnprior, ON after a 36-year career in the public and private sectors. He is a board member of the Galilee Mission Centre and is

active in the Knights of Columbus. He and his wife Marie have two grandsons who love to visit.  
[morganmorgandw1@gmail.com](mailto:morganmorgandw1@gmail.com)



**Roy Timms** (Civil '74) is president of Timbro Design Build Contractors, Timbro Refrigerated Structures and R.T. Engineering & Design. Roy is a Rotarian and a member

of organizations such as Welland Recreational Canal Corp., Welland Development Commission, Niagara Economic Advisory Council, and Niagara Industrial Association.

He is also vice-chair of the Design Build Institute of Canada and Director of the Ontario General Contractors Association.

[info@timbrodesignbuild.com](mailto:info@timbrodesignbuild.com)

## 1975

**Ron Mitchell** (Civil '75) is managing Ausenco's Heavy Haul Rail and Road Systems Group after working with Transport Calgary and the Canadian Pacific Railway. He reports that he and Barb (Math '74) are in Perth, Australia, for a six-month stint to build their global reach in railway engineering/construction into the APAC region.

**Jim Shook** (Civil '75) recalls being one of the older students when he was at Waterloo in the 1970s — he celebrated his 89th birthday on December 27, 2012. Jim says that he looks back with pleasure on his years in Waterloo. He reports that he has "retired" three times and the last time was for good.



**Geoff Tigg** (Mech '75) is a retired business executive and business consultant who lives in White Rock, BC, enjoying his time at home with his wife

Diana, a retired teacher. Now a novelist, Geoff started to publish the first of five fictional novels this past spring.

[www.rushingtidemedia.com](http://www.rushingtidemedia.com)

## 1976

**Joseph Debanne** (MSci '76) was awarded the Queen Elizabeth II Diamond Jubilee Medal in October 2012 for his pioneering work in digital electronic computers and his contributions to his Lebanese Melkite church and community.



**Dave Good** (Mech '76) is the father of twins — a son who is in mechanical engineering at Waterloo and a daughter who is at Wilfrid Laurier University. Now retired, Dave is enjoying a “second career” as a vintage sports car racer.



**John Samuel** (SD '76) retired in 2012. He and his wife Heather have two children, Kate and Ben, and live near Kew Gardens, outside London, England. John

occasionally blogs at [www.gramachree.co.uk](http://www.gramachree.co.uk)



**Bernie Sander** (MSci '76) reports that his company, Innovation Transfer, runs five-day idea generation workshops called PiT-Stop — problem finding, structuring and solving — around the world.

[bsander@innovationtransfer.com](mailto:bsander@innovationtransfer.com)

## 1977



**Stan Devries** (Elect '77) is a chief solutions architect for a global specialty engineering and technology firm. He is also involved in missionary work at home and overseas.

## 1978

### CLASS REUNION – 35 YEARS SEPTEMBER 28-29, 2013

**Robert Inkol** (Elect '78) retired in September 2012 after serving 34 years as a Defence Scientist with Defence R&D Canada. Last November, he was awarded the Queen Elizabeth II Diamond Jubilee Medal in recognition of his scientific contributions.



**Ashok Kumar** (Mech '78) recently co-authored a book called *Energy Assessments For Industrial Complexes*, published

by Bentham Science Publishers.  
[akumar@utoledo.edu](mailto:akumar@utoledo.edu)



**Rick Vender** (Mech '78) retired from his work in engineering design and engineering management in 2011. Since then, he has been busy travelling and

volunteering with the York Chapter of PEO and as an Engineer in Residence in a Markham, ON elementary school. He also operates a small part-time business helping engineers make successful career moves.  
[rickvender@rogers.com](mailto:rickvender@rogers.com)

## 1979



**Dharamvir Prasher** (Elect '79) reports that he's worked with DeVry since 1981. He is currently completing a graduate degree at Villanova University in Philadelphia.

**Jacques Ribout** (Mech '79) has taken on a new challenge of organizing maintenance and infrastructure upgrades to three health care facilities.

## 1980



**William Rule** (Civil '80) is working for John Deere in Waterloo, Iowa doing finite element analysis of large tractor components using ANSYS Workbench.

**Wayne Shaw** (Mech '80, '88) retired from Honda Canada after 25 years and now works part time for Deloitte as an SR&ED practitioner.

## 1981

**Jeff Robillard** (Elect '81) began working this year for Pleora Technologies as a product manager. The company makes video interfaces, camera sub-systems and networking components for vision systems employed in medical, industrial and military applications.  
[jeffrey.robillard@gmail.com](mailto:jeffrey.robillard@gmail.com)

**Brigitte Shim** (Arch '81, '83) and **Arthur (Howard) Sutcliffe** (Arch '83), both of Shim-Sutcliffe Architects Inc., were named Members of the Order of Canada.



**Brian A. Smith** (SD '81) is the general manager at Raytheon Canada Limited in Waterloo, which employs 218 employees and specializes in

solid-state air traffic control radar systems and services and integrated maritime surveillance systems. As well as his systems design engineering degree, Brian holds a master's degree in business administration from Wilfrid Laurier University.

**Michael Steele** (Civil '81) is president/CEO of a restructuring oil and gas syndication. He lives half time in Canada (Toronto and Calgary) handling energy initiatives and the other half in Arizona for the company's mining business in Mexico and South America.

## 1982

**David Peate** (SD '82) works for a boutique firm as a consultant to the federal government. He performs program evaluations, strategic planning and process design.

## 1983

### CLASS REUNION – 30 YEARS SEPTEMBER 28-29, 2013



**Bill Johnstone** (SD '83, '85) completed his PhD in civil engineering at the University of British Columbia in 2012. He developed an approach to assess the effectiveness

of Community Protection Systems to mitigate loss of life due to extreme natural, technological and wilful hazards. His methods have been used to analyse dam failure events in Canada, the United States and Europe, and to support tsunami emergency preparedness on Vancouver Island.  
[bill.johnstone@spatialvisiongroup.com](mailto:bill.johnstone@spatialvisiongroup.com)

## 1984



**Gordon Dey** (Elect '84) reports that he's proud to be driving a battery-powered electric vehicle (a Nissan Leaf) around Waterloo Region.

**Frank Gerencser** (SD '84), the chairman and CEO of triOS College, is proud of the following achievements: the celebration of triOS College's 20-year anniversary, triOS being named one of Canada's Best Managed Companies for the third year in a row, as well as being awarded the Queen Elizabeth II Diamond Jubilee Medal for his ongoing contributions to the private career college sector.



**John Mason** (Elect '84) has been working for the past 11 years as a senior electrical engineer at Molson Coors Canada. He says that the free beer is just icing on the cake.



**Jeff Newfeld** (SD '84) says that after a year of retirement and two years of working on a startup, he accepted a position as director of software

development for Spacelabs Healthcare. Jeff and his family live east of Seattle and raise chickens and Nigerian dwarf goats.  
[jeff\\_newfeld@hotmail.com](mailto:jeff_newfeld@hotmail.com)



**Leslie Woo** (Arch '84) reports that as Toronto's Metrolinx vice president of policy, planning and innovation, she leads

The Big Move — a 25-year transportation plan for over \$16B in transit expansion. She is a corporate champion for Innovation, Design Excellence, Accessibility and Women's Leadership. Leslie is mother of Laurin Benson, who graduated from Waterloo's chemical engineering program this year and Evan Benson, candidate for BES '16.  
[leslie.woo@metrolinx.com](mailto:leslie.woo@metrolinx.com)

## 1985

**Susie Costello** (Mech '85) is working as a psychotherapist in private practice in Toronto.



**Rumki Mukutmoni** (SD '85) reports that this past March break she and her family rented an apartment in Rome close to the Trevi fountain and within walking distance to major sites.



**Modya (Mark) Silver** (SD '85) is taking a break from running a charity in Toronto to trek in Nepal with his twins to fulfill a 21-year promise to them!

[modya@madrega.com](mailto:modya@madrega.com)

## 1986



**Joanna Kervin** (Civil '86) reports that she has been working as director, third party, on the TTC's Toronto-York Spadina Subway Extension for the past four

years. As part of her job, she participated in a program to encourage students to keep taking math so that they can consider careers in areas like subway designing and building.  
[joanna.kervin@ttc.ca](mailto:joanna.kervin@ttc.ca)



**Mike Thomas** (SD '86) sold his businesses and for the first time in many years is working for someone else — a software startup in Austin, Texas. He and his wife split their time

between Austin and Cambridge and work on international development projects.  
[mthomas@noesis.com](mailto:mthomas@noesis.com)

## 1987

**Duncan J. Gibbons** (Mech '87) says that he and his wife Karen are selling their house in Whitby and are heading to Ottawa, where he has worked for Optelian since 2011.  
[djgibbons@rogers.com](mailto:djgibbons@rogers.com)



**Cathy Wilton-Bransch** (Mech '87) has lived in Cleveland since finishing her MBA at the University of Michigan. She works for Progressive Insurance and her husband,

**Harald Bransch** (Mech '88, '91), works for an industrial robotics company.

## 1988

**CLASS REUNION – 25 YEARS  
SEPTEMBER 28-29, 2013**

## 1990

**Joe Seymour** (Mech '90) reports that he feels old after his second son was accepted into Waterloo's mechanical engineering program.

## 1991

**Gregory Cook** (Civil '91) is an entrepreneur active in several new projects in consulting engineering services, land development, and civil infrastructure asset management. A member of the Ontario Society of Professional Engineers, he is an elected board member and chairs two task forces.  
[gcook100@hotmail.com](mailto:gcook100@hotmail.com)

**Gordon Meth** (Civil '91, '92) was recently elected as secretary/treasurer of the Northeast District of the Institute of Transportation Engineers and last year was appointed to a three-year term on the Transportation Professional Certification Board. Gordon is the director of traffic engineering at The RBA Group in Parsippany, NJ.



## TURNING WASTE INTO ENERGY

Although magician isn't part of her job title, **Dianna Foldi** (BArch '90) knows how to transform forestry waste into green energy. As project manager for Infrastructure Development at the University of British Columbia, Foldi oversaw the design and construction of the on-campus Bioenergy Research and Demonstration Facility — the first of its kind in North America.

The magic happens in a 21,000-square-foot "shed" made from glulam structure, glass and eco-friendly cross-laminated timber panels. Inside, bark and tree trimmings are superheated, creating synthetic gas. With the system in thermal mode, the syngas fuels a boiler that supplies 18 per cent of campus heating needs.

For real innovation, however, switch the facility to "combined heat and power." In this mode, the syngas drives an engine that powers a two-megawatt generator. Meanwhile, waste heat is channeled into the district heating system. Net savings: an impressive 5,000 tonnes of greenhouse gases a year.

Although external architects designed the building, Foldi used the critical thinking and collaborative skills she honed at Waterloo to shepherd the project to completion. "It's by far the most challenging project that I've ever been involved with," she says.

The \$28-million facility opened in late 2012 and attracts visitors from around the world. But what really inspires Foldi is seeing the industry partners who developed the technology discussing improvements with UBC faculty, students and operations staff. "It truly is a living lab," she says.



**David Ross** (Comp '91) is CEO of his family company, Ross Video. Under his leadership, the company has grown from 25 to almost 500 people and

has enjoyed 22 straight years of increasing sales. He says if you watch TV, you're probably watching Ross Video's video mixers, control systems, virtual reality graphics, robotics, fiber optics and more.

## 1993

**CLASS REUNION – 20 YEARS  
SEPTEMBER 28-29, 2013**

**Jeanette Fooks** (Geo '93) is the reunion class rep for the geological class of 1993.  
[519-579-0774](tel:519-579-0774)

**Tony Savor** (Elect '93, '97) recently started working for Facebook in California in infrastructure engineering.

[tony\\_savor@hotmail.com](mailto:tony_savor@hotmail.com)

**Jacob Scharcanski** (SD '93) is a faculty member at the Departamento de Informatica Aplicada Instituto de Informatica, Universidade Federal do Rio Grande do Sul, and is also an adjunct faculty member of Waterloo's systems design engineering department.

[jacobs@inf.ufrgs.br](mailto:jacobs@inf.ufrgs.br)

**John Zufferli** (Mech '93) retired from Wall Street and Bay Street in 2011. He completed a BEd degree and is now teaching high school math and business with the Toronto Board of Education.

## 1994

**Marcelo Alencar** (Elect '94) is currently chair professor at the Department of Electrical Engineering, Federal University of Campina Grande, Campina Grande, State of Paraiba, Brazil. He is also president of the Institute for Advanced Studies in Communications and vice-president of the Brazilian Telecommunications Society. Marcelo just published his 15th book, entitled *Computer Networks Engineering* written in Portuguese and his 350th scientific article.

**Osama Bakir** (Civil '94) is the president and CEO for an international PM Consulting and Training Company based in Toronto, which he founded in 2003.

[osama.bakir@pmctquest.com](mailto:osama.bakir@pmctquest.com)



**Chris DeBrusk** (SD '94) reports that in the spring of 2011, he joined two former colleagues, including **Rob McGeachy** (SD '94), to start a consulting firm called

Waterline Group based out of New York and Toronto. Earlier this year, they sold the company to Rule Financial, a global capital markets consulting firm. Chris is now heading up the firm's North American operations.

[chris.debrusk@rulefinancial.com](mailto:chris.debrusk@rulefinancial.com)

## 1995



**Jerry Van Kooten** (Civil '95) started a construction drilling and shoring company called Earthline Foundations and Shoring Limited that offers drilling, earth retention

and foundation solutions to all sectors of the construction industry. The company has worked on projects across the GTA such as the Spadina Subway Expansion, Union Station Revitalization and the Pan Am Athletes Village.

[jvankooten@elfoundations.ca](mailto:jvankooten@elfoundations.ca)



**Jeffrey Veffler** (Arch '95) realized after working for almost two decades in corporate positions at the Discovery Channel, Bell Canada

and Air Miles that his true passion was still with architecture. His realization led him and an architecture classmate to launch Incite Design.

[Jeffrey.veffer@incited.ca](mailto:Jeffrey.veffer@incited.ca)

**Graham Whiting** (Arch '95) works in Waterloo at his company Whiting Design. He's thrilled to be teaching in the University of Waterloo's School of Environment, Enterprise and Development and to be chair of the board of directors for CAFKA.

[graham@whitingdesign.ca](mailto:graham@whitingdesign.ca)

## 1996



**Donna McHardy** (Chem '96) is married to Ian McHardy (BMath '95) and has two daughters. Donna is the board chairman at

Foundation Christian School, which her daughters attend, and serves on the board and the finance team of her church, Calvary St. Jacobs.

## 1997

**Tejesh Makanawala** (Comp '97) is working as an electrical engineer at Bentek Solar in San Jose, California. He finished a part time MSEE and is currently working part time towards an MBA.

650-968-4315



**June Yu** (Mech '97) reports that after graduation she worked with COM DEV Ltd. and Xerox Canada Ltd. She has now found her "true calling" and is a sales

representative with Century 21 Millennium Inc.

[june.yu@century21.ca](mailto:june.yu@century21.ca)

## 1998

**CLASS REUNION - 15 YEARS  
SEPTEMBER 28-29, 2013**



**Alexander Ferworn** (SD '98) is a professor in the Department of Computer Science at Ryerson University, as well as Associate Chair and Graduate Programs Director.

His areas of research include computational public safety.

[afferworn@scs.ryerson.ca](mailto:afferworn@scs.ryerson.ca)

## 1999



**Christine Cheng** (SD '99) moved to London to start a new job teaching in the War Studies Department at King's College. For the past 10 years, she conducted

research on peacekeeping and post-war transitions.

[www.christinescottcheng.wordpress.com](http://www.christinescottcheng.wordpress.com)



**Nyall Engfield** (Elect '99) works as a patent attorney specializing in the fields of electrical and mechanical inventions, as well as software. He started the

firm Engfield Patents and Trademarks and represents small to mid-size companies as well as solo inventors.

## 2000



**Edward Kim** (SD '00) recently resigned from his position as executive director at Morgan Stanley to take on a new role as a user experience design director at Fidelity

Investments. He and his wife, Claire, and their one-year-old son live in Brooklyn, NY.

[eddy@eddykim.com](mailto:eddy@eddykim.com)

**Shannon McLaren** (SD '00) and her husband Phil Rohtla are pleased to announce the birth of their son, Jack Endel McLaren Rohtla, born in February 2013.

[shannonjmlaren@hotmail.com](mailto:shannonjmlaren@hotmail.com)



**Raymond Wong** (Civil '00) is now working in Hong Kong for MVA Hong Kong Ltd.

## 2001

**Srikant Cheruvu** (Comp '01) works in New York as a patent litigation associate at the law firm of Kenyon & Kenyon and his new wife Kavya works at an investment bank.

[scheruvu@gmail.com](mailto:scheruvu@gmail.com)



**Diliny Corlosquet** (Chem '01, '04) relocated from Galway, Ireland, with her husband to Boston, MA in 2009. Her family has since expanded to include a two-year-old

son and a pointer lab. She's currently working as product manager for BioRAFT, a startup specializing in laboratory safety and compliance software.

[dcorlosquet@gmail.com](mailto:dcorlosquet@gmail.com)



**Elsa Lam** (Arch '01) is the new editor-in-chief of Canadian Architect magazine.

[elam@canadianarchitect.com](mailto:elam@canadianarchitect.com)



**Jeff Meister** (Elect '01) lives in Toronto and is the new father of Annique Juno Ng Meister. [jmeister@alumni.uwaterloo.ca](mailto:jmeister@alumni.uwaterloo.ca)



**Richard Zheng Wang** (Mech '01) finished an MBA degree while working as a nuclear engineer and graduated last year from Vancouver Film School's film

production program. Over the past year, Richard directed four short films and a live performance gala. He's currently working on two feature documentaries and is writing two books. Besides his engineering day job, he runs a multimedia production company on weekends. [www.trexmultimedia.com](http://www.trexmultimedia.com)

## 2002



**Domenic Cina** (Mech '02) works as an engagement manager in the strategy group at Deloitte Consulting. He graduated with an MBA from the University of Chicago in 2009 and currently lives in Chicago.

## 2003

### CLASS REUNION - 10 YEARS SEPTEMBER 28-29, 2013



**Wafeeq Ajoor** (Elect '03) works with the National Health Regularity Authority (NHRA-Bahrain) as an executive IT adviser. He is the recipient of the prestigious

Canadian Wireless Telecommunications Association award and has been a Senior Member of the IEEE since 2009.



**Remona Basur** (Elect '03) recently returned to Waterloo after working at Honeywell, Alcatel and L3 Wescam and travelling to countries including China, Vietnam, Cambodia and Malaysia.



**David de Koos** (Mech '03) says he recently married, bought a condo in Montreal, finished his MBA, started a new job with Easton Sports and moved to California!

[dave.dekoos@gmail.com](mailto:dave.dekoos@gmail.com)

**Kevin Hofstee** (Comp '03) reports that after eight years in the video game industry at Electronic Arts in Vancouver, he returned to school to complete an MBA at the UCLA Anderson School of Management. He recently joined Deloitte Consulting in Los Angeles.

**Erik Walle** (Comp '03) married his sweetheart of five years and is now living in Richmond, BC. His startup just launched its first product. <http://battlemines.com>

## 2004



**Alexander Cicuttini** (Geo '04) recently moved with his new wife Catherine to Calgary where he is a project engineer with Shell.

## 2005



**Vic Beaumont** (Chem '05, '08) says since completing post-grad studies, he's worked in the water/wastewater industry in the GTA. [Vic.Beaumont@gmail.com](mailto:Vic.Beaumont@gmail.com)



**Paul McKinnon** (Mech '05) married Ashley Letsch last September and works as a project engineer with the Facilities Management Group at the Region of Waterloo. [pmmckinnon@gmail.com](mailto:pmmckinnon@gmail.com)

**Trevor Clark** (Mech '05) has two children and works for Vari-Form Inc. as a project engineer for new process development.

**Erik Wilhelm** (Chem '05, '07) is a faculty member at the Singapore University of Technology and Design in the Engineering Product Development pillar. He has started hiring Waterloo co-op students to help his group with its research on vehicle control

and transportation system design. [erikwilhelm@sutd.edu.sg](mailto:erikwilhelm@sutd.edu.sg)

## 2006



**Charles Hua** (Chem '06) is working at General Motors' Milford Proving Grounds in Milford, Michigan. He is a high voltage battery performance integration engineer for future hybrid and electric vehicle programs, and travels with the vehicle teams to various destinations for development.



## SHE'S UP TO FUNNY BUSINESS

Meet management sciences grad **Julie Kim** (MEng '07) while she's wearing her healthcare consulting hat and the conversation might revolve around the latest medical technology. But head down to the local comedy club later that same day and you'll see her joking about her trials and tribulations growing up as a chubby kid in Toronto.

Kim credits her interest in comedy to a steady diet of Saturday Night Live and MADtv. Since her debut in 2010, she has worked her way from appearing in small local bars to a gala performance at the 2012 Halifax Comedy Festival that aired on CBC. Along the way, she garnered a Canadian Comedy Award nomination for best stand-up newcomer.

Pursuing parallel careers as a consultant, university lecturer, workshop facilitator and comedian isn't easy. Her secrets? Flexibility, plus superhuman focus — although that last part isn't going perfectly, she admits.

For Kim, stand-up offers a chance to make people laugh and exercise her creative talents. "Few things make me as excited as when I come up with a great new joke," she says.

Look for her at the Edmonton Comedy Festival taking place this October. Just remember: if you feel the urge to heckle, don't. "It's not an appropriate thing to do," Kim says. "After all, you wouldn't go to the symphony and start playing your own tuba!"

## 2007



**Mubarak AL-Mutairi** (SD '07) is the dean of Hafr Albatin Community College and the acting dean for its college of engineering. [almutairi@kfupm.edu.sa](mailto:almutairi@kfupm.edu.sa)



**Sultan Alghamdi** (Elect '07) works at SABIC Riyadh, Saudi Arabia as a senior business continuity management specialist. His position includes identifying business interruption risks.



**Matthew Bailey** (Mech '07) is taking All Saints High School to the Greater Toronto East and Greater Toronto West FIRST Robotics Regional Tournaments to climb

pyramids and shoot Frisbees. [m.bailey@design1st.com](http://m.bailey@design1st.com)



## 2009



**Anne-Marie Fox** (SD '07) reports that in January 2012, she and her husband **Chris Fox** (Comp '07) sailed from San Francisco to Baja, Mexico aboard their 36-foot sailboat.

They spent the rest of 2012 exploring the Sea of Cortez, swimming with sea lions, hiking in the desert and digging for clams.

[annemariefox@gmail.com](mailto:annemariefox@gmail.com)



**Al Ismaili** (Comp '07), founder of BambaRewards, has been directing the execution and operations of the organization since its 2011 launch. The Canadian-

based performance software organization is concentrating on the East-African enterprise market while also giving back through an innovative education-based charity model for underprivileged Kenyan children.



**Christina Klein** (Enviro '07) and her husband Ryan welcomed their first child, Lily, in February 2013. Christina is a project engineer for the County of

Northumberland and works part time for GoodLife Fitness as a fitness instructor.



**Mark Meldrum** (SD '07) graduated in December 2012 from the INSEAD MBA program and joined Bain & Company at its London UK office in April. Mark is

engaged to **Marieke Scholz** (Elect '07).

[mark.meldrum@gmail.com](mailto:mark.meldrum@gmail.com)

## 2008

**CLASS REUNION - 5 YEARS  
SEPTEMBER 28-29, 2013**



**Andrew Lee** (Civil '08) reports that after working in Calgary for four years he took time off to travel in Europe. He says that his travels have made him a better-rounded

person and highlights included teaching English and working on a farm.

**Harout Manougian** (Elect '08, '09) was recently elected as a trustee with the Toronto District School Board.



**Suhail Aldharrab** (Elect & Comp '09) reports that he passed his ECE PhD defence examination. He now is employed at King Fahd University of Petroleum and

Minerals (KFUPM) in Dhahran, Saudi Arabia.  
[suhail.d@gmail.com](mailto:suhail.d@gmail.com)

**Amir Rouzrokh** (Mech '09) is completing an MBA degree at Harvard Business School and will be joining Google Mountain View full time as a product manager when he graduates.

[arouzrokh@mba2013.hbs.edu](mailto:arouzrokh@mba2013.hbs.edu)



**Jacky Chen** (Civil '09) obtained his PEng in October 2012 and now works at WorleyParsons as a civil engineer.

[yjjackychen@gmail.com](mailto:yjjackychen@gmail.com)



**Nik Kapauan** (Comp '09) has worked at IBM since he graduated from Waterloo. In his role as a software engineer and project manager, he has continued

to extend the patented expert system he developed as an IBM co-op student. Nik will be leaving IBM to pursue an MBA at Columbia Business School in New York City.

[nkapauan@gmail.com](mailto:nkapauan@gmail.com)

**Majid Mirza** (MBET '09) is currently working as program coordinator for Engro Foundation, Engro Corporation's Corporate Social Responsibility arm in Pakistan. He also runs his award-winning blog, Goodnews.pk, which shows the positive side of Pakistan. Majid married in 2012 and spent his honeymoon in Istanbul and Turkey.



**Alex Scott** (Elect '09) moved to London, England, to work for Deloitte Consulting. He is also beginning the MBA program at the London Business School.

## 2010

**Gary Abbott** (SD '10) was named one of Waterloo Region's Top 40 Under 40 for 2012. Gary was recognized for his work as a product designer at Desire2Learn and his involvement with Big Brothers Big Sisters of Waterloo Region and the Waterloo Minor Hockey Association.

**Zeeshan Reza Abdy** (Civil '10) is a transportation engineer in the network planning division for the City of Calgary. His plan for the city, entitled Investing in Mobility, defines the priority and timing of capital transportation infrastructure projects for the next 10 years.



**Poroshat Damavandi-Asli** (Enviro '10) was promoted to utilities coordinator of the Eglinton Crosstown Light Rail Transit after just over a year of service at MMM

Group Limited. Poroshat is responsible for the utilities coordination of six future stations: Keele, Oakwood, Dufferin, Mount Dennis, Allen Interchange & Yonge-Eglinton Interchange.



**Meghan Hennessey** (MBET '10) is working with Clearpath Robotics as its marketing communications coordinator. She continues to volunteer in the Kitchener-Waterloo

community with Track 3 Ski School and recently became Board Director for KW Oktoberfest, as its Family and Cultural liaison.

**Edwin Liou** (Mech '10) is employed with Spartan Controls, a local business partner of Emerson Process Management. Currently working in the company's Vancouver office, he will be relocating to its head office in Calgary.

## 2011



**Behrad Mehraie** (MSci '11) is a PMP certified senior project manager (contractor), managing IT projects, mainly for financial institutions. His latest contract was with TD

Canada Trust, where he managed multiple infrastructure projects to upgrade the Direct Channel and Online Banking Hardware and Software.



**Leslie Merrithew** (Civil '11) is working for Stantec in Yellowknife, NT. Leslie is part of a roller derby league and volunteers regularly with the NWT SPCA.



**Navid Poulad** (Mtron '11) began his career as a Product Design Engineer in the hardware division of Amazon.com Inc., known as Lab126, in June 2011. Since then, he has been living in the beautiful state of California where he

rents a small townhouse for a ridiculous sum of money and the promise of his first born. Despite that, he has picked up volleyball and plays every weekend. He says he is getting fat, but he's happy and that's all that matters.



## PASSION FOR CYCLING REMAINS IN HIGH GEAR

**Kyrylo Rewa's** fascination with cycling began at age six when he learned to ride a bicycle. Years later, his love for biking steered its way into both the focus of his university education and career.

After completing a planning degree at the University of Waterloo, Rewa began a graduate degree in civil engineering. His supervisor and collaborator of several papers was Jeff Casello, who is a Waterloo civil engineering and planning professor.

As a master's student, Rewa worked on a study with the University of Waterloo and the Region of Waterloo, which put the brakes on a few cycling myths. In a presentation at Velo-city Global 2012, an international conference sponsored by the European Cycling Federation, Rewa pointed out his research showed that while it has been assumed that most cyclists ride bicycles because they can't afford a car, they usually have higher average incomes. The cyclists also may own a car, but choose instead to cycle.

After graduating with his MSc in 2012, Rewa worked on a joint GPS cycling project undertaken by the Waterloo Public Transportation Initiative at the University of Waterloo, and the Regional Municipality of Peel. The project involved distributing compact GPS units to cyclists in the Region of Peel along with a survey to gather household demographics. The aim of the study was to develop regional profiles of cyclists to help with things like visitor parking for them.

Since last October, Rewa has been employed as a Transportation Planner EIT with the BA Consulting Group in Toronto where he conducts transportation impact studies in the City of Toronto. He says that his career is the perfect fit for him and his interests. "I wake up happy every day. Well most days, that is," he adds laughing.

## 2012



**Behzad Biglarbegian** (Elect '12) is working for Samsung Telecommunication of America and is the new father of a baby boy named Alee.



**Greg Gambino** (Geo '12) travelled throughout most of Western Europe after graduation. Last January, he started a MSc degree

focused on geomechanics at the University of Toronto.



**Umer Shaheen Malik** (Elect & Comp '12) works for P&G Canada.

*malikumershaheen@gmail.com*

**Neil McCann** (Mech '12) works for Victaulic, a multinational manufacturer of piping hardware in Richmond Hill, ON. He is involved in industries ranging from HVAC to the Oil Sands, and from fire protection to water treatment.

**David Nguyen** (Mtron '12) reports that he is working out of Oakville.



**Harmeet Singh** (Elect '12) recently started working with PowerLine Plus Ltd. in Toronto. He is an engineer in training in the company's design engineering department.

*s\_harmeet@ymail.com*



**Yan Wu** (SD '12) is a doctoral candidate at Cambridge University studying computational neuroscience and machine learning.



**Ayman Zein Alabedin** (Elect '12) joined SNC-Lavalin T&D last March as a SCADA Engineer. His work includes designing SCADA systems for electric power substations.

## UPCOMING EVENTS

### REUNION FOR THE CLASS OF 1963

**Dates:** September 27 to 29, 2013

**Time:** Various, all day

**Locations:** University of Waterloo and Waterloo Inn

50th anniversary reunion celebrations start on Friday with a special Iron Ring Ceremony, an obligation renewal, followed by an Iron Ring Dinner at the University Club. The next day features the Reunion Back to the Classroom lecture series, an open house in the Engineering 5 building and tours of Waterloo Engineering buildings. A memorable reunion dinner will be held on Saturday night and reunion festivities wrap up with brunch on Sunday.

### REUNION FOR THE CLASSES OF 1968, 1973, 1978, 1983, 1988, 1993, 1998, 2003 AND 2008

**Dates:** September 28 and 29, 2013

**Time:** Various, all day

**Locations:** University of Waterloo and Waterloo Inn

Saturday's events feature the Back to the Classroom lecture series, an open house in the Engineering 5 building and tours of Waterloo Engineering buildings. A memorable reunion dinner will be held on Saturday night and reunion festivities wrap up with brunch on Sunday.

Register for reunion events at:

<http://uwaterloo.ca/engineering/alumni/reunions>

## IN MEMORIAM



**Julian Anders** (Mech '67)

**Paul Ayllon** (Mech '89)

**Edward Barrette** (Mech '78)

**Gregory Boshaw** (Mech '74)

**John (Nick) Brown** (MSci '69)

**Gary Cooke** (Mech '91, '12)

**David Doran** (Elect '84)

**Evan Gross** (SD '83, '85)

**Jiri Kolejka** (Elect '72, '74)

**William Lavender** (Chem '65, '66)

**Brian Lee** (MSci '87)

**Joseph (Mike) Lehman** (Mech '74)

**Steven MacMillan** (Mech '71)

**Harold (Ted) Martin** (Mech '75)

**Gary McMann** (Mech '71)

**Michael Misetich** (Elect '88)

**Walter Morningstar** (Mech '65)

**Ashwin Muzumdar** (Elect '77)

**Tae-Joon Park** (DEng '91)

**Sherwood Prawel** (Civil '71)

**John Putnins** (Mech '66)

**Ernest Shumsky** (Chem '79)

**Robert Siemon** (Civil '73)

**David Smith** (Civil '73)

**David Snaith** (Civil '69)

**Rimas Sonda** (Mech '75)

**Charles Stevens** (Civil '71)

**Stephen Strathdee** (Mech '86)

**David Thomson** (Elect '76)

**Chang-Lin Tien** (DEng '95)

**Emmanuel Voskakis** (Elect '82)

**Gregory Welstead** (SD '90)

## TD WALTER BEAN LECTURE

**Date:** Wednesday, October 2, 2013

**Time:** 5:30 p.m. to 6:45 p.m.

**Location:** Theatre of the Arts, Modern Languages,  
University of Waterloo

The lecture entitled "A Delicate Balance: Fighting poverty in the age of climate change" will be delivered by Professor Diana Liverman, co-director of the Institute of the Environment and Regents Professor in the School of Geography and Development at the University of Arizona.

## GO ENG GIRL

**Date:** Saturday, October 19, 2013

**Time:** 9 a.m. to 3 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. To find out more, contact Rohini Wittke at: [rwittke@uwaterloo.ca](mailto:rwittke@uwaterloo.ca)

## WATERLOO ENGINEERING ALUMNI WINE TASTING RECEPTION

**Date:** Thursday, October 17, 2013

**Time:** 6 p.m. to 9 p.m.

**Location:** Maverick Winebar, 676 Queen St. W., Toronto

Enjoy a tasting of limited production wines not available at the LCBO at this casual wine bar founded by Elizabeth Choi (BASc '06, SD).

## A CELEBRATION OF RICK HALDENBY

**Date:** Saturday, November 30, 2013

**Location:** School of Architecture, 7 Melville St. S., Cambridge

Rick Haldenby is celebrating 25 outstanding years as the director of Waterloo's School of Architecture! Attend this event to celebrate Rick and his many contributions to architectural education.



For the latest Waterloo Engineering alumni events, visit [engineering.uwaterloo.ca/alumni](http://engineering.uwaterloo.ca/alumni)

## WATERLOO ENGINEERING ALUMNI RECEPTION AT THE 2014 TRB ANNUAL MEETING

**Date:** Tuesday, January 13, 2014

**Location:** Washington, D.C.

Join fellow classmates at this special alumni reception during the 2014 Transportation Research Board Annual Meeting.

## WATERLOO ENGINEERING ALUMNI SKI DAY

**Date:** Friday, January 24, 2014

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

**Location:** Osler Bluff Ski Club, Collingwood

Hit the slopes – join us for this annual event hosted by Steve Vokes (BASc '77, Civil). The day includes skiing, timed runs, lunch, and prizes at the après ski at this gorgeous private ski club.

## WATERLOO ENGINEERING ALUMNI CURLING BONSPIEL

**Date:** February 2, 2014

**Time:** 9:30 a.m. to 6 p.m.

**Location:** High Park Curling Club, Toronto

Curlers of all levels are encouraged to join the curling bonspiel for a fun-filled day on the ice with fellow classmates. Enter singles, couples and teams – beginners are welcome.

## 2014 CLASS REUNIONS

Reunion for the Class of 1964

**Dates:** September 26 to 28, 2014

Reunion for the Classes of 1969, 1974, 1979, 1984, 1989, 1994, 1999, 2004 and 2009

**Dates:** September 27 and 28, 2014

**Mark your calendar!**

## CLASS REPS WANTED!

Volunteer to be a Class Rep for your upcoming class reunion and be part of the action! Register today by emailing [engineering.alumni@uwaterloo.ca](mailto:engineering.alumni@uwaterloo.ca) or calling 519-888-4567, ext. 36838.

## GREETINGS ALUMNI

September is a time to celebrate new beginnings. And this September is no exception as we celebrate the 50-year anniversary of the graduation of the second engineering class. This fall is also a special time for me as well as I mark 10 years as your alumni officer. If you're ever on campus, please drop by my office to say hello – I'll treat you to a cup of coffee and show you around the newest buildings on campus.

I hope you enjoy reading this latest issue of WEAL. As always, I welcome your story suggestions for future issues of WEAL or eWEAL.

Sincerely,

**GOSIA BRESTOVACKI**, Senior Alumni Officer  
[gosia.brestovacki@uwaterloo.ca](mailto:gosia.brestovacki@uwaterloo.ca)

## A PART OF SOMETHING SPECIAL

**Back when she was in second year, Alessia Danelon gathered with fellow mechanical engineering students in one of the department's labs to study. A classmate walked into the study group with not only ideas to share, but bags full of candy as well.**

"I know that gesture was small, but it was that day I realized I was part of something special. We felt we knew where we were going and how to help each other out," says Danelon who convocated in June.

This summer, Danelon started her career as a hardware test engineer for Apple Inc. in Cupertino California. She brought with her not only her mechanical engineering skills and knowledge, but also the insights she picked up as a co-op student at large firms such as Procter and Gamble and smaller building consulting firms.

"I learned patience and how to have a positive outlook at work," she says. Both traits are proving to be invaluable working for a company with vendors all over the world who have different business and communication cultures.

Engineering also sharpened Danelon's leadership and organization skills in a wide variety of ways. She served as a Waterloo EngSoc president, as well as the president of the Engineering Student Societies of Ontario, for which she organized its annual general meeting held this past May. As a Waterloo Engineering orientation leader, she helped many new students successfully transition to campus.

Along with balancing her engineering education and volunteer roles, she found the time to direct a musical, play piano, and even sing and play trumpet with the Waterloo Engineering Jazz Band.

Danelon is beginning to connect with her new community. She has already checked out social activities for new Waterloo grads and has even looked up local coffee houses with open mic nights in the San Francisco area. Just don't expect her to take the stage alone. She'd rather find a new band.

"Trumpet is not really a solo instrument," she laughs.

*Alessia Danelon, BAsC '13, Mech*



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### CONTACT US

Waterloo Engineering Alumni Affairs  
University of Waterloo  
200 University Ave. W., Waterloo, ON N2L 3G1

[engineering.alumni@uwaterloo.ca](mailto:engineering.alumni@uwaterloo.ca)

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