

## Energy

Spotlight on Dalhousie Alumni  
powering the energy industry

Manufacturing  
Blackberry

with Matthew Burke

Alumni photo contest



 **DALHOUSIE  
UNIVERSITY**  
*Inspiring Minds*

*Faculty of Engineering*  
[engineering.dal.ca](http://engineering.dal.ca)



As the 2012-2013 academic year winds down, we wish our largest ever graduating class all the best

in the future and look forward to another great year at the Faculty of Engineering. Demand for our programs continues to grow, with applications up by 15% over last year. So far over 1500 have been processed for 360 spots.

This growth is not without its challenges, but the enthusiasm and energy on campus clearly makes up for it. Students have been designing and building everything from I-beams to race cars and their enthusiasm for engineering is infectious.

Over the past few months we have launched the NSERC Ultra Electronics Maritime Systems Chair in wireless information transmission and networking. The Chairholder, Dr. Christian Schlegel, is busy setting up a multi-million dollar research program here at Dal. This is just one of many industrial research success stories for Dalhousie Engineering.

We wish you a safe and happy summer and look forward to seeing you on the golf course and at other great alumni events.

**Dr. Joshua Leon, P.Eng.**  
*Dean of Engineering*

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# Start-up success

In the high-risk world of energy start-ups, what keeps Ken Bowie going?



**Ken Bowie** (BEng'82, Mining) was certain he'd be a Petro-Canada employee for life. Recruited right out of TUNS – it was one of five job offers he received – he spent 11 years with the company in Calgary as a petroleum engineer. But after earning his MBA, this Nova Scotian decided he wanted something more.

"I wanted to start my own energy company, so I quit. I figured if it didn't

work out, I could get another job and soon recover from my mistake."

More than 20 years have passed since that fateful decision, and things have worked out very well for Bowie. He has launched four oil companies to date, each time moving on when the company reaches a certain level of success to start the process all over again. The fourth venture, a company called Spry2, launched in 2012. Named for Spryfield, the Halifax community where Bowie grew up, the company has so far raised \$108 million to purchase oil properties and drilling rights.

What is it in Bowie that motivates him to keep building companies? "I love the start-up phase because there are fewer restrictions. You have the freedom



to take the company in any direction.”

You have to admire Bowie’s energy and boldness. The oil industry is highly competitive, capital intensive and very risky. But he likes that early stage when the potential is great, the team is closely knit and there’s more flexibility in how you grow.

“I’ve learned I’m very good at starting and growing a company to the point where you build in managerial

layers. That’s when it feels like you’re an employee, and it’s not as satisfying, so it’s better to start over.”

Somewhat amazed that he has thrived in such a high stakes industry, Bowie attributes some of his good fortune to his experiences at TUNS/Dalhousie. “There is no way I could have achieved what I have done without the education I received there. It’s a

high-quality institution and I look upon graduates from Dalhousie very favourably when I am hiring.”

Despite his successes to date, Bowie hints Spry2 may be his last start up. If that’s the case, his sons are more than ready to carry on his legacy. “Both have studied engineering and both have that entrepreneurial spirit. That makes me proud.”



## Harnessing the tides

When **Robynne Murray** (BEng’10, MASc’12, Mechanical) looks out at the Bay of Fundy near where she grew up in Truro, NS she sees more than the average person, the tidal energy researcher sees the potential future for energy generation in Nova Scotia.

“Nova Scotia is home to one of the most powerful tidal energy sites in the world. I am excited to be working on a renewable energy project that has immediate real world applications.”

Unlike other sources of renewable energy such as solar, wave or wind, tidal energy is both reliable and predictable. But there remain many engineering challenges to overcome before tidal energy extraction becomes economical. One of the biggest concerns is the cost to service and maintain tidal turbines. Another issue is reliability as tidal turbines must perform

reliably in harsh operating conditions. However, it is those very challenges that peak Robynne’s interest.

“It’s a really exciting field because there are so many opportunities for research, so many interesting questions for a mechanical engineer.” says Robynne.

Her PhD work centers on the development of tidal turbine blade designs and passive blade control systems. She notes the use of passive design is key because this is what will lead to reduced maintenance requirements over the mechanisms currently used.

“We sometimes tend to over-engineer the solution. Keeping it simple is sometimes the biggest challenge because we need to meet certain performance requirements with minimal actuated parts.”

Robynne’s research will take her to Scotland later this year where she will work and collaborate with researchers from Strathclyde University who are at the forefront of tidal energy research. Her work will be among the first collaborative tidal energy research projects between Canada and Scotland and has received funding from both the Nova Scotia and UK governments.

The opportunity to work with supervisors Dr. Darrel Doman and Dr. Mike Pegg as well as strong support and family ties made Dalhousie a natural choice for her doctoral studies. Robynne was awarded the prestigious Eliza Ritchie Doctoral Scholarship for women this past Fall in addition to a national doctoral NSERC Postgraduate Scholarship.

# In conversation with **Bill Andrew**

*Bill Andrew ('BEng'75, NSTC Mining) found success in the energy sector leading PennWest Exploration for over 20 years. Under his leadership, the company went from a small capital explorer to one of Canada's largest senior oil and natural gas exploration and production companies. Now at the helm of Long Run Exploration, he shows no signs of slowing down. As Bill prepares to wrap-up his second term as Chancellor of UPEI he sat down with Dalhousie Engineering magazine.*



## How did you become interested in Engineering?

Through high school I didn't know what I was going to do, but I knew I would go to university. About a mile down the road from my home growing up was the staging area for some oil and gas exploration that was happening on PEI. I became intrigued by the equipment and what was going on, and wondered what would be the best way to get involved; the answer seemed to be to get an engineering degree.

## As a leader in business, what difference has engineering made for you?

I was fortunate to have some strong professors at both UPEI and NSTC who really encouraged us to think. I think the biggest thing an engineer can do is solve a problem and I have used that throughout my career; whether it was a technical or logistical problem, or later in my career a business problem. From how we find a solution to how do we build consensus; I think the things that will make a strong engineer will also help in business.

## What lessons have you learned from growing and developing Penn West?

First thing I learned is that you never do anything on your own, you have to have good people, people who are equally committed to having a successful company. To achieve that, you have to have a good place to work, you want people to come to work with a smile on their face because they're happy to face a challenging work day and because they enjoy what they're doing. You have to run your company with open doors, where people are talking to each other to solve problems and where everyone is part of the build. Maintaining that kind of work place has been key.

## What do you think of where the energy sector is now?

I'd like to be 19-years old again going into first-year university. I think its just starting here in Canada. Energy will be one of the drivers. One of the greatest things I've seen in my career is the

emergence of Canadian entrepreneurs and technology. When I started, most of the companies that operated here did not have roots in Canada. Today, a lot of companies in our industry are Canadian controlled or owned. We've got some really good minds; accountants, engineers, geologists or scientists; we've made tremendous strides in Canada. I see a pretty good future for this country.

## What made you get involved in PEI's Wind Energy Institute?

We're blessed in PEI to have areas that have a lot of wind and so it's a good place to do some rigorous testing and research. It might seem weird that someone from oil and gas was interested in wind, but I believe that as we progress, it makes sense that some of that engineering know – how that's going into oil, gas and coal should also look at alternate energy whether it be wind, solar or tidal. If you think about it, one of the greatest applications for wind is in remote, inaccessible areas where its logistically difficult to bring in petroleum or natural gas.

## How do you remember about your time at Dal?

I had a great time at Dal, I was involved in everything from intramural sports, to residence and events. There was a lot of independent thought going on. It was great to be at Nova Scotia Tech and we had a very active social program, professors who were really involved with their students. It was a wonderful experience. I learned its not all work, you have to thrive and make the most of it.

### You are completing your second term as Chancellor of UPEI, what made you take on that role?

Its the best non-paying job of my life. Once a year I get to go and see the happiest people in the world dance across the stage to get their degree and be associated with a good university and help them with the challenges a university faces the best I can.

### What advice do you give new graduates?

I don't pontificate, but my advice is fairly consistent; I tell them not to be afraid, to get out there and live life, and don't let people tell you 'no'. Take that piece of paper and challenge the world.



## Off-Shore Abs: Staying fit on the Rigs



Its not easy staying fit on the rigs but **Tyler Watkins** (BEng'08, Electrical) may have the solution. After

working on and travelling to hundreds of rigs all over the world as a Wireline Field Engineer with Schlumberger, Tyler knows first-hand how the long hours and high stress of rig work makes it difficult to maintain a typical fitness routine.

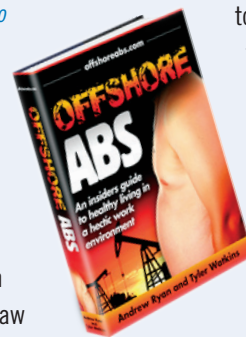
"In all the places I've worked I saw the same thing; people working ridiculously hard while their health suffers. It's not that they didn't care, it was that they didn't know what to do about it." say Tyler.

A lifelong fitness nut, Tyler started bodybuilding in high school and then played hockey, rugby and just about every other intramural sport during his time at Dal. He had been giving fitness

*Off-Shore Abs is designed to help rig workers maximize their work-out time and adapt their fitness routine to whatever facilities they have available.*

advice to his colleagues informally since he began working on the rigs and saw a real need for fitness advice that was customized to the oil and gas industry. Tyler approached certified nutritionist and co-author Andrew Ryan and e-book 'Off-Shore Abs' was born.

Life on the rigs varies dramatically with small land rigs having virtually no facilities all the way up to some deep water rigs which resemble 4-star hotels with fully equipped gyms, internet cafes, and fantastic buffet dinners. Tyler has spent more than four years on the rigs applying everything he knows



to the various rig environments — from how to pick the best foods at the buffet, to learning to sleep better to introducing high intensity exercises.

Both Tyler and his co-author see Off Shore Abs as a great way to improve life on the rigs and promote the health of employees.

"Eventually we'd like to partner with companies to make this fitness program part of their welcome package and see a focus on health and fitness become part of the oil and gas culture; from new-hire to retirement."

You can check out Tyler's e-book and sign up for a free e-newsletter at [www.offshoreabs.com](http://www.offshoreabs.com)



## Bright (green) future for fast-growing power provider

**Mike Snow** (BEng'84) talks about the challenges of heading up a billion dollar renewable energy business, what makes his company different, what led him to lead – and how his time at TUNS helped him do it.

Half way through 2011, alumnus Mike Snow took on the top job at Algonquin Power Company, North America's fastest growing provider of clean, green energy.

"The Oil Age is drawing to a close," he says. "And people are increasingly realizing that the status quo isn't going to take us much further – and that humankind has to come up with some fresh ideas about where our energy is going to come from. Renewables are a big part of the solution. And Algonquin is a big part of renewables in the North American energy market."

### Big risk

Mike's move into management came in the early 1990s, after he realized he wanted to lead companies instead of simply being part of them.

In 1989, five-years after completing his Bachelor of Engineering at TUNS, Mike left a senior engineering role with J. D. Irving's pulp and paper division to study full time for an MBA in general management – "the biggest risk" he's ever taken.

Straight out of his MBA in 1991, Mike secured his first of many management roles with Emerson, moving quickly up the leadership ladder.

*"I'm not a 'maintenance mode' person. I need to be in an organization that has growth at the top of its strategic agenda."*

"The biggest challenge of my move away from a technical role was having to suddenly and quickly acknowledge that I was dependent on others to get things done," says Mike, a married father of 2 who lives in the Greater Toronto Area.

From Emerson, Mike moved on to lead Omron Canada and later General Donlee – businesses that fit Mike's criteria of offering plenty of potential for expansion. "I'm not a 'maintenance mode' person."

he says. "Instead, I need to be in an organization that has growth at the top of its strategic agenda."

### Enabled by engineering

Looking back, Mike says combining a technical background with an MBA has served him very well.

"Engineering has always allowed me to discuss most topics knowledgeably. And even nowadays as president, I remain in close touch with the front line of engineering – whether through project management, technical reviews or on-site visits," says Mike.

Mike says Dal offered an opportunity to achieve "a world class education within an intimate setting."

"That meant a lot to me during my time there. It allowed me to establish long-lasting relationships. In addition, my time at TUNS instilled within me a framework for results – and an excitement to make a difference," he says.

"If I was doing it all over again, Dal would still be my first choice – as would engineering."

## Growing the future: re-designing engineering education

Dalhousie Engineering continues to grow, and in all the right ways. With the Fall 2013 admissions cycle in full swing, the demand for enrollment is up as more students are choosing Dalhousie for engineering.

Growth however, isn't just measured by numbers. The ways by which engineering curriculum is delivered are also evolving to include more real world design and team based projects at every level. Where engineering education may have once relied more on a 'stand and deliver' approach to teaching and learning, this didactic style of instruction has given way to more hands on problem solving and a design centered approach.

"Engineering education and how we train our students has come a long way. Dalhousie is at the forefront of transforming engineering education. Design is at the center of what engineers do, and it's at the heart of innovation."

says Dr. Clifton Johnston, NSERC Chair in Design Engineering.

Dalhousie's innovative approach has been recognized by the American Society for Engineering Education (ASEE) and will be one of several top engineering schools to be featured on ASEE TV this summer at the 2013 ASEE conference in Atlanta, GA.

While renovations continue on Sexton campus to fit and retrofit lecture halls and work spaces to accommodate the needs of 21st century learning, the ultimate solution is for a new building on Sexton Campus. The anticipated IDEA (Innovation and Design in Engineering and Architecture) building is designed with flexible and multi-use space in mind. While it will house modern classrooms and some offices, 'IDEA' is primarily a learner-centered building with room for students to study and collaborate as well as providing much

needed space for student competition teams such as Formula SAE, Dal Aerospace, and Concrete Toboggan.

Students are so committed to the IDEA building they have already agreed to pay a \$75 per semester building levy once the building has opened.

"Students support the fee because student space on Sexton campus is in such high demand, and students would like some measure of input and control over the types of student space that will be allocated in the new building," says Gregory Bowser President, Dalhousie Undergraduate Engineering Society.

For some the building can't get here soon enough. "This campus typically houses around 1500-1600 students that are continuously working on group projects. Students are hopeful that the IDEA building will help alleviate these pressures and encourage productive team and design work," says Gregory.





## Meet Dr. Christian Schlegel

Continuing to bolster its reputation for excellence, Dalhousie's Faculty of Engineering has added another top-notch researcher to its roster to assume the role of Natural Sciences and Engineering Research Council (NSERC) Research Chair – among several in the faculty.

In January 2012, Dalhousie became research home to Dr. Christian Schlegel, an expert in communications and information processing. He joined Dalhousie as the NSERC/Ultra Electronics Maritime Systems Industrial Research Chair in Wireless Information Transmission and Networking. He'll lead the Ultra Marine Digital Communications Centre (UMDCC) – a partnership between the faculty and Ultra Electronics Maritime Systems Inc., of Dartmouth, NS

– a leading producer of underwater sonar devices.

After spending 10 years at the University of Alberta as the iCORE Chair for Digital Communications, he decided this opportunity at Dalhousie was the right move for he and his family.

"This NSERC Chair is quite unique in its capability to interact with industry. That's very important to engineering research and was a real positive to Dalhousie and Halifax," says Dr. Schlegel.

Dr. Schlegel's research explores ways to communicate and send data from one device to another without losing information and with minimal resources. For example, when you electronically send a file or photo, you want it to arrive quickly and intact. While Very Large

Scale Integration (VLSI) microprocessors and integrated circuits have created ever faster devices, ensuring that transmission quality of the data keeps up with that increased speed is critical.

"We live in a world where we want more and we want it faster, and this is true in all aspects including industry," says Dr. Schlegel. "As an engineer, I'm not so much interested in why we want it faster, but how to make it happen."

The work of Dr. Schlegel, and his research team, includes working with under water acoustic devices and exploring the best ways to communicate and send information in marine environments. The results of this work could have far reaching implications for how we operate at sea relating to defence, shipping, weather prediction, and marine resource monitoring.

An avid skier, rock-climber and athlete, Dr. Schlegel holds a degree from the Swiss Federal Institute of Technology in Zürich, and MS and PhD engineering degrees from the University of Notre Dame. His work with industry has resulted in eight patents in the area of spread spectrum communication, error control coding, and digital and analog communications systems.





# Designing manufacturing processes

## for the next generation of BlackBerry devices

When **Matthew Burke** (BEng'98, Mechanical) sees people texting and surfing on the new BlackBerry Z10 smartphone, he feels a sense of pride. It's only natural given that he, as Director of Manufacturing Engineering at BlackBerry, spent the past eighteen months leading the team that developed the phone's manufacturing processes.

"People rely on our devices," says Burke. "I know I do. My responsibility is to ensure that we build your BlackBerry phone to be as reliable as possible so that, even if you drop it, it still works."

Sure, Burke is tickled that he gets to use these gadgets long before anyone else does, but he takes the dependability of BlackBerry products very seriously. With his team, Burke strives for processes that are low cost, repeatable and result in high-quality products. "That's how we measure our success," he says.

One of four engineers in his family, the Nova Scotia-born Burke swears there

was no pressure to follow his father, a sister and a brother into the profession. "I was naturally good at math, and engineering is just applied math, so it was an easy decision to make."

So was the decision on where to earn his degree. After starting at StFX, where he received a scholarship, Burke transitioned to Dalhousie University to complete his studies. He says the small-town-small-class ambiance he found at Dalhousie offered a highly social aspect to his education that has served him well.

"I take and wear that experience on my sleeve wherever I go. I use it to build teams and foster relationships between employees. It's important that the people you deal with know who you are and trust you. And that's a quality you learn to appreciate at a smaller, more intimate campus like Dalhousie."

His respect for Dalhousie is such that Burke is looking for opportunities to engage students in engineering design projects. "Technology has made

it possible to do this remotely. For us, it means a huge reduction in costs to resolve process issues, as well as promoting innovative approaches. For students, it's an opportunity to get real work experience."

Burke says he likes to involve students in problem solving because they aren't typically encumbered by the limitations of 'that's the way it has always been done.' "The result is solutions presented tend to be more fearless. I plan on working with Dr. Clifton Johnston and Sandra MacAulay to get some design projects from BlackBerry into Dalhousie."

Meanwhile, Burke is designing manufacturing processes for the next generation of BlackBerry devices and hoping that, whatever role he takes on next with the company, he'll continue to be an agent of change.

"I like being where the pace of change is fast and the reliance on innovation is high."



Matthew Burke, centre, on the BlackBerry shop floor.



# Working with

**Chuck Hartlen** (BSci, BEng'83, TUNS) always wanted to take gadgets apart to see how they work. "But more than that," he adds, "I was interested in how you can improve on things."

Hartlen has spent most of his life improving things. Not just as Senior Vice President of Customer Experience at Bell Aliant, his employer for 28 years, but also in the community through organizations like the Halifax Dragon Boat Festival, Halifax Connects, the Nova Scotia Community College, the Atlantic Chapter of the MS Society, 211 Nova Scotia and the United Way.

## Mentoring the next generation of Engineers

To say that **Dr. Ron Gilkie** (BEng'62, NSTC) is warm and friendly may be an understatement.

"I have the gift of the gab," laughs the respected professor and Dal/Tech alumnus "I just really enjoy being with people."

With a remarkable ability to connect with students and young professionals, a passion for engineering and a genuine interest in student success, it's easy to see how he would be an engaging teacher.

"Dr. Gilkie was always a class favourite. He is the epitome of a good teacher. All of the students in the class had the upmost respect for him – respect that continues to this day." says Dr. Craig Lake (BEng'95), Head of Civil Engineering.

By the time Ron completed his

Bachelor's and Masters degrees in civil engineering at Tech he was already on track to an academic role. He completed his Ph.D. in Space Structures at the University of London and returned to Halifax to work in the Civil Engineering Department.

An accomplished researcher, his work in structural analysis and design is well regarded.

"I always enjoyed the research but I loved teaching and the classroom- it's a real joy to work with a committed student."

Ron encourages students to take chances and not be afraid of failure, and notes he was never afraid to show students his mistakes.

"I've tried a lot of things and failed at

a lot of things. If I've learned from failing- I must be a genius by now!" he jokes.

Throughout Ron's 50 year career, he has been seen as a role model for young engineers inspiring them to get involved in their professional associations and to volunteer their talents in the community.

"Engineers tend to be good at a lot of things- logic, problem solving. They bring common sense and a way of thinking that a lot of groups can benefit from."

Ron's own volunteer efforts range from a lifelong involvement in sailing, helping with church projects, working with professional associations, the Royal Society of Arts, and playing music for veterans and nursing home residents,

# A gifted

# the community

“I believe if you have the means, then you have an obligation to give back. It’s part of my DNA and I’m proud to be with a company that shares that DNA.”

It was Bell Aliant’s support of United Way that influenced Hartlen to get involved with the nonprofit organization. As executive champion for the Bell Aliant Employee Giving Campaign, he’s helped raise \$2.3 million for the United Way over the past five years. He has served on its board for eight years, contributing to its fundraising efforts, and he chairs the board that launched the 211 service in the province last February. “Now anyone looking for food, shelter, clothing or

financial aid can find the help they need with just one phone call,” says Hartlen.

From bringing 211 online to guiding the team that rolled out Bell Aliant’s FibreOP service, Hartlen has been involved in many major undertakings over the years. He credits Dalhousie and TUNS for giving him the skills and knowledge to take on such challenges.

“The focus in my studies was problem solving. I learned that nothing is impossible. You can always find a way through any issue, and that discipline and confidence has benefitted me all my life.”

Currently, Hartlen is working to introduce 211 in other provinces through

the National Steering Committee and he’s supporting the Faculty of Engineering in its efforts to enhance student and alumni relations. How does he balance it all? “My wife has been an absolute pillar. Without her support, or the support of my kids, this would not be possible.”

Hartlen adds that he has no plans to slow down his community involvement, at least not yet. “As long as something strikes a chord and I feel I can add value, I will take it on. If not, I’ll slip away.”

Given his history, that hardly seems possible.

# teacher

first with the DixiTech 7 and now with Seniors Moments and Highland Heritage.

For his service to the profession, Ron has been honoured by many organizations such as Engineers NS and Engineers Canada, and most recently being named Fellow of the Canadian Academy of Engineering, Fellow of the Canadian Society for Senior Engineers, Chief Warden for Camp 7, and Warden of the Corporation of the Seven Wardens, Inc.

Ron’s contributions go beyond academia to the betterment of the profession and model a broad breadth of service. Ron’s style has been to lead by example, quietly showing the next generation of engineers how they might give their all.



*Dr. Ron Gilkie in the Structures Lab of the Department of Civil Engineering.*

# The Gillespie Scholars: strategies for success

*This spring, the first Gillespie Graduate Scholarships were awarded to three of Dalhousie Engineering's best and brightest. These awards, endowed by alumnus Dr. Robert Gillespie (BEng'64, DEng'08), recognize academic excellence and are awarded to alumni pursuing graduate studies in Engineering at Dalhousie.*

*The Gillespie Scholars are high achievers, but it's more than just hard work that has got them to where they are today. Here they share some of their secrets to success.*



**Kate Latham**  
(BEng'12,  
Electrical)

*Hometown:*  
Cole Harbour, NS

### Kate's strategy:

- Follow your passion – I did my best to choose a program that I was really interested in and I was continuously interested and engaged.
- Learn from everyone around you – your classmates, TA's, grad students and technicians are all excellent resources.
- Develop good time management skills – I work very hard, but always allow myself downtime and never exhausted myself by working into the wee hours.
- I tell new students to get involved with teams and societies – it is the easiest way to meet people. I became involved with the Women in Engineering Society and IEEE-Eta Nu (and international electrical engineering society)- these societies provided great experiences for me.

### What's next?

My graduate work is in Biomedical Engineering. I'm working with Dr. Jeremy Brown and his research group who design and fabricate high frequency ultrasound systems for biomedical applications.



**Dan MacDougall**  
(BEng'12,  
Electrical)

*Hometown:*  
Dartmouth, NS

### Dan's strategy:

- Don't memorize anything, try to understand it! If you understand it, there's no need to memorize it.
- It's worth taking the time to understand the material as you are being taught, putting it off until the exam doesn't work!
- Strict no late night policy: all-nighters aren't worth it! I always act like everything is due one full day before the actual due date.
- I always say engineering is just like professional problem solving – there are problems everywhere, and engineering can take you a lot of surprising places!

### What's next?

For my graduate work I'm going to be working with a relatively new technology called Optical Coherence Tomography. We're using it to provide real-time imaging of the middle ear in the operating room. It works a lot like ultrasound except with light energy instead of sound.



**Andrea Felling**  
(BEng'12,  
Mechanical)

*Hometown:*  
Edmonton, AB

### Andrea's strategy:

- Work hard and work consistently – a little work each week means less cramming.
- Find a study group that you work well with.
- Always schedule time to take care of yourself, having a healthy balance between school and life helps you do better.
- I highly recommend joining one of the design teams– Formula SAE, Supermileage, ROV, Mini Baja and any others that you see. It's a great way to get some hands on project experience, and the senior students are wonderful mentors to have.

### What's next?

For my masters degree I will be working in powder metallurgy. We're working with new technology and my specific area of research is in placing hollow sections in parts made from powdered metal. Ultimately, this could help us to produce lighter-weight parts using less material and thereby reducing our environmental footprint. I love research and I know that's what I want to do for my career.

# Exceptional Allison



Allison Chua (BEng'11, Mechanical) says she never intended to take on so much, but when the opportunity comes up to try something interesting, she makes the time. As a Master's student, Supermileage Team Leader and Co-coordinator of RobotsEAST she might be pushing the boundaries of being over-committed, but she just laughs and humbly admits to being a very good time manager.

Allison is in her second year of her Master's degree in Powder Metallurgy. Working with Dr. Paul Bishop and Boeing Research and Technology, her graduate work is focused on the development

of aluminum alloys for aerospace applications.

Never one to sit still for too long and always up to try something new, Allison joined the Supermileage team when they needed a driver. She soon found herself in the workshop working on the vehicle's carbon shell and entrenched in the vehicle's construction. Now as the Team Leader she has also taken on a number of administrative tasks including coordinating the team and liaising with sponsors.

"I enjoy the construction aspect of Supermileage because it allows me to learn about real-life design applications." says Allison.

## Supermileage team competes in Houston

The Dalhousie Supermileage team had their best finish ever at the Shell Eco-marathon Americas competition this past April in Houston, achieving the highest mileage ever by a Dalhousie team.

The Dalhousie Sexton Supermilers placed 9th in a field of 55 teams drawn from Brazil, Canada, Guatemala, Mexico and the US, and achieved a team best of 965 mpg. The Shell Eco-marathon Americas is a unique competition that challenges teams to go further rather than faster and strive for the highest fuel-efficiency.

### *The Supermileage Team thanks:*

- Dalhousie University, Faculty of Engineering
- Shell and Shell Canada
- Dalhousie University, President's Office
- Dalhousie University, Student Union
- Leaf Racewear
- Continuum Consulting Ltd.
- Performance Electronics Ltd.
- Wainbee Ltd.
- SolidWorks
- Engineers Nova Scotia

In her spare time, Allison is an adult literacy tutor with the Halifax Community Learning Network where she has volunteered for the last four years. Allison, who is an avid reader herself, was looking for a way to give back to the community and so it was a nice fit. When she's not on campus or at the library she's making time to work through an online course to be accredited as a literacy practitioner.

Perhaps Allison's first love however, is the student-run RobotsEAST competition. Allison was her high school's team captain and she credits the robotic contest as the event that led her to pursue engineering at Dalhousie.

"I never considered engineering until I joined RobotsEAST in high school. To me, the most rewarding part of helping to organize the event is watching students hit upon the realization that they, too, are passionate about engineering."

## Dalhousie Shines at the Canadian Engineering Competition (CEC):

Dalhousie Engineering was well represented at the 2013 CEC at Carleton University in Ottawa. The team of Shelby Pottle and Grace Dobek finished third in the new 'Re-Design' competition, while the Senior Design team of Brent Libby, Alex MacDonald, Matt Thompson and Jeffrey Grover placed first in their competition and were crowned Senior Design Champions.

# Events & Highlights Sexton Campus Alumni Events

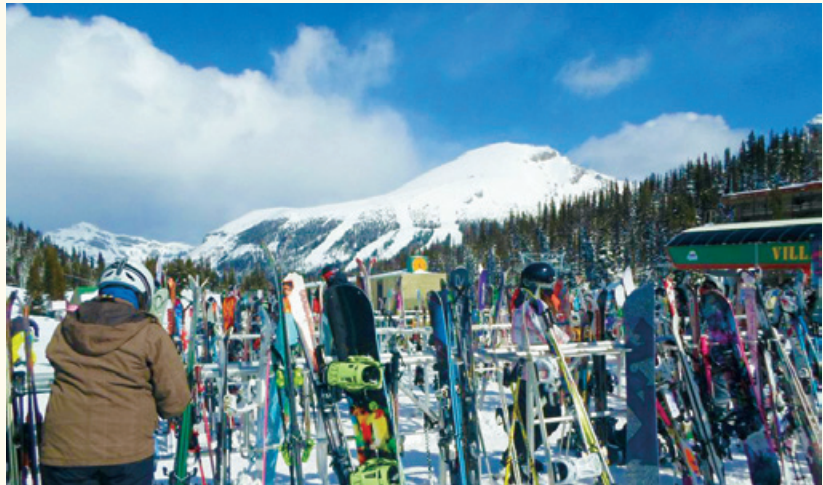
*This year, Dalhousie Engineering held three joint alumni events with Architecture and Planning. These Sexton Campus Alumni Events welcomed alumni from both faculties to get together and find out what's new at Dal.*



On Thursday, February 7, Sexton Campus Alumni were welcomed to a reception at the Fairmont Hotel in **Vancouver, BC**. Alumni and friends reconnected and met the Dean of Engineering, Joshua Leon and the Dean of Architecture and Planning, Christine Macy. Attendees heard what's new on campus like construction of new spaces to accommodate student learning and how the faculties are working together.



On Saturday, February 16, Alumni, family and friends of Sexton Campus enjoyed a day of skiing in the beautiful **Wentworth Valley, Nova Scotia**. It was a great day for hitting the slopes with friends and for refreshments afterwards in Ducky's Lounge.



**Banff Ski Day**, on Saturday March 23, Engineering Alumni and friends in Calgary attended a ski day at Sunshine Village in Banff, Alberta. Attendees skied for the day and then enjoyed après ski appetizers in the Eagle's Nest atop the mountains.



Dalhousie Engineering **Lobster Supper** in Calgary on Saturday, May 4th. Alumni enjoyed our annual taste of the Maritimes in Calgary at the Big Rock Grill.



On Thursday March 21, Sexton Campus Alumni were welcomed to a reception at The **Art Gallery of Ontario** in Toronto. The reception was a great opportunity to mix and mingle with friends and meet new ones. Attendees also learned what is new in terms of curriculum with changes being made to facilitate student collaboration and increase opportunities for hands-on learning.

# Class Notes

## 1950's

**Peter Power, BEng'55 (NSTC metallurgical)** is semi-retired and working as a consultant. He is grateful that his Dalhousie/NSTC education prepared him for a rewarding career in the steel wire and rod industry with skills that are still "in demand".

**Andy Nicholas, BEng'57 (NSTC civil)**, was the first First Nation's grad from TUNS in Engineering. He has worked for a number of First Nation Communities in the Atlantic region as well as other locations across Canada and internationally. Andy still does some consulting and is active with Negutkook Elders. He thoroughly enjoyed his years at TUNS and met many memorable students and faculty. Andy feels fortunate to have learned about global interests for the fantastic education and experience he got as a young student from a small First Nation community.

**Scott James, BEng'58 (NSTC mechanical)**, came to Grand Falls, NL and made a career in the paper mill. He retired in 1990 and has since made a second volunteer career developing a walking trail and environmental improvements in the community. He is responsible for 7km of accessible trail and 7km of improved hiking train around ponds and wetlands at Corduroy Brook, NL. Enjoying retirement!

## 1960's

**Fred Christie, BEng'60 (NSTC mechanical)**, has retired for the last time- he thinks. He closed Saamis Technical Management Services at the end of December after more than 14 years of consulting in the aerospace industry and government departments

promoting technology based developments. He is still happily based in Ottawa with summer holidays at Amherst Shore, NS.

**Donald Fraser, BSc'59, BEng'61 (NSTC mechanical)**, has decided to "hang up his guns" after completing his last project: a Canadian International Development Agency (CIDA) funded study in Malawi for Just Us! Coffee Roasters Cooperative. After a 42-year career in International Development in 76 countries, Donald has settled in Musquodoboit Harbour N.S. He enjoys summers in Petpeswick Harbour, N.S. and winters in Texas. As founder and owner of a consulting engineering firm for much of the final 25 years of his career, Donald received two awards for successful international development projects: one from the Government of Nova Scotia and one from the Government of Canada.

**Ron Gilkie, BSc'60, BEng'62 (NSTC civil)**, will be made a Warden of the Corporation of the Seven Wardens, Inc. at their AGM in Monreal. Ron has been an Alternate Warden for the past 14 years representing Atlantic Canada.

**William Wheeler, BEng'63 (NSTC mechanical)**, married Mount Saint Vincent graduate, Lola MacDonald, after graduating from Dalhousie. William has spent his working career in plastic raw materials and started his own company, Simcoe Plastics in 1980. In 2011 he sold his business and has been happily retired since, sailing on beautiful Georgian Bay in Ontario, doing volunteer work in his home town of Thornhill, O.N. and visiting his children and grandchildren in Vancouver, B.C. and New Zealand.

**John Lewis, BEng'64 (NSTC civil)**, retired from Snohomish County Public Utility District as Substation Engineering Manager in 2010. He now lives in McMinnville, O.R.

**Calvin Payne, BEng'67 (NSTC electrical)**, received his prior engineering diploma from Memorial University in Newfoundland. He attributes his preparedness for the future to his excellent professors and instructors. Calvin remembers the strong camaraderie he held with his electrical classmates and met his wife while attending Tech.



## 1970's

**Conrad LeLievre, BEng'75 (NSTC mechanical)**, is currently the corporate safety coordinator for CBCL Limited, an engineering and environmental design consulting company in Halifax, N.S. Conrad retired in 2005 from Michelin Tires after 28 years. In conjunction with Engineers Nova Scotia, Conrad has been presenting safety related lunch and learn seminars across the Nova Scotia as part of Engineers N.S. mandatory professional development program.

**Michel Larade, BEng'76 (NSTC civil)**, retired from Nova Scotia Power Inc. (NSPI) in 2009 after 33 years with the company. Mitchel currently works part-time as an external consultant to Power Production group at NSPI. He plans to spend winters in Harlingen, T.X. with spouse Adele, in their new mobile home.

**Daniel Stevens, BSc'75, BEng'77 (NSTC civil)**, retired from Suncor Energy in Fort McMurray, A.B. in 2011 after 13 years in the oil sands. After retirement, he and wife, Joan returned to Nova Scotia and are active in their community: joining the volunteer fire department & auxiliary and the recreation association. Daniel looks forward to attending a future Dalhousie engineering reunion and seeing many old classmates and work associates.

## 1980's

**Edward Gillis, BSc'79, BEng'80 (NSTC civil)**, has retired from East Hants in March and he looks forward to more personal time to travel, play golf and snowboard while continuing to work part-time.

**Steve MacDonnell, B.Sc.'79, BEng'81 (TUNS civil)** was recently awarded the Queen Elizabeth II Diamond Jubilee Medal for national and community service. He was nominated by the RCAF Association for over 30 years service to that as well as other worthy organizations including the Canadian Cancer Society and Canadian Parents for French. He is currently the chief engineer with Gemini Corporation in Calgary, AB.

**Ajit Rai, MASc'84 (TUNS industrial)** recently visited Dalhousie and enjoyed catching up with professors, Eldon Gunn, Pemberton Cyrus and others in the department. Ajit started his own successful company in India ([www.suprajit.com](http://www.suprajit.com)) making automotive control cables. His business has grown significantly and serves key customers such as BMW, VW, GM and Nissan. He thanks TUNS and Dalhousie for the wonderful foundation to build his career and the great times he had in Halifax!

**Dave Haley, BEng'85 (TUNS civil)** was appointed Environmental Engineering Manager with SNC-Lavalin Inc. at the Lower Churchill Project in St. John's NL.

**Susan Burris, BEng'86 (TUNS mechanical)**, has completed a practical nursing program (LPN) and plans to enter the nursing field as her "second career". Her "first career" with General Motors of Canada Limited is still going strong after more than 27 years. She encourages fellow classmates from Dal and TUNS to get in touch with her: [burrstone@hfx.eastlink.ca](mailto:burrstone@hfx.eastlink.ca).

**Keith Landra, BEng'87 (TUNS chemical)**, has been appointed Chief Safety Officer of the Canada-Nova Scotia Offshore Petroleum Board.

**Bernie MacDonald, BEng'88 (TUNS industrial)**, he has joined Siemens Energy as a Principal Project Manager in Orlando, F.L. with the Transportation & Logistics group.

## 1990's

**Alain LeBlanc, BEng'91 (TUNS electrical)**, has made the leap from Engineering to Medicine and reports that engineering was more difficult than med school! He's enjoying his field of sports and exercise medicine which makes great use of his engineering training. He lives in Victoria, and is remarried with kids 23, 21, 8, 6 and 4. Alain has great memories of TUNS and would love to reconnect with classmates he can be found on Facebook.

**Grenville Phillips, BEng'91 (TUNS civil)**, MASMRP'98, was elected a Fellow of the Institution of Structural Engineers and a Fellow of the Chartered Institute of Highways and Transportation. Grenville lives in Barbados and works throughout the Caribbean.

**Grant Sullivan, BEng'91 (TUNS industrial), MBA'95, MEC'01** was recognized this past January at the Halifax Business Awards. As Vice President of global delivery at CGI Information and Management Systems, Grant was recognized for leading his team to worldwide sales in excess of \$50M in IT consulting. Grant has been teaching in Dalhousie's MBA program for close to ten years in information systems and project management

**Peter Young, BEng'94 (TUNS electrical), MES**, has spent the last two and a half years living in Kyiv, Ukraine and volunteering with CCX-Ukraine, a non-profit, non-denominational Christian organization that helps students develop



their language and leadership skills. Peter moved back to Nova Scotia in December of 2012 and is currently living near Bridgewater, N.S.

**Jason Simpson, BSc'95, BEng'97 (TUNS)**, has been appointed Chief Operating Officer at Torex gold Resources Inc. Simpson brings over 17 years of global, multi-commodity, operational and mining experience. In this position, he will lead the senior operations team that will be responsible for overseeing the construction and operation of the Morelos gold Mine in south-western Mexico.

**Daniel Phillips, BEng'99 (mechanical)**, hopes everyone from the mechanical engineering classes of 1998 and 1999 are doing very well. Daniel currently lives in Toronto with his wife and 6-month old baby boy. Daniel is currently the Director of TV Marketing for Sony Canada. If anyone is in the Toronto area and wants to catch up, please find me on Linked-In.

## 2000's

**(Donald) Ritchie Murray, BEng'00 (mechanical)**, is still working for Enbridge Gas Distribution in Toronto, O.N. His latest assignment is Manager for Natural Gas for Transportation (NGT) Business Development. Ritch is married to Sherri (Keating) from Guysborough, N.S. They have two kids, daughter Emerson is four years old and son, Elliott is three months. His latest hobby includes gold panning, extracting gold from a placer deposit using a pan (check him out on YouTube)!

**Jaymi (Cormier) Taiani, BEng'03 (biomedical)**, has completed a Master's degree and a PhD in Biomedical Engineering at the University of Calgary since her graduation from Dal. Her

research focused on using stem cells to improve bone fracture healing in osteoporotic bone. Jaymi works in the McCaig Institute for Bone and Joint Health at the University of Calgary in a position that she created as a public educator. In partnership with various community groups, including the Arthritis Society, Osteoporosis Canada and Calgary's Telus Spark Science Centre, her job raises awareness of bone and joint health in the community and promotes the research endeavours currently underway at the University of Calgary in this field.

**Matthieu Trudeau, BEng'03 (mechanical)**, is expecting to graduate in May from a doctoral degree in Ergonomics from the Harvard School of Public Health in Boston, M.A. He just accepted a position as a postdoc in the Human Performance Lab, Department of Kinesiology at the University of Calgary.

**Brian Brown, BEng'06 (mechanical)**, retired from the RCAF as a Captain in the Aerospace Engineering trade in September 2012. Brian is enjoying life in the Annapolis Valley, N.S. on his 52 acre property, spending my time tending to his vineyard and making some great wines.

**Yaser Chaban Kabakibo, BEng'06 (electrical)**, would like to say how valuable the classes he took with Professor Dr. Peter Gregson were. Yaser learned how to understand a vast array of topics to easily shape a solution to a technical problem for a customer. This understanding is important as his position as V.P. Sales and Marketing for an Engineering Services company where his challenge is to find the right solution and the best talent to solve engineering problems for his clients

**Kenneth Braedley, BEng'03 (electrical), DMet**, is working for Environment Canada as an Operational Meteorologist at Canadian Forces Base (CFB) Gagetown in Oromocto, N.B. after returning to Dalhousie to complete a diploma in meteorology.

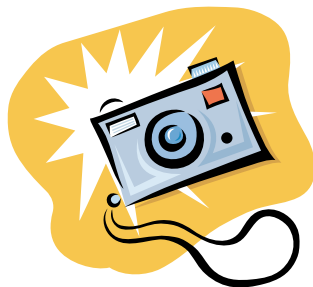
**Farah N Jaber, BEng'08 (electrical)**, moved to Kuwait City and worked as a network and communications engineer and as a design engineer in the electrical and electronic fields for over four years after graduation. She has experience with major networks including Nortel and Cisco and their associated technical documentation and design drawings. Farah recently started working at Fleetway, an engineering, technical, logistics and management service company, as an electrical engineer.

**Carlos Palacios, BEng'08 (civil)**, was part of the design team that laid out "The World" in Dubai - 300 human made islands in the shape of the world map. Having completed his Masters degree in coastal and Oceanographic Engineering at the University of Florida he is the first Bahamian Coastal Engineer. He currently works at Caribbean Coastal Services and is also the Principal and Managing Director of Marine Development Ltd. a construction firm which specializes in marine projects and wetland restoration.

**Class Notes** — We would love to hear from you! Please stay in touch and let us know how you are doing. Submit your class notes and updates (may include special achievements, in memoriam and birth announcements) to Amy McEvoy at [amy.mcevoy@dal.ca](mailto:amy.mcevoy@dal.ca).

## Alumni photo contest

# Where in the world is Dalhousie Engineering?



Where has Dal Engineering taken you? Has your engineering career taken you to interesting places? Have you worked on interesting projects? Show us where you've been, what you've been up to or the people you've met along the way – the only limit is your imagination!

For full Contest Rules and more information on how to enter, please visit: [dal.engineering.ca/alumni](http://dal.engineering.ca/alumni) and click on Alumni Photo Contest.

- Contest is open to alumni of NTSC, TUNS and Dalhousie Engineering, and current Dal Engineering students and faculty.
- Limit two entries per person.
- Please complete the official entry form at [dal.engineering.ca/alumni](http://dal.engineering.ca/alumni) for each entry.
- Photos can be submitted using the Dalhousie File Exchange: <https://filedrop.dal.ca/login.php> and sent to [amy.mcevoy@dal.ca](mailto:amy.mcevoy@dal.ca).

### Judging:

All submissions will be reviewed by a panel drawn from the art and engineering communities. Winning entries will be announced online at [dal.engineering.ca/alumni](http://dal.engineering.ca/alumni) and may appear in the Fall 2013 issue of the Engineering Alumni Magazine.

### Prizes:

In addition to bragging rights and possibly seeing your photo in print:

- First Prize** – Blackberry Playbook
- Second Prize** – iPod Touch
- Third Prize** – Dalhousie sweatshirt

## Deadline for entries: 4pm, August 16, 2013.

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## Homecoming 2013

# Welcome Home! October 3-5th, 2013

Dalhousie Faculty of Engineering invites all NSTC, TUNS and Dalhousie graduates to join us for Homecoming weekend events and celebrations including...



- Welcome Reception
- Dalhousie Alumni Dinner
- Coffee Club
- Tour of Sexton
- President's Luncheon & Photos
- Class of 1963– 50th Class Pinning
- Farewell brunch
- Dal sporting event

**For more information visit:**

[www.dal.ca/faculty/engineering/alumni-friends](http://www.dal.ca/faculty/engineering/alumni-friends)

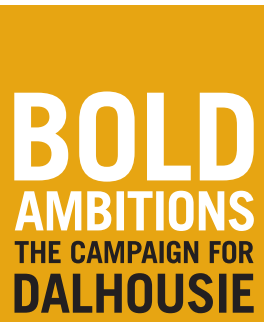
or contact Ms. Terri Mann by e-mailing:

terri.mann@dal.ca or by calling 902.494.3158.

**Did you graduate in 1963, 1973, 1983, 1993, or 2003?**

**Celebrate this important milestone year!**

To organize a reunion for your graduating class contact Terri Mann, Alumni Officer by e-mailing [terri.mann@dal.ca](mailto:terri.mann@dal.ca) or by calling 902.494.3158



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Cheques may be made payable to Dalhousie University or visit [www.boldambitions.ca](http://www.boldambitions.ca) to access our secure online giving option.



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# Engineering Golf Tournament

Thursday, September 26th, 2013  
Glen Arbour Golf Course

40 Clubhouse Lane, Hammond Plains, NS

To register online, visit [engineering.dal.ca/alumni](http://engineering.dal.ca/alumni)

Early Bird deadline is July 31st, 2013


Contact: Terri Mann · Tel: 902.494.3158 · Email: [terri.mann@dal.ca](mailto:terri.mann@dal.ca)



Co-hosted by  
**Sheldon MacDonald**, BEng'05, (Electrical)  
and **Len White**, BEng'75, (Civil)



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