

The Civilian

One Department, Two Great Programs: Civil and Mineral Engineering / Issue 10 / March 2011

Holistic Vision

Peter and Barbara Halsall Support a Bold New Curriculum

Plus-Power House

**How Thorsten Klaus' Award-Winning
Design Could Change Your Next Home**



welcome

Welcome to our 10th issue of the Civilian!

If you have a story you'd like to share, please send it to us.

Our alumni are responding strongly and actively to our initiative to expand, revitalize and grow Camp for the next 90 years. We are delighted to announce three very important gifts that have been made in support of our Gull Lake campaign.

Two companies have each stepped forward in support of our campaign to revitalize and expand our Camp facilities. We are pleased to announce that PCL Construction Group and Buttcon Group have each made gift commitments at the \$50,000 level in support of our campaign. Thank you!

And we are thrilled to announce a wonderful, personal gift that has been made to support the development and delivery of environmentally-focused programming at Camp.

Peter Halsall (CIV7T7 and MASc 8T0), with the active support of his wife, Barbara, have made a gift in the amount of \$100,000! A very special thank you is extended to Peter and Barbara Halsall, whose generosity is profiled on the following pages. These gifts begin what promises to be an incredible campaign in support of Camp.

For those of you who would also like to participate at any level, you will find a broad call for support in our fall issue of The Civilian.

It has come to my attention that some donations that were intended for our Department were inadvertently misdirected. If you have not received a personal Thank You from me following your donation, please let me know so that we can track it down.

Finally, I'm pleased to invite you and your kids/grandkids (aged 7-15) to this year's Camp Reunion at Gull Lake on Saturday, September 17th, 2011. We will have an activity program for kids that involves orienteering and/or learning about the forest ecosystem (depending on the weather and size of the group). We'll have more information posted on-line in July.

That's it for now. I hope you enjoy this 10th issue – we have so much to celebrate and share with you! Thank you for listening.



Brenda McCabe

PhD, PEng

Associate Professor & Chair
Department of Civil Engineering



Cover: Werner Sobek Stuttgart's rendering of Thorsten Klaus' award-winning home design. See story on page 16.





Holistic Vision

Peter (CIV7T7) and Barbara Halsall have given \$100 000 toward a bold new curriculum at Camp. An activist businessman and practical idealist – Peter Halsall proves that this is less of a contradiction than you may think.

The Halsall name has long been associated with “green” engineering. Even as Halsall Associates made a name for themselves in structural, restoration, and consultancy work, they integrated sustainable design practices into every project undertaken.

Pioneers of green building consulting, they even helped develop the Canada Green Building Council LEED-EB Standards in place today.

But their commitment to environmental protection goes far beyond the boardroom. For Peter and Barbara Halsall, it’s personal.

The couple have recently finalized a generous \$100 000 gift to the Department of Civil Engineering, a gift specifically targetted toward the development of a value-added

sustainability-themed curriculum that will be further integrated into the Camp experience.

“The basic idea is to have an expert available,” Peter says of the plan, which will bring in a specialist to teach students to look at cycles that exist in nature and learn to emulate this in their work. “Not many schools have an opportunity to do this.”

The resident naturalist would intensively engage with the students at Camp as they carry out their work, but would also be asked to work with the entire Department back in Toronto.

The Halsall donation will provide funding for this program starting this summer and will continue for the next 5 years, dovetailing seamlessly into the ongoing redevelopment of the physical

Curriculum in Focus

What will this donation mean, exactly, for our curriculum?

“The donation will be used to engage renowned thought leaders,” Prof. Brenda McCabe, Chair of the Department of Civil Engineering, says. “They will interact with the Department, and more specifically, interact with the students up at Camp.”

The funding, which is expendable over a period of 5 years, will enable us to host, for example, a naturalist-in-residence who can provide technical help with the training of engineering field skills, along with a unique passion for the environment in which they operate.

“We want an inspired do-er,” McCabe says. “We want someone who leads not just in theoretical knowledge, but who has truly made a change in their world.”

The new program will come into effect for this year’s Camp, and the Department is currently short-listing candidates.

“I believe strongly in our students and their ability to change the world,” McCabe adds. “This will help them make the connection between thought and action.”

property at the site.

The Halsalls are passionate about sustainability and want to help develop the future of the civil engineering industry. "We need to understand how nature operates to be able to engineer for humans," Peter reflects. "Along with the technical specifics of engineering, we need to study natural laws."

Too often, of course, we're tempted to simply draw a straight line through natural systems in solving a problem. Halsall suggests that this simply won't do in the long run.

So where did the inspiration come from?

"When I became President," Peter says of his firm, "I asked myself why not build a company that our children would be proud to aspire to work at."

Environmentalism all too often lends itself to passionate but impractical moral idealism. But Peter is very practical in laying out his philosophy.

"In the late 90s it became apparent that we were exceeding the carrying capacity of the Earth," he says. "We wanted to be able to say that what we were working for was for the good of

humanity."

"Our clients," he adds, "wanted to be inspired."

Peter might best be described as an activist. A conversation on sustainability is peppered with phrases like "drive for change," and an unmasked repugnance for those forces which would have us accept the status-quo.

But in a business like engineering, which is by nature bound by the requirements of public regulation, inertia is all too often the name of the game.

"Responsible change is needed," Peter insists. "We need decision-makers who will do more than just the minimum they can get away with."

And it is that vision of the future that brings us squarely back to today's educational mission.

"Too often we work to solve a problem that somebody else has defined," Peter says, pointing to issues around the ozone layer, acid rain, and the last energy crisis as examples of problems caused largely by the decisions of previous generations. "Let's look at the big picture now, and work to avoid creating the next generation's major problems down the road."



Highway curve exercises at Camp.

As practical activists, the Halsalls admit that change won't happen overnight. For them, it's all about building momentum.

"This whole thing is a journey," they say, "and it is about inspiring others to come together and join each other on the journey. For us it is not a bandwagon – it is an approach to living life – to doing business."

Placing students in the way of passionate thought leaders will help integrate sustainability into every corner of our student experience. Already a cornerstone of the undergraduate program, this program will add value to camp far beyond anything currently offered in Canadian engineering programs. ■

March is National Engineering Month
Design the Future

University of Toronto **Engineering**

 **Civilian Online**

Read more on our website
www.civ.utoronto.ca

New events and features
added all month long

Alumni Dinner 2011



The 3rd Annual CIV-GEO-MIN Alumni Dinner was a big success thanks to people like you!

The night boasted the highest attendance yet, and most remarkably, continues to be the largest single-Department alumni event at the University of Toronto.

Our Skule™ Spirit simply can't be beat!

The cornerstone of our success was the tremendous industry response we received this year. 7 companies (see right) came forward to sponsor tables. Not only did this allow participating companies to bring CIV, GEO, and

MIN Alumni staff members in celebration of their success, but they also generously enabled several leading students to attend. A big thank you is owed to all those who made this possible.

The 9T5's ran away with the prize of the night for their outstanding win in our quiz – they took home the sought-after Godiva Chocolates (appropriately furnished by Lady Godiva herself, who made a personal appearance).

This annual dinner is always a highlight of our alumni event season. We look forward to seeing you next year! 🏡

Table Sponsors

Bondfield
Construction Co., Ltd.

Deep Foundations
Contractors, Inc.

Fabian Papa & Partners

Holcim (Canada) Inc.

MMM Group Ltd.

PCL Constructors, Inc.

Trow Associated, Inc.

Featured Volunteer

J. BARRIE BLANSHARD (CIV5T3)

Barrie Blanshard has been a pillar of the Civil Engineering Class of 1953 for the past 57 years, holding the positions of first vice-president and class representative.

He was instrumental in establishing the 5T3 Engineering Award and has been chair of the award selection committee since 2003 as well as either chair or vice-chair for class reunions.





‘Lost Boy’ HEADING HOME

Simon Kuany (MIN1T1) is getting ready to go back to South Sudan. His country’s future largely depends on the responsible development of its natural resources.

Simon Kuany is all smiles these days, and it has nothing to do with the fact that mid-terms are wrapping up.

When he was only 12 years old, he wandered across the Sudanese countryside into Ethiopia and Kenya in a bid to flee a civil war that had lasted for nearly 50 years.

Along the way, he met up with other children who had escaped the hunger, disease, and malnutrition caused by the conflict.

When they and thousands of other children began to arrive in a Kenyan refugee camp, the world called them Sudan’s “Lost Boys.”

Now in his fourth year in the Lassonde Mineral Engineering Program, Simon is counting down the days until he gets to go home. He’s not alone among his peers here in his excitement, but few probably understand the significance of his return trip.

Simon is returning to Panyagoor,

a small town in South Sudan, which is set to formally secede and declare independence from its Northern controllers on July 1, 2011.

A few weeks ago, Simon and other members of the Sudanese-Canadian community participated in an internationally-monitored referendum which could help secure peace in his homeland. They voted almost unanimously (99%) in favour of separation.

On a chilly day in February, Simon

sits outside the Bahen Centre on campus and stares wistfully to the East as he speaks of his past and his future.

"In the early 1990s I lived in the warzone," he recalls. "When northern troops attacked, there was nowhere we could run to... the war was everywhere."

Kuany was born in Panyagoor, Sudan, a small town near the eastern border with Ethiopia.

He struck out toward the border on foot, leaving behind friends, family and everything he knew in the world. Behind him, other children were being coerced or voluntarily taking up arms in the conflict.

Refugees were not welcome in Ethiopia, which was actively displacing foreigners at the time, so he and the other boys he had met along the way continued south to Kenya.

A quick map reference suggests he probably wandered over 400km, or the equivalent of a 12-year-old walking from Toronto to Detroit without a guide.

It was a five-month trek, and many of his compatriots died of disease along the way.

"It was hard," he says, now smiling. "But we just persevered."

A UN-operated refugee camp eventually welcomed them in northern Kenya. There, he had the opportunity to attend primary school through the help of the Lutheran World Federation.

Primary school was held under a tree in the camp. He eventually completed his schooling, having fulfilled the requirements of the

Kenyan primary system.

It was an oddly multicultural experience, Simon recalls, given the socio-ethnic conflicts that had plagued the region.

"There were so many of us," he remembers. "Rwandans, Ethiopians, Sudanese. We all learned together and came to know English in the camp."

Unable to afford to pay the fees that the mainstream Kenyan high school system required, a group of Jesuits stepped in and offered sponsorship. With the Jesuit's support, he finished his Kenyan secondary school exams from a local boarding school.

"It was hard... but we just persevered."

At that point in his life, his options seemed limited. He couldn't go home. He couldn't afford school, and couldn't legally work in his foreign residence.

That's when World University Services of Canada (WUSC) arrived on the scene.

They could only handle about 25-30 students, which made for a competitive process. In the end, Simon was one of them, an opportunity that changed his life forever.

Simon came to the University of Toronto and found his way to the Lassonde Mineral Engineering program. "Sudan has so many resources," he says with a sense of pride. "We will need to find a way to develop this in our country."

And develop it he will. Through the Program, Simon is learning from some of the industry's leaders in mineral resource estimation, extraction, and business.

Through necessity, he has also gained first-hand experience in the minerals industry.

Since WUSC could only support him for his first year, Simon has been supporting his own education in Canada. He works part-time throughout the year – as a Research Analyst with Boswell Capital Corporation.

A lot has happened in South Sudan in the few years since he left – and a lot has happened in his own life, too. Where once there seemed to be nowhere to go, his life is suddenly filled with almost limitless options.

Yet Simon knows what he must do.

"I am planning to return home to my village, Panyagor, to help them develop the new economy," he says. "At the present time, there is almost no development whatsoever." Indeed, the South is full of oil and other valuable minerals – but much of the infrastructure, including a major pipeline, was developed in the north of the country.

"This isn't simple rebuilding, it is creating," Simon insists. "There is nothing there at present – we are literally creating a new country day by day."

And so, on a chilly day in February, Simon sits outside the Bahen Centre on campus and smiles to the East as he speaks of his past and his future. ♣

INNOVATION



We can all thank innovators for giving us the quality of life we've come to expect. In the 21st Century, the commercialization of theoretical science will be more important than ever.

Norman Augustine recently remarked in Forbes magazine on America's great history of innovation in science and engineering.

He pointed firmly to this tradition of knowledge as the reason his country enjoyed unparalleled success and advancement in the 20th century.

But he's worried.

He sees waning investment and awareness of science and engineering among youth as a real danger that puts America, and likeminded countries, at risk of falling behind the curve in human development.

The commercialization and application of proven theoretical science is vitally important. Luckily for us, it's part of what we do.

PhD candidate Michael Gray and Prof. Constantin Christopoulos, for example, have developed a new earthquake damping mechanism designed to help

dissipate the forces of shaking in large, steel buildings.

The device itself (above) looks like two giant steel toothbrushes, bristles aimed toward each other in a firm embrace of the building's normal steel girders.

"There's bending in the fingers," Gray explains. "They flex back and forth in the earthquake and they save everybody."

While the actual science behind the device is just a bit more complicated than that, Gray's assessment of the creation's effectiveness is right on.

Buildings, especially large ones, are designed with movement in mind.

"Shaking only causes real damage and kills people when the structures that people are occupying collapse," offers Prof. Christopoulos. In other words, the more we can get a building to respond dynamically to earthquake movement without failing, the better.

A building that moves a lot without falling over could, potentially, withstand even the most powerful quakes.

The giant steel mechanism is attached diagonally to the floor and ceiling of a building. One end is fixed to the superstructure. The steel fingers on the other end are designed to grab and hold on to the earthquake's vibrations, dissipating the force throughout.

We recently tested the invention in real-time in our newly renovated Structural Testing Facility, complete with one of North America's largest hydraulic actuators.

A mock building frame meant to imitate one floor of a larger building was constructed, the arm installed.

Then the entire apparatus was bombarded with forces equivalent to those you would have felt had you been about 40km away from the epicenter of the devastating 7.0 Haitian earthquake last year.

IN MATTERS



VIEW THE
DISCOVERY
CHANNEL
DOCUMENTARY

online at
www.civ.utoronto.ca

If that weren't enough to make you nervous: we invited the press.

The quake lasts about 20 seconds, creaking and flexing the apparatus in seemingly chaotic, unpredictable jolts. Imagine feeling that on the 60th floor of your office tower.

"No-one died today," declares a beaming Gray, whose invention, the data shows, would have saved

everyone inside.

Hundreds of tiny sensors proved that the invention took some serious punishment, but would have kept the structure standing.

This intenvion is being commercialized by Cast Connex Corporation.

Coming soon to a building – hopefully near you. 🍀



Featured Volunteer

JIM BURGESS (CIV5T6)

Jim Burgess, who has been Civil Engineering Class of 1956 president for life since graduating from the Faculty of Applied Science and Engineering, has fostered a life-long bond between that class and the University of Toronto. Jim was instrumental

in establishing the 5T6 Civils Scholarship. The award has made annual gifts since 1964 to a second-year civil engineering student, with the current value being \$3,000. He has also organized annual class reunions since graduation.

Where are YOU

Our Alumni change the world. Here's a sampling of top Skule™ spots in North America by CIV, GEO, and MIN Alumni population.

Top 10 in Ontario

- | | | | |
|---|-----------------------------|----|----------------|
| 1 | Toronto | 6 | Greater Ottawa |
| 2 | York Region | 7 | London |
| 3 | Durham Region | 8 | Niagara Region |
| 4 | Halton-Brampton-Mississauga | 9 | Sudbury |
| 5 | Hamilton-Brantford | 10 | Waterloo |



- | | |
|----|-----------------------------|
| 1 | Calgary |
| 2 | Greater Vancouver |
| 3 | Edmonton |
| 4 | Quebec |
| 5 | British Columbia (Non Van.) |
| 6 | California |
| 7 | Florida |
| 8 | Winnipeg |
| 9 | New York (State) |
| 10 | Texas |

Top 10 in North America (Outside Ontario)

Featured Volunteer

MARGARET KENDE (CIV6T0)

Margaret Kende graduated with her Bachelor of Applied Science in Civil Engineering in 1960, one of a handful of women to have completed the program at that time.

She has dedicated a tremendous amount of time and energy since in leadership roles that promote the status of women in engineering and science.

Margaret has assisted in successful efforts to recruit more young women to the faculty at the University of Toronto and elsewhere.

She has been involved with the Faculty of Applied Science and Engineering alumni office and has been a Warden of Camp One Iron Ring, since 1988.

J?



**Calgary Alumni
Chapter**

[www.facebook.com
search: Skule Alumni](https://www.facebook.com/search:Skule+Alumni)

**Toronto Alumni
Chapter
Camp 1 Iron Ring**

www.skulealumni.ca

Professional Experience Year

EllisDon

Emily Golem (CIV1T1) + PEY
Vincent Davenport (CIV1T1) + PEY

Emily and Vince went to work for the year as Quality Assurance Representatives with EllisDon Contractors, one of the largest building contractors in Canada.

We are based out of the head office in Mississauga, but we spend about 50% of our time on job sites and at subcontractor's plants throughout Ontario, Nova Scotia and the US.

We're responsible for being corporate liaisons with 6 of EllisDon's current projects.

Our jobs consist of two major roles: administering quality control to ensure that jobs are completed in accordance with the construction contract documents, and identifying deficiencies in construction through various testing and inspection methods.

We'll perform important smoke and air infiltration tests on building envelopes, water tests, concrete tests, and thermal modeling, just to name a few.

EllisDon prides itself in being one of the few general contractors in Canada with a Quality Assurance and Research & Development Department.

This PEY experience provided us with a broad exposure from the boardroom and architect's offices down to the subcontractors and job sites, and allowed us to make educated decisions regarding our future career paths and interests. 🏠





Werner Sobek Stuttgart's rendering of the Plus Energy House.

Plus Energy



Thorsten Klaus' award-winning design may change the way homes are built.

The house generates energy exclusively through photovoltaic and solar thermal arrays.

The front and rear portions of the roof incorporate high-efficiency monocrystalline PV arrays, while the middle portion above the "energy core" of the building features a row of solar vacuum tube collectors for warm water heating.

To further boost the electrical generating capacity, the south-west facade is made up of thin-film solar modules, which are less efficient than the panels on the roof, but blend seamlessly into the house's appearance, and contribute nearly 20% of the total annual power supply.

Heating and cooling is handled almost entirely using an air-source heat pump powered by the solar array.

This type of heat pump uses the outside air as the heat source and heat sink, much like a refrigerator.

Heat is distributed within the house by water flowing through low-temperature heating and cooling surfaces in the ceilings.

The walls consist of highly insulated prefabricated engineered wood modules

designed to minimize thermal bridging, and the large window areas are kept as efficient as possible by using inert-gas-filled triple-glazing with a very small framing area.

Also key to energy efficiency is energy management.

The house features an automated control system coupled to a monitoring network of sensors to ensure that the energy collected is used in the most efficient way possible, depending on many factors such as the time of day, whether the occupants are home, and whether the electric cars need to be charged.

There are two aspects to the recyclability of the building: the re-usability of the individual materials, and the ability to dismantle the building components to those constituent materials.

By sticking to materials such as glass, steel, aluminum, and plastics, and avoiding such materials as drywall, plaster, and laminates, he ensured that all components were recyclable on a material level.

The house will be built in Berlin in the summer of 2011. 🏠

Read more at www.civ.utoronto.ca

Thorsten Klaus (EngSci Infra OT4, MASC OT7) was one of the three principal designers of a concept house that has won a federal German design award.

The building is unconventional, to say the least.

Rather than seeing the sizable amount of technical equipment needed to heat, cool, and power the house as an inconvenient volume to be hidden somewhere in the building, he decided to make it a prominent feature, and set it out in plain view behind the street-facing glass facade.

This creates an eye-catching public display from the outside while simultaneously offering a layer of privacy to the inside, and it even allows equipment maintenance to be performed from the carport without technicians having to enter the house.

It also generates enough of its own energy to power itself and a microfleet of urban electric vehicles that sit outside.

MIN UPDATE

The Lassonde Mineral Engineering Program continues its exciting renaissance. This year, we're welcoming our new Associate Director, Prof. John Harrison.

Professor Harrison joined the Department of Civil Engineering and the Lassonde Mineral Engineering Program in October 2010 from Imperial College, UK, as the Keck Chair.

His area of expertise is in Engineering Rock Mechanics. His main research interests are in the areas of mechanics and geometry of fractured rock masses, particularly in relation to engineering design.

A UK Chartered Civil Engineer, Professor Harrison has published many scientific papers, books and book chapters, and regularly acts as a consultant to the civil, mining and petroleum engineering sectors.



Prof. John Harrison.

At Geology Field Camp, students will learn to incorporate geological observations into their engineering data sets.

The course will focus on the recognition of rock types in the field, mapping of geological structures related to mineralization of potential economic importance, and field measurement techniques for obtaining rock engineering data.

Students will learn how to make geological observations that are of critical importance to their success as mineral engineers, and to foster a sense of excitement and curiosity about the rocks that form the physical environment within which they will work as professionals. ♦

New Field Course

Alumni of the Lassonde Mineral Engineering Program will remember the choice they had in completing the Fourth Year Geology Field Camp.

While this program was useful and interesting for students, we wanted a "made-in-MIN" solution that would cater specifically to the needs of mineral engineers.

Starting this year, we're launching a new course, MIN400 - Geology Field Camp for Mineral Engineers.



Featured Volunteer

FABIAN PAPA (CIV9T5)

Fabian Papa has been a dedicated volunteer since his U of T civil engineering student days in the mid-1990s. Even while taking on a growing career, he has generously given his time to the Faculty of Applied Science and Engineering as an industry

expert, guest lecturer and course and program consultant. He has also assisted in the publication of a textbook and several university-edited academic journals and has recently become an executive member of the Engineering Alumni Association.

FIELD NOTES:

GOLDCORP RED LAKE

By James Sproul (MIN1T3)

The annual field trip for second year Lassonde Mineral Engineering students took place from November 8th to 10th, 2010.

It was a great first exposure to the mining industry.

We travelled to Goldcorp's Red Lake Gold Mines in Red Lake, Ontario. The mine is one of the world's richest gold mines, with an average 2 troy ounces per ton, mined at 635 tons per day.

Our group was divided in two, with the first going to the Campbell Complex and the second going to the Red Lake Complex.

Both groups were underground for a few hours, where we were able to take the vocabulary and theory learned in our class, and connect it to real life examples.

At the RedLake Complex, two of

our tour guides were graduates of the Lassonde Mineral Engineering program.

They took us down to the bottom level of the shaft (6300ft or 1890m deep). Some things that we were shown include drills, explosives, mining vehicles, mechanical shops, a refuge station, and gold!

After lunch, both groups met up and went to the mill. Here we saw the processing of the mined ore. Our guides explained how the gold was separated from the ore by both physical and chemical means.

Overall, the trip was an excellent learning experience, and was a valuable addition to our lecture material. Thank you Goldcorp! 🍀



9th in the World Among Our Peers

According to the HEEACT Performance Ranking of Scientific Papers for World Universities, the Department of Civil Engineering at the University of Toronto ranks number 9 in the World among other comparable Civil Engineering Departments.

We are the 1st of 6 Canadian institutions listed in the top 100.

The HEEACT rankings form a highly respected index of institutions based on the number of publications in top journals and academic citations related to research undertaken in this Department.

This puts us among other world leaders like UC-Berkeley, Imperial College, and Delft University of Technology.

Congratulations to everyone on a job well done!

Welcome Prof. Karl Peterson

Karl W. Peterson joins us from Michigan Technological University where he was an assistant research professor.

Karl has a BSc in Geology and MSc and PhD (2008) in Civil Engineering.

His main research interests are the assessment of concrete durability and visualization techniques for microstructural characterization of materials.

The position held by Karl was created as a result of Prof. Doug Hooton's NSERC Industrial Research Chair in Concrete Durability and Sustainability.

Prof.Doug Hooton's Research Saves Ontario Government \$72 Million

A University of Toronto alkali-silica reaction research project led by Professor Doug Hooton, who holds the Industrial Research Chair in Concrete Durability and Sustainability at U of T, correlated short-term laboratory tests with long-term performance to predict concrete behaviour, which improved understanding of detrimental chemical processes in concrete.

This new information was subsequently incorporated into Ontario Ministry of Transportation (MTO) specifications to improve the quality and extend the life of concrete.

With a research investment of \$29,000, MTO calculates implementation of the changed concrete standards that can add one extra year of bridge life before rehabilitation or replacement occurs—at a savings of \$40,000 per structure—for an overall savings of \$72 million over the life of the ministry's 1,800 concrete bridges.

Prof. Hooton was made a Fellow of the Engineering Institute of Canada in 2010 in recognition of his outstanding contributions to research.



Prof. Karl Peterson.

Prof.Eric Miller and Two Alumni Win Charley V. Wootan Award

The U.S. Transportation Research Board has awarded Professor Eric Miller, Director of the Cities Centre, and Civil Engineering Graduate Alumni Jiang Yang Hao and Marianne Hatzopoulou, for the best paper presented at the January 2010 Annual Meeting in the area of transportation policy and organization.

The award was presented at the 2011 Annual Meeting. The paper, "Integrating an Activity-Based Travel Demand Model with Dynamic Traffic Assignment and Emission Models: Implementation in the Greater Toronto Area," constituted much of Jiang's MASC thesis, and Marianne helped supervise the work in her position as a Post-Doctoral Fellow.

Alanna Komisar (CIV1T1) Takes Silver Medal in Rowing

Congratulations are in order for Alanna Komisar, who finished the Head of the Trent regatta with a Silver Medal in the Women's Lightweight Singles category. Alanna finished in a time of 21:51.51, less than a second behind Ottawa.

Civil Engineer is one of N. America's Top Jobs: Money

Money Magazine recently ranked Civil Engineer as the 6th best job in North America.

Part of what drove this ranking is the relative availability of engineering jobs compared to other industries, a phenomenon the magazine credits to huge projects in countries like China and India, which are creating a

shortage of local, qualified engineers.

And what, in their estimation, is the biggest draw?

"What's perhaps most satisfying for civil engineers is the tangible legacy they leave," the magazine writes.

Money Magazine used US Bureau of Labor Statistics growth forecasts for 7,000 jobs, and identified industries with the biggest increases in jobs requiring bachelor's degrees.

Prof. Robert Andrews Wins Julian C. Smith Medal

The Engineering Institute of Canada has awarded Prof. Robert C. Andrews a 2010 Julian C. Smith Medal.

Prof. Andrews holds an NSERC

Industrial Research Chair in Drinking Water Research.

He founded the Drinking Water Research Group at the UofT in 1998. Prof. Andrews is recognized internationally as an expert in drinking water treatment and is a member of numerous decision-making committees and advisory councils in Canada and the United States.

His involvement with municipalities as research partners has allowed him to solve real-world problems and have a direct impact on the safety of Canada's drinking water supply.



Featured Volunteer

H. ROSS PITMAN (GEO7T4)

H. Ross Pitman, a 1974 geological engineering graduate from the Faculty of Applied Science and Engineering, is one of the founding members and a dedicated champion of the four-year-old Calgary Skule Alumni Chapter.

Ross has organized a number of annual events to help alumni living in Alberta feel connected to Skule. He has ensured that the Calgary chapter's legacy will live on through the creation of the Alberta Skule Admissions Scholarship.

**GO BACK
TO SCHOOL
FOR THE
WEEKEND**
**SPRING
REUNION
2011**
May 25-29

A weekend of lectures and
lunches, dinners and drinks.
Plan your **Reunion Weekend**
at U of T.

**HONoured YEARS
ENDING IN 1 AND 6**

springreunion.utoronto.ca



Civil Engineering *Summer* Workshop Series

Pillar Sponsors



June

Backyard and Indoor Composting

Free - Learn about aerobic, anaerobic and worm composting and take home your own composter.

July

Green Roofs and Urban Space Reclamation

Free - Tour Toronto's most productive green roof and learn how communities are reclaiming green space

August

Organic Urban Gardening

Free - Join us in our garden at the height of growing season. We'll share seed, planting, species, and container tips.

www.civil.engineering.utoronto.ca/news/summer.htm
colin@civ.utoronto.ca

Welcome to Skule™

Alumni Volunteers Needed



Recruitment Event - Friday, May 14, 2011

10:00 AM - 1:00 PM

contact nelly@civ.utoronto.ca

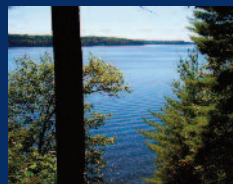
Joel Babbin is retiring after 44 years with the Department of Civil Engineering!

If you would like to receive an invitation to his party, please visit www.civil.engineering.utoronto.ca/news/babbin.htm



Alumni Awards

Did you graduate in 1987 or 2002? Nominations are open for the early and mid career awards! Contact us.



Survey Camp Reunion

Saturday, September 17, 2011



ACI Convention in Tampa Bay, FL?

Are You Attending?
Contact
nelly@civ.utoronto.ca

2012 CIV-GEO-MIN Alumni Dinner

Friday, February 10, 2012



Hossam Abd El-Gawad (PhD 2010) accepts his Young Researcher Award from Peter Ramsauer, German Minister of Transportation.

Stay in Touch

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