Welcome to the 2009 edition of our Building Partnerships newsletter. This is our opportunity to tell you about the many exciting activities that took place in the Department of Civil Engineering this last year. This is my first “Headlines” column, as I have recently taken over the headship of our department from Kevin Hall who has moved on to a senior administrative position at the University of Guelph. Kevin left the department in excellent shape with increased endowment support, a new curriculum, and a vibrant and engaged faculty and staff. I would like to thank Kevin for his many years of service to the department, and wish him all the best in his new position at Guelph. During the year our faculty and staff completed many milestones, achieved many goals, and accepted numerous accolades, all under the demands of a continually growing undergraduate population. Our department now has the largest enrollment in its history with 135 students entering second year, last fall. Our total enrollment (2nd to 4th year) is 379 students which has placed very substantial strain on our resources particularly in these times of budgetary restraint. Dean Woodhouse has recognized our plight and awarded us three faculty positions, one of which has been filled by Dr. Neil Hoult, another filled by Dr. Kevin Mumford (more on each later), and the third to be filled in the summer of 2010.

The final year of our new curriculum was rolled out in the fall term and Civil Week continues to be a highlight. Civil Week is a five-day immersion in engineering design and professional skills development that is presented during the first week of the fall term in each of 2nd, 3rd, and 4th year. This year Dr. Andy Take, who very ably coordinates all three levels, developed a new project for 2nd year that involved the design, construction and usage of cardboard canoes. Teams of 12 students designed and built three-person canoes out of cardboard and plastic which were raced over a 200-m course on the Salmon River. We were blessed with good weather the day of the race and students, participating, faculty and staff all enjoyed a wonderful learning experience. Access to the river was obtained using the Kennedy Field Station; a 65 hectare property gifted to the Department of Civil Engineering by Russ Kennedy, a former professor in the department and senior administrator at Queen’s. Dr. Kennedy was recently honored with a plaque mounted in the 2nd floor of Ellis Hall, commemorating his many years of service to the department and university. Please see the video available on our web site for a summary of the race and a quick view of the Field Station.

The Department continues to excel at research having the highest average grant per faculty member of any civil engineering department in the country, again this year. Our graduate student enrollment has declined slightly to less than 90 relative to previous years, although we are taking on more PhD students now than Masters students. Our research output in the form of journal publications has blossomed in recent years as a result of the significant funding support and the excellent cadre of graduate students we are training. Several of our researchers were honored this year with “best paper” awards, journal editorialships and awards specific to their discipline. Dr. Ian Moore was particularly honored by Professional Engineers Ontario as he was given the Engineering Medal-in the Research and Development Category earlier this fall. Several of our faculty and staff won teaching and service awards this past year. Dr. Ana da Silva was given the Golden Apple Teaching Award by the Engineering Society, Dr. Brachman won the Civil Engineering Teaching Award and Cathy Wagar was given the AMS Staff Award for outstanding contributions to departmental and university activities. Congratulations to all!

Several of our staff passed significant milestones in their careers here at Queen’s during 2009. In particular, on March 19th, 2009 we celebrated Dave Tryon’s 50 years of service to the department with a ceremony attended by many old friends, current faculty and staff, and professors’ emeriti. Dave is the only Queen’s employee to achieve the 50-year milestone and having done so he retired in early December with the record. Both Neil Porter and Diann King reached 20 years of service this year, and Stan Prunster reached the 10-year mark.

So as we look forward to the budgetary uncertainty of the next few years, we feel that the Department is well-placed for the rigors ahead. We continue to seek endowment support for a variety of initiatives including support specifically for our very popular Civil Week program. Any ideas or suggestions in this area are very welcome, and in fact if you have comments on any aspect of what you see in this document, please contact me at kent@civil.queensu.ca or via phone (613) 533-6417.

Kent Novakowski
Decked out in flight suits and aviators, and sporting concrete paddles, Queen’s arrived in style at the Canadian National Concrete Canoe Competition (CNCCC) hosted this year by École Polytechnique in Montreal. At 20’, 299 lbs, the team’s Vengeance was a testament to the unsurpassed effort and determination to ensure a rousing success following the disappointing breakage of The Black Pearl in 2008. Vengeance was the product of countless hours of research and testing on the part of civil undergraduate students. This included the unheard of construction of a preliminary proto-canoe, later to be given the moniker OnePiece and paddled extensively to prepare for the racing element of the competition. It was the first opportunity for many members of the team to experience paddling a concrete canoe, a significant milestone.

At the competition, rookie members of the team were quick to realize that their experience with the Queen’s Concrete Canoe Team had given them only a tiny glimpse into the realm of concrete canoes. Matthew Scanlan found the experience to be a valuable learning opportunity: “At the competition, you realize that there are so many ways to build a concrete canoe other than what your particular team may have done; it’s inspiring and I have lots of ideas for next year which I hope to pursue further with the construction team.” Michal Simhon was particularly interested in some of the advanced technology seen at the competition: “A lot of the other teams use expensive materials and complex equipment which we have not been able to explore to date due to budget restraints. As a member of next year’s sponsorship team, I’m hoping to change that.”

From a development perspective, the concrete canoe team has never been stronger. Taking up the helm of captain for the 2009/2010 canoe year is third-year civil engineering student Laura Garner, a member since first year: “With our new executive structure, revised charter, and a multitude of capable and enthusiastic members, I foresee great things for 2010!” This past year marked a vast improvement on previous construction processes but next year’s Construction Lead, Jordan Jenah, wants to take the team one step further: “It’s time to go back to basics and overhaul our design process with an emphasis on innovation and testing. Over the years, we’ve never strayed very far from our current design process and I’ve got the feeling it’s time to shake things up!”

The team has great aspirations for the coming year and looks forward to competing in the CNCCC 2010, hosted this year by the University of Toronto. Along with long-time canoe veterans, Sarah Zakaib, Bob Garner, and Doug Tomlinson, last year’s Head of Construction, Matthew Fleguel, was sorry to leave the team upon graduation in 2009: “Concrete Canoe has been one of the highlights of my university career. I’m really going to miss the team and wish them all the best in 2010.”

The Queen’s Concrete Canoe Team would like to thank all of its corporate sponsors, as well as support from Queen’s University, the Department of Civil Engineering, the Faculty of Applied Science, the AMS, and the Engineering Society.

You can find out more about the team and track their progress at http://engsoc.queensu.ca/canoe.
Graduate Students in the Department of Civil Engineering

The graduate student population in the Department of Civil Engineering is a diverse group of people with backgrounds spanning many cultures. We are women and men who work on the many disciplines that encompass Civil Engineering, including structures, waste water, hydrogeology, river engineering, coastal oceanography, and landfill liners.

Students take their research out of Ellis Hall by attending conferences, acting as student advisors for the Society of Graduate and Professional Students (SGPS), and working as Teachers’ Assistants for undergraduate classes. For example, this year Usman Mustaq won the Bombardier Humanitarian Engineering Fellowship.

The Civil Grad Executive Committee is responsible for social events, coordinating two engineering forums (described below), keeping our pop fridge well stocked, and acting as a liaison with the SGPS and the professors in the Department of Civil Engineering. In short, the executive is available to make graduate students’ experience at Queen’s more enjoyable.

“The Robert and Joyce Jones Speaker Series”, otherwise known as the Engineering Forum, made possible by the interest and generous support of Robert K. Jones (Science 1952) and A. Joyce Jones (Arts 1953), is a unique initiative that was launched in the Department of Civil Engineering in October 1998 by graduate students, and quickly expanded to include involvement from undergraduate students, faculty, industry, and alumni.

It is a weekly presentation and discussion series aimed at increasing awareness and debate of both research initiatives and practical applications in engineering. We welcome speakers from any Civil Engineering discipline to discuss their work. Please contact Ashley Wemp and Reid Smith at forum@ce.queensu.ca if you are interested in joining this amazing initiative.

The Finite Element Forum gives students working with finite element models an opportunity to discuss issues that arise while using the models. Presentations from faculty and students provide information on current research in finite element modelling.

Graduate students in the Department of Civil Engineering not only engage in exciting and innovative research in a wide range of fields, but we also manage to find time for many social events, such as barbecues, trivia nights at the grad club, an annual golf tournament, and a holiday party.

Concrete Toboggan

Last February, the 2009 Queen’s Concrete Toboggan Team travelled to Red Deer, Alberta to compete at the annual Great Northern Concrete Toboggan Race. The team was made up of 29 members from a wide range of years and departments. Donned in 80’s Hair Metal attire, the team was cheered on by family, friends, and alumni who travelled from around Alberta to support the team!

The team is pleased to report that they placed 5th overall, and received the awards for Best Technical Report, Best Technical Presentation, and Best Team Spirit. In keeping with Queen’s spirit of innovation (Queen’s introduced steering to the competition in 2005 and was the first to use a full aluminum roll cage), last year’s entry included a shock-absorbing rack and pinion system.

The team would like to extend their gratitude to the University of Calgary who hosted the event, their generous sponsors, and the Department and Alumni for their continuing support.

Civil Club

Civil Club is an elected group of undergraduate Civil Engineering students who act as liaisons between the Civil Engineering Department and their peers. Through events organized by the club, students are given opportunities to meet and find mentors among students in different years. Students can also meet Professors and Staff through events such as the Welcome Back BBQ, Bowling with Profs, and Curling with Profs.

Every January, Civil Club organizes a trip to an American city. This allows students to see the ways their knowledge can be applied through organized visits to sights such as the Sears Tower in Chicago and the Big Dig in Boston. It is also a great way for students to bond and relax before the hectic second semester. This year, over a hundred students travelled to Boston, MA.

The Club is also actively involved with Department related events. Civil Club aids the department in running an industry open house every year, which welcomes industry representatives from engineering companies across North America. This gives Civil students an unrivalled opportunity to network with these companies to gain summer experience and full time careers. In addition, Civil Club aids graduating students by assembling their resumes for these industry representatives to ensure that the graduating class is getting ample opportunity to find jobs once they graduate.
Bruce’s newest Asian Adventures

After literally a decade worth of work, it was my pleasure in November 2009 to attend and participate in the inaugural scientific symposium and opening ceremony to celebrate the launch of the Fudan-Queen’s Sino-Canada Centre for Environment and Sustainable Development. This joint Centre is an outgrowth of the formal Fudan-Queen’s co-operative agreement and the sub-agreement that established a co-laboratory of urbanization and environmental research between Civil Engineering and Urban and Regional Planning at Queen’s, and the Institute of Biodiversity Science at Fudan University in Shanghai. The formal launch activities (symposium, field tours and round-table discussions) were very well attended by such dignitaries as the former Chinese Ambassador to Canada, Mei Ping; the Canadian Counsel General, Nadir Patel; the current President of the Canadian Chamber of Commerce in Shanghai, Mark Ceolin, along with numerous senior administrators, researchers and students from both universities. The Centre will serve as a focal point to bring together academics and students in the fields of environment and sustainability, and provide collaborative research linkages, policy consultation and training opportunities in issues of interest to both countries. Please let me know if you would like more information about this exciting new phase of my China work.

Dave Tryon Retired after 50 Years of Service!

Dave Tryon retired on December 31, 2009 after 50 years of service and is officially the longest serving staff member in Queen’s history. The Department and emeritus professors assembled to celebrate Dave’s milestone in March and his retirement in December.

One of Dave’s first jobs in 1959 was to move the department’s laboratories and shops into the newly constructed Ellis Hall from the previous home in Jackson Hall. Dave played a valued role in the areas of Structures and Hydrology both in teaching and research. He contributed to the practical skills development of literally thousands of civil engineering students and kept them safe while working in the labs. Dave was always a willing mentor and helping-hand for student competitive teams such as the Concrete Toboggan, Concrete Canoe and Bridge Building.

Renewal, Tenure And Promotion

Amir Fam was promoted to the rank of Professor effective July 1, 2009.

Congratulations to all for well deserved recognition.
We are pleased to announce the appointment of Dr. Neil Hoult as an Assistant Professor in this department. Neil earned his PhD at the University of Cambridge for his work in shear strengthening of concrete T-beams with fibre reinforced polymer (FRP) straps. He completed his MASc and BASc at the University of Toronto. After completing his PhD in 2006, Neil worked for Halsall Associates in Toronto for a year and then returned to Cambridge as a post-doctoral fellow to conduct research into structural health monitoring of civil infrastructure. His current research focuses on rehabilitation of concrete structures and monitoring of bridges and structures with wireless sensor networks and thus meshes extremely well with research at Queen’s focusing on renewal of infrastructure. With regard to teaching, Neil is particularly interested in design courses where he would have the opportunity to engage with students and inspire them with what is possible within structural engineering.

Our newest appointment is Dr. Kevin Mumford who just joined our department in January as a Walter Light Scholar in Applied Sustainability at the rank of Assistant Professor. Kevin comes to Queen’s from the University of Western Ontario where he has been working for the last year as a Natural Sciences and Engineering Research Council (NSERC) post-doctoral fellow in their Geotechnical Research Centre. He completed his BASc and MASc at the University of Waterloo, and his PhD at McMaster University where he investigated the expansion and mobilization of gases from dense non-aqueous phase liquids (DNAPLs) trapped in groundwater. His unique scholarly contributions are focused at the fundamental pore-scale interactions between gas, water, and DNAPLs and how these interactions may impact the fate and remediation of subsurface contamination. In terms of applied sustainability, Kevin’s planned research will include brownfield development and carbon dioxide storage, in addition to continued research on trapped gases in NAPL-contaminated systems. With this background, Kevin’s appointment is an excellent fit to build on our existing expertise in groundwater and geotechnical engineering.

In 2009 Dr. Kerry Rowe presented:

5th John Adjeleian Lecturer, Carleton University and 3rd Zeng Guo-Xi Lecturer, Zhejiang University and the keynote lecture at GeoAfrica, Capetown, September 2009.

He and Dr. Richard Brachman were awarded an NSERC strategic grant ($593,590 over 3 years) for a project on Barrier systems engineering for environmental protection from emerging contaminants of concern

Advancement News for Civil Engineering Newsletter

Our alumni and friends from the Department of Civil Engineering have a long standing tradition of being engaged. Your support allows us to enhance the quality of the educational experience of our students. You can help through student internship or employment opportunities, design and research topics and sponsorships, as a guest speaker or financial funding for academic chairs, library resources, industry collaborations and curriculum initiatives. The Faculty of Applied Science has a dedicated and experienced team to help alumni reconnect with the Department or fulfill their philanthropic goals to provide the lasting benefits of an even better University for generations of students to come.

We are here to work with you and explore how you can make an impact on the future of our students. For more information on supporting Civil Engineering at Queen’s please contact:

Joanne Grills, Faculty Advancement Coordinator
Ph: 613-533-6000 ext. 75248 Toll Free 800-267-7837
Email: grillsj@queensu.ca

Jane McMillan, Senior Development Officer
Ph: 613-533-2160 Toll Free 800-267-7837
Email: jane.mcmillan@queensu.ca

Donna Dwyre, Development Officer
Ph: 613-533-6000 ext. 78212 Toll Free 800-267-7837
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Beth Wylie, Development Officer
Ph: 613-533-6000 ext. 74594 Toll Free 800-267-7837
Email: beth.wylie@queensu.ca

www.civil.queensu.ca
This year’s **OPEN HOUSE** was a **GREAT SUCCESS** with **37 PARTICIPANTS**!

Thank you to this year’s participants:

- AECOM
- AMEC Earth & Environmental
- Armtec
- Bermingham Foundations Solutions
- BGC Engineering
- Byrne Engineering
- ConeTec Investigations Ltd.
- Counterpoint Engineering
- Decommissioning Consulting Services Ltd.
- EBA Engineering Consultants Ltd
- EllisDon
- GENIVAR
- Golder Associates Ltd.
- Halcrow Yolles
- Halsall Associates
- Hatch
- J.L. Richards & Associates Limited
- Jacques Whitford
- Kiewit Construction
- Maple Reinders Constructors Ltd.
- Marshall, Macklin, Monaghan (MMM)
- McCormick Rankin Corporation
- McIntosh Perry Consulting Engineers
- Ministry of Transportation
- Morrison Hershfield
- Neegan Burnside Ltd
- O’Connor and Associates
- PCL Constructors Canada Inc
- R.V. Anderson Associated Limited
- Read Jones Christoffersen
- Stantec
- Terraprobe
- The Johnson Company
- The Sernas Group
- The Thompson Rosemount Group
- Thurber Engineering Ltd.
- Transport Canada
The 2010 Industry Open House will be held on January 28, 2010, and again we are anticipating large number of companies attending. Please contact Cathy Wagar (Industry Open House Coordinator) at 613 533 600 ext 74227 for more information.

**SPRING REUNION 2010**

Please come and join us for the Spring Reunion 2010 from May 28-30, 2010. Civil Engineering will be hosting a reception on Saturday May 29th in Civil Engineering, 2nd Floor in the afternoon.

*Everyone is welcome!*
CONGRATULATIONS

to all of our Graduate Students who received their degrees at the Spring and Fall Convocation 2009

Johnathan Cholewa (PhD) June '09
Currently working for Golder Associates in Ottawa, ON

Indra Kalinovich (PhD) June '09
Currently Postdoctoral Fellow at University at Buffalo (SUNY)

Thomas Gleeson (PhD) Oct '09
Currently Postdoctoral Fellow at UBC, Earth and Ocean Sciences, Vancouver

Md. Shakhawat H. Chowdhury (PhD) June '09

Karina Lange (PhD) June '09
Currently working as a Geoscience Officer for Canadian Nuclear Safety Commission

Ali Oveisy (PhD) Oct '09
Currently Postdoctoral Fellow at Queen's University, Kingston

Wenhong (David) Dai (PhD) June '09

Santosh Rimal (PhD) June '09
Currently working for Golder Associates Limited, Mississauga, ON

Stephen Vardy (PhD) Oct '09

M. Zahirul Islam (PhD) June '09
Currently working as a Senior Staff Engineer, GeoSyntec Consultants, Austin, Texas

Hongwei Xia (PhD) June '09
Currently working with EBA Engineering, Edmonton, AB

Michael West (PhD) Oct '09
Currently working for B. Kueper & Associates Limited, Kingston

Jianfei Ye (PhD) June '09
Currently working with Gibson Associates (Ontario).

Cameron Smith (MENG) June '09
Currently working for XCG Environmental Consultants, Kingston

Graham Watt (MEng) Oct '09
Pursuing PHD studies in September 2010

Lucio Amato (M.Sc.Eng) June '09

Roya Davoodi Bilesavar (M.Sc.Eng) June '09
Currently working for Hatch, Winnipeg

Luis Bayona (M.Sc.Eng) Oct '09

Ryley Beddoe (M.Sc.Eng) June '09
Currently working on a PhD at Queen's University

Raejee Kaewsong (M.Sc.Eng) June '09

Erin Hall (M.Sc.Eng) June '09
Currently working with Gibson Associates (Ontario).

Jianfei Ye (PhD) June '09
Currently working with Gibson Associates (Ontario).

Laura Bostwick, (M.Sc. Eng) Oct '09
Currently working for Stantec, Ottawa

Heather Lossing (M.Sc.Eng) June '09
Currently working as Project Manager for XCG, Oakville

John Gales (M.Sc.Eng) Oct '09
Currently working on a PhD at University of Edinburgh

Andrea Lougheed (M.Sc.Eng) June '09
Currently working with Thurber Engineering, Vancouver,

Eric Martin (M.Sc.Eng) June 09
Currently working on a PhD at Queen’s University

Lesley Herstein (M.Sc.Eng) Oct '09
Currently working on a PhD at University of Toronto

Heather McLeod (M.Sc.Eng) June '09

Waleed Shawkat (M.Sc.Eng) June '09
Currently working on a PhD at University of Edinburgh

Please send comments and or news to:
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