Hello all Alumni and Friends of Geological Sciences and Geological Engineering at Queen's. It is my great pleasure to provide you with departmental news for the 2013 year.

It has been a very busy year, with some great successes, as well as some continuing challenges, all of which are associated with declining funding for education.

We continue on our upward enrollment trajectory, with the number of undergraduate students in 2nd year exceeding 90 for the second year in a row. The staffing and running of field school has become an exercise in "engineering optimization", and we have taken over every bed in the hotel in Sutton.

We have had the great joy of welcoming two new faculty members to the department this year: Dr. Alexander Braun and Dr. Georgia Fotopoulos. A brief profile of each is provided on the next page. Their contributions to the department have already been tremendous - the students are benefitting from the return of advanced geophysics courses offered by Alexander, and the new courses in GPS positioning for earth observation and "presenting science" being offered by Georgia.

Our appointments committee has also been kept very busy this year, seeking to fill two other positions. Queen's won the opportunity to recruit for two of the eleven Canada Excellence Research Chairs. In our department's case, a top international researcher will become the CERC in Geofluids in Sedimentary basins. The second position has been made possible by a generous donation from alumni to hire an Executive Director to lead the development of a new professional Masters in Earth and Energy Resources Leadership. In both cases, we hope to announce the names of these new members of our department shortly.

The Faculty of Arts and Sciences welcomed a new Dean this summer. Dr. Susan Mumm has joined Queen's, after completing her term as Pro Vice-Chancellor of the College of Humanities and Social Sciences at Massey University in New Zealand. In a short time, Dr. Mumm has developed an excellent set of priorities for the Faculty and has made impressive progress with implementing the new activities based budget model.

We were delighted to welcome alumni back to the department during the two fall Homecoming weekends in October. In particular, the class of '83 made a very strong showing indeed, showing up in large numbers and bringing lots of great stories of their time at Queen's and class memorabilia. My personal favourites were the photos of Ron Peterson from those days. In Fall 2014, we are looking forward to welcoming back members of the graduating classes of the *4 and *9 years - hopefully many of you will join us in the Department for our reception.

Thank you all very much for your continuing support of and interest in the department.

With very best wishes for a happy holiday season and a wonderful year ahead.

D. Jean Hutchinson, Department Head
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New Professional Masters Programs

The Department of Geological Sciences and Geological Engineering (GS&GE) is pleased to announce the development of a new Graduate program in Natural Resources Intelligence (NRI). This professional master's program is poised to meet the market needs in Canada for continued professional education and training in the natural resources industry. Courses will be offered in three interlaced areas, namely: (i) data acquisition, (ii) processing and modeling, and (iii) interpretation to achieve 'intelligent' data management for the natural resources sector. The program will be a collaborative venture with joint offerings between GS&GE and number of other units at Queen's including the Business School and other departments (Geography, Biology, Chemistry, SURP).

This new opportunity will be a unique experience for all participants and will provide the ultimate environment for exposure to the practical applications of innovative research as well as excellent networking opportunities. For more information, readers are encouraged to contact Dr. Georgia Fotopoulos directly.

Welcome Georgia Fotopoulos

Dr. Georgia Fotopoulous, P.Eng., joined the department on July 1, 2013, moving here from University of Texas at Dallas. Georgia is a Geomatics Engineer by training, and received her degrees in from the Department of Geomatics Engineering from the University of Calgary. The department is delighted to have her on the faculty team.

Georgia will be teaching courses in applied numerical methods, geomatics and geodesy, as well as developing and leading a new professional Master's program (see description above).

Welcome Alexander Braun

Dr. Alexander Braun joined the department on July 1st, 2013 as our new Applied Geophysics Professor. Alexander will be teaching our undergraduate geophysics courses and will introduce new graduate level courses to our program. His expertise, energy and enthusiasm will be a wonderful contribution to the faculty team.

Earth and Energy Resources Leadership

The new professional Master's program in Earth and Energy Resources Leadership, will provide participants a unique, case based learning opportunity. Elements of geology, resource engineering, chemical engineering, and environmental studies, as well as business, finance, law, policy, ethics and innovation will be combined into a world class program. Stakeholder engagement and the social license to operate resource projects will be an important point of focus for the program. Intended for participants from any of these fields, who are currently working in the earth resource sectors, this program will be scheduled and structured to permit students to continue working while they complete the degree requirements.

The Executive Director responsible for bringing this program to market is funded through a very generous donation from Queen's alumni.

The first class for this new degree program will be accepted during the fall of 2015. Interested parties are encouraged to contact Dr. Jean Hutchinson.
A week at the geology museum! This is what will be happening for two grade 4 classes in March of 2014. The Miller Museum of Geology will be the host site for an exciting educational pilot project, in collaboration with the Kingston Association of Museums, Art Galleries, and Historic Sites, and both the Limestone District School Board and the Algonquin and Lakeshore Catholic District School Board. The “Open Minds/Campus Calgary” project started in Calgary, Alberta, with the financial support of Chevron and the vision of two innovative educators, Gillian Kydd and Don Harvie. In the Open Minds concept, the novelty of the usual half-day “school field trip” is replaced with an entire week of learning at a site outside of the school. The classroom relocates to a museum, a zoo, or other setting where the students immerse themselves in the new atmosphere and use the resources and people available there to get a deeper, more thoughtful understanding of a topic. “We slow kids down, and give them the skills to observe, to see things in depth” says Dr. Kydd. From its Calgary beginnings in the 1990’s, the Open Minds concept has spread to Edmonton (“Inquiring Minds”), London, Ontario (“Museum School”), Newfoundland, and as far as Singapore. This pilot project will lead to a full scale implementation at multiple Kingston sites over time. The Miller Museum has been very successfully delivering curriculum-linked hands-on educational programs in geology to thousands of people each year in the museum’s classroom since 1988. Museum curator Mark Badham is heavily involved in both educational and operational collaborations with other local museums, and the Miller Museum was an obvious site to host this exciting new initiative in Kingston.

GeoEng Grads Awarded First Prize at CGS Student Competition

Congratulations to Gary Cui, Jessica Galavan, Duncan Leung, and Matt Lloyd. These four GeoEng grads were awarded first prize by the Canadian Geotechnical Society for their design entry in the Undergraduate Student Report (Group) Competition.

The report submitted by the students, titled "Holmestrand Underground Rail Cavern", concerns the design and modeling of the excavation and supports of a massive underground rail tunnel under very difficult geological and hydrogeological conditions. This report was done for the fourth year design capstone courses, GEOE 446 and 447, and the project was supervised by Dr. Mark Diederichs.

Nature & The Life Equation -

New Displays by Dr. Leigh Smith

In the wall-mounted display cases in Bruce Wing, two new displays have been added. These displays highlight the equation developed by Dr. Leigh Smith, known as the “Life Equation”, as well as nature’s role in controlling CO2 concentration in the air and in the sea.

These educational displays host some fantastic samples from the department, including brain coral, horn coral, strombus shell, millepora and more. Everyone is encouraged to come view these displays.
Emeritus Professors

We wish Jim Lee all the best, as he departs Queen’s to become deputy vice-chancellor, international, at Macquarie University in Sydney, Australia.
ALUMNI NEWS
The department is always looking for class reps to act as a liaison between alumni and the department. If you would be interested please contact Jean Hutchinson.

MESSAGE FROM ROGER

Your Queen’s Geology Council has been going strong now for 10 years and a lot has been accomplished. Our first target was to raise $2MM for the newly established Queen’s Geology Field School Endowment Fund. All of us remember just how much the various field schools enhanced our understanding of geology. Well, the dramatic drop in government funding was poised to jeopardize that experience. The fund had recently surpassed the $2MM target—thanks to so many of you—and it now helps fund 1/3 of the field school expenses. Given the increase in student numbers plus costs, we recently set a new target – $4MM – so please go to the Departmental website and help out with whatever size donation you can manage.

There are also multiple other fund raising initiatives underway to help the Department achieve its objective of providing a world class educational experience for the students. If you would like further information about them, please contact Jean Hutchinson or myself (chwsmith555@gmail.com). Thanks!

Alumni Awards

Mike Rose, Artsci’79, and Susan Riddell Rose, Sc’86 have been presented with the 2013 Johnson Award. It’s the highest honour bestowed by the Queen’s University Alumni Association’s Calgary Branch. The Johnson Award pays tribute to lifelong contributors to Queen’s University, the Alumni Association, and the Calgary community.

Roger Smith, Sc’71, was awarded the Stanley Slipper Gold Medal, the Canadian Society of Petroleum Geologists’ most prestigious award. The Stanley Slipper Gold Medal recognizes excellence in exploration activities.

Upcoming Alumni Events
- Vancouver - Round-Up - Monday, January 27
- Toronto/PDAC - Tuesday, March 4
- Homecoming 2014 - The department would like to work with you to organize an event for Homecoming 2014. If you have ideas, let us know!

NAMED TASHIP DONORS

Thank you to all Named TAship Pledge Donors:

Arc Resources
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Katie Anne MacInnis and Rick Wasfy
Griff Murphy and Anne Raymond
William Pearson
Marc Prefontaine
Roger & Lorna Smith
Student’s Perspective

By Edward Matheson and Ryan Dhillon

On May 15, 2013 twelve graduate students and five professors from the department departed Albuquerque, New Mexico for an 18-day journey around the southwest US. Over that time they would travel 8500 kilometers (5200 miles) through seven states, and across thirteen state borders.

This whirlwind tour was an interdisciplinary graduate field course where everyone, professors included, expanded their geologic knowledge. Each graduate student was responsible for the geologic overview of a specific field site, including both a written summary and leading a group discussion at the location. The diverse research interests and experiences of both the students and professors lead to a collegial environment, which encouraged peer-based learning.

Over the course of the eighteen-day trip the group visited world-class geologic sites including everything from metamorphic core complexes to ancient carbonate reefs to recent volcanics. Well known sites include Zion National Park, Yosemite National Park, the Grand Canyon, Death Valley, the Permian Reef Complex, Arches National Park, and Carlsbad Caverns among many more. The group also observed important engineering sites including Cripple Creek and Victor Gold Mine, Glen Canyon Dam, the Creede Mining District, and Hoover Dam.

The trip was a great success and wouldn’t have been possible without the superb leadership of master planner Rob Harrap, and his trusted guide team of Dr. Noel James, Dr. Bob Dalrymple, Dr. Jean Hutchinson, and Dr. Bill Martindale as well as our colleagues at New Mexico Tech, Drs. Peter Scholle and Dana Ulmer-Scholle. Thanks also to the department and our generous donors for financial support, which helped keep student costs manageable.

From Albuquerque to Albuquerque in 18 days

By Rob Harrap

The annual grad trip has become something of an institution at Queen’s, growing out of the epic GSA and MINEX trips of the 1970s and 1980s. These days our scope can be a little larger - last year the target was Nepal - but we returned to the familiar and fascinating southwest USA in 2013. The area is unsurpassed for opportunities to see geology at hand-lens to far-horizon scale, for world class National Parks, and of course for many mines and petroleum resource areas.

Unlike previous southwest trips which attempted a large loop encompassing as many mines and geological must-see’s as possible, this year we did two loops and our focus was a little broader. Noel James, Bob Dalrymple, Bill Martindale, Jean Hutchinson and myself took 12 lucky (?) students on a trip that ranged from the geology and geotechnical engineering of a major gold mine (in Cripple Creek, Colorado) to the geology and economic significance of the Permian reef complex of west Texas. The first loop covered the mines and parks (from Albuquerque to the north and west), and the second loop encompassed the reef complex (and Carlsbad Caverns!).

Highlights of the trip included Yosemite park, the old mining town of Creede, Colorado, Death Valley, and of course the guided tours at Cripple Creek and of the Permian reef complex. Thanks so much to Cripple Creek and Victor Mines and to Dana Ulmer-Scholle and Peter Scholle for those opportunities!
“All the trips included in the Geological Engineering curriculum at Queen’s have been a learning experience and an adventure. The hands-on knowledge has been invaluable for summer jobs, and the great friendships born out of these trips are also unforgettable. I can whole heartedly say that we are lucky to have the opportunity to participate in them and are definitely glad to have such wonderfully helpful TAs along for the ride with us as well.” - Josephine Morgenroth  B.Sc.E Candidate, Class of 2014

“GEOL 301 was a great learning experience to finally be able to use things that we had learnt about in lecture and apply them out in the field is invaluable. The weather was gorgeous, the scenery surrounding us was breathtaking and the rocks told a great story about island arcs, thrusting events and finally evidence of Pangea. Definitely a trip to remember!” - Olivia Park (GEOL 301)

“Nothing feels better than completing a flawless seismic reflection survey! The combination of geophysics field work and lab work is exactly the reason I chose geology. You work hard all day, then get back from the field to look at what your hard work has produced. In my case, one of the best reflection sections I’ve ever seen. So amazing!” - Meredith Raddysh (GEOE 419)

“This trip was fabulous! All of these years at school, intensely studying and work, started to slide into place. I was sooo excited, practically humming with energy because there were so many adventures and experiences to be had. This trip allowed me to ask questions and then see the answers!” - Kathryn Franklin (Sci’12: BGC Engineering, Vancouver)” - (GEOL 410)

Undergraduate Field Schools
Student Perspective
Staying in Touch

To receive information via email about upcoming departmental alumni events, or to receive the departmental newsletter, please ensure that your personal information on file is current. You can update your contact information at:

https://adv.queensu.ca/biographicupdate/