



# Geomatics News

SUMMER 2014 · Volume 11, Issue 4

### Message from the Head

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#### **COMING EVENTS**

Fall Convocation November 10, 2014 Jack Simpson Gymnasium

> ENGG 200 Presentation November 13, 2014

SSE 3<sup>rd</sup>/4<sup>th</sup> Year dinner November 19, 2014

FOCUS November 20, 2014

1st Year "Future Is..." Event November 27, 2014 5pm • Murray Fraser Hall 162

> Midwest Surveys December 3, 2014

Geomatics Exposition January 29, 2015 MacEwan Hall

ENGO 501 Geomatics Field Surveys Kananaskis Field Station Kananaskis, Alberta August 17-26, 2015





Dear Reader,

We are nearly half-way through the new and very busy fall semester. This year we welcomed our class of second-year students with a new initiative, a career planning workshop. The aim of the Second-Year Career Planning Day was to better prepare our students for their future careers by introducing them to the industry, informing them about what employers look for when hiring and options after graduation from the BSc program. The full-day workshop featured presentations from the Department, the industry—thank Geomatics you to GEAC members Landra Trevis and Irwin Natt!—human resources personnel, the Engineering Internship Director and others. Participation was voluntary and free, save for the admission "fee" of a résumé. Career Services staff reviewed the students' résumés and provided feedback at the end of the day. It was a very successful workshop.

Also new this year is a change in format to the Geomatics Engineering Advisory Committee (GEAC) meetings. In addition to the annual GEAC meeting in March, a short September meeting was held to provide an update to committee members on recent activity in the Department.

The meeting was a success so we plan to continue having this more frequent connection to our valuable industry advisory committee.

The summer saw some staff changes in Geomatics Engineering. We welcomed Monica Freeman to the team in August and Kirk Collins took up a new 50% role in July as Space Capacity Lead for the Schulich School of Engineering. We also bade farewell to Ayman Habib.

Finally, on 27 November we will host a First Year Pizza

and Info Session, "Future Is..." in Murray Fraser Hall. The speakers will be GEAC member Barbara Ball and alumni Justin Williams and Yan Wong from WorleyParsons Canada. The aim of the event is to enlighten first year students about exciting and challenging careers that will open up for them if they complete a degree in Geomatics Engineering.

Derek Lichti Professor and Head



### 2014-2015 Geomatics Engineering Student Society (GESS)

Front Row (L to R): Danica Pratt, Olivia Bakstad, Nicole Beier, Anna Ross, Adam Bhavnani (President), Madison Shevchuk, Sarah DeMong, Marnie Dunbar, Claudia Potok

Back Row (L to R): Arthur Lu, Jefferey Cornish, Clayton Berg, Jesse Vanneste, David Krawczuk, Colin Edgar, Rafael Canelon

# AWARDS RECOGNITIONS

- Professor Michael Sideris received the NSERC
   Accelerator Grant for
   his project involving the
   monitoring of the temporal changes in the gravity
   field, oceans, land water
   and ice masses in North
   America by the means of
   integrated satellite data.
- Professor Ruisheng Wang was one of 50 researchers awarded the Eyes High Postdoctoral Scholars Award. Winners are invited to nominate a new scholar from outside the University of Calgary who will contribute to increase

- our research capacity.
- Recent PhD graduate Jacky Chow was featured on GIM and Xsens for he's research on surveying and indoor mapping.
- Professor Steve Liang and Maribeth Murray, executive director of the Arctic Institute of North America and professor of anthropology and archaeology, have received \$500,000 from (CANARIE) to launch ArcticConnect. ArcticConnect is designed to make it easier for scientists to manage and access information about the changing conditions in the Arctic.
- 2014 was another excellent year for Geomatics Engineering researchers at the Institute of Navigation

- GNSS+ 2014 Meeting in Tampa, Florida. Researchers from our department won five best presentation awards for the following papers:
- Amr Al-Hamad, for Mobile Mapping Using Smartphone: N. El-Sheimy, A. Al-Hamad and A. Moussa
- Professor Susan Skone, for GPS Scintillation Modeling and Receiver Design Strategies for Low-latitude Regions: F. Ghafoori and S. Skone
- Elmira Amirloo Abolfathi for Deriving Bearing Measurements from Video Images using Haar-Like Features for Vehicle-to-Vehicle Navigation: E. Amirloo Abol-

- fathi and K. O'Keefe
- Kelly Chang, for An Advanced Real-Time Navigation Solution for Cycling Applications Using Portable Devices: H-W. Chang, J. Georgy, Trusted Positioning Inc., Canada; N. El-Sheimy
- Srinivas Bhaskar, PhD candidate, for Exploiting Quasi-periodicity in Receiver Dynamics to Enhance GNSS Carrier Phase Tracking: S. Bhaskar

The last paper, by PhD candidate Srinivas Bhaskar, was one of only four papers selected this year for the ION GNSS Student Paper Award. Mr. Bhaskar is supervised by Professor Gérard Lachapelle.

### **Department Activities -**



### **Department Potluck Picnic**

August 10, 2014

The graduate students, faculty, staff and their families enjoyed an afternoon of fun, games and great food at the Department Potluck Picnic. Thanks go out to G^3, the Social Committee and staff for arranging the event which took place at Edworthy Park.



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### **Department Activities**



The annual excursion to the Kananaskis Valley for ENGO 501 – Field Surveys started on August 18, 2014 and ran for 10 days. Students retraced the boundary of the Barrier Lake Field Station lease, surveyed Barrier Dam, conducted static and RTK GPS surveys, mapped part of Barrier Lake and then assembled all of their results and some current and historical imagery in a GIS. Despite some rainy weather, all of the groups were

able to complete all of the work on time and on "rain day", which was beautifully sunny, a group of students and TAs made it to the top of Mount Baldy. This year's Lost Peg competition wasn't as accurate as some past years, but the winners, Nicole Beier, Blake Lange, Anna Ross and Carson Bannon came in with a distance just over 1m. Five professional land surveyors, Arlin Amundrud, ALS, Bob Haagsma, ALS, Aaron Shufletoski, BCLS, Mark

Mason, BCLS, and David Marquart, ALS, and one representative of the Alberta Government, Glen Tjostheim, participated in this year's industry presentations. They also helped the instructors find the true location of the lost peg (after we had marked it earlier in the week with two non-magnetic nails). The department would like to thank them for their support of our program. The next Survey Camp will take place from August 17-26, 2015.



# **Survey Camp**

Kananaskis • August 18-27, 2014











#### **Other News**



#### **Farewell Ayman!**

This August, a special event was held to wish Prof. Ayman Habib the best of luck as he pursues his new position at Purdue University. Ayman will be truly missed after 12 years with the department, though he will continue to serve the department as an Adjunct Professor.



## Black vs. White Soccer Match



The department would like to introduce and welcome our newest staff member, Monica Freeman! She comes to us from Douglas College where she worked extensively with students and professors. Monica is in the office part-time assisting with a wide variety of tasks and already is an invaluable part of our admin team.

A fun fact, Monica is originally from Calgary, but has grown up in England and overseas – don't let the accent fool you.





Graduate students, faculty and staff were all welcome to participate in the department's first soccer match, this summer, organized by G^3. It was a close match but the white team won the honor this year.



**G**∧3 2014 Committee



Adam Clare President



Mohammad Amirani Vice-President



Wenxin Yang Secretary



Mostafa Arastounia Treasurer



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