



**SCHULICH**

School of Engineering

The classes of both the Winter term and Spring session have now officially ended. The period since mid-March has been very unusual and challenging for our students, staff and faculty. There has been a tremendous amount of work happening behind the scenes to complete the academic year as smoothly as possible and create the plan for the re-opening of the campus and the Fall term. In Geomatics Engineering, we are all so grateful to all of the University community for working so collaboratively and quickly under these challenging circumstances.

This Newsletter summarizes the activities of our department over the last few months. This academic year, we are proud to celebrate our 40th anniversary. Since our inception in 1979, the Department of Geomatics Engineering at the University of Calgary has grown into a dynamic global leader in education, research and impact on society. Our graduates have been instrumental in the success of many geomatics companies in Alberta, Canada and the world. The employment opportunities for our graduates have always been high and continue to grow. This June we are so excited to celebrate our 40th graduation class!

The 40-year journey has been an exciting experience for all those who were involved. The department has evolved rapidly to follow and shape the evolution of geomatics engineering discipline and profession in Alberta, Canada and the world. We are experiencing difficult times; however, for every challenge encountered, there is opportunity for growth. Our department's mission has always been to sustain-grow-transform and we keep working closely with our industry, government and professional associations advisors to draw our vision for the next 40 years.

The Schulich School of Engineering has recently launched the Catalyst, an initiative to support expanded student learning opportunities outside the classroom. The Geomatics Exposition, an annual event organized by the Geomatics Engineering Students Society (GESS), has been the Catalyst for a successful career of our students for 22 years. In January 2020, the Department welcomed the unprecedented number of companies visiting the campus to inspire our students and offer them exciting summer jobs, internships and full-time employment opportunities. In February, a dozen of undergraduate students participated in the inaugural global experience trip to Denver, Colorado.

Our renowned faculty members continued their successful research path by fostering collaborations with industry and government partners, bringing more resources to support their research teams, preparing the new generation of geomatics engineers, promoting innovation and entrepreneurship, and contributing with our graduate students to the evolution of geomatics engineering technologies.

We are grateful to the sponsors for their continued support and all industry representatives for their active involvement and promotion of our department and profession. Last but not least, congratulations to all award and scholarship recipients as well as our entire student community. You make us proud with your hard work and amazing achievements!

Emmanuel Stefanakis

Department Head

June 27, 2020

## Congratulations – Class of 2020!

Geomatics Engineering celebrates its 40th Graduation Class



On June 25 2020, the Department hosted the Class of 2020 online graduation celebration. As COVID-19 forced the postponement of the spring engineering convocation, we virtually celebrated as a department. The graduation celebration was organized by the Schulich School of Engineering as one of five different engineering online graduation celebrations taking place simultaneously.



The well-attended celebration was hosted by Dr. Emmanuel Stefanakis, Head of Geomatics Engineering Department. At the beginning, Dean Bill Rosehart offered a few words on behalf of the Schulich School of Engineering. Then, Dr. Elena Rangelova, an award-winning instructor, including ESS Geomatics Engineering Graduating Students Professor of the Year and the Department of Geomatics Engineering Teaching Excellence Award, shared her words with the newest Schulich Geomatics Engineers. The program continued with the speech of Sandra Simeonova, President of the Geomatics Graduate Group (G<sup>3</sup>). Then, our distinguished alumni Natasha Spokes, CEO & Co-Founder of FarCloser Travel, offered her words of wisdom and also led all the new graduates in the University of Calgary alumni pledge, a key part of our graduation tradition. Finally, Provost Dru Marshall popped by to congratulate our graduates.

Here is the list of the names of those who are members of the Class of 2020 for geomatics engineering:

### **Bachelor of Science in Geomatics Engineering**

- Miriam Deitz
- Khongorzul Duurenbileg
- Kelly Harke
- Brandon Langton
- Erica Lemieux
- Chris Lin
- Morgan Moe
- Dawood Nadeem
- Jeffrey Plett
- Juan Rivera
- Steven Schroeder
- Jeffrey Thompson

### **MSc in Geomatics Engineering**

- David Jarron

### **Doctor of Philosophy in Geomatics Engineering**

- Mohammad Razu Ahmed
- Zahra Hadavandsiri
- Mohamed Shawky Mohamed Ali Khadra
- Yiran Luo
- Hani Mahmoud Mohammed
- Helen Pinto
- Dimitrios Piretzidis
- Shaobo Xia
- Peiyuan Zhou

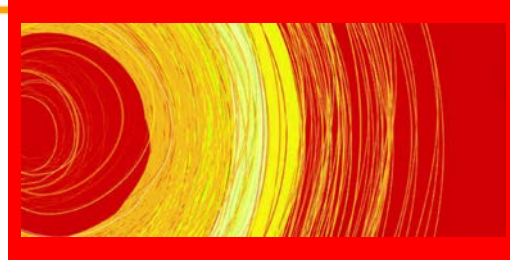
This year is a special year for the Geomatics Engineering Department. The department was founded in 1979 and in 1980 celebrated the 1<sup>st</sup> graduation class in Geomatics Engineering. The Class of 2020 is the 40<sup>th</sup> Graduation Class of our Department.

Congratulations graduates!

June 3, 2020

# 2019 Geomatics Engineering Undergraduate Awards

Celebration of Excellence



On January 30<sup>th</sup>, 2020 we celebrated excellence. The 2019 Geomatics Engineering Undergraduate Awards were presented to the recipients. Here is the list of the Awards and the recipients. Congratulations to all the winners and thank you to all the donors for contributing to the success of our students!

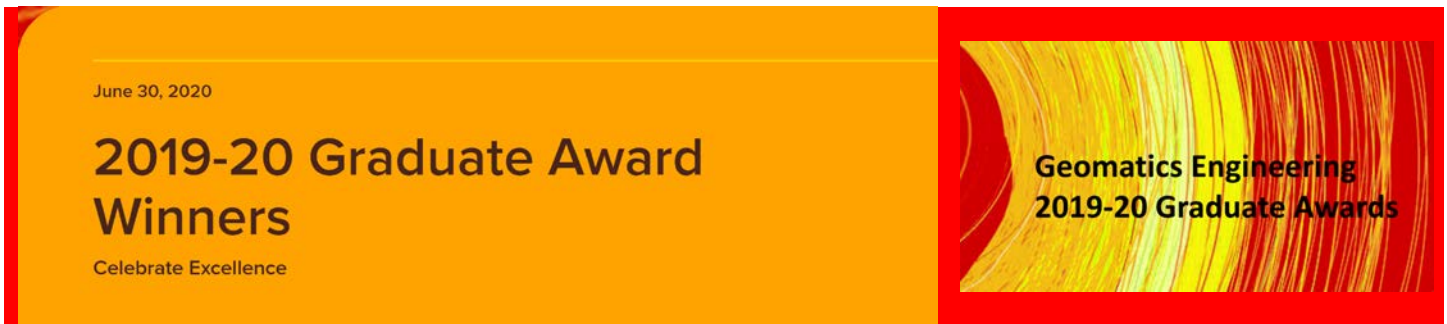
## Department Awards

- A.D. (Denis) Hosford Scholarship: Erica Christina Lemieux
- Alex Hittel Memorial Bursary in Geomatics Engineering: Carlitos John Modesto Enverzo
- Cannon-Lachapelle Family Scholarship: Andreas John Brown
- E.J. Krakiwsky Bursary: Zifan Zhang
- Green MacPhee Endowed Scholarship in Geomatics Engineering: Dongheok Cho
- Institute of Navigation Alberta Chapter Bursary: Zifan Zhang
- J.H. Holloway Scholarship in Geomatics Engineering: Chris K.Chan Cho
- John Deyholos Memorial Award: Erica Christina Lemieux
- KIS-97 Undergraduate Scholarship: Mabel Grace Heffring
- L.R. (Dick) Newby Memorial Award: Teagan Joseph Drever
- Ray Lowry Memorial Bursary: Jan Erik Naess
- Scott Anderson Memorial Award in Geomatics Engineering: Andreas John Brown
- Stephen P. Williams Memorial Award: Andrew Johannes Richard Grab
- Green MacPhee Geomatics Engineering Field Survey Camp Endowment Fund - Winners of the Lost Peg Competition: Erica Christina Lemieux, Cho, Steven Schroeder, Trisha Escorpiso, Juan Rivera
- Green MacPhee Geomatics Engineering Field Survey Camp Endowment Fund - Second Place in the Lost Peg Competition: Kelly Harke, Brandon Langton, Eric Ho, Miriam Deitz, Hojo Duurenbileg

## Industry and Associations Awards

- Alberta Geomatics Group Scholarship: Katharine Mairin Rockliff
- Alberta Land Surveyors' Association Scholarship: Mitchell Edward Brown
- B.C. Land Surveyors Foundation H.R. Goldfinch Memorial Award: Jeffrey Gordon Johnson
- BC Land Surveyors Foundation - Kenneth K. Wong Memorial Land Surveying Scholarship: Maria Thu Le

- Cansel Undergraduate Award - Research Paper: Morgan Moe
- Grant Hastings McNabb Memorial Award: Claire Lindsay Mah
- Jack and Louise Lee Family Energy Leaders Scholarship: Faith Larissa Nayko
- McElhanney Award: Jeffrey Allan Thompson
- Midwest Surveys' Jerry J. Simpson Memorial Scholarship: Jeffrey Allan Thompson
- Saskatchewan Land Surveyors' Association Award: Carter Cordell Janssen
- Underhill Geomatics Award: Ranique Nicky Mclaughlin
- WSP - Geomatics Engineering Bursary: Wynand Tredoux



On 29 June 2020, the 2019-20 Graduate Awards were presented to the recipients by Dr. Michael Sideris, Associate Head Graduate Studies in an online session attended by graduate students, faculty and staff. Congratulations to all the winners for their hard work and dedication and thank you to all the supporters and donors for the continued contribution to the success of our students!

Here is the list of the Awards and recipients:

### **Graduate Award Competition (GAC)**

Dean's International Doctoral Recruitment Scholarship

- Farzaneh Zangeneh-Nejad

Eyes High International Doctoral Recruitment Scholarship

- Soroush Ojagh

Alberta Innovates Graduate Student Scholarship

- Kent Jones
- Mohamed Moussa
- Shu Zhang

T. Chen Fong Doctoral Research Excellence Scholarship in Medical Imaging Science

- Shu Zhang

## Werner Graupe International Fellowship in Engineering

- Chrysostomos Minaretzis
- Dimitrios Piretzidis

## **Alberta Graduate Excellence Scholarship (AGES)**

### MSc Studies

- David Jarron
- Katherine Pexman
- Paul Gratton

### Doctoral Studies

- Mohammad Razu Ahmed

### International

- Hani Mohammed
- Ahmed Youssef
- Emad Ghaleh Noei

## **Department Awards**

### L.R. (Dick) Newby Memorial Award

- Dillon Pullano

### Huangqi Sun Memorial Graduate Scholarship

- Mohammad Razu Ahmed

### Helmut Moritz Graduate Scholarship

- Emad Ghaleh Noei

### KIS-94 Graduate Scholarship

- Chrysostomos Minaretzis

### Institute of Navigation (ION) Graduate Award

- Sharareh (Asal) Naghdi

### Institute of Navigation (ION) Graduate Award

- Cheng Huang

### Institute of Navigation (ION) Alberta Section Graduate Award

- Cheng Huang

### Institute of Navigation (ION) National Graduate Award

- Cheng Huang

## **Mitacs-Accelerate Graduate Research Internship**

- Camilo Esteban Cortes Rubio



- Mohammad Hassanein

## Teaching Assistant Recognition Award

- Hani Mohammed
- Rodrigo Augusto de Oliveira E Silva
- Lingyi Cui

Congratulations to all our 2019-20 Graduate Award Winners!



**AUTHOR: Michael Platt, SSE**

### Geomatics and Electrical Engineering collaboration...

Technically, we'll all be winners if Team Pixel Heroes is successful in protecting the planet Earth from rogue asteroids and comets.

But for now, the celebration is focused on the trio from the University of Calgary's Schulich School of Engineering, who capped a busy 2019 as overall winner of the Canadian Space Agency's (CSA) annual Space Apps Challenge, part of NASA's International Space Apps Challenge.

Pixel Heroes, as Parnia Shokri, Bahareh Yekkehkhany and Amin Zadeh are known, proposed an app using computer-vision algorithms to spot miniscule changes in images of space, as captured by Canada's Space Surveillance Telescope, NEOSsat.



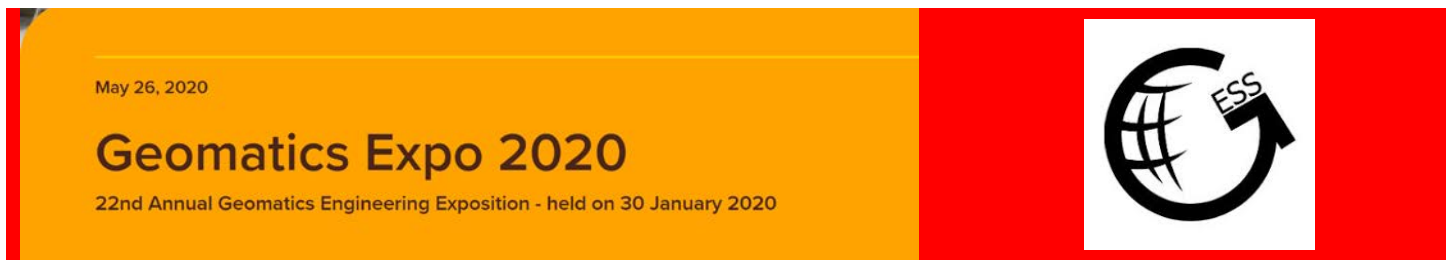
As the team's software repeatedly scans images of space for anything new or out of place, objects that present a threat to Earth – be it an asteroid or comet – should be spotted well in advance, giving Earth plenty of time to react.

"We designed a software based on computer-vision algorithms to find these objects in images. It's open source and user friendly. There's a graphical user interface. With just one click people can load a data set and detect asteroids and comets," Shokri told CBC Radio in an interview late last year.

Parnia is an electrical and computer engineering student, Bahareh is a geomatics engineering student, and Amin is an electrical and computer engineering graduate now working outside of the university.

The CSA called the engineering team's idea an "inspiring and innovative solution to the NEOSSat challenge".

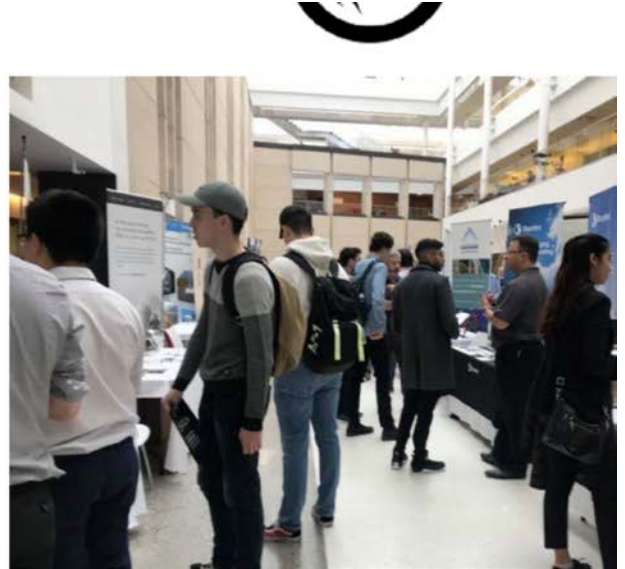
In February, Team Pixel Heroes presented their award winning, planet-saving solution to the CSA's president and technical teams.



This year marks the 22<sup>nd</sup> annual Geomatics Exposition hosted by the Geomatics Engineering Students' Society (GESS). The Geomatics Exposition is one of the biggest events hosted by GESS that provides an opportunity for geomatics companies to interact with and inspire the next generation of geomatics engineers by showing them all of the various career opportunities that they can pursue. The objective of the Geomatics Exposition is to have individuals from various companies talk to undergraduate students/alumni and build valuable connections with people in industry.

The exposition is an all day event that ends with a reception event for the companies and students. During the day, the companies are set up in a specific location and throughout the day undergraduate students and alumni have a chance to talk to people in the geomatics industry and companies can present the exciting projects that they are working on in information sessions. Companies can also host interviews at the exposition if they are looking for interns. The Geomatics Exposition is 100% planned and run by students. All proceeds from the exposition goes towards the Geomatics Engineering Student's Society to be used for future expositions or for other activities hosted by GESS.





The companies that have attended this year's Geomatics Exposition include:

- WSP
- Leica Geosystems
- Challenger Geomatics
- NovAtel
- McElhanney
- MidWest
- Airborne Imaging
- Association of Canada Land Surveyors
- Cansel
- LN Land Development Technologies
- Occipital
- Stantec
- Tulloch Engineering
- Underhill Geomatics
- Alberta Land Surveyors' Association
- Allystar Technology
- Altus Geomatics
- Association of British Columbia Land Surveyors
- Ellisdon
- ESRI Canada
- Meridian Surveys
- Natural Resources Canada
- OGL Engineering

February, 2020

## Global Engineering Experience Geomatics 2020

Denver, Colorado



A dozen of students in their second or third year of a Department of Geomatics Engineering degree visited the beautiful Denver, Colorado during the Winter break. The trip was organized by the Schulich School of Engineering under the new initiative Global Engineering Experience.

The Denver metro area has become a trailblazing tech hub, with many companies innovating solutions in the Geomatics industry. U of C Alumni in Denver offered the students a week of learning how geomatics engineering is an integral component of modern solutions in transportation, architecture, construction, agriculture, logistics, natural resources and the environment. Students visualized what their career in the geomatics industry could look like, by networking with professionals in engineering, product development, technical sales, marketing, research, and many more disciplines. They experienced the unique entrepreneurial spirit of Denver, balanced with a passion for the outdoors, sports teams, and craft culture. Company visits included Trimble Inc, Intermap, and Amazon Web Services.



The tour was organized by Stephanie Michaud, Trimble Navigation. The students were chaperoned by Dr. Ivan Detched, Instructor, and Sandra Simeonova, Graduate student in Geomatics Engineering.

June 9, 2020

# 2020 Summer Studentship Projects

Undergraduate Student Research Experience in Geomatics Engineering



The involvement of undergraduate students in research activities is a growing trend in Canada and the world. The Natural Sciences and Engineering Research Council of Canada, through the Undergraduate Student Research Awards, has long invested in exposing undergraduate students to research activities as a way to foster their interest in and fully develop their potential for research careers in natural sciences and engineering. The University of Calgary and the Schulich School of Engineering have also established various grants and awards to actively support authentic research experiences that extends to all undergraduate students.

This summer four faculty members of the Department of Geomatics Engineering are supervising research projects of eight undergraduate students, all funded by SSE, PURE or NSERC grants. The selection of student recipients for the PURE Awards was facilitated by the Geomatics Engineering Student Society (GESS).

Here is the list of projects in progress:

**Disaster modelling** by Anika Achari (2<sup>nd</sup> year; Health Science). Supervisor: Dr. Quazi Hassan. Funding: NSERC Discovery Grant.

**Disaster modelling** by Mehul Gupta (2<sup>nd</sup> year; Health Science). Supervisor: Dr. Quazi Hassan. Funding: NSERC Discovery Grant.

**Fisheye modelling of wide-angle lenses** by Wynand Tredoux (3<sup>rd</sup> year; Geomatics Engineering). Supervisor: Dr. Derek Lichti. Funding: SSE and NSERC grants.

**Flood maps of First Nations Communities** by Min Kang (2<sup>nd</sup> year; Geomatics Engineering). Supervisor: Dr. Emmanuel Stefanakis. Funding: SSE research funds.

**Indoor Path Finder: University of Calgary** by Helen Zhang (1<sup>st</sup> year; Engineering). Supervisor: Dr. Emmanuel Stefanakis. Funding: PURE Award and SSE research funds.

**Integrating machine learning and photogrammetry concepts for the calibration of wide angle cameras** by Liana Goodman (1<sup>st</sup> year; Engineering). Supervisor: Dr. Ivan Detchev. Funding: NSERC USRA.

**Mapping COVID-19** by Akanksha Bhargava (1<sup>st</sup> year; Engineering). Supervisor: Dr. Emmanuel Stefanakis. Funding: PURE Award.

**Water mass anomalies in North America determined from satellite data** by Lisa Huang (1<sup>st</sup> year; Engineering). Supervisor: Dr. Elena Rangelova. Funding: PURE Award.

Oct. 30, 2019

## ESRI Canada Centre of Excellence

Student of the Year Award given to Geomatics graduate student



Congratulations Rodrigo de Oliveira E Silva! He is a current graduate student in Dr. Xin Wang's research group and he has received the ESRI ECCE Student of the Year Award.

As part of an ESRI Canada Centre of Excellence (ECCE), students who excel in GIS and demonstrates the mission and vision of the ECCE can be nominated as the student of the year. As the winner of the year, Rodrigo received a certification from ESRI and \$250. In 2018-2019, Rodrigo was one of the student associates of our department of the ECCE. He led a Geomatics graduate team to participate the ESRI App Challenge and was very active to promote the GIS and geomatics technology, such as Geoday organization and Geomathron.



June 1, 2020

## Dr. Derek Lichti - recipient of the 2020 ISPRS Schwidefsky Medal

International Society for Photogrammetry and Remote Sensing (ISPRS)



Dr. Derek Lichti is the 2020 recipient of the highly prestigious Schwidefsky Medal from the International Society for Photogrammetry and Remote Sensing (ISPRS).

The Deutsche Gesellschaft für Photogrammetrie, Fernerkundung und Geoinformation (DGPF) decided to present an award in memory of Prof. Dr. rer. techn. Dr.-Ing. E.h. Kurt Schwidefsky, honorary member of the International Society for Photogrammetry and Remote Sensing (ISPRS), which is called the (Schwidefsky Medal). Details on the award can be found here:

<https://www.isprs.org/society/awards/schwidefsky.aspx>

The winners of the award:

1988: K.Rinner, Austria; G.C.Tewinkel, USA

1992: K.Atkinson, United Kingdom; W.Hofmann, Germany

1996: J.B.Case, USA; A.P.Cracknell, United Kingdom

2000: Guy Ducher, France; L.R.A. Narayan, India

2004: Emmanuel Baltsavias, Switzerland; Zhilin Li, Hong Kong

2008: Gerhard Kemper, Germany; Klaus Szangolies, Germany

2012: George Vosselman, The Netherlands

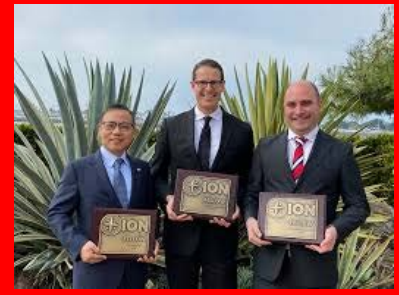
2016: Charles K. Toth, USA; Clément Mallet, France

2020: Derek Lichti, Canada

May 26, 2020

## Dr. Yang Gao elected to ION 2020 Fellow Membership

The Institute of Navigation Announces that Dr. Yang Gao Has Been Elected to Fellow Membership



**Manassas, Virginia, January 27 2020-** The Institute of Navigation (ION) announced that Dr. Yang Gao has been elected to Fellow membership during the ION International Technical Meeting (ITM) and Precise Time and Time Interval Systems and Applications (PTTI) meeting held January 21-24, 2020 in San Diego, California. Dr. Gao was recognized for significant contribution to the development, dissemination and commercialization of high-precision GNSS technologies; and for significant educational and training impact on navigation engineers and professionals.

Dr. Gao is an accomplished researcher who has dedicated his career to the development of high-precision GNSS technologies. He contributed to the development of early commercial GPS software and real-time kinematic (RTK) systems, and led a research team with 20 years of sustained contributions to the development and application of precise point positioning technology. Dr. Gao is also widely known for his sustained contributions to technology transfer of high-precision GNSS technologies. His research results have been transferred to GNSS receiver manufacturers, system integrators and service providers, with direct impact on product development.





Dr. Gao is an enthusiastic educator who has trained scores of navigation engineers and professionals who are contributing to GNSS technology and product development in academic and industry sectors around the world. His students won many student paper awards. He has offered numerous lectures and presentations to the industry and academic sectors and received several teaching excellence and graduate education awards.

Dr. Gao's contributions have been recognized by a number of national and international awards, including the ION's Thurlow Award, the CIG Intermap Award and the APEGA Research Excellence Award.

Dr. Gao has provided extensive professional services and leadership to industry and academia. He is a member of editorial boards for six international journals, and a Fellow of the International Association of Geodesy, who has played a leadership role as chair of the technical commissions on high-precision GNSS positioning and navigation.

Dr. Gao is a professor in Geomatics Engineering at The University of Calgary. He received his BSc and MSc in Surveying Engineering, both from Wuhan University, and his PhD in Satellite Geodesy from The University of Calgary.

Election to Fellow membership recognizes sustained professional accomplishments that have significantly contributed to the advancement of the arts and sciences of Positioning, Navigation and/or Timing (PNT) in the areas of technology, management, practice or teaching and a demonstrated and sustained impact on the PNT community. Fellows have maintained an observable presence in the ION community over the long term, including contributions to ION programs and publications.

## About ION

The Institute of Navigation is a not-for-profit professional organization dedicated to advancing Positioning, Navigation and Timing (PNT). The Institute is a national organization whose membership spans worldwide. Additional information about the ION can be found at [ion.org](http://ion.org).



Nov. 12, 2019

## Geomatics Professor named as one of Peak Scholars 2019

Imaging Metrology - Dr. Derek Lichti

Congratulations Dr. Derek Lichti for being named one of the Peak Scholars in Entrepreneurship, Innovation & Knowledge Engagement for 2019

Dr. Lichti's research focuses on developing new methods for precise 3D measurement from imaging sensors. One of his inventions, MillMapper, has changed mining service industry practice for comminution mill monitoring.

To see all of the Peak Scholars and their research areas, [click here](#)

Nov. 4, 2019

## Leading the Way With IoT

Winner of the 2019 ASTech Outstanding Science and Technology Start-Up Award



Congratulations Dr. Steve Liang!

Dr. Steve Liang is a winner with his company SensorUp for his work creating a cloud-based Internet of Things platform that aggregates IoT silos into a coherent system of systems and transforms them into actionable insights.



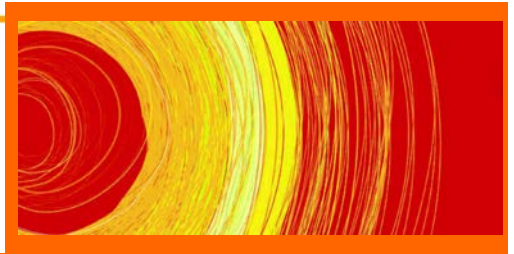
The ASTech awards are to showcase the substantive achievements in science and technology in Alberta and to promote the importance of these activities to society and our economy.

Dr. Liang thanked the Department of Geomatics Engineering, "We are one of the most entrepreneurial departments in Canada and we have many colleagues that set great examples, this award is following in their steps".

June 12, 2020

# Teaching & Research Achievement Awards

Schulich School of Engineering



The 2019-20 SSE Teaching and Research Achievement Awards were presented on June 11<sup>th</sup>, 2020. Here is the list of the Geomatics Engineering Department recipients:

## **Teaching Achievement Award Recipients (Geomatics Engineering):**

- Dr. Alexander Bruton
- Dr. Yang Gao
- Dr. Quazi Hassan
- Dr. Xin Wang
- Dr. Ivan Detchev
- Dr. Elena Rangelova
- Ghada Nafie

## **Research Achievement Award Recipients (Geomatics Engineering):**

Program: NSERC CRD

Principal Investigator: Dr. Steve Liang

Partner: CAE Inc.

Title: Advancing the open geospatial consortium (OGC) CBD standard for 3D synthetic environment simulation and modelling.

June 18, 2020

## Rogers and UofC advance innovative IoT Research



Rogers Communications and the University of Calgary today announced a five-year agreement to advance innovative Internet of things (IoT) research in support of Canadians, and Canadian businesses. Together, they have established the Rogers Internet of Things Chair with research led by Dr. Steven Liang, PhD, a renowned researcher at the Schulich School of Engineering.

Rogers Press Release – Read more [here](#)

May 26, 2020

## Spatial Leaders + their Stories & Cool Stuff

Meet some of the amazing spatial leaders changing the world around us today, and learn about how geomatics engineering is fueling their careers.

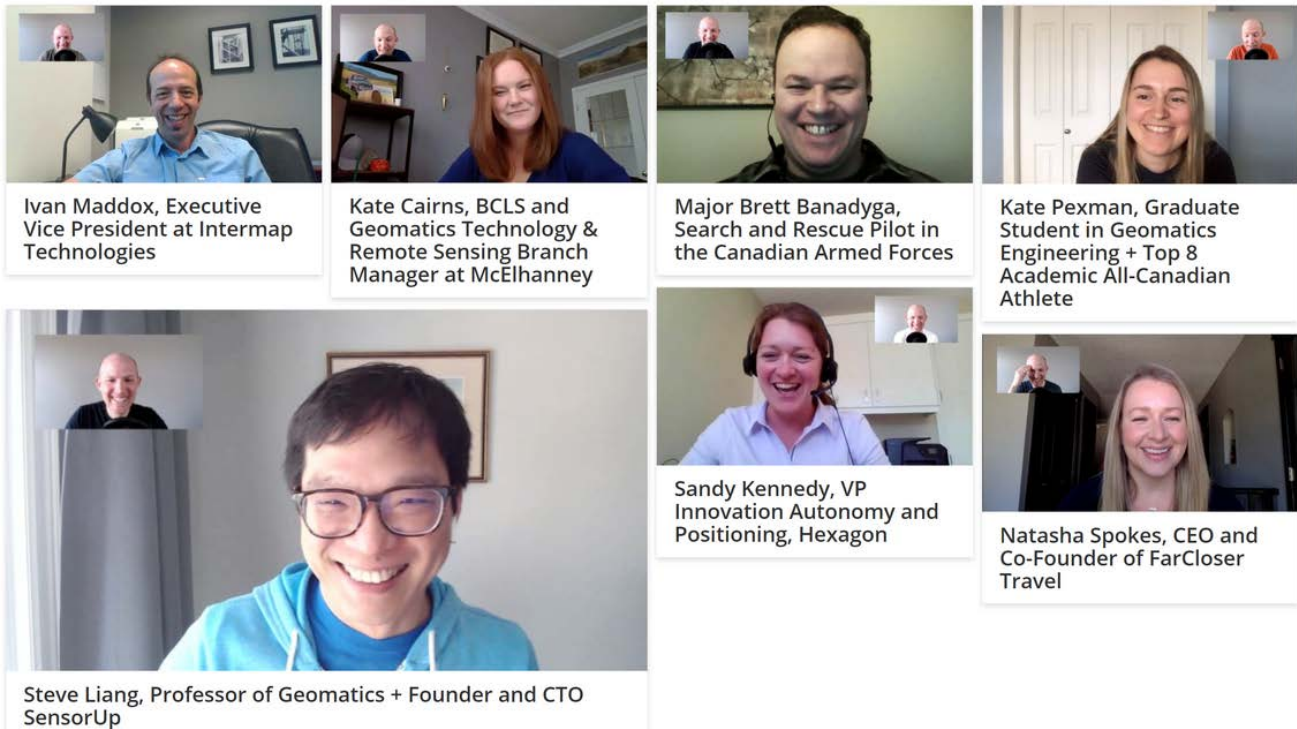


We're pleased to share with you a series of podcasts that introduce some incredible spatial leaders, shares their stories, and gets their advice for building an exciting and deeply fulfilling life and career.

The Podcasts were created by Schulich School of Engineering Teaching Professor **Dr. Alex Bruton** and feature leaders who teach in or have graduated from our school with titles such as Professor, CEO, CTO, VP Innovation (Autonomy and Positioning), Search and Rescue Pilot, Graduate Student, and Top-8 Academic All-Canadian Athlete.

If you're looking for a truly leading-edge next step then be sure to check it out: <https://spatial.engineer/podcast/leaders>

Next is the list of the Podcasts (more to come!):



- [Steve Liang, Professor of Geomatics Engineering + Founder and CTO, SensorUp](#)  
Dr. Steve Liang is a prof in the program as well as CTO of this Internet of Things startup.
- [Natasha Spokes, Co-Founder and CEO, FarCloser Travel](#)  
Natasha Spokes is a program grad as well as CEO of this international travel company.
- [Sandy Kennedy, VP Innovation Autonomy and Positioning, Hexagon](#)  
Sandy Kennedy is a program grad as well as VP Innovation at a top Calgary-based tech company.
- [Kate Pexman, Graduate Student and Top-8 Academic All-Canadian Athlete](#)  
Kate Pexman is a grad student in the program and Top-8 Academic All-Canadian Athlete.
- [Major Brett Banadyga, Search and Rescue Pilot in the Canadian Armed Forces](#)  
Major Brett Banadyga is a program grad and Search and Rescue Pilot.
- [Kate Cairns, BCLS and Geomatics Technology & Remote Sensing Branch Manager at McElhanney](#)  
Kate Cairns is a program grad and technology manager whose career is on the rise.
- [Ivan Maddox, Executive Vice President Commercial Solutions at Intermap](#)  
Ivan Maddox is a program grad turned product manager and senior executive who's tech helped with the Thai cave rescue.



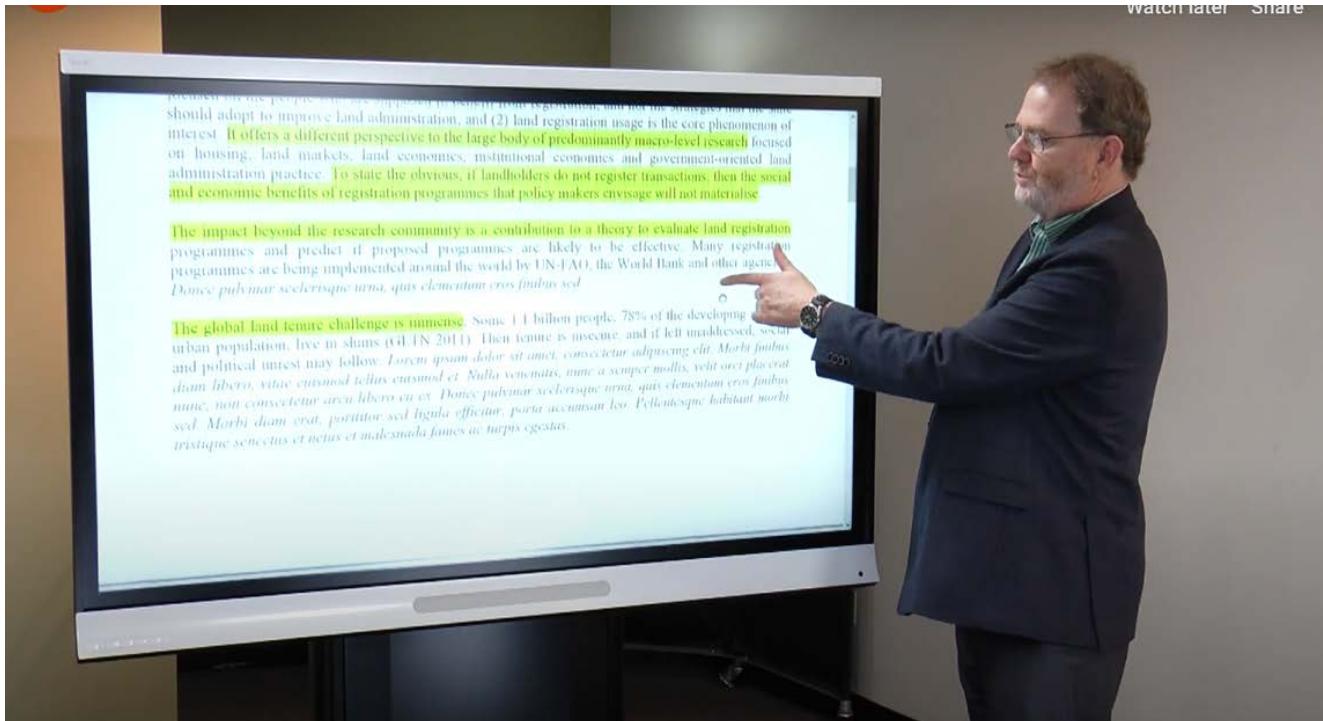
May 27, 2020

# How to Write a Grant Proposal

FIG - International Federation of Surveyors

# FIG

With the lockdown, it may be difficult for supervisors to guide their grad students in proposal writing. **Dr. Michael Barry**, Professor, Chair Land Tenure and Cadastral Systems, did two videos on how to write a **one page proposal** and a **five page proposal** to the **FIG Foundation** as per the link below, which may be useful.



Dr. Barry has used an interdisciplinary project as the example as it's the most difficult grant application that he has found to write. The videos do cover the basics of grant writing and some of the pitfalls based on Dr. Barry's own experience and the grant applications received through the FIG Foundation.

The videos are available here:

[https://www.fig.net/figfoundation/commission\\_author\\_support\\_grant.asp](https://www.fig.net/figfoundation/commission_author_support_grant.asp)

Video 1: How to write a one page grant: <https://youtu.be/gO7ZFjB0XgI>

Video 2: How to write a grant proposal: <https://youtu.be/g9kgPU3ceRE>



June 18, 2020

## 'Life has to continue': Using sensors to track health risks in post-COVID world



"Just as 9/11 changed our airports forever, COVID-19 is going to change how we design our public spaces and how we live, work and play," said Steven Liang, a professor in the department of geomatics engineering at the university's Schulich School of Engineering.

Steve Liang has been named to the Rogers Internet of Things Chair, which is meant to advance innovative tech solutions to support Canadian businesses.

CBC Press Release – Reade more [here](#)

Nov. 1, 2019

## Coordinated Cadastres and Coordinates as Evidence:

Practical Considerations



r. Michael Barry, Professor Department of Geomatics Engineering University of Calgary, Chair Land Tenure and Cadastral Systems, Director of FIG Foundation, explores this topic in his most recent publication.

### *Abstract*

Drawing on twenty years of practical surveying land surveying experience, the article examines the two main options for coordinated cadastres. It then provides some practical examples of how to handle coordinates as evidence and finally how to use evidence from digital cadastral databases. The first policy option is that coordinates as mathematical evidence constitute boundary corners. The second is that coordinates are merely evidence of the most probable position of a boundary corner. The latter option is the best as the former can result in anomalies, loss of land and a boundary system that floats around the landscape. The practical examples advocate an intuitive approach to using coordinates as evidence. In any spatial data analysis and modelling exercise, the solution that uses the fewest parameters is best. Likewise, one should not throw a similarity transformation at a cadastral survey problem without a critical inspection of the data and ascertaining how many parameters are actually relevant. Lastly, the article provide advice on how to use evidence from digital cadastral databases for boundary retracement and re-establishment surveys. Only coordinates of points that have been generated by survey should be adopted. Treat all others with caution.

For the full article on the Alberta Land Surveying Association website click [here](#)

July 2, 2020

# Chair in Land Tenure and Cadastral Systems

ALSA Webinar



On 9 June 2020, Dr Michael Barry, Chair in Land Tenure and Cadastral Systems and Dr Emmanuel Stefanakis, Head of Geomatics Engineering Department at the University of Calgary, offered a Webinar hosted by the Alberta Land Surveyors Association (ALSA) and broadcast to members of surveying associations in Western Canada.

The Webinar started with the acknowledgments to the individuals and companies who have supported the Chair in Land Tenure and Cadastral Systems since 2008. Then, Dr. Stefanakis presented the vision and goals of the Geomatics Engineering programme at the University of Calgary and the state of geomatics and land surveying education in Canada. Dr. Barry took over next to report the achievements and impact of his research group under the Chair since 2013.

A screenshot of a webinar interface. On the left, there are two video thumbnails showing participants. The main area displays a presentation slide with the ALSA logo and the following text:

**"CADASTRAL CHAIR AT THE UNIVERSITY OF CALGARY" WEBINAR**

Welcome to the webinar. It will start at 12:00 p.m. and participants will be muted by default.

You can minimize, maximize and move the GoToWebinar control panel and you can drag the border of the camera images to resize them.

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**Synopsis:**  
Join Dr. Mike Barry for a discussion about the future of the Land Tenure and Cadastral Studies Chair position in the Geomatics Engineering Department at the University of Calgary. Dr. Barry and Dr. Emmanuel Stefanakis will also provide an update on the happenings in the Geomatics Engineering Department.

**Presenters:**  
Dr. Mike Barry  
Dr. Emmanuel Stefanakis

**Upcoming Webinars:**

- June 18 Trends in Professional Governance
- June 25 What Does Protecting the Public Mean?

ALSA Webinar, 9-June-2020

Dr. Barry's presentation focused on the Chair as a Centre of Excellence at the University of Calgary, Alumni and Graduate students, Outreach Activities (World Bank and United Nations), Publication list, Network of Excellence in Canada and Internationally, the Ideal Land Surveying Education Experience and Relevance of a professor conducting research in the area. He concluded with the succession plan and the need for industry support for a new chair or professorship in Land Tenure and Cadastral Systems.



Monwabisi Park Informal Settlement, Cape Town.

One of the research group's recent projects involved an examination of a community operated land information system in the Monwabisi Park informal settlement in Cape Town. It is the only effective digital community operated system that Dr Barry has come across. It provides important lessons in participatory development and participatory land information system design, implementation and development.

Then, the speakers responded to the members' questions focusing on the need for a professor chair conducting research in land tenure and cadastral systems in Canada and Alberta. The webinar was live-streamed to 100 participants and the recording was made available by ALSA to its members.

Our sincere thanks to the following individuals and companies who made the chair possible:

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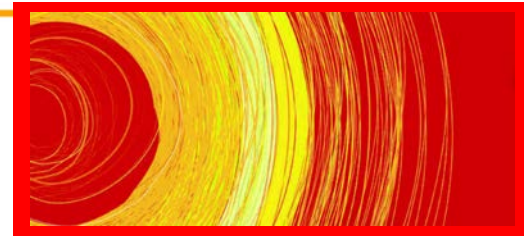
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Thank you to John Holmlund who funded the original chair 2008 - 2013. Thanks to Victor Hut and Michael Thompson.



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—  
Stephanie Michaud, P.Eng.  
Strategic Marketing Manager, Geospatial Field Solutions, Trimble Inc.

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