

# Technical program for SaGES 2023

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*Last updated on July 9, 2023*

Note that the registration desk, the welcoming reception, the technical talks, the morning and afternoon breaks, the business meeting, and the awards dinner will be located in ENG 207 (second floor of [engineering complex block G](#));

Lunches will be provided in the [Dining Centre](#) or DC (which is located south-west of the [International House](#) or IH, formerly known as Hotel Alma);

For a map of campus see

<https://www.ucalgary.ca/sites/default/files/teams/157/Main%20Campus%20Map%20Template%2020200609%20Revised.pdf> or simply type ucalgary.ca/map in a web browser

## Sunday, July 16, 2023

18:00-21:00	Registration desk	Please make your way to ENG 207 (second floor of engineering block G for registration pick-up)
19:00-20:00	Welcoming reception	Again, join us in ENG 207 for some finger food

## Monday, July 17, 2023

07:45 – 10:45	Registration desk	At ENG 207
08:00-08:25	Opening	At ENG 207
08:30-09:50 (80 mins)	Technical session (18 mins per talk)  Moderator: Martin Paquette	<ol style="list-style-type: none"> <li>1. “Integrating geomatics into the next generation civil engineering curriculum” by Wayne Sarasua (Clemson University, South Carolina)</li> <li>2. “Preserving the public land survey system following wildfires using GNSS measurements tied to the national spatial reference system” by Brian Dollar (University of Maine)</li> <li>3. “Authentic assessment design in remote sensing training” by Carina Butterworth (SAIT)</li> <li>4. “On stockpile volumes” by Jack Walker (Oregon Tech)</li> </ol>
09:50-10:10	Morning break	At ENG 207
10:10-11:10 (60 mins)	Technical session (18 mins per talk)  Moderator: Sudhagar Nagarajan	<ol style="list-style-type: none"> <li>1. “Testing a new PPP-RTK method and results” by Yan Zhang (University of Calgary)</li> <li>2. “A distance education model for teaching surveying/geomatics” by Ahmed Elaksher (New Mexico State University)</li> <li>3. “UAS based coastal land management techniques” by Sudhagar Nagarajan (Florida Atlantic University)</li> </ol>
11:15-11:45	Invited talk	“Surveying the high-tech frontier for spatial success” by Kristian Morin (XYZ Reality, formerly at Hilti Group and also Leica Geosystems / Hexagon)
12:00-13:00	Lunch	At the Dining Centre (DC)
13:10-14:55 (105 mins)	Technical session (20 mins per talk)  Moderator:	<ol style="list-style-type: none"> <li>1. “LiDAR in your pocket: friend or foe to a surveyor?” by Michael Olsen (Oregon State University)</li> <li>2. “Accelerating graduates’ preparedness for the 4IR geospatial industry: a project-based approach to developing spatial literacy in surveying and geomatics education” by Huiran Jin (NJIT)</li> <li>3. “Introduction to ABET Accreditation” by Amanda Reid (ABET)</li> </ol>

	Carol Morman	<p>4. “Addressing the educational need for professional surveyors and dual registrants” by Carol Morman (Cincinnati State Technical and Community College, Ohio)</p> <p>5. “Mathematical coordinates as evidence in Alberta” by Matthew Sakatch (Pasquini &amp; Associates Geomatics)</p>
15:00-15:15	Afternoon break	At ENG 207
15:20-17:00 (100 mins)	<p>Technical session (18 mins per talk)</p> <p>Moderator: Balaji Ramachandran</p>	<p>1. “Developing a surveying engineering technology certificate program to create the next generation of professional land surveyors” by Tony Nettleman (Nettleman Land Consultants Inc., TX)</p> <p>2. “Geotechnology and innovation course in the Metaverse” by Salvatore Amaduzzi (University of Udine, Italy)</p> <p>3. “Asset management for sustainable infrastructure: a new educational initiative at the University of Calgary to support expanded opportunities for geomatics professionals” by Robert Radovanovic (McElhanney Ltd.)</p> <p>4. “Land surveying education in a forestry college” by Yanli Zhang (Stephen F. Austin State University, Texas)</p> <p>5. “Woolgar Geomatics College: an informal learning platform for geomatics professionals” by Brian Ball (Woolgar Geomatics College) - <i>pending</i></p>
17:15-18:00	Department tour (and group photo)	

## Tuesday, July 18, 2023

07:45 – 10:45	Registration desk	At ENG 207
08:00-09:50 (110 mins)	Technical session (20 mins per talk)  Moderator: Matthew O'Banion	<b>ISPRS technical commission V working group 1 (WG V/1) co-sponsored session</b> 1. "Use of head-mounted VR for differential leveling surveying education" by Matthew O'Banion (United States Military Academy – West Point) 2. "On trigonometric functions" by Daniel Blessner (Pennsylvania State University) 3. "Global engineering trip to Denver Colorado" by Wade Zhang (University of Calgary) 4. "Cloud-computing and software as a service (SaaS) for geospatial research and education: GeoCloud sample" by Eugene Levin (Meharry Medical College, TN) 5. "Geomatics education challenges: a discussion paper" by Michael Chapman (Toronto Metropolitan University, formerly Ryerson)
09:50-10:10	Morning break	At ENG 207
10:10-11:10 (60 mins)	Technical session (18 mins per talk)  Moderator: Sean Galway	1. "Augmenting geomatics research and development in post-secondary technical institutes with education and cost saving" by Michel Morgan (SAIT) 2. "Boy Scouts of Canada and the surveying merit badge" by Sean Galway (BCIT) 3. "Precise positioning with smart phone GNSS observations" by Farzaneh ZangenehNejad (University of Calgary)
11:15-11:45	Invited talk	"The spatial extent of Aboriginal title in Canada: parcels & boundaries" by Brian Ballantyne (BoundaryIntelligence)
12:00-13:00	Lunch	At the Dining Centre (DC)
13:15	Bus pick-up	Field trip (meet at the International House / IH)

## Wednesday, July 19, 2023

07:45 – 10:45	Registration desk	At ENG 207
08:00-09:50 (110 mins)	Technical session (20 mins per talk)  Moderator: Jinseok Hong	<ol style="list-style-type: none"> <li>1. “CBEPS 2023 national syllabus” by Marie Robidoux (CBEPS / ACLS)</li> <li>2. “ROME: efficient extraction and classification of complex road markings from mobile LiDAR data” by Jaehoon Jung (Oregon State University) – to be presented by Michael Olsen</li> <li>3. “Methodology for precision DEM creation using InSAR and corner reflection correction in Calgary, AB” by Silvio Andres Ordonez-Zuniga (SAIT)</li> <li>4. “Estimating near-surface winds and their correlation with terrain in tornadoes using tornado-induced three damage” by Richard Wood (University of Nebraska-Lincoln)</li> <li>5. “Enhancing NextGen student learning in geospatial academia” by Jared Wilson (East Tennessee State University)</li> </ol>
09:50-10:10	Morning break	At ENG 207
10:10-11:10 (60 mins)	Technical session (18 mins per talk)  Moderator: Kyle O’Keefe	<ol style="list-style-type: none"> <li>1. “Case studies of authentic assessment in team activities in geomatics engineering technology” by Lance Hummel (SAIT)</li> <li>2. “Verbesserung vs. residual: how sign conventions complicate student understanding of non-linear parametric least-squares and Kalman filtering” by Kyle O’Keefe (University of Calgary)</li> <li>3. “Lessons learned from teaching boundary law in a virtual environment” by Izaak de Rijcke (University of New Brunswick / Four Point Learning)</li> </ol>
11:15-11:45	Invited talk	“NATRF2022 – What Canada and the provinces are up to” by Geoff Banham (Geodetic Control, Lands Division, Alberta Environment and Protected Areas)
12:00-13:00	Lunch	At the Dining Centre (DC)
13:10-14:55 (105 mins)	Technical session (20 mins per talk)	1. “Integrating classroom observations and students feedback to support learning of the fundamentals of surveying” by Elena Rangelova (University of Calgary)

	Moderator: Marlee Walton	<p>2. “Assessing the ability to function effectively on technical teams in an on-line surveying engineering technology baccalaureate degree program” by Rich Vannozzi (University of Maine)</p> <p>3. “On subsurface utility engineering (SUE)” by Marlee Walton (Iowa State University)</p> <p>4. “Exploiting the connection between spatial and mathematical ability: recruiting traditional students to surveying/geomatics education” by Laramie Potts (NJIT) – to be presented by Huiran Jin</p> <p>5. “Terrain analysis and water simulation using immersive and experiential leaning environments, extended reality sandbox” by Mojgan Jadidi (York University)</p>
15:00-15:15	Afternoon break	At ENG 207
15:15-16:15 (60 mins)	<p>Technical session (18 mins per talk)</p> <p>Moderator: Joe Paiva</p>	<p>1. “Multi-topic course design in geomatics engineering technology: challenges and proposed mitigation approaches” by Sameh Nassar (SAIT)</p> <p>2. “Elevation survey update for coastwide reference monitoring system (CRMS) and associated secondary monuments with comparisons on geoid changes in the datum and soil types” by Esra Tekdal Yilmaz (Nicholls State University, Louisiana)</p> <p>3. “Elevation and direction-wise distribution of land surface temperature in Jeju island using Landsat data” by Farhan Khan (Jeju National University, South Korea)</p>
16:20-17:45	Business meeting	At ENG 207
18:00-20:00	Awards dinner	At ENG 207

### Thursday, July 20, 2023

All day	Networking excursion	<p>Meet in front of the International House (IH) at 07:15 am</p> <p>(drop off will likely be around 21:00 or 9 pm)</p>
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