



**Fresno State
Student Association of
Geomatics Engineering**

**60th Annual Geomatics
Engineering Conference
Presented Virtually
January 29-30, 2021**

**Conference
Program**

— Schedule of Events —

(Schedule Subject to Change)

Friday, January 29, 2021

8:00 am – 6:30 pm

Virtual Conference Open

8:45 am – 9:00 am

Welcome and Opening Ceremony

9:00 am - 10:00 am

Presentation Skills: How To Keep Your Audience Engaged and Awake

Karen Susman - Karen Susman Business & Professional Development

By now, you and everyone around you has “Zoom Fatigue.” Whether you are conducting a webinar, a meeting, an interview or a visit with Grandma, keeping your audience tuned in and with you, energized and engaged, and impressed with how the time flew by is a challenge. During this interactive session, you’ll get more than 15 ways to engage your virtual audience so they stay with you until you say “Goodbye” while getting maximum value from your virtual experience. We’ll try several techniques out during the webinar so you can see what you’d like to try in your next virtual presentation. You will be able to adapt these techniques for any presentation. After all, we will be back live and face-to-face eventually. If you ever wanted to be a more dynamic, engaging presenter, this session is for you. You’ll get: Three ways to engage your audience before the meeting or webinar begins; Five ways to use your voice and body to amp up engagement and; Seven ways to build engagement into your content.

10:10 am – 11:10 am

TRACK A:

The Art of Retracement

Gary Kent - Meridian Land Consulting, LLC

Every professional surveyor across the United States knows the phrase “Follow in the Footsteps” as it relates to conducting a boundary retracement survey. But what does it really mean and what is the basis for following the footsteps? And exactly whose footsteps are we talking about? Surveyors also know the effect of the statute of frauds is that what is written in the conveyancing document is considered by the courts to be the highest and best expression of the parties’ intentions. But what happens when the evidence of the footsteps on the ground conflicts with the written title? What if there are seemingly no footsteps to follow? What then? In this program we will explore retracement, how it relates to and is dependent on the document of conveyance, and what controls when conflicts are inevitably encountered. When armed with a full understanding of the concept of retracement, surveyors will be much better equipped to help steer their clients (and their affected neighbors) away from the pain and cost of litigation, and towards an amicable solution based on well-placed confidence and understanding of their respective roles and responsibilities.

Friday, January 29, 2021

10:10 am – 11:10 am

TRACK B:

What You Need to Know to Become Licensed in California As a Professional Land Surveyor

Dallas Sweeney – Board for Professional Engineers, Land Surveyors & Geologists

This presentation is geared towards those wanting to become a Professional Land Surveyor. It will provide information about the application process, the test plans and helpful study tips.

11:10 am – 11:30 am

Break/Visit with Vendors

11:30 am – 12:30 pm

TRACK A:

Running a Successful Surveying Business - New Challenges and New Markets

Michael Pallamary, PLS - Pallamary & Associates

There are many challenges to operating a business in today’s business environment. Technology has changed the tools surveyors use while, at the same time, these same tools have altered the way business is done. Many untrained and uneducated people fancy themselves as Land Surveyors due to the availability of GPS equipment and electronic mapping programs, making it difficult for Land Surveyors to distinguish themselves as a profession. As field crews diminish in size and expertise, absent a traditional apprenticeship process, new markets must be explored, in order to survive. Some of the benefits are the ability to work remotely, something that has become critical due to the coronavirus. Mr. Pallamary will discuss these options as well as ways to move into, and to create new markets.

11:30 am – 12:30 pm

TRACK B:

Encroachments on Real Property - A Surveyor's Perspective

Dean Exline, PLS - GeolInnovation, PC

We, as surveyors, run into encroachments on a regular basis in the performance of our work as professionals. There are various types and severities of encroachments on real property. During this presentation, Dean will discuss what encroachments are and how to identify them.

12:30 pm – 1:30 pm

Break For Lunch

1:30 pm – 2:30 pm

TRACK A:

Easements - Words Matter

David Woolley, PLS - D. Woolley & Associates, Inc.

The east thirty feet, together with west 30 feet, of Lot 1 for roadway purposes. What could go wrong? After years of bitter litigation the case turned on its head based on a theory offered by the land surveyor. A lesson in reading, research and the understanding that words have meaning. Where does a land surveyor’s liability begin and end?

— Schedule of Events —

(Schedule Subject to Change)

Friday, January 29, 2021

1:30 pm – 2:30 pm

TRACK B:

Comparative Assessment of Photogrammetric Techniques: Structure From Motion and Classic Photogrammetry

Oscar Duran, Geomatics Analyst

Oscar will present an overview of his research paper summarized as follows: The democratization of Unmanned Aerial Vehicles has caused the rapid introduction of a new processing technique in the photogrammetric workflow. Rooted in 3D computer vision, Structure from Motion (SfM) distinguishes itself from classic photogrammetry in its novel method for camera structure reconstruction. Due to SfM's appeal to a wide range of users, its software solutions are characterized by high automation. The highly automated process can lead users to undermine SfM's operating principles and capabilities. Using classic photogrammetry as a comparative reference, SfM's technical background and accuracy results of processing reflect its strengths and deficiencies. A survey of previous comparative studies guides the experiment carried out and anticipates the results to be obtained. The experiment used imagery acquired with a medium format camera installed in a rotary-wing aircraft. Two of the most prominent software packages based on classic photogrammetry (Inpho Match-AT) and SfM (Pix4Dmapper) principles were tested. The accuracy results favored traditional photogrammetry. Even though SfM and classic photogrammetric originated in different fields, they share the same goal: camera reconstruction.

2:30 pm – 2:45 pm

Break/Visit with Vendors

2:45 pm – 3:45 pm

TRACK A:

The Land Surveying World We Live In - sometimes it is the devil we know

David Woolley, PLS - D. Woolley & Associates, Inc.

A wend through the past, present and future of land surveying: mapping your career for the future, selecting your next employer and exit strategies, employee retention based on the Price Law, the importance of licensure, prevailing wage and public works, multiemployer pension plans, moving the profession away from trades and engineering oversight, the threat of deregulation, the Lake Wobegon effect – breaking informational cascades and social proofing, together with various perspectives on the state of the profession. There is a light at the end of the tunnel. There will be an open question and answer session at the end of the presentation. Put your thinking cap on.

2:45 pm – 3:45 pm

TRACK B:

A Practical Guide to GIS in Autodesk Civil 3D

Rick Ellis - Cadapult Software Solutions, Inc.

If you are a Civil 3D user being asked to provide data to your GIS department, if you are being asked to use GIS data as background data for your designs, or if you think GIS is a four letter word; this class will answer this all too common question, "Why should I care about GIS?" You will learn to import GIS data not only as AutoCAD objects, but also directly

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as Civil 3D objects like Surfaces and Pipe Networks that leverage the existing database information. The request to provide design data to GIS departments is becoming more common every day. This class will explore the details of why just sending them a drawing is often not an adequate way to satisfy that request. We will explore ways to export Civil 3D objects to GIS formats that can be used easily and consistently by your GIS department. This popular class has won the award for Best Hands-on Lab at Autodesk University, don't miss your chance to learn how the GIS tools in Civil 3D can make you more productive by automating common everyday tasks.

3:45 pm – 4:45 pm

TRACK A:

It's Not Just An ALTA: Key Challenges of the ALTA/NSPS Survey Process

Michael Knopf, PE, PLS - QK, Inc.

Brandon Walker, PLS - QK, Inc.

Antonio Westerlund, PLS, CFedS - QK, Inc.

ALTA/NSPS Land Title Surveys are so much more than just a boundary and topo survey. Understanding the client, lender, and title company needs, while also meeting the minimum requirements are critical for a successful project. The QK team will help you understand how to navigate some of the challenges, learn what to watch out for, and help you have a better understanding of what differentiates ALTA/NSPS Land Title Surveys from other survey work.

3:45 pm – 4:45 pm

TRACK B:

Developing Guidelines for Monument Preservation on ROW Infrastructure Project

Landon Blake, PLS - Redefined Horizons

Monument preservation is a state law requirement. However, it is poorly handled on public works projects by many public agencies in California. In this short talk, Landon shares tips for monument preservation from his 15+ years of experience as a public works surveyor. These tips include a description of the monument preservation process that should be required as part of the scope-of-services, the type of monument preservation information should be included in the civil engineering plans for the project, and how to verify monument preservation has been properly performed by the land surveyor in responsible charge.

4:45 pm – 5:00 pm

Break/Visit with Vendors

5:00 pm – 6:30 pm

Awards Presentation & Happy Hour

Please join us for scholarship announcements and networking.

— Schedule of Events —

(Schedule Subject to Change)

Saturday, January 30, 2021

8:30 am – 1:00 pm

Virtual Conference Open

8:45 am – 9:00 am

Day 2 Welcome

9:00 am - 10:00 am

But Wait! There's More: Your Six Success Secrets from The Infomercial King

Karen Susman - Karen Susman Business & Professional Development

This entertaining, practical, unique session will give students and professionals marketing tools to reach and engage their internal and external network and clients so they can build more business and their careers. We've all seen those infomercials selling everything from kitchen gadgets to exercise equipment. Admit it. You've been tempted to phone in for just \$199.95 (or four easy payments of \$49.95) to get something you didn't know you needed, but now can't live without. This session decodes the infomercial success steps that you can use to market you, your expertise, and your services. These practical steps are based on the fascinating and inspirational career of the father of infomercials, Ron Popeil. Ron invented more than 70 products, and sold millions of Showtime Rotisseries. His story is fascinating and applicable to anyone who has to market his or her services and expertise. You'll get: Six implementable success steps; One bonus action; Ron's three mantras that can carry you through any challenge.

10:10 am – 11:10 am

TRACK A:

The History of ALTA Standards

Mitch Duryea, PLS - Duryea & Associates

In 1962, ACSM and ATA established the first Minimum Standard Detail Requirements for Land Title Surveys. Beginning in 1986, these standards have gone through multiple revisions. This session will look at the purposes of a Land Title Survey, a history of the standards and a presentation of the 2021 Standards that take effect on February 23, 2021.

10:10 am – 11:10 am

TRACK B:

Performance Considerations in Drone LIDAR Systems

Lewis Graham - GeoCue Group Inc.

Small Unmanned Aerial System (sUAS) mapping sensors are rapidly moving from photogrammetry only to laser scanning (LIDAR) and LIDAR/camera combinations. The cost range of systems is quite broad so one must be careful in selecting a system that will perform the desired projects yet remain within a reasonable budget. In this talk, we will examine the myriad considerations that frame the selection of a small Unmanned Aerial System (sUAS) LIDAR sensor and provide some insight into the importance of each. Participants in this talk should come away with an understanding of the performance considerations of sUAS LIDAR systems in terms of their impact on mapping/survey product generation.

Saturday, January 30, 2021

11:10 am – 11:30 am

Break/Visit with Vendors

11:30 am – 12:30 pm

TRACK A:

The Land Surveyor's Professional Obligations - The Future of the Field Surveyor

Michael Pallamary - Pallamary & Associates

Curt Brown once said: "Professional stature cannot be attained by self-proclamation. The lazy say, 'give me the prize without the training, the wages without work, the reward without the quest, heaven without probation, a profession's prestige without a profession's skill.' If the land surveyor is to have professional standing, that standing must be earned and bestowed upon him by others." Modern tools and technology have created an environment wherein too much reliance is placed on the readings and measurements from this equipment. As with cell phone obsession and detached human interaction, the profession suffers from a detachment from one's professional obligations. In many instances, the one-person survey crew is ill-equipped and untrained in client and public interaction. Mr. Pallamary will discuss various methods to educate field personnel while, at the same time, capitalizing on promotional opportunities.

11:30 am – 12:30 pm

TRACK B:

A status report on East Los Angeles College's & Cal Poly Pomona's National Science Foundation Advanced Technological Education Project Titled Filling Skill Gaps through the Geo-Spatial Engineering & Technologies Program

Humberto A. Gallegos, PhD, PE, LSIT - East Los Angeles College

Omar E. Mora, PhD, LSIT, Assistant Professor - Cal Poly Pomona

NSF ATE focuses on two-year Institutions of Higher Education (IHEs) to support Advanced Technological Education (ATE) programs whose mission is to create and or enhance and promote improvements in the education of science and engineering technicians at the undergraduate and secondary school levels. NSF ATE focuses on the education of technicians for the high-technology fields that drive our nation's economy. ELAC and CPP have been on a mission to enhance their existing geospatial engineering programs in terms of articulation work, course development, surveying equipment and mapping software purchases, marketing & branding campaigns, and offering test preparation courses and workshops for the State of CA FS and PLS exams.

12:30 pm – 12:45 pm

Closing Ceremony - Thank You For Attending!

— Schedule at a Glance —

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