



2021 SCSPLS Convention and Technical Conference

SCSPLS Meeting: Wednesday, March 31, 2021

Conference: Thursday, April 1 – Friday, April 2, 2021

DoubleTree by Hilton

2100 Bush River Road, Columbia, SC

Due to COVID-19 and the ongoing restrictions in relation to COVID-19, the SCSPLS Convention & Technical Conference will have limited attendance for an in person event with unlimited online participation.

*****ONLY 100 PEOPLE MAY ATTEND IN-PERSON.*****

***** All in-person attendees must wear a mask at all times and must maintain a social distance of a minimum of 6 feet. This is required by the state of SC for in person meetings as well as required by the contract signed with the DoubleTree. If you do not wear the mask at all times except when eating, you will be required to leave and will not be eligible for a refund.*****

Wednesday, March 31, 2021

2:00 PM – 5:00 PM

Registration

2:00 PM – 5:00 PM

Exhibitor Set UP

3:00 – 4:30 PM

SCSPLS General Membership Meeting

Thursday, April 1, 2021

7:00 AM – 5:00 PM

Registration

7:30 AM

Biscuits and Coffee with Vendors

Exhibit Hall

8:00 – 11:50 AM

Morning Track

Concurrent Presentations

2:00 – 4:50 PM

Afternoon Track

Concurrent Presentations

Track 1 Morning Session

8:00 - 11:50 AM

Title Insurance and Boundary Surveying for Surveying Professionals

Jeff Lucas, Lucas & Company, LLC

4 PDH

The two most important documents relative to the ownership of property may be the Title Insurance Policy and the Boundary Survey. But what do these documents actually do for the property owner? What does the title policy actually cover and what doesn't it cover? Does the survey of the property create any assurances for the landowner? What is the role of the ALTA/NSPS Land Title Survey? These documents and other related matters will be discussed in order to answer these and other important questions.

OBJECTIVES: To enhance professional competency and improve practitioner's knowledge of the law as it relates to the practice of land surveying.

12:00 PM – 1:50 PM

Lunch Banquet and Keynote

1 PDH

Leadership Principles in Changing Times

Reg Christopher, Insight Group

1 PDH

Track 1 Afternoon Session

2:00 - 4:50 PM

Better Business Practices and the Law

Jeff Lucas, Lucas & Company, LLC

4 PDH

What do better business practices have to do with the law? Plenty! Put another way, better business practices must be in harmony with the law that affects our practice as professional service providers (land surveyors, engineers, architects,

etc.). The law that most affects us as professional service providers is property law, contracts, negligence, torts, the common law, administrative law, and statutory law. Ignorance of the law is no excuse for the average citizen and even more so for professional service providers. This seminar will focus on 10 Better Business Practices that you can implement immediately to bring your practice in harmony with the law. These practical steps will benefit your company whether you are a multi-state corporation with hundreds of employees, a solo practitioner, or an individual licensee wanting to improve his or her own personal practice. OBJECTIVES: To enhance professional competency and improve practitioner's knowledge of the law as it relates to the practice of land surveying.

Track 2 Morning Sessions

8:00 - 8:50 AM

Carlson SurvPC/CE: Common Support Questions and Shortcuts

Charles Lawley, Transit and Level Clinic

1 PDH

Carlson SurvPC/CE is a powerful field software. In fact, it is so powerful, many Surveyors only scratch the surface of what it can do. In this one hour class, we will discuss some of the most powerful features of the software as well as some of the most common support questions we receive on a daily basis. Regardless of what you use Carlson SurvCE/PC with (equipment), there will be something for everyone.

9:00 - 9:50 AM

Monitoring Best Practices and Improved Workflows

Joseph B. Priestner, PLS, PE, Duncan Parnell

1 PDH

This webinar will feature a discussion of the latest technology and techniques needed for a land surveyor to conduct an accurate and thorough monitoring project. Topics include establishing sufficient control, installation of permanent targets, types of measurements, manual and automated monitoring, and data processing.

10:00 - 10:50 AM

Mobile Lidar For Asset Management And RCI Projects

Matthew LaLuzerne, PSM, GPI Geospatial, Inc

Allen Brock, GPI Geospatial, Inc.

1 PDH

This presentation will demonstrate the use of mobile LiDAR with simultaneous video and imagery capture for large scale asset management and roadway characteristic inventory (RCI) projects. We will take a look at an in-depth analysis and applications for using multiple data capture sensors on a single platform. The presentation will include demonstrations on tying imagery and video collection to trajectories and using software applications for easy data extraction and asset database management.

11:00 - 11:50 AM

Trajectory Processing using FPRN's Virtual Rinx Solutions

Matthew Laluzerne, GPI Geospatial, Inc

Allen Brock, GPI Geospatial, Inc.

1 PDH

This presentation will demonstrate the use of FDOT's FPRN GNSS broadcasting network to generate a Virtual RINEX position to be used in processing trajectories for remote sensing applications. We will take a look at an in-depth analysis

and instructions on how to use the FPRN network to facilitate trajectory processing for aerial imagery, aerial LiDAR and mobile LiDAR applications.

The presentation will include step by step guides on how to incorporate the Virtual RINEX solution in your planning, acquisition and processing stages of your project. We will highlight many benefits including the reduction of baseline lengths, GNSS geometry and reduction of ground support.

12:00 PM – 1:50 PM

Lunch Banquet and Keynote

1 PDH

Leadership Principles in Changing Times

Reg Christopher, Insight Group

Track 2 Afternoon Session

2:00 - 4:50 PM

Transitioning to the Modernized NSRS

Scott Lokken, NOAA and NGS

Matt Wellslager, SC Geodetic Survey

3 PDH

1. Short update on the New Datums
 2. 2022 transformation tool
 3. GPSONBM
 4. OPUS
 5. OPUS projects.
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Track 3 Morning Session

8:00 AM – 11:50 AM

Comparative Ethics: What can Surveyors learn from other professions? And why are other professions' Ethics different (and the same) from Surveyors'?

David Lee Ingram

4 PDH

Ethical considerations of business and professional practice have always been of concern to surveyors, but in recent years surveyors have seen an increasing emphasis on the need to understand and put into practice positive ethical attitudes. Attempts are made to impose ethics on surveyors and engineers from several directions including legal, professional, and moral. An understanding of the implications of each is important. Additionally, surveyors find themselves interacting with other professions on a daily basis where an understanding of their ethical obligations is critical to a positive outcome for projects that require input from many different sources. However, it is frequently observed that priorities of different professions may be in conflict with each other. To focus thoughts for the class, the workshop will begin with a review of ethical guidelines that surveyors are expected to adhere. After a discussion of the history of ethics for surveyors and an examination of modern ethical guidelines for surveyors, ethical guidelines for several other professions will be examined with an eye towards areas of commonality as well as areas of conflict. Some of these groups will be closely related professions to surveyors while others will be examined not for their areas of common interest, but rather to see what we can learn from them.

Finally, the workshop will conclude with a guided discussion time where the class will discuss what ethics guidelines should be included in a code of ethics for surveyors and why these are important for professionals to keep in mind and adhere to.

12:00 PM – 1:50 PM

Lunch Banquet and Keynote

1 PDH

Leadership Principles in Changing Times

Reg Christopher, Insight Group

Track 3 Afternoon Sessions

2:00 - 2:50 PM

Unprecedented Times: Navigating What's Now and What's Next

Brian Barton, Jones & DeMille

Chandra Stourrusten, ourlinQ

Panel by Jones & DeMille

1 PDH

Less than a year ago, we were all battling for talent. Now, many firms are worried that they may have to let of this talent go. During these turbulent times, it is critical to remember the wisdom of Steven Covey – we are not a product of our circumstances but of our decision – and proactively take control of what we can. Leaders must not be afraid to make strategic and tough decisions. Join us for an interactive session that will provide you with action oriented best practices you can implement immediately. You will learn how one firm has built a crisis resistant culture by intentionally focusing on performance management to navigate and thrive during this tumultuous time. You will also learn what your firm can do now to ensure it comes out of this even stronger and more resilient than ever.

3:00 - 3:50 PM

Protecting Your Practice – Contracts for Surveyors

Karen McCabe, IMCI

Anita Rogers, IMCI

1 PDH

4:00 - 4:50 PM

The Liberty Trail

Chris Haynes, Davis & Floyd

Doug Bostic, SC Battleground Preservation Trust

1 PDH

Many historians consider the Revolutionary War to have been decided in the swamps, fields, woods and mountains of South Carolina, won by the resilience and determination of Continental soldiers and Patriot militia. Although the full story of the Southern Campaigns is not widely known, the events of 1779-1782 in the Carolinas directly led to an American victory in the war. Soon, The Liberty Trail will be a unified path of preservation and interpretation across South Carolina, telling this remarkable story. These important battlefields, still largely unspoiled, deserve to be preserved. Since early 2016, Davis and Floyd has been working with the South Carolina Battleground Preservation Trust and the American Battlefield Trust to design immersive historic interpretation parks across the state. More than 200 battles and skirmishes occurred in South Carolina during the war. Working with a panel of historians and archaeologists to select the most significant of these actions, the Battleground Trust developed plans to form The Liberty Trail, an innovative driving route designed to connect these battlefields. With Davis and Floyd's help, The South Carolina Battleground Preservation Trust and the American Battlefield Trust are now working toward the launch of the initial

phase of The Liberty Trail. This presentation will provide attendees with an overview of the project and historic sites identified across the state to be a part of the larger trail network. Davis & Floyd will also present the master plans for the first two sites on the Trail: Fort Fair Lawn located in Moncks Corner, SC and the Camden Battlefield and Longleaf Pine Preserve located in Camden, SC.

Friday, April 2, 2021

7:00 AM – 5:00 PM

Registration

7:30 AM

Biscuits and Coffee with Vendors
Exhibit Hall

8:00 – 11:50 AM

Morning Track
Concurrent Presentations

Noon – 1:25 PM

Lunch and Visit with Exhibitors

1:30– 4:30 PM

Afternoon Track
Concurrent Presentations

Track 1 Morning Session

8:00 - 11:50 AM

Water Boundaries and Riparian Rights
Jeff Lucas, Lucas & Company, LLC
4 PDH

There are two primary reasons the land surveyor will be called upon to deal with water boundaries. To survey property bounded by a body of water or to make a riparian boundary line determination. Navigability is the key issue in both of these situations. Generally, navigability determines the extent of the upland ownership and determines if riparian boundaries even exist. In order to perform either of these functions, the land surveyor has to understand the nature and uniqueness of water boundaries and have a full understanding of riparian rights. This course dives deep into both of these issues with plenty of case studies to enhance participant's understanding.

OBJECTIVES: To enhance professional competency

Noon – 1:25 PM

Lunch and Visit with Exhibitors

Track 1 Afternoon Session

1:30 - 4:20 PM

Boundary Retracement - The Latest Cases
Jeff Lucas, Lucas & Company, LLC

4 PDH

The vast majority of surveying work being performed by land surveyors in the modern era is retracement surveying. Original surveying work is still being performed, but nothing like when the United States was young and large grants in the east were being subdivided into smaller and smaller tracts, or when the vast public domain consisting of 1.5 billion acres of land was subdivided into one-mile squares. This course will study the latest case law on boundary retracement and the ramifications to the retracing surveyor. Real-world examples will be studied and alternative solutions will be discussed in a class-room environment.

OBJECTIVES: To enhance professional competency and improve practitioner's knowledge of the law as it relates to the practice of land surveying.

Track 2 Morning Session

8:00 - 11:50 AM

Controlling Errors in Conventional Survey Measurements for GPS Compatibility

Alan Dragoo

4 PDH

Errors in conventional measurements, especially angles and distances accumulate so quickly and unexpectedly for some surveyors that they are left wondering; "why those GPS positions don't check the survey measurements". The errors in GPS vectors and conventional measurements propagate differently.

The workshop will cover:

1. Identifying and quantifying random errors.
2. Identifying and quantifying systematic errors and correcting for them.
3. Identifying equipment calibration and adjustment errors and correcting for them.
4. The use of proper observing techniques for error elimination.
5. The use of proper adjustment techniques for random error distribution and evaluation.

Through the application of the knowledge gained in this workshop attendees will understand and appreciate the complete consistency and compatibility of GPS and conventional measurements.

Noon – 1:25 PM

Lunch and Visit with Exhibitors

Track 2 Afternoon Session

1:30 - 4:20 PM

Practical Least Squares Adjustments for Survey Measurements

Alan Dragoo

4 PDH

A true Least Squares Adjustments is where all measurements and known values are considered and adjusted so that the differences between any field measurement and the adjusted value is at a minimum is always a better adjustment.

Surveyors intuitively use Least Squares principals for measurement adjustment.

The workshop will cover:

1. Understanding the concept of how Least Squares works.
2. Understanding the concepts of statistical terms used in Least Squares Adjustments.
3. Understanding instrument error sources and magnitude for use in Least Squares.
4. The practical application of redundancy to a survey control project.

This workshop will present the knowledge necessary to understand the concepts of Least Squares adjustments, leaving the math to be preformed by the computers. Attendees will learn what data needs to be available to do a Least Squares adjustment and understand the results of the completed adjustment. Control survey error detection and adjustment strategy will also be discussed.

Track 3 Morning Sessions

8:00 - 8:50 AM

Business Development in a Virtual World

J. Timothy Thomas, PLS, Stewart

1 PDH

9:00 - 9:50 AM

Legal & Ethical Aspects of Practice for Surveyors & Their Employers

Sam Wellbourn, Robinson Gray Stepp & Laffitte, LLC

1 PDH

This session will equip you and your firm with an understanding of what ethical and legal issues to avoid in your practice as an surveyor. The session will also cover what to expect after you have received a notice of complaint, how to navigate the complaint process, and how to protect your firm from liability.

10:00 - 10:50 AM

FEMA's New TB1, Elevation Certificates and NFIP Premium Impact

J. Paul Abrams

Floodproofing.com

This course provides insight into FEMA's NEW TB1 (March 2020), the importance of proper foundation flood openings and compliance with ICC ASCE regulations found in current building code. It reviews FEMA NFIP guidance standards and how they can effectively prevent major damage to buildings during a flood event. The course revisits applicable codes pertaining to foundation flood vents and highlights changes in the NEW TB1. After the course, participants will have a thorough understanding of the changes made, difference between non-engineered openings and engineered openings and the important role they play in designing a sustainable structure.

1 PDH

11:00 - 11:50 AM

Retirement – Making Your Money Last

Matthew "Tucker" McGee

Edward Jones Investments

1 PDH

Noon – 1:25 PM

Lunch and Visit with Exhibitors

Track 3 Afternoon Sessions

1:30 – 2:20 PM

Wetland Jurisdictional Determinations

Sydni Redmond, Ecologist
Passarella & Associates, Inc.

2:30 – 3:20 PM

The Governing Body and its Influence on Our Profession

Patrick Sadek, PE
Aesthetic Concepts

The session will simply cover the impact of favorable and unfavorable decisions made by elected & non-elected officials and their impact on local economies and innovations & creative thinking of professionals. I will have a presentation that will cover lessons learned, projects, case studies, recommendations, etc.

1 PDH

3:30 – 4:20 PM

Technology Overview – Combining Robotic Total Station Functionality with 3D Scanning and Imagery

Blake Walker
Earl Dudley

Land Surveyors can now utilize the best of both worlds with the combination of a fully robotic total station that also has integrated 3D Scanning capabilities. Examples of applicable projects and workflows will be addressed and explained in detail. A live demonstration of the capture, download and point cloud process will also be offered.