

# ARIZONA PROFESSIONAL LAND SURVEYORS CONFERENCE

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**MAY 9 - 11, 2019**  
SCOTTSDALE, ARIZONA



## FEATURED SPEAKERS:

JEFF LUCAS, PLS ▪ STEVE PARRISH, PLS ▪ DAVID DOYLE

## CONFERENCE HIGHLIGHTS:

16 OF HOURS CONTINUING EDUCATION ▪ EXHIBITS & VENDOR DEMOS ▪ CFEDS PROGRAM

**MAY 9-11, 2019**

HILTON SCOTTSDALE RESORT & VILLAS  
SCOTTSDALE, AZ



# GENERAL INFORMATION

The APLS Annual Conference will be held May 9-11, 2019 at the Hilton Scottsdale Resort & Villas, in Scottsdale, Arizona. We hope we have included all necessary information regarding the Conference, however, please feel free to contact the APLS Office at (888) 994-3317 or email [info@AzPLS.org](mailto:info@AzPLS.org), if you have additional questions.

**For updated Conference information, please visit our website [AzPLS.org](http://AzPLS.org)**

## REGISTRATION

Attendees can register online at [AzPLS.org](http://AzPLS.org) or by using the enclosed registration form.

**Early Bird Pricing Ends  
April 16th**

Member: \$395  
Non-Member: \$495

For the complete registration price schedule, see registration form enclosed.

## HOTEL INFO

**Hilton Scottsdale Resort & Villas**  
6333 N Scottsdale Rd, Scottsdale

**Reservations:** 800-498-7396

**Rate:** \$139

**Group Code:** APL

**Cut-Off Date:** April 16th

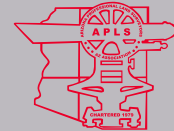
Group rate not available after the cut-off date. Reserve early for guaranteed pricing.

## QUESTIONS?

**APLS Executive Office**  
Phone: (888) 994-3317  
Email: [info@AzPLS.org](mailto:info@AzPLS.org)

For update information, visit

**[AzPLS.org](http://AzPLS.org)**



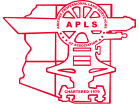
## Hotel Highlights

- Resort atmosphere with breathtaking views of Camelback Mountain
- 1,600 sq. ft. two-bedroom villas with private patio and full kitchen
- Three restaurants: BlueFire Grille, Fleming's Steakhouse and Oasis Bar
- Wellness center with spa, cardio equipment and outdoor heated pool
- 25,000 sq. ft. of versatile indoor and outdoor space for up to 800
- Complimentary shuttle within two-mile radius including Old Town Scottsdale

## Things to do

- Old Town Scottsdale
- Championship golf courses
- Spring Training - Salt River and Scottsdale stadiums
- Scottsdale Fashion Square Mall
- Camelback Mountain





# CONFERENCE REGISTRATION FORM

FULL NAME (LAST/FIRST/MI) \_\_\_\_\_ FIRST NAME or NICKNAME (as you wish it to appear on your badge) \_\_\_\_\_

Is your mailing address your:  BUSINESS  RESIDENCE

COMPANY \_\_\_\_\_

ADDRESS \_\_\_\_\_

CITY \_\_\_\_\_ STATE \_\_\_\_\_ ZIP \_\_\_\_\_

PHONE \_\_\_\_\_ FAX \_\_\_\_\_

EMAIL \_\_\_\_\_

APLS MEMBER NUMBER # \_\_\_\_\_ RLS # \_\_\_\_\_ SPOUSE (if attending) \_\_\_\_\_

## MEMBER REGISTRATION

	BEFORE April 17	AFTER April 16	AMOUNT
Conference Registration Includes sessions on Thursday - Saturday, breaks each day, luncheons on Thursday and Friday and reception on Thursday night.	\$395	\$495	\$ _____

Conference One Day <b>Select Day:</b> <input type="checkbox"/> Thursday <input type="checkbox"/> Friday <input type="checkbox"/> Saturday Includes event(s) for day registered.	\$195	\$295	\$ _____
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## NON-MEMBER REGISTRATION

	BEFORE April 17	AFTER April 16	AMOUNT
Conference Registration Includes sessions on Thursday - Saturday, breaks each day, luncheons on Thursday and Friday and reception on Thursday night.	\$495	\$595	\$ _____

Conference One Day <b>Select Day:</b> <input type="checkbox"/> Thursday <input type="checkbox"/> Friday <input type="checkbox"/> Saturday Includes event(s) for day registered.	\$295	\$395	\$ _____
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## OTHER REGISTRATIONS

Spouse Registration Includes entrance to Exhibit Hall, Icebreaker Reception, Thursday Lunch, Friday Lunch	\$195		\$ _____
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Full-time Student Registration Unlicensed students only. Must attach current student ID. Includes Conference Registration (Thursday thru Saturday) Icebreaker Reception, Thursday Lunch, Friday Lunch	\$195		\$ _____
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## OPTIONAL ACTIVITIES

	AMOUNT	
Continuing Education Certificate	\$25	\$ _____

## PAYMENT INFORMATION

Total Enclosed \$ \_\_\_\_\_

Check Enclosed (Checks payable to APLS Conference)

Charge to:  Visa  MasterCard  Gov. Purchase Order

Cardholder Name \_\_\_\_\_

Account # \_\_\_\_\_ Exp. Date \_\_\_\_\_ CID # \_\_\_\_\_

Authorized Signature \_\_\_\_\_

Billing Address \_\_\_\_\_

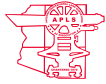
**Mail to:**  
APLS  
526 South E Street  
Santa Rosa, CA 95404

**Fax to:**  
(707) 578-4406  
**Questions?**  
info@AzPLS.org

**PHOTO/VIDEO DISCLAIMER:** By registering for and attending this conference, you agree that your image may be taken during the conference and used at any time, without further notification, for printed materials, websites, social media and other marketing purposes.

**CONTACT DISCLAIMER:** By registering for and attending this conference, you agree that your contact information may be provided to exhibitors for a one-time use in providing you information regarding their products/services.

**CANCELLATIONS:** To receive a refund on registration fees (less a \$35.00 cancellation fee), all cancellations must be received in writing no later than April 16, 2019. Substitutions welcome - additional fees may apply. Contact the conference office at : (888) 994-3317 for more information.

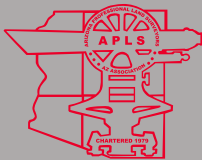


# PRELIMINARY CONFERENCE AGENDA

## THURS., MAY 9th

### PROGRAM DETAILS

Visit our website at [AzPLS.org](http://AzPLS.org) for detailed program descriptions and speaker bios.



### REGISTER ONLINE

Register online at:  
[AzPLS.org](http://AzPLS.org)

- 7:00 AM - 8:00 AM**    **REGISTRATION OPEN/REFRESHMENT BREAK**
- 8:00 AM - 8:30 AM**    **OPENING CEREMONIES**
- 8:30 AM - 10:00 AM**    **CONCURRENT SESSIONS**  
**ETHICS FOR LAND SURVEYORS**  
*Jeff Lucas, PLS*  
**PRIVATE-FEDERAL BOUNDARY DETERMINATION (CFedS)**  
*Steve Parrish, PLS*  
**LIDAR - A BIT BEYOND THE BASICS WITH AN ASSIST BY ARCGIS**  
*Robert Davis, Quite Creek Corp.*
- 10:00 AM - 10:30 AM**    **BREAK IN EXHIBIT HALL**
- 10:30 AM - 12:00 PM**    **CONCURRENT SESSIONS**  
**ETHICS FOR LAND SURVEYORS (Cont.)**  
*Jeff Lucas, PLS*  
**PRIVATE-FEDERAL BOUNDARY DETERMINATION (Cont.)**  
*Steve Parrish, PLS*  
**3D MAPPING OF THE HISTORIC OLD TUCSON FILM STUDIO**  
*Nikolas Smilovsky, RLS*
- 12:00 PM - 1:30 PM**    **LUNCHEON IN EXHIBIT HALL**
- 1:30 PM - 3:00 PM**    **CONCURRENT SESSIONS**  
**BETTER BUSINESS PRACTICES & THE LAW**  
*Jeff Lucas, PLS*  
**PRIVATE-FEDERAL BOUNDARY DETERMINATION (Cont.)**  
*Steve Parrish, PLS*  
**USING THE ESRI ARCGIS FOR AUTOCAD PLUGIN**  
*Thomas Holman*
- 3:00 PM - 3:30 PM**    **BREAK IN EXHIBIT HALL**
- 3:30 PM - 5:00 PM**    **CONCURRENT SESSIONS**  
**BETTER BUSINESS PRACTICES & THE LAW (Continued)**  
*Jeff Lucas, PLS*  
**PRIVATE-FEDERAL BOUNDARY DETERMINATION (Cont.)**  
*Steve Parrish, PLS*  
**WHAT IT TAKES TO COLLECT SURVEY-GRADE DATA BY DRONE**  
*Logan Campbell*
- 5:30 PM - 7:00 PM**    **RECEPTION IN EXHIBIT HALL**

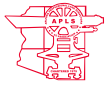
## RECEPTION

Join us Thursday night at the Icebreaker Reception for an opportunity to network with colleagues, meet new friends, and check out the latest technology the vendors have to offer.

**Thursday, May 9th**

**Exhibit Hall**

**Appetizers & No-Host Bar**



## THURSDAY WORKSHOPS



**JEFF LUCAS, PLS**

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### **ETHICS FOR LAND SURVEYORS**

Utilizing the Surveyor's Creed and Canons adopted by the National Society of Professional Land Surveyors as a basis for discussion, this seminar will study ethical consideration in everyday practice. Real cases involving real surveyors will be discussed and explored for the ethical issues that they contain. Some hypothetical situations are also discussed. This seminar usually generates plenty of discussion over the case scenarios and the actions of the surveyors involved.

### **BETTER BUSINESS PRACTICES & THE LAW**

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 professionals is property law, contracts, negligence, torts, the common law, administrative law, and statutory enactments. 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 practice.



**STEVE PARRISH, PLS**

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### **PRIVATE-FEDERAL BOUNDARY DETERMINATION (CFedS PROGRAM)**

This is a full-day CFedS Continuing Education course on survey procedures and their applications when surveying "private-private" ownership boundaries versus "federal-private" ownership boundaries for federal purposes. This workshop will include a variety of actual survey experiences and discuss acquired federal land status. Two (2) CFedS CE credits will be awarded to Certified CFedS attendees after successful completion of an online post-workshop quiz. **Additional \$50 fee applies for CFedS Certification.**



# PRELIMINARY CONFERENCE AGENDA

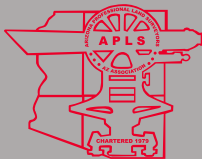
**FRI., MAY 10th**

## **BOWLING NIGHT**

Join us Friday night for a fun night of bowling and networking at the Bowlero Via Linda Lanes.

All proceeds benefit the APLS Education Foundation

**SEE BOWLING  
REGISTRATION  
FORM FOR  
DETAILS**



**7:30 AM - 8:30 AM REGISTRATION OPEN/REFRESHMENT BREAK**

**8:30 AM - 10:00 AM CONCURRENT SESSIONS**  
**SURVEY EVIDENCE AND PROCEDURES**  
*Jeff Lucas, PLS*  
**HISTORY OF THE GEODETIC DATUMS**  
*David Doyle*  
**LIABILITY EXPOSURES FOR SURVEYORS**  
*Laura Ledbetter*

**10:00 AM - 10:30 AM BREAK IN EXHIBIT HALL**

**10:30 AM - 12:00 PM CONCURRENT SESSIONS**  
**SURVEY EVIDENCE AND PROCEDURES (Cont.)**  
*Jeff Lucas, PLS*  
**HISTORY OF THE GEODETIC DATUMS (Cont.)**  
*David Doyle*  
**LIABILITY EXPOSURES FOR SURVEYORS**  
*Laura Ledbetter*

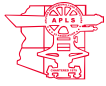
**12:00 PM - 1:30 PM LUNCHEON IN EXHIBIT HALL**

**1:30 PM - 3:00 PM CONCURRENT SESSIONS**  
**PIN CUSHION EFFECT: MULTIPLE MONUMENT DILEMMA**  
*Jeff Lucas, PLS*  
**NEW DATUMS 2022**  
*David Doyle*  
**LEGAL TRACK SESSION**

**3:00 PM - 3:30 PM BREAK IN EXHIBIT HALL**

**3:30 PM - 5:00 PM CONCURRENT SESSIONS**  
**PIN CUSHION EFFECT: MULTIPLE MONUMENTS (Cont.)**  
*Jeff Lucas, PLS*  
**NEW DATUMS 2022**  
*David Doyle*  
**LEGAL TRACK SESSION**

**6:30 PM - 8:30 PM BOWLING FUNDRAISER**



## FRIDAY WORKSHOPS



**JEFF LUCAS, PLS**

### **SURVEY EVIDENCE PROCEDURES**

There is a line of thinking within and without the surveying community that goes something like this: The surveyor's only role is to deal with the facts as contained in the client's deed; all other issues with regard to boundaries can only be determined by a court of competent jurisdiction. The obvious problem with this line of thinking is that, if this is truly the case, society does not need land surveyors. Boundary determinations boil down to two questions: A question of law and a question of fact. "The question of what is a boundary line is a matter of law, but the question of where a boundary line, or a corner, is actually located is a question of fact." *Walleigh v. Emery*, (Pa.Super.Court. 1960). This seminar will explore both of the questions fully, as well as the topics of evidence and procedures for the determination of a well-reasoned opinion on boundaries. State specific law will be incorporated into this seminar in the process of answering these and many other questions.

### **PIN CUSHION EFFECT**

The "pincushion" corner is the name that has commonly been assigned to the phenomenon of multiple monuments that have been placed in the vicinity of a single land boundary or property corner. The pincushion corner is the bane of the land surveying profession because it represents the physical manifestation of the land surveyor's collective confusion over his or her duties and responsibilities toward property boundaries. Within the context of the land surveyor's duties and responsibilities toward boundaries, there is no reason for multiple monuments to exist when only one corner is contemplated under the law. This seminar explores the phenomena of the pincushion corner and the dilemma it creates for the land surveying profession. The surprising causes of the pincushion corner will be discussed and ways to avoid starting a new pincushion or adding to an existing one will be explored.



**DAVID DOYLE**

### **HISTORY OF THE GEODETIC DATUMS**

This program details the historical and contemporary developments of the horizontal and vertical geodetic datums of the United States including: the Bessel reference system, U.S. Standard Datum, North American Datum, North American Datum of 1927, North American Datum of 1983, First, Second, Third and Fourth General Vertical Adjustments, the National Geodetic Vertical Datum of 1929 and the North American Vertical Datum of 1988. The program highlights the development of reference ellipsoids, geoid models and contemporary global coordinate systems such as the International Terrestrial Reference Frame (ITRF) and the World Geodetic System of 1984 (WGS 84), and describes the efforts of the National Geodetic Survey to modernize the reference systems of the United States.

### **NEW DATUMS 2022**

During the next several years enhancements and additions to the network of Global Navigation Satellite Systems (GNSS) will significantly improve the use of space-based positioning systems for surveying, mapping, charting, navigation and innumerable other applications. In order to meet the anticipated demands for an improved geospatial framework that these developments will require, the National Geodetic Survey (NGS) is implementing a plan for the modernization of the National Spatial Reference System (NSRS). Among the various topics outlined in this plan is the adoption of an entirely new geodetic reference frame with updated geometric (horizontal) and gravimetric (vertical) realizations that will replace the North American Datum of 1983 (NAD 83), the North American Vertical Datum of 1988 (NAVD 88) and the several island vertical datums. This presentation highlights the rationale for these changes; the various elements that currently define the NSRS and the activities NGS is engaged in to improve the capacity of and access to the NSRS.

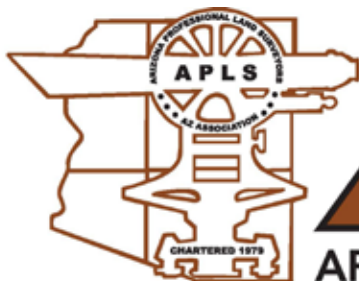


**APLS  
CONFERENCE**

# PRELIMINARY CONFERENCE AGENDA

**SAT., MAY 11th**

<b>7:30 AM - 8:00 AM</b>	<b>REGISTRATION OPEN/REFRESHMENT BREAK</b>
<b>8:00 AM - 10:00 AM</b>	<b>CONCURRENT SESSIONS</b> <b>FROM FLIGHT TO FINISH: THE LATEST IN DRONE TECHNOLOGY WITH 3DR SITE SCAN</b> <i>Shawn Herring</i> <b>PANEL DISCUSSION: ATTORNEY, SURVEYOR, AND TITLE COMPANY</b> <i>Panel to be determined.</i> <b>CASE STUDIES</b> <i>30 Minute Presentations by Various Speakers</i>
<b>10:00 AM - 10:30 AM</b>	<b>BREAK</b>
<b>10:30 AM - 12:00 PM</b>	<b>CONCURRENT SESSIONS</b> <b>FROM FLIGHT TO FINISH: THE LATEST IN DRONE TECHNOLOGY WITH 3DR SITE SCAN (Cont.)</b> <i>Shawn Herring</i> <b>PANEL DISCUSSION: ATTORNEY, SURVEYOR, AND TITLE COMPANY</b> <i>Panel to be determined.</i> <b>CASE STUDIES</b> <i>30 Minute Presentations by Various Speakers</i>
<b>12:00 PM</b>	<b>CLOSING CEREMONIES</b>
<b>1:00 PM</b>	<b>APLS BOARD OF DIRECTORS MEETING</b>



**APLS**  
**ARIZONA PROFESSIONAL LAND SURVEYORS**

APLS CONFERENCE ~ MAY 9-11, 2019

[AzPLS.org](http://AzPLS.org)





## SATURDAY WORKSHOP



**SHAWN HERRING**

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### **FROM FLIGHT TO FINISH THE LATEST IN DRONE TECHNOLOGY WITH 3DR SITE SCAN**

Join us as we explore the latest in drone technology and how it can benefit Architecture, Construction and Engineering (AEC) firms of an size. UAV/ Drone capture data is in quickly becoming the go to tool on projects ranging from traditional survey/ALTA, large scale topo, construction management and many more aspects. Come see some of the latest trends on hardware and software for UAV reality capture needs. We will explore project case studies, best practices and tips and tricks we have learned along the way. In the first session as we map out a flight plan and fly the convention center with the 3DR SiteScan & DJI M200 UAV. This session will be hands on as we look at some of the best practices in the field while flying this project. We will successfully fly the aircraft in several modes showing just how diverse of a workflow you can provide for your customers. The second half of this session will be a follow up to the field work. We will process our flight, tie it to survey control and look at all the functions and features of SiteScan. We will view our results within several different products including Civil 3D, Infracore and others. We will generate topo, volumes and just about everything else you need to be successful from flight to finish!

**ADDITIONAL INFORMATION AVAILABLE ON THE APLS WEBSITE**

**AzPLS.org**

**QUESTIONS?**

(888) 994-3317

info@AzPLS.org