

# Agenda

*Presented by Paul Wheeler*

## The Present and Future of Unmanned Aircraft Technologies

- UAS platforms: fixed wing and rotorcraft
- Selecting UAS
- Uses - cases
- Future technologies

## Commercial UAS Applications

- Agriculture
- Architecture and construction
- Engineering
- Environmental monitoring and compliance
- Defense and public safety
- Marketing, media and public relations
- Infrastructure development and maintenance

## Mapping Using UAS

- Photogrammetry vs. LiDAR
- Sensor considerations
- Software set-up
- Preflight planning
- Flight operations and considerations
- Post-processing
- Data deliverables

## Civil Engineering Applications for UAS

- Site inspection and site work
- Construction progress monitoring
- 3D modeling

## Thermal Imaging with UAS

- What is thermal imaging?
- Wavelengths
- Industry use cases and benefits
- False positives and false negatives
- Cameras and settings
- Post processing
- The importance of proper atmospheric

### Can't Attend? Order the Manual and Audio from the Live Seminar as a Self-Study Package!

Audio recordings of this seminar are available for purchase starting at \$269. See registration panel for more information and please refer to specific state licensing rules or certification requirements to determine if this learning method is eligible for continuing education credit.

## Unmanned Aircraft

## Applications for Engineers

Salt Lake City, UT - Friday, February 28, 2020



HalfMoon Education Inc.  
PO Box 278  
Altoona, WI 54720-0278

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## Learning Objectives

### You'll be able to:

**Identify** present and future unmanned aircraft technologies.

**Explore** commercial UAS applications for engineering, architecture and construction, and infrastructure development and maintenance.

**Learn** about UAS mapping procedures from software setup and preflight planning to post-processing.

**Explore** civil engineering applications for UAS, such as site inspection and construction progress monitoring.

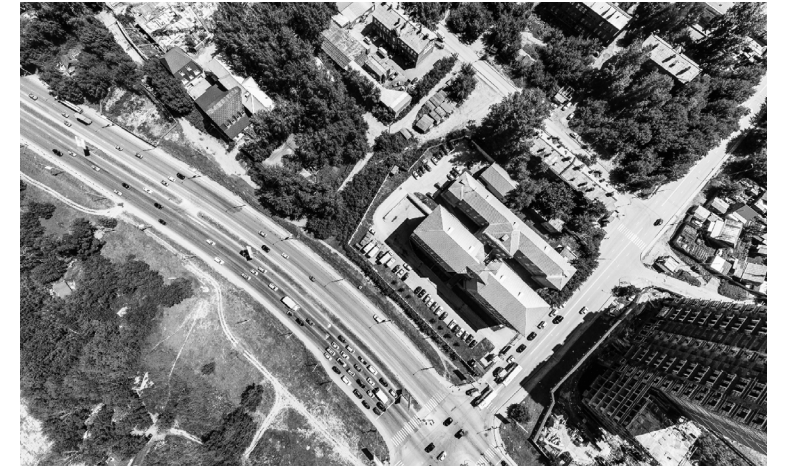
**Examine** thermal imaging capabilities and discuss commercial applications.



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# Unmanned Aircraft Applications for Engineers

*Salt Lake City, UT - Friday, February 28, 2020*



**Discuss** the present and future of unmanned aircraft system (UAS) technologies

**Explore** commercial UAS applications for architecture, agriculture, environmental compliance and public safety

**Learn** about mapping using UAS

**Examine** the use of UAS in inspections and construction progress monitoring

**Understand** applications for UAS thermal imaging

### Continuing Education Credits

This seminar offers 6.0 CPE hours/PDHs to professional engineers.



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# Faculty



**Paul Wheeler** is the Unmanned Aerial Systems program manager at the Utah Department of Transportation. He is an instrument-rated pilot and serves on multiple national committees to help foster innovation through the use of unmanned aerial systems (UAS). He was named one of the top seven drone visionaries in civil infrastructure by Commercial UAV Expo and is an internationally recognized speaker and innovator for UAS technologies.

### Here’s what attendees had to say about presenter Paul Wheeler:

- “Mr. Wheeler was well prepared and an excellent instructor!” - *Civil Engineer*
- “Coming from a different background I have a much better understanding.”  
- *Analyst/Drone Pilot*
- “Very useful information- extremely knowledgeable and answered questions with ease.”  
- *Civil Engineer*
- “Excellent seminar! Paul was willing to answer questions and provide suggestions.”  
- *Land Surveyor*

# Seminar Information

<b>Marriott University Park</b> 480 Wakara Way Salt Lake City, UT 84108 (801) 581-1000	Registration 8:00 - 8:30 am Morning Session 8:30 am - 12:30 pm	Lunch (On your own) 12:30 - 1:30 pm Afternoon Session 1:30 - 4:00 pm
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### Tuition

**\$289** for individual registration  
**\$269** for three or more simultaneous registrations.

**Included with your registration:**  
*Complimentary continental breakfast and printed seminar manual.*

**Receive a reduced tuition rate of \$101** by registering to be our on-site coordinator for the day. For availability and job description, please visit [www.halfmoonseminars.org](http://www.halfmoonseminars.org).

### How to Register

- Visit us online at [www.halfmoonseminars.org](http://www.halfmoonseminars.org)
- Mail-in or fax the attached form to 715-835-6066
- Call customer service at 715-835-5900

**Cancellations:** Cancel at least 48 hours before the start of the seminar, and receive a full tuition refund, minus a \$39 service charge for each registrant. Cancellations within 48 hours will receive a credit toward another seminar or the self-study package. You may also send another person to take your place.

# Additional Learning

### Webinar Series

#### Foundations in Cold Regions

- **Introduction to Foundations in Cold Regions**  
Thurs., Feb. 20, 2020, 11:00 AM - 12:30 PM CST
- **Shallow Foundation Design in Cold Regions**  
Thurs., Feb. 20, 2020, 1:00 - 2:30 PM CST
- **Deep Foundation Design in Cold Regions**  
Fri., Feb. 21, 2020, 11:00 AM - 12:30 PM CST
- **Foundation Construction in Cold Regions**  
Fri., Feb. 21, 2020, 1:00 - 2:00 PM CST

#### Soil Mechanics and Slope Stability

- **Soil Investigation and Classification**  
Tues., Feb. 25, 2020, 11:00 AM - 1:00 PM CST
- **Reviewing Hydraulic and Mechanical Properties of Soils**  
Tues., Feb. 25, 2020, 1:30 - 3:00 PM CST
- **Determining and Increasing Bearing Capacity**  
Wed., Feb. 26, 2020, 11:00 AM - 1:00 PM CST
- **Determining and Increasing Slope Stability**  
Wed., Feb. 26, 2020, 1:30 - 3:00 PM CST

#### Designing for Climate Resilience

- **Current and Anticipated Climate Effects on Structures and Communities**  
Thurs., Feb. 27, 2020, 11:00 AM - 12:30 PM CST
- **Assessing the Impact of Sea Level Rise, Changing Temperature and Changing Weather Patterns**  
Thurs., Feb. 27, 2020, 1:00 - 3:00 PM CST
- **Studying the Impact of Extreme Weather**
- **Events on Structures and Communities**  
Fri., Feb. 28, 2020, 11:00 AM - 12:30 PM CST
- **Adapting Sites, Outdoor Spaces, New Construction and Existing Buildings to Withstand Extreme Weather Events**  
Fri., Feb. 28, 2020, 1:00 - 3:00 PM CST

For more information and other online learning opportunities visit:  
[www.halfmoonseminars.org/webinars/](http://www.halfmoonseminars.org/webinars/)

### Continuing Education Credit Information

This seminar is open to the public and offers 6.0 continuing professional education hours/PDHs to professional engineers licensed in all states. Educators and courses are not subject to preapproval in Utah.

HalfMoon Education is an approved continuing education sponsor for engineers in Florida, Indiana (License No. CE21700059), Maryland, New Jersey (Approval No. 24GP00000700), North Carolina, and North Dakota. HalfMoon Education is deemed an approved continuing education sponsor for New York engineers.

Attendance will be monitored, and attendance certificates will be available after the seminar for most individuals who complete the entire event. Attendance certificates not available at the seminar will be mailed to participants within fifteen business days.

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# Registration

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How to Register	
<b>Online:</b> <a href="http://www.halfmoonseminars.org">www.halfmoonseminars.org</a>	
<b>Phone:</b> 715-835-5900	
<b>Fax:</b> 715-835-6066	<b>Code:</b>
<b>Mail:</b> HalfMoon Education Inc., PO Box 278, Altoona, WI 54720-0278	
<b>Complete the entire form.</b> Attach duplicates if necessary.	
<b>Registrant Information</b> Name: _____ Company/Firm: _____ Address: _____ City: _____ State: _____ Zip: _____ Occupation: _____ Email: _____ Phone: _____ <b>Additional Registrants:</b> Name: _____ Occupation: _____ Email: _____ Phone: _____ Name: _____ Occupation: _____ Email: _____ Phone: _____ <small>Email address is required for credit card receipt, program changes, and notification of upcoming seminars and products. Your email will not be sold or transferred.</small> ( )  I need special accommodations. Please contact me.	

### Tuition

- ( ) **I will be attending the live seminar.** Single Registrant - **\$289.00**. Three or more registrants from the same company registering at the same time - **\$269.00** each.
- ( ) **I am not attending.** Please send me the self-study package:
- ☐ Downloadable MP3 Audio/PDF Manual for **\$269.00**.  
☐ CD/Manual Package for **\$289.00**. ☐ USB/Manual Package **\$289.00**.  
(S&H included. Please allow five weeks from seminar date for delivery)

**Checks:** Make payable to HalfMoon Education Inc.

**Credit Card:** *Mastercard, Visa, American Express, or Discover*

Credit Card Number:	_____
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