

INTRODUCTION TO DRONES & UAS FOR UTILITIES

September 15, 2020
Online | Central Time

EUCI ONLINE COURSE

EUCI is pleased to offer this one-day course on our online interactive platform. Enjoy a valuable learning experience with a smaller impact on your time and at reduced cost. You will gain new knowledge, skills, and hands-on experience in just one day from the comfort of your remote location.

    **TAG US #EUCI**
FOLLOW US @EUCIEvents

 EUCI is authorized by IACET to offer 0.6 CEUs for the course

OVERVIEW

This program is designed to provide utilities who are exploring the potential for utilizing Unmanned Aerial Systems (UAS) with a solid foundation about the capabilities and limitations of the technology. The workshop will also provide you with the tools to adapt current processes to leverage this rapidly developing technology as well as identify when drones present a real opportunity for ROI. The program will be divided into morning and afternoon sessions, each with a specific focus. The morning session will present information about UAS hardware, regulations, use cases and specific considerations your operations will want to address when starting up a large utility drone project. The afternoon session will cover advanced UAS technologies such as autonomous UAS inspections, Beyond Visual Line Of Sight (BVLOS) operations, and software technology that can help organize and expedite the analysis of the huge quantities of data typically collected with remote sensing technology.

LEARNING OUTCOMES

- Describe the current ecosystem for UAS hardware and command and control systems
- Discuss which use cases currently provide the most ROI and how this may evolve in the future
- Examine what types of payloads are available for drone operations and how these various sensor systems intersect with utility UAS program goals
- Explore the FAA's regulatory environment that both enables and restricts the use of drone technology
- Describe best practices when starting up a large utility UAS program including managing contractors, creating program documentation, and issues around accessing private property and customer interactions
- Explain the options available for securely transferring data from the field to the party responsible for processing the data
- Look at software that can help extract value from the mountain of data that is usually produced by UAS remote sensing operations
- Explore advanced flight Concepts of Operations (ConOps), particularly BVLOS and autonomous flight operations
- Discuss guidelines for evaluating current processes that likely will be adapted or replaced in the future
- Adjust/reset current Utility expectations such as Defect Find Rate, data storage needs, etc.
- Examine important new UAS initiatives such as Remote ID and Unmanned Traffic Management (UTM)

WHO SHOULD ATTEND

The interactive, technical course will offer hands on support for energy stakeholders interested in UAS/UAV, line inspections, safety, and training.

REGISTER TODAY! CALL **303-770-8800** OR VISIT **WWW.EUCI.COM**

AGENDA

TUESDAY, SEPTEMBER 15, 2020 - CENTRAL TIME

- 8:45 – 9:00 am** **Log on and Sound Check**
- Morning Session**
- 9:00 – 9:30 am** **Introduction to UAS Operations and Use Cases**
Overview of UAS aircraft types and sensor systems
- 9:30 – 10:00 am** **The FAA and the UAS Regulatory Environment**
- Beyond line of sight approval
 - 14 CFR Part 107
- 10:00 – 10:15 am** **Morning Break**
- 10:15 – 11:00 am** **Utility UAS Operations**
- Defining the project
 - Specifying deliverables
 - Creating program documentation
 - How do you keep track and communicate with a widely dispersed workforce?
- 11:00 am – 12:00 pm** **Structuring the Project Operations**
- How to set up project goals
 - Contractors – selecting qualified vendors
 - Customers
 - Project management
 - Safety – How can you structure compensation in order to incentivize productivity without compromising safety?
- 12:00 – 1:00 pm** **Lunch Break**
- Afternoon Session - Data Processing and Advanced UAS Pperations**
- 1:00 – 1:30 pm** **Handling Project Data and Critical Infrastructure Information (CII) Considerations**
- Data ethics and privacy
 - Mandates for critical data
- 1:30 – 2:00 pm** **Data Processing**
- Analysis of LiDAR data
 - Staffing the data center
 - Procedure and techniques
- 2:000 – 3:00 pm** **Software for Extracting Value from UAS Pperations**
- Analysis of digital elevation models
 - Creation of autonomous inspection flight plans
 - Automated inspections
- 3:00 – 3:15 pm** **Afternoon Break**

REGISTER TODAY! CALL 303-770-8800 OR VISIT WWW.EUCI.COM

AGENDA

TUESDAY, SEPTEMBER 15, 2020 - CENTRAL TIME (CONTINUED)

3:15 – 4:00 pm

Advanced UAS Operations - BVLOS and Autonomous Operations

- Uploading and managing field data
- Review of inspection assets
- Creation of inspection reports

4:00 – 4:30 pm

What the Future Holds for UAS Technology

- What drones would be acceptable?
- What cameras? Or is it a case of meeting a certain resolution requirement?

4:30 – 5:00 pm

Lessons Learned and Program Review

- Transmission structure inspection
- Data analysis
- Review an inspection report

5:00 pm

Adjourn



“EUCI events are a great way to connect with top industry experts.”

Director, Gulf Coast Energy Network



“EUCI made me believe that learning is not locked down during COVID 19 pandemic time. EUCI provided online learning opportunity which proved that learning from home is possible!”

Operations Support Analyst, TC Energy

REGISTER TODAY! CALL **303-770-8800** OR VISIT **WWW.EUCI.COM**

INSTRUCTORS



Chris McMurtry

Solutions Architect, Sharper Shape

In his role as the Solutions Architect for Sharper Shape, Inc., Chris McMurtry is focused on designing unmanned aerial solutions based around the company's class leading "full-stack" hardware and software tools. Chris first became involved with drone technology for film and television production work, but he soon became convinced that unmanned aerial technology could do far more than just produce compelling entertainment content. This led to the creation of one of the first UAS services companies that specialized in using drone technology for utility inspections. Since 2013 Chris has been focused on finding the fit for UAS applications in the energy sector, with the goal of helping utilities transform their inspection and maintenance programs.

Paul Frey

Vice President of Sales, Sharper Shape

Paul has over 30 years of engineering and management experience in the utility industry. He started his career at Baltimore Gas & Electric as an intern while still in high school, and finished 34 years later as the Director of Distribution Automation. Just prior to joining Sharper Shape, Paul was the Senior Manager of Operations at the Edison Electric Institute where he set up the Unmanned Aircraft Systems Executive Task Force. While at EEI, he also helped establish the National Response Event framework and led the development of the RAMP-UP Tool, a national resource allocation tool for mutual assistance after storms. Paul has a M.S. in Engineering Administration from George Washington University and a BSEE and Computer Science degrees from Johns Hopkins University.

William Chung

Vice President of Business Development Sharper Shape

Will joined Sharper Shape in 2019 to help utilities with their remote inspection processes and data asset management. He leads the US business development and supports operations for existing US clients and projects. Will has over 13 years of electric utility experience from Pacific Gas and Electric Company where he most recently worked on Aerial Inspections and the development of machine learning to augment the remote inspection process. Prior to that, Will held various roles from Distributed Generation, Regulatory Compliance and Audits, Process Improvement, Business Operations, and Grid Innovation. Will has a Bachelor's Degree in Mechanical Engineering and a Master's in Business Administration from the University of California Berkeley.

Wesley Pritchett

Program Manager, Sharper Shape

Wesley brings aviation and operational management experience to the Sharper Shape team. Wes served in the United States Military as an aviation maintenance officer and pilot for 8 years with multiple deployments. Following his time in the military, Wes has worked in both finance and the nonprofit world. Wes studied at the United States Military Academy at West Point and received his MBA from the Wharton School at the University of Pennsylvania.

REGISTER TODAY! CALL **303-770-8800** OR VISIT **WWW.EUCI.COM**

IACET CREDITS



EUCI has been accredited as an Authorized Provider by the International Association for Continuing Education and Training (IACET). In obtaining this accreditation, EUCI has demonstrated that it complies with the AN-SI/IACET Standard which is recognized internationally as a standard of good practice. As a result of their Authorized Provider status, EUCI is authorized to offer IACET CEUs for its programs that qualify under the AN-SI/IACET Standard.

EUCI is authorized by IACET to offer 0.6 CEUs for the course.

INSTRUCTIONAL METHODS

PowerPoint presentations and open discussion will be used

ONLINE COURSE DELIVERY & PARTICIPATION DETAILS

We will be using Microsoft Teams to facilitate your participation in the upcoming event. You do not need to have an existing Teams account in order to participate in the broadcast – the online course will play in your browser and you will have the option of using a microphone to speak with the room and ask questions, or type any questions in via the chat window and our on-site representative will relay your question to the instructor.

- You will receive a meeting invitation which will include a link to join the meeting.
- Separate meeting invitations will be sent for the morning and afternoon sessions of the online course.
 - o You will need to join the appropriate meeting at the appropriate time.
- If you are using a microphone, please ensure that it is muted until such time as you need to ask a question.
- The remote meeting connection will be open approximately 30 minutes before the start of the online course. We encourage you to connect as early as possible in case you experience any unforeseen problems.

REQUIREMENTS FOR SUCCESSFUL COMPLETION

You must be logged in for the entire presentation and send in the evaluation after the online course is completed.



“I was skeptical about the remote learning platform but in fact i found this to be more efficient and overall better than an in person class!!! it was nice to be able to type questions out and have them answered at a good point in the discussion instead of derailing the presentation.”

Deputy Director, City of Naperville

REGISTER TODAY! CALL **303-770-8800** OR VISIT **WWW.EUCI.COM**

REGISTRATION INFORMATION

Mail Directly To:

EUCI
6400 S Fiddlers Green Cir., Suite 1620
Greenwood Village, CO 80111
OR, scan and email to: conferences@euci.com

WWW.EUCI.COM

p: 303-770-8800

f: 303-741-0849

ENERGIZE WEEKLY

Energize Weekly is EUCI's free weekly newsletter, delivered to your inbox every Wednesday. We provide you with the latest industry news as well as in-depth analysis from our own team of experts. Subscribers also receive free downloadable presentations from our past events.

Sign me up for Energize Weekly

PLEASE SELECT

INTRODUCTION TO DRONES & UAS FOR UTILITIES ONLINE COURSE
SEPTEMBER 15, 2020: US \$795 (Single Connection)

PACK OF 5 CONNECTIONS: US \$3,575

PACK OF 10 CONNECTIONS: US \$5,965

For volume discounts call +1.303.770.8800 for quote

** all other discounts do not apply to license packs*

Online Course Delivery & Participation Details

See page 6 for information

How did you hear about this event? (direct e-mail, colleague, speaker(s), etc.)

Print Name

Job Title

Company

Address

City

State/Province

Zip/Postal Code

Country

Phone

Email

CREDIT CARD INFORMATION

Name on Card

Billing Address

Account Number

Billing City

Billing State

Exp. Date

Security Code (last 3 digits on the back of Visa and MC or 4 digits on front of AmEx)

Billing Zip Code/Postal Code

OR Enclosed is a check for \$ _____ to cover _____ registrations.

Substitutions & Cancellations

Your registration may be transferred to a member of your organization up to 24 hours in advance of the event. Cancellations must be received on or before August 14, 2020 in order to be refunded and will be subject to a US \$195.00 processing fee per registrant. No refunds will be made after this date. Cancellations received after this date will create a credit of the tuition (less processing fee) good toward any other EUCI event. This credit will be good for six months from the cancellation date. In the event of non-attendance, all registration fees will be forfeited. In case of course cancellation, EUCI's liability is limited to refund of the event registration fee only. For more information regarding administrative policies, such as complaints and refunds, please contact our offices at 303-770-8800. EUCI reserves the right to alter this program without prior notice.

