

UAV Mapping Educational Series

Thursdays, March 28, April 11 & 25, and May 9 & 23, 2024

8:00 AM - 10:00 AM

Zoom Video Webinar

The UAV Mapping Educational Series is comprised of five two-hour webinars that are designed to teach professionals about the concepts behind UAVs, mission planning, data collection, data processing, georeferencing, quality assurance, lidar alternatives, attributing the information, national standards, and products. While directly related to traditional fixed wing large camera format photogrammetry, the use of UAV in producing similar products has dramatic differences due to no pilot on board, smaller format handheld cameras, multi-ray overlaps of photos, self-calibration of cameras, automated pixel matching, and automated classification. The use of airborne GNSS and inertial measuring system (IMU) sensors has changed the traditional georeferencing problem dramatically.

In addition to lectures, the series' featured sessions will utilize example data and example software, and allow time for questions and answers. Each two-hour session will include a ten-minute break and a quiz to measure participant learning. Registrants who view all five sessions and pass all administered quizzes will receive a certificate of completion. For participant convenience, the first four sessions will be recorded and made available between classes. Participation in the live fifth session is mandatory. Subjects covered during each session are as follows:

Session 1: Flight planning, scale of raw photography vs. focal length vs. pixel resolution vs. camera angle, percent overlap considerations, limits in forested areas and at building edges, fixed wing vs. rotor vs. hybrid UAV, use of gimbal mount, ASPRS accuracy standards and client needs.

Session 2: Automated image matching, concepts of aerotriangulation, measuring control images, quality indicators from the bundle adjustment.

Session 3: Airborne GPS-IMU possibilities, optimizing ground control and its measurement, using ground control vs. coordinate comparisons as a quality assessment, relationship to ASPRS accuracy standards.

Session 4: UAV Lidar as an alternative to photography, Lidar advantages and disadvantages, Lidar intensity returns to color, control measurement with Lidar, point density requirements, bare earth vs. digital surface models.

Session 5: Automated classification processes, manual classification processes, converting .las to vector information, helping a client understand deliverables and language in the deliverables.

Speaker



Raymond J. Hintz, PLS, PhD, Professor, University of Maine

Raymond J. Hintz is a professor of surveying engineering technology at the University of Maine, program coordinator for the B.S. program in surveying engineering technology and graduate coordinator for the Professional Science Masters in Engineering and Business surveying engineering concentration. His research interests lie in automation of data collection and processing of surveying and photogrammetric information. Dr. Hintz has published more than 50 articles in journal and conference proceedings related to surveying, and is a registered land surveyor in the states of Maine and Florida. He is active in promoting UAS technology, with a portion of two Photogrammetry courses he teaches dedicated to surveying and mapping using UAV technology. He also conducted nine one-day seminars to various organizations on UAV's in the last two years. In addition to his academic experience, Dr. Hintz is recognized for his role in developing several software packages including the Cadastral Electronic Field Book (CEFB), Cadastral Measurement Management (CMM) and Geographic Measurement Management (GMM). The CEFB enables automatic entry of measurement and automated field note information into CMM, a computation tool for survey and analysis of cadastral surveys. GMM was adopted as the approved tool for development of the Bureau of Land Management's Geographic Coordinate Data Base.

Registration Information

Registration Fees: \$550/person for members* and \$800/person for non-members.

These sessions will be recorded, and by registering you are agreeing to be recorded.

* Members of CALS, MSLS, NHLA, NYSAPLS, RISPLS and VSLS can attend for the MALSCE Member rate.

Registration Deadline: Friday, March 22, 2024. Individual webinar registrations and payment via Visa, MasterCard, or American Express can be made online. To register online for this webinar at the MALSCE member rate, log in using your MALSCE assigned username and password. If you do not know your member login information or if you need help registering call 617/227-5551. You can also complete the registration form below and register via fax or regular mail. Fax your registration form with credit card information to 617/227-6783. Mail your registration with credit card information or a check (payable to "MALSCE") to: MALSCE, One Walnut Street, Boston, MA 02108. No refunds will be given after the Friday, March 22, 2024, registration deadline. All registrants will be billed regardless of series participation status. This series is offered for the benefit of MALSCE members and other interested registrants. Anyone discovered viewing a session without having registered to do so will be billed the appropriate series registration fee.

Continuing Education

Registrants who participate in or view all five sessions and pass all administered quizzes will receive a certificate of completion. Please complete the appropriate registration form with your legal name, address, and other contact information so that you will be properly identified on the certificate.

Tax Information

Expenses incurred for education undertaken to maintain and improve professional skills (including travel, meals, and lodging) may be tax-deductible.

Individual Registration Form

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Registrant Information:

Name: _____

Organization (if applicable): _____

Address: _____

City: _____ State: _____ Zip Code: _____

Phone: _____ Fax: _____ Email: _____

Registration Fees

\$550 MALSCE Member*

* Members of, CALS, MSLS, NHLA, NYSAPLS, RISPLS and VSLS can attend for the member rate. Please check the appropriate box below:

CALS MSLS NHLA NYSAPLS RIPLS VSLS

\$800 Non MALSCE Member

Total Amount Enclosed: _____

Make checks payable to "MALSCE" and mail with completed form to: MALSCE, One Walnut Street, Boston, MA 02108-3616

Or pay with (Check one): Visa Master Card American Express

Card Name: _____

Card Number: _____

Expiration Date: _____ Security Code: _____

Billing Address: _____

City: _____ State: _____ Zip: _____

Signature: _____

- Registration is processed on a first-come, first-served basis. Registration deadline is Friday, March 22, 2024. No refunds will be given after this date. All registrants will be billed regardless of series participation status.
- Registrants that participate in all five sessions and pass all quizzes administered will receive a certificate of completion.
- Questions? Call 617/227-5551