



The Rocky Mountain
Compiler

Issue 3

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Newsletter of the Rocky Mountain Region of ASPRS, serving Montana, Wyoming, Colorado, and New Mexico

President's Message

Dear Rocky Mountain Region Members of ASPRS,

Our annual meeting is coming up this weekend in a new multi-date format (3-5 November 2017, Centennial, CO) with workshops, panel sessions, and opportunities for networking during receptions, meals, and coffee breaks. If you have not yet made any plans for the weekend, please join us! The meeting will begin with an Opening Reception on Friday evening at the Lone Tree Brewing Company, near Centennial Airport. For more information, see the following article in this newsletter or visit our website (<http://www.asprs-rmr.org/> for latest news).

If you have not been receiving announcements from us (the Region), you are probably not subscribed to our community on the ASPRS website. To subscribe, log in to your ASPRS account, go to Members Home > My ASPRS > My Participation > Region – Rocky Mountain. Once on the Rocky Mountain Region Community page, select subscribe under Events to Opt In to receiving messages from us. In addition, or alternatively, follow us on Facebook where we post news and events on a regular basis.

Our annual Student Scholarship for 2017-2018 is also announced in this issue. Applications will be accepted until December 1st.

We hope you enjoy this newsletter. We'd like to hear from you. Please email us (asprs.rmr@gmail.com) your thoughts!

With best wishes,
Dr. Michaela Buenemann
ASPRS Rocky Mountain Region President

ASPRS Rocky Mountain Region Annual Meeting

New multi-day format!!

3-5 November 2017

(Friday evening, Saturday all day and Sunday morning)

Please join us for a weekend of workshops, panel discussions, meals, and networking social gatherings!

Main Event Venue:

The Trails Recreation Center (TRC)
Centennial, CO 80016

Visit our [website](#) for complete schedule, registration and sponsorship information.

Sponsorships Needed!

Please consider sponsoring this event; details are found below. Read on ...

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Schedule

Friday, 3 November 2017

6:00 – 9:00 pm Opening Reception in the West Wing Room of [Lone Tree Brewing Company](#)

Saturday, 4 November

8am - 5pm Workshops and Sessions, followed by Dinner 5:30 - 8:30pm

-An Introduction to Structure from Motion -- Multi-view Stereo (SFM-MVS) Workshop, Dr. Chris Lippitt (University of New Mexico)
 Abstract: This workshop will introduce participants to SFM-MVS processing of digital aerial photography. SFM-MVS has become a critical pre-processing technology for the geometric correction of imagery acquired from unmanned aircraft systems (UAS) owing to the number of frames routinely acquired by these systems. Using Agisoft Photoscan, participants will produce orthophotos and digital surface models using overlapping imagery acquired from a Nikon D810 (f = 50mm) mounted on a GippsAERO GA8 and Survey grade ground control. Principles of SFM-VS will also be reviewed. Participants will complete the workshop on their own person computers; information on obtaining a license for required software will be distributed prior to the meeting.

-GIS&T Careers Panel Session, Dr. Michaela Buenemann (New Mexico State University), Leandro Gonzalez (DigitalGlobe, Inc.), others
 Abstract: GIScientists from the private and public sectors with hiring experience will inform you about their careers, organizations, and what they look for in job applicants. Participants will discuss trends in the industry and their implications for job market preparations. The session will begin with some structured questions from the session chair and conclude with questions from the audience!

-Professional Certification Information Session, Dr. Chris Lippitt (University of New Mexico)
 Abstract: ASPRS certification is generally considered the gold standard certification in the geospatial industry. The various certifications ASPRS offers and the process for obtaining certification will be reviewed followed by a discussion with the audience.

-Seeing the Unseen with WorldView-3 Short-Wave Infrared (SWIR) Imagery Workshop, Bill Baugh (Digital Globe)

Abstract: The WorldView-3 (WV-3) commercial remote sensing satellite enables significant new material characterization capabilities at high spatial resolution. This is due to the 16-band expanded spectral range spanning visible, near infrared (VNIR), and shortwave infrared (SWIR) reflected light. The SWIR imaging bands are collected at a native 3.7 m resolution and cover a range of diverse and unique absorption features (natural signatures) for many materials. The VNIR bands are collected at a higher 1.2 m resolution; and a panchromatic band at 0.31 m resolution reveals unprecedented spatial details from space. Building on over three years of experience with WV-3 spectral data, Bill Baugh will present a survey of case studies that demonstrate applications that can be used to improve decision making and operational management.

Sunday, 5 November

8:00 am – noon

-Remote Sensing and Public Engagement Panel Session, Dr. Cerian Gibbes (University of Colorado, Colorado Springs), and additional speakers TBD

Abstract: Remotely sensed data is increasingly available through interactive interfaces. The increased accessibility of the internet, mobile computing, and remotely sensed data has led to a rise in public engagement in data collection, basic analysis, and diversification of the narratives presented about the physical and social environment. This rise in the accessibility of remote sensing, and more broadly geospatial science, holds the potential to advance the legitimacy of the models used for decision making purposes. This session will consist of brief presentations of examples of the use of remote sensing and geospatial science to engage the public. The presentations will be followed by an open discussion.

-Incorporating No-cost Landsat Data and Products in Mapping Applications Workshop, Dr. Ramesh Sivanpillai (University of Wyoming)

Abstract: Landsat data products provide invaluable earth observation tools that are available to users at no cost. Since 2016, the US Geological Survey (USGS) has started organizing Landsat data into a

tiered collection structure, based on data quality and level of processing. This lecture and demonstration-style workshop will show how to search and download data from the collection archive, introduce basic remote sensing concepts, and demonstrate characteristics of Landsat data applications, such as monitoring and mapping natural and man-made features, time-series analyses, vegetation indices, and wildfire burn severity. Workshop participants will receive a completion certificate.

Registration fee

Current membership in ASPRS is not required. Registration includes all workshops and panel sessions, opening reception Friday evening, all meals on Saturday, and Sunday breakfast.

(Registration fee waived for Panelists who are participating only on Sunday.) Registration is limited to 40 people — reserve your spot today!

- Professionals — \$75 (includes all sessions and meals)

- Students — \$15 (includes all sessions and meals)

Visit www.asprs-rmr.org beforehand to register.

Sponsorships Needed!

Please consider sponsoring this event at one of the following levels:

Platinum Level – \$1,000

Booth near conference registration area

Logo display and written acknowledgment in next ASPRS-RMR newsletter

Verbal acknowledgement during Saturday dinner event

Logo display on meeting website and program

Gold Level – \$500

Logo display and written acknowledgment in next ASPRS-RMR newsletter

Verbal acknowledgement during Saturday dinner event

Logo display on meeting website and program

Silver Level- \$250

Verbal acknowledgement during Saturday dinner event

Logo display on meeting website and program

Bronze – \$100

Name display on meeting website and program

Please visit our website for complete details and links to a secure site for registration and sponsorship.

Rocky Mountain Region Student Scholarship Program 2017-2018

In its continuing efforts to support and build awareness for the Remote Sensing and GIS / Geospatial sciences, the Rocky Mountain Region of ASPRS is proud to announce its academic scholarships for 2017-2018. The ASPRS-RMR offers scholarships to deserving undergraduate and graduate students every year. There will be at least one scholarship awarded (assuming sufficient applications are received) in the range of at least \$500 to \$1,000 each, depending on level of study (Bachelor's, Master's or Ph.D.). The scholarships are intended for students throughout the Rocky Mountain Region (Montana, Wyoming, Colorado and New Mexico) who demonstrate excellence while pursuing careers in the fields of Photogrammetry, Remote Sensing, and Geographic Information Systems (GIS) or related disciplines. Both undergraduate and graduate students of any third-level educational institution within the four-state region who are pursuing careers in these disciplines are encouraged to apply.

Get information and the application from the "Newsletters" page at <http://www.asprs-rmr.org> Student membership in ASPRS is not required to apply, but if selected, membership is required at time of scholarship award. Awards will be presented sometime in early 2018. The Rocky Mountain Region has consistently offered thousands of dollars in annual scholarships every year. Preference will be given to those studies that apply sound scientific principles to practical applications in the geospatial sciences (photogrammetry, remote sensing, Geographic Information Systems, etc.). Awards at both the undergraduate and the graduate levels are based on academic merit; that is, the application form does not request any personal financial data. Applications should be submitted by the December 1, 2017 deadline. Be sure to follow submittal instructions on the bottom of the application. If you have any questions, send an email to <mailto:asprs.rmr@gmail.com>

Stay tuned for upcoming Technical Tours and Social Events! Check out new professional opportunities and upcoming events on the Rocky Mountain Region [Website](#) ...

National Director's Report

UAS: Fad or Trend?

There is very strong evidence in the geospatial market that Unmanned Aircraft Systems (UAS), including Unmanned Aerial Vehicles (UAV) or drones, are here to stay as a ubiquitous acquisition technology. Convergences of new platforms, sensors, associated software and operator availability have contributed to a pronounced leap forward. The regulatory environment has become more favorable for daily application of UAS. Additionally, geospatial practitioners have increased their adoption of UAS-acquired datasets, whether from air, land, or sea. A few recent private-sector developments support this argument:

- J First, the recent Commercial UAV Expo was a great event (see <https://www.expouav.com/>). This year's Expo had twice the number of exhibitors as the previous year. The program was broad-ranging and informative. During the event, ASPRS conducted initial exams for ASPRS UAS Certification. UAS is now mainstream for our individual members, corporate members, and the collective geospatial user community (see <https://www.asprs.org/certification-program/certified-mapping-scientist-uas-asprs.html>).
- J Second, the Commercial UAV Expo and Drone World Expo are now under common ownership, and in 2018 the two events will be combined (see <https://www.expouav.com/commercial-uav-expo-drone-world-expo-unite-2018/>).
- J Third, within the Rocky Mountain Region, UAS Colorado has become a viable and fully functional advocacy organization for UAS businesses in the state (see <http://uascolorado.com/>).
- J Forth, XPotential 2018, a national UAS event, will be held in Colorado next spring (see <http://www.xponential.org/xponential2018/public/enter.aspx>).



COLORADO CONVENTION CENTER | DENVER
 April 30 – May 3: Educational Program |
 May 1 - 3: Exhibit

For me, the most exciting developments relate to UAS Colorado. This non-profit business league for Unmanned Aircraft Systems in Colorado is hosting a company-sponsored VIP demonstration weekend and tour to highlight unmanned systems for key executives and industry leaders in the days prior to XPotential 2018. The goals are to demonstrate cutting-edge capabilities and to promote doing business in Colorado. Colorado is a UAS-friendly state and offers unique challenges to the UAS user community with its high altitude and geographically diverse terrain. Also, Colorado is home to several aerospace industry leaders and, as a state, consistently ranks in the nation's top three aerospace employers. Companies will have the unique opportunity, in conjunction with XPotential 2018, to demonstrate platforms, payloads, sensors, software, analysis, and services to their most important customers and prospects in Colorado's premier flight testing areas. Limited sponsorship and demonstration packages are available the weekend prior to XPotential 2018. Demonstrations will be conducted in the expansive 5-million-acre San Luis Valley of Colorado at up to 15,000-foot elevation above Mean Sea Level, and above some of the most diverse terrain in the nation, as well as at the high-altitude and geographically diverse test areas located near Mt. Princeton Hot Springs Resort in Nathrop, Colorado.

[Note that portions of the description above were provided by UAS Colorado.]

Please consider participating.
 Your comments are always welcome ...

Jeffrey M. Young
 ASPRS-RMR National Director
<mailto:jyoung@lizardtech.com>

GIS in the Rockies Report

GIS in the Rockies is a collaboration of four professional societies: ASPRS-RMR, GIS Colorado (GISCO), The Professional Land Surveyors of Colorado (PLSC), and the Urban and Regional Information Systems Association (URISA) Rocky Mountain Chapter. The conference began on Tuesday, September 19th with several pre-conference Workshops on capturing GIS data, utilizing drone/UAS (Unmanned Aerial Systems) technologies, Spatial SQL and QGIS (Open Source) Visualization, Advanced OpenStreetMap, Asset Management, Next Generation 9-1-1, and supporting the mobile project lifecycle.

This was the 30th Anniversary for GIS in the Rockies: Premier Geospatial Conference of the Rocky Mountain West with over 500 attendees!! It was held September 19-22 at a new venue this year, the Hilton Denver Inverness near Centennial Airport. It was a nice facility with adequate meeting rooms, good sound-proofing between meeting rooms, and a well-lit hallway for exhibitors. A light and airy "greenhouse" room was used for the Poster Session (24 submitted) as well as for lunches and breaks. The Wednesday evening Social Event was held outside on the patio with a gazebo where the infamous Dave Watson presided over his infamous "Geography Quiz." The questions, as always, were quite challenging. There were several drawing winners, and the Grand Prize winner took home a SPARK Drone offered up by Platinum Sponsor CompassDrone (part of the OneCompass family with CompassCom, CompassData, CompassTools). Both days, CompassTools and CompassDrone gave ongoing demos of their drones and data collection tools out on the patio.

The Opening Plenary Speech on Wednesday morning was delivered by Peter Batty, co-founder and CTO of the geospatial division at Ubisense. His talk was entitled, "The Geospatial Industry: Past, Present, and Future." Peter has given the Plenary speech twice before, in 2003 and 2010; now, 7 years later, he summarized the past 30 years of geospatial technologies. Peter is always interesting; with keen foresight he went on to show glimpses of what changes the future of our industry may bring, especially for the consumer sector, including 3D Scanning by mobile phones, Augmented Reality for aviation, reality capture with LiDAR, Structure from

Motion / SLAM (Simultaneous Localization and Mapping) for mapping interior or exterior spaces, and Drones as personal aerial video cameras.

The Keynote Speech on Thursday after lunch was given by Dr. Aileen Buckley, a Research Cartographer at Esri. She talked about "Maps that Inform, Engage, and Inspire" and showed us many examples of what makes a great map, and how our perceptions are affected by various cartographic techniques.

Technical sessions on Wednesday included the following tracks: GIS in Conservation, Collaboration Across Boundaries (GISCO), GIS in Emergency Management, GIS in Development, GIS in Government, and Vendor Showcase. On Thursday, the tracks included GIS: A Medium for Local and Regional Development (RM-URISA), GIS Graduate Projects, GIS in Education, Big Data (ASPRS-RMR), GIS in Business, Surveying (PLSC), and Vendor Showcase.

Post-conference Tours were held on Friday at an eclectic collection of local attractions: NOAA, Celestial Seasonings, Denver Botanic Gardens Calder Monumental Exhibit, The Old Map Gallery, and Stranahan's Distillery. Need I say more? If you missed the conference, it will be back next year!

This conference would not happen without all the volunteers who work many hours to pull it together. ASPRS-RMR National Director Jeff Young and Vice-President Mike Tuffly served on the Conference Board of Directors. Regional Director Jason Isherwood served on the conference Planning Committee and organized the ASPRS track. Regional Director Cerian Gibbes also served on the conference Planning Committee and organized the Career Development Academy held for students on Thursday afternoon. The ASPRS-RMR exhibit table was alternately staffed by Jeff Young, Mike Tuffly, Cerian Gibbes, and Communications Coordinator Sheila Pelczarski. Many thanks to these and all the additional volunteers from the other societies who contributed to another successful GIS in the Rockies!!

Sheila Pelczarski
Communications Coordinator

ASPRS Conference 2018 + Int'l LiDAR Mapping Forum

February 5 - 7, 2018 - Denver, CO
[Conference Website](#)

BETTER TOGETHER!

2 Conferences + 1 Exhibit Floor
 More education, networking & technology than ever before!

FROM FEBRUARY 5-7, 2018, THE INDUSTRY WILL DESCEND ON DENVER for what's certain to be the single largest gathering of geospatial professionals in North America — ever. For mapping professionals, there's no better place for technical education, networking and sourcing geospatial solutions all in one place than at ILMF-ASPRS 2018! They'll be comparing and qualifying solutions. The only way to be sure yours are being considered is by exhibiting.

BETTER TOGETHER. The combined event will feature a single exhibit hall and inclusive social activities. The events will maintain their unique technical programs, including ILMF product previews and ASPRS workshops, awards, and committee meetings. Attendees will be able to purchase a conference pass that allows entry to programs of their choice, or they may choose a universal pass that allows entry to all programs. For more information, check out our informational flyer [HERE](#)

Student Rebate Offer

ASPRS Rocky Mountain Region will reimburse \$25 of the \$50 cost of student membership, so your net cost is only \$25 for all the benefits of membership in the Society!

Download the Student Membership Rebate Form at <http://www.asprs-rmr.org> (on the Student Chapters page). Here's the best part: This offer from the Region is good for every year you are a full-time student!

Welcome New Members!!

Teresa L. Barber
 Kenneth Boykin
 David Carter
 Paul Petersen
 Kirk Saylor

GeoBytes

In addition to the ASPRS Webinars, our organization also offers free online seminars presented by ASPRS and sponsored by the ASPRS GIS Division, in cooperation with AAGS and CaGIS.

Attention those seeking ASPRS Certification: ASPRS Online Seminars are a great way to gain Professional Development Hours! [Click here to learn more](#)

Contact Us!

All ASPRS Regions now have our own ASPRS.ORG email addresses. Should you ever want to reach out to the Rocky Mountain Region, send an email to rockymountainregion@asprs.org

We welcome suggestions for content and stories for our quarterly newsletter!

ASPRS Website Login Change

As of August 1, 2017, your username for the [ASPRS member website](#) will be changed to the email address listed in your membership profile. Please take a moment to verify your user profile information, including email address, for accuracy. We would also like to take this opportunity to remind members that digital access to the full content of PE&RS is included in your membership. If you wish to receive a hard copy of the printed journal, you must choose to add that option for an additional \$60/year for shipping.
