



GIS

IN THE ROCKIES 

Premier Geospatial Conference
of the Rocky Mountain West **2018**

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GIS
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Premier Geospatial Conference
of the Rocky Mountain West **2018**

September 19-20, 2018
Hilton Denver Inverness, Denver, Colorado

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About the cover:

The Green River and the Colorado River meet within Canyonlands National Park in Utah. Snow-covered Mount Waas, shown in light blue on the right side of the image, overlooks the arches, canyons, and bizarre rock formations that prevail throughout this region. This Landsat 8 image was captured on 3/29/2015 and is one of 37 images that is part of the Earth As Art 4 gallery hosted by the USGS.

WELCOME

Welcome and thank you for attending the 31st annual GIS in the Rockies Conference! The 2018 GISITR Board of Directors and Planning Committee are excited to be celebrating 31 amazing years of geospatial sciences with you, and we have another great conference planned for you this year!

For the first time, we are pleased to offer a digital program with unlimited downloads that can be viewed on your smart device. GISITR has printed fewer programs this year, and we encourage you to download the Guidebook app to enhance your conference experience. Look for signs around the venue for more info!

We have two outstanding keynote speakers this year. Join us at the Opening Plenary and Second Day Keynote to hear Salla Hanninen and Cory Reppenhagen, respectively, give their exciting presentations on how GIS plays a role in their daily work schedules.

We would like to extend a HUGE “Thank You” to all of our sponsors, especially our Platinum Sponsor, CompassDrone! Be sure to check out the many demos by CompassData and CompassDrone, including the MX7 on the patio and the Drone Giveaway at the Social Event & Geography Quiz.

For first-timers, we have a new attendee guide on the GISITR website to help you get the most out of the conference. If you are returning to GIS in the Rockies, thanks for coming back. We have many offerings at this year’s conference for everyone – technical & poster sessions, interactive panels, the Career Development Academy, National Geographic’s Giant Map of Colorado, post conference tours, and much more! Visit our exhibitors as they showcase their latest and greatest products in the geospatial world.

We would like to thank each of you for attending GIS in the Rockies. Your attendance makes GIS in the Rockies a continued success every year!

Matt Hanks

2018 GIS in the Rockies Planning Committee Chair

2018 GIS IN THE ROCKIES PLANNING COMMITTEE

Planning Committee Chair
Matt Hanks, GISP, Jefferson
County Public Schools

Program Coordinators
Genie Hays, Bureau of Indian
Affairs
Kaitlyn Scott

**Marketing | Exhibits |
Sponsorships |
Conference Planning**
Paul Balaguer Events

**Registration Coordinator |
Database | Geography Quiz
Host**
Dave Watson, Boulder County
Transportation

**Registration Coordinator |
Volunteer Coordinator**
Angela Yragui

Webmaster
Stephen Bankston

Social Activities
Nicole Peace

**Career Development
Academy**
Julia Bailey, Urban Drainage
and Flood Control District

Poster Session
Jake Fritz, Pinyon Environmental
Doug Haller, GIS Technician,
Jeppesen

Videographers
Ethan Crawford
Kyoko Oyama

**Social Media | Digital
Program**
Caitlin Reusch, City of Boulder,
Open Space and Mountain Parks

Signs
Carman Skeehan

**Student/Education
Coordinators**
David Diggs, Department of
Geography and GIS, University of
Northern Colorado
Kyoko Oyama

Workshop Coordinator
Ed Vigil

Tour Coordinator
Meredith Dutlinger

Vendor Showcase
Brian Collison
David Siddle

2018 GIS IN THE ROCKIES BOARD OF DIRECTORS

President Elthron M. Anderson, GISP, Southgate Water and Sanitation Districts, RM-URISA

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Member at Large Kerry Shakarjian, GISP, National Park Service

Ex Officio - Planning Committee Chair Matt Hanks, GISP, Jefferson County Public Schools

Ex Officio - Conference Planner Paul Balaguer

MEMBER SOCIETIES



The American Society for Photogrammetry and Remote Sensing (ASPRS) - Rocky Mountain Region

Founded in 1934, The Imaging and Geospatial Information Society: ASPRS is a scientific association serving professionals worldwide. Our mission is to promote the ethical application of active and passive sensors, the disciplines of photogrammetry, remote sensing, geographic information systems, and other supporting geospatial technologies to advance the understanding of the geospatial and related sciences; to expand public awareness of the profession; and to promote a balanced representation of the interests of government, academia, and private enterprise. The Rocky Mountain Region serves members in Montana, Wyoming, Colorado, and New Mexico. We are The Imaging and Geospatial Information Society: ASPRS. www.asprs-rmr.org/



GIS Colorado

GIS Colorado (also known as "GISCO") is a statewide grass-roots organization providing a cooperative environment of GIS users from both public and private sectors. The primary goal of GIS Colorado is to foster communication and education to advance the level of effectiveness of GIS use in Colorado. The group maintains a list-server, and hosts educational events and quarterly forums on various GIS topics in different parts of Colorado to encourage learning and data sharing. www.giscolorado.org



The Professional Land Surveyors of Colorado (PLSC)

PLSC is a non-profit organization dedicated to the improvement of land surveying education and practice throughout Colorado. PLSC offers members an exciting and interactive environment to grow and develop their land survey skills and abilities. www.plsc.net



Urban and Regional Information Systems Association (URISA) - Rocky Mountain Chapter

URISA is an interdisciplinary society dedicated to stimulating and encouraging the effective integration and application of information technology and urban and regional information for decision-making. A nonprofit educational association, URISA provides a forum for users of spatial information in both the public and private sectors. Founded in 1982, RM-URISA is a regional chapter serving the Rocky Mountain area, including the states of Colorado, New Mexico, Utah, and Wyoming. www.rm-urisa.com

KEYNOTE SPEAKERS



SAILA HANNINEN "The Future of Mobility"

Saila leads partnership efforts for Waze in the Rocky Mountains region. She has been with Waze since 2016, where she is excited to be a part of a brand that is deeply invested and innovating in the transportation industry and the future of driving. Saila recently moved to Denver from NYC. Prior to joining Waze, she spent 13 years as a marketing and advertising executive with Fox Sports Net, Turner Broadcasting & Google.



CORY REPPENHAGEN "GIS and Your Local Weatherman"

Cory Reppenhagen is a meteorologist and journalist at 9News Colorado (KUSA-TV). A native Coloradan, Cory got hooked on severe weather and storm chasing, leading to a career first as a video journalist, and then forecasting and reporting on the weather as a meteorologist. At 9NEWS, Cory is the "utility infielder" of the weather department, chasing severe weather and storms in Colorado's mountains and plains.

pitney bowes

Go further.

#FreeYourGIS and reach the full potential of Location Intelligence.

CONFERENCE EVENTS

CompassData Mobile & Aerial Imagery Mapping Solution for Fast Data Collection

Wednesday, September 19 & Thursday, September 20,

Ongoing Demos / Outside on the Patio

The Rockies are GROWING and CompassData has the tools to help keep you on top of the madness! Come see the MX7 which can capture 300 miles of data in a day. New software from Trimble and Orbit streamlines feature extraction and makes sharing data easy. Have your own up-to-date Street Viewer on demand. Our Aerial Camera Pod can capture tens of thousands of acres per flight, delivering imagery and point cloud data in weeks instead of months. Is your GIS base map out of date? We have a solution for that!

Social Event & Geography Quiz

Wednesday, September 19, 5:00 p.m. - 7:00 p.m. / Outside on the Patio

Following regular conference activities, join us for the conference social event, featuring appetizers, wine, beer and soft drinks. Mingle with fellow attendees; test your geo knowledge with an interactive quiz, featuring prizes.

CompassDrone Drone Giveaway – 3 DJI DRONES!

Wednesday, September 19, 5:00 p.m. - 7:00 p.m. /

Social Event – Winners Announced

Come see what is new from DJI, FLIR, Sentera, Pix4D, and DroneDeploy. See the new CompassDrone CIRRUAS App which will plot DJI Video on your ESRI Map. Also stop by to learn about a new American-made drone that will revolutionize the industry! Learn how to integrate drones into your municipality by subcontracting through CompassDrone's experts on a project. Hiring CompassDrone as a service will help you get around administrative hurdles and get you free training! Stop by the booth to enter a DJI drone raffle and learn about the show's special on DJI hardware. Winner will be announced at the Social Event & Geography Quiz from 5-7pm. YOU MUST BE PRESENT TO WIN.

National Geographic's Giant Map of Colorado

Thursday, September 20, 8:30 a.m. - 12:00 p.m. / Aspen Room

Check out the latest teaching tool from National Geographic's Giant Traveling Maps program – state maps that travel to schools, libraries, and museums! The 14' x 21' map of Colorado offers a chance to explore cities, national parks, rivers, and topography. It is designed for elementary students as they learn about scale, grid systems, distance, cardinal directions, and the history and geography of their states. Visits of Colorado's map are organized by the Colorado Geographic Alliance (COGA). Experience how a Giant Map can encourage learning through movement and games that teach place names, physical geography, and cultural geography as well as map reading skills. We know that one map cannot contain all the features of the Earth, so think about what is NOT on the map and share ideas about what layers should be added to the online atlas of Colorado being created to complement the Giant Map. Provide ideas about lesson topics and materials. Professional geographers at GIS in the Rockies will be encouraged to support visits of state maps to schools in their regions and to offer guidance as teachers explore geospatial technology using the online state atlas.

Career Development Academy

Thursday, September 20, 2:00 p.m. - 4:00 p.m. / Aspen Room

Join us at the Career Development Academy (CDA) on **Thursday afternoon, September 20, 2018!** Attendance is complimentary. Come to Career Development Academy to hear back to back presentations by Richard Serby of Geosearch, Inc. The first presentation, "State of Geospatial," includes data and statistics about employment, skills in high demand, hot job markets in the US, and information related to the geospatial job industry. The second presentation, "Careers by Design," will describe an approach for taking control of your career path and highlights exercises for self-assessment. Finally, the academy will close with 2 rounds of 15 minute mock-interviews with volunteer GIS professionals. **Mock-interview availability is limited; you must reserve your spot at the registration desk on Wednesday.** Participants are encouraged to provide a sample resume and/or cover letter when they sign-up. Complimentary resume review is available. (<http://www.geosearch.com/submit-your-resume.html>).

DAY 1 CONFERENCE PROGRAM: WEDNESDAY, SEPT. 19

8:30	Opening Plenary in The Alpine Ballroom			Keynote by Salla Hanninen		
10:00	Morning Break - Light snacks and refreshments					
Track	Aspen Room	Conifer/Evergreen Rooms		Alpine Room 1		
		GIS in Business		GIS Colorado: Your Geospatial Connection		
10:30	Room unavailable	Trials and Tribulations of Switching to esri's Mobile Apps Will Mast & Scott Tzsen		DRCOG's Regional Planimetric Project: A Case Study of Open Data Driving Innovation Ashley Summers		
11:00		KID - The Knowledge Driven Approach to Extracting the Value from Geo-Data and More Jim Barrett		Growth Planning: Improving Local Housing Datasets to Enhance Regional Modeling Dorothy Friday		
11:30		Development of a Low Cost and Easy to Configure Geospatial ETL "Data Workflow" that Can Be Deployed on AWS or Via Docker Deployment Matthew Krusemark		Opioid Use in Larimer County Nina Wickens-Bhowmik		
12:00		Enabling Spatial Data Integration, Collaboration, and Governance Using a Common Geo-Registry Nathan McEachen & Justin Lewis		ZDV-3D: A Modern 3D Visualization and Analysis Tool for Denver Air Route Traffic Control Center Berrett Doman		
Lunch is available from 12:00p to 1:00p						
CompassData Mobile & Aerial Imagery Mapping Solution for Fast Data Collection - all day outside on patio						
Track		GIS in Conservation		GIS Colorado: Your Geospatial Connection		
	1:00	Updating the Watershed Boundary Dataset with the WBD Web Edit Application Alexander Kaufman		Permanent Water Quality Control Measure Survey 123 Inspection Report Mobile App George Suresh & Jeremiah Unger		
1:30	Utah & Colorado Water Resources Margaret Mulhern		A Fractured Landscape: A New Approach to Assessing Connectivity for Wildlife in Colorado Paul Millhouser			
2:00	Markup Application for Hydrography Datasets Tatyana Dimascio		Evisioning Redevelopment in Dillon, Colorado Meghan McCloskey-Boydston			
2:30	GIS for Surface Water - Using the National Hydrography Dataset Jeffrey Simley		Integrating UAV-Derived Photogrammetry, LIDAR, and Geomagnetic Data in Weld County Brian Soliday			
3:00			GIS Colorado Open Discussion Pete Magee, Moderator GIS Colorado President			
Afternoon Break - Snacks and refreshments while networking with GIS professionals!						
Track		GIS in Conservation		GIS in Emergency Management		
	3:30	Iceland: A Case Study on Sustainability Jacqueline Zurmuhlen		Updating Maps for Emergency Management Routing Devon Wallis		
4:00	Visualizing Iceland's Vegetation Through NDVI Eric Nussbaumer		Lessons Learned from a First Responder/ GIS Professional Scott Trapolino			
4:30	The Effect of Channel Migration on Riparian Vegetation Along the South Platte River Joshua Rogerson & Jessica Salo		Geospatial Information in Emergency Operations Ryan Broughton			
5:00	An Introduction to NHDP Plus High Resolution Value Added Attributes Ariel Doumbouya & Hayley Thompson					
7:00	Mapping the Density of Forest Understorey Vegetation Using Discrete Return Airborne LIDAR Michael Campbell					
Social Event & Geography Quiz!						

Presentation time slots include Q&A and transition between speakers

The Future of Mobility					
Poster Session from 10:00a to 5:00p in the Upper Mountain View Room - Vote for your favorite poster!					
Track	Alpine Room 2	Alpine Room 3		Alpine Room 4	
	GIS in Government	GIS in Education		Vendor Showcase	
10:30	USGS 3D Elevation Program Carol Lydic	The Meaning Behind a Career as a GIS Professional Esther Worker		Frontier Precision GIS Services to the Rescue! Karissa Giles & David Siddle Frontier Precision	
11:00	The Role of GIS in Developing a Comprehensive Stormwater Infrastructure Master Plan to Inform an Intergovernmental Agreement Denise Magditch & Chris Martin	Denver Street Trees and Road Safety: A Geographic Information Systems Analysis Nicholas Coppola		AdventureSafely - A New Technology for Saving the Lives of Outdoor Recreationalists David Thomas Adventure Safely	
11:30	Publishing BLM Data on the Web Jason Frels & Stacey Crowe	Trail Difficulty Per Segment: A GIS Based Analysis of Hiking Trails Lisa Dubas		LIDAR and Point Clouds and Laser Scans, Oh My! Tammy Peterson Solv3D	
Lunch is available from 12:00p to 1:00p					
Hardware and Software Demos Trimble MX7					
Track	GIS in Government	GIS in Education		Vendor Showcase	
	1:00	What a Relief: Designing Multi-scale Terrain Representation for The National Map Elaine Guidero		Car Racing with Collector Elizabeth Tulanowski	
1:30	Prioritization Modeling Lancaster County, PA TIP Prioritization Aron Langley		GIS Watershed Delineation and Morphometric Analysis of the Upper Vltava River in the Czech Republic Shannon Jones		
2:00	Historical Topographic Map Collection Brian Collinge		sUAS Data for a Particular Riparian Extent Holly Wilkie		
2:30	A New Approach to Boundary Labels in U.S. Topo Products Utilizing Auto-Labels Bethany Walker		Agent-based Modeling of Shared Electric Vehicle Patterns Stefania Mitova		
3:00			Helping Construction from Above - Unmanned Systems Pave the Way for Renewable Energy Progression Daryl Southard Juniper Unmanned		
3:30			Sharing Spatial Data Freely Ian Isaacs Boundless		
Poster Session in the Upper Mountain View Room - Meet the poster presenters during the break!					
Track	GIS in Government	Professional Panel		Vendor Showcase	
	4:00	Leveraging GIS for Homeless Outreach and Other Human Services Karissa Giles		LaserGIS for Everyone: Eliminate Mobile Asset Management Workflows Deficiencies Derrick Reish Laser Technology	
4:30	Building an esri Workflow Manager to Maximize High Quality, Consistent Data Products in Large Volume Sara Boyer		Using Voice to Interact with Geospatial Information Mike Giddens & John Thompson Xentity		
5:00	Pits and False Hills and Spikes, Oh My! Fixing Blunders in the USGS Seamless 1/3 Arc-Second DEM Barry Miller		How Using Accurate, Reliable, and Timely Data Is Vital for Effective Decision-Making Allan Benek & Kam Draper InfoGroup		
Poster winners will be announced! Drone Giveaway - 3 DJI Drones					

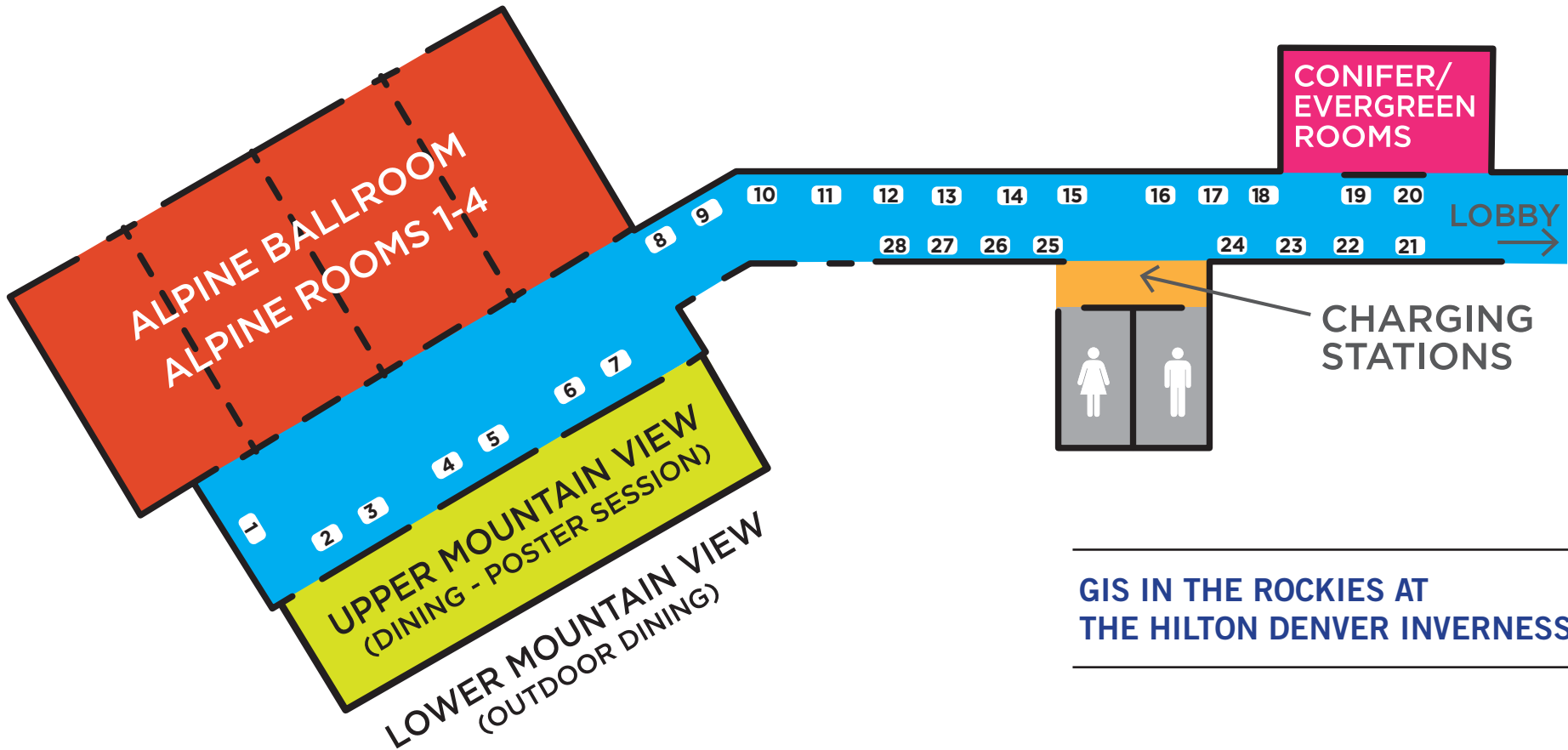
DAY 2 CONFERENCE PROGRAM: THURSDAY, SEPT. 20

Track Rm	Aspen Room	Conifer/Evergreen Rooms	Alpine Room 1
8:30	<p>National Geographic's Giant Map of Colorado Presented by Rebecca Theobald</p> <p>It's a plastic tarp! It's a Twister mat! No, it's National Geographic's Giant Map of Colorado!!! This 14' x 21' map typically used for K-12 lessons and activities is on display from 8:30am - 12pm for your viewing pleasure.</p>	<p>RM-URISA</p> <p>Colorado Water Plan: The First Three Years Phyllis Thomas</p>	<p>GIS in Development</p> <p>FOSS4G in the Government (Proof of Concept) Samuel Song</p>
9:00		<p>Historical GIS: A Discussion and a Demonstration of Using Story Maps in History Drew Heiderscheidt</p>	<p>Semantic Web Lucas Kaim Thelen</p>
9:30		<p>Evaluation of Derived Elevation Products: sUAS Photogrammetric vs. Authoritative LIDAR Max Marno</p>	<p>GRASS GIS: Striking Terrain Visualizations in the Rockies Robert Dzur</p>
10:00		Morning Break - Light snacks and refreshments	
10:30	<p>National Geographic's Giant Map of Colorado Presented by Rebecca Theobald</p>	<p>ASPRS</p> <p>Applying the Best of Remote Sensing and Deep Learning to Refugee Tent Detection Chloe Hampton & Martha Morrissey</p>	<p>GIS in Development</p> <p>Developing a National Map of Subsurface Infrastructure Geoff Zeiss</p>
11:00		<p>Front Range Oblique Photography Available Today George Halley</p>	<p>New Developments in Global Web Mapping Platforms Steve Milroy</p>
11:15		<p>Utilizing Landsat to Detect Ephemeral Water Sources in Support of a USGS Feasibility Assessment and Management Strategy of Equids Kristen Dennis</p>	<p>USGS & Citizen Science: Success and Enhancements for TNMCorps Samantha Doering & Erin Korris</p>
11:30		Lunch is available from 12:00p to 1:00p	
12:00	Lunch is available from 12:00p to 1:00p		
1:00	Lunch is available from 12:00p to 1:00p		
2:00	Second Day Keynote in The Alpine Ballroom		Cory Reppenhausen
2:30	Early Afternoon Break - Light snacks and refreshments		
2:30	<p>Career Development Academy</p> <p>Students, early career professionals, and seasoned GIS specialists are all invited to participate in this interactive session designed to transition from one stage of their career to another. Featuring presentations, mock interviews, and pre-conference resume review. Sign Up at Conference Registration Desk 2:00p - 2:45p State of Geospatial 2:45p - 3:30p Careers by Design 3:30p - 3:45p Mock Interviews Round 1 3:45p - 4:00p Mock Interviews Round 2</p>	<p>ASPRS</p> <p>What Do You Do with a Bunch of LIDAR? Nick Viau</p>	<p>GIS in Development</p> <p>What's New in Q... Version 3, That Is Dave Murray</p>
3:00		<p>Classification of Tropical Forest Tree Species Using High-Resolution Imagery Matthew Cross</p>	<p>Look Ma, No Server and Big Data - Using Serverless Functions to Mine Open Geodata on AWS Matthew Krusemark & Trent Pingent</p>
3:30	Presentation time slots include Q&A and transition between speakers		

Track Rm	Alpine Room 2	Alpine Room 3	Alpine Room 4
8:30	<p>PLSC</p> <p>Grid to Ground Conservation & NATRF2022 Steven Parker</p>	<p>GIS in Recreation</p> <p>Adding Value to "Colorado the Beautiful" Initiative Michael Carr</p>	<p>Vendor Showcase</p> <p>Integrating Geospatial Technologies: Land Survey and GIS Cate McNabb & Paul Biehl Aztec Consulting</p>
9:00	<p>Introduction to the Public Land Survey Todd Beers</p>	<p>The Latest Trail Technology - Crowdsourcing, Maps, and Apps Brian Riordan</p>	<p>Open Space Challenges and Meter Reading in Augmented Reality Brian Collison Argis</p>
9:30		<p>The Making of a Trail: Desktop and Field GIS Deployed to Plan for New Trails in Silverthorne Nick Viau</p>	<p>ERDAS Imagine: What's New and Tips and Tricks Jeff Van de Vaarst & Matt Falter Hexagon US Federal</p>
10:00	Morning Break - Light snacks and refreshments		
10:30	<p>PLSC</p> <p>Meet the New Geomatics Coordinator Working Group for Colorado John Hunter & Pam Fromhertz</p>	<p>GIS in Recreation</p> <p>Virtually Touring the National Trails Ryan Abrahamsen</p>	<p>Vendor Showcase</p> <p>Deploying ArcGIS Government Solutions Using ArcGIS Pro Matt Bullock esri</p>
11:00	<p>Turning Towards the Future Pam Fromhertz & John Hunter</p>	<p>Partnerships Lead to Additional Recreational Content on U.S. Topo Maps Elizabeth McCartney</p>	<p>Solving Real World Issues with Hexagon Smart M.Apps: The Map of the Future Michael Ann Lane Hexagon Geospatial</p>
11:15		<p>BikeDenver Downtown BID Bike Parking Analysis Gianfranco Palumbo</p>	<p>Building High-Performance Government: 5 Tips to Mapping Your Journey Heather Henderson Cartograph</p>
11:30	Lunch is available from 12:00p to 1:00p		
12:00	Lunch is available from 12:00p to 1:00p		
1:00	Lunch is available from 12:00p to 1:00p		
2:00	GIS and Your Local Weatherman		
2:30	<p>PLSC Panel Connecting GIS and Surveying</p>	<p>GIS in Recreation</p> <p>A Creek Runs Through It Shannon McElvanev</p>	<p>Vendor Showcase</p> <p>The Data-Driven Government Joe Francica Pitney Bowes</p>
3:00		<p>Riparian Shrub Assessment of the Mancos River Canyon, Mesa Verde National Park Angela Yragui</p>	<p>Spatial Analysis Using ArcGIS Pro Shelby Hines esri</p>
3:30	Presentation time slots include Q&A and transition between speakers		

EXHIBITOR BOOTHS

Organization	Booth	Organization	Booth
Allpoints GIS	26	GIS Colorado	15
ASPRS -		Hexagon US Federal	11
Rocky Mountain Region	13	Infogroup	5
AzTec Consultants	3	Juniper Unmanned	22
Boundless	25	Laser Technology, Inc.	19
Canon	1	Pitney Bowes	7
Cartegraph	20	PLSC	14
Cityworks	8	Rocky Mountain URISA	12
CompassData	10	Solv3D	21
CompassDrone	9	United Reprographic Supply	27
Eos Positioning Systems	16	University of Colorado Denver	23
Esri	4	University of Denver	17
Frontier Precision	6	University of Northern Colorado	18
Geomni	2	WC Technologies Inc.	24



GIS IN THE ROCKIES AT THE HILTON DENVER INVERNESS

POSTER SESSION

Joel Murray

2016 Quarterly Volume Weighted Average API Gravity by County, State of Wyoming

Rachel Pierstroff

Trends of Suburban Poverty Based on Walkability: A GIS Analysis of Minneapolis Suburbs

Samuel Song

Veterans Statistics in the Rockies

Jim Sanovia

Utilizing Geospatial Modeling Techniques for Trend and Prediction Patterns on Eolian and Erosion Sediment Deposits

Lilly Jones

Modeling Hydrologic Parameters in High Plains Aquifer Units Using GIS and a Convolutional Neural Network

David Sachs and Will Rundquist

Geodesign Applied to an Urban Campus and Its River Reach: Colorado College and Monument Creek

Amanda Ruiz

Identifying Additional Land Suitable for Food Production on the Pine Ridge Indian Reservation

Anna Savage and Ramesh Sivanpillai

Monitoring Crop Growth Variations in a Wyoming Field Using Growing Season Satellite Data

Joshua Zeeb

Gray Wolf Habitat Suitability Analysis in the State of Wyoming

Ariel Doumbouya

NHDPlus High Resolution

Stephen Mitchell

Jefferson County's GIS Supports Mission Statements and Mandates

Stephen Mitchell

Same Data, Different Stories

Seth Webinger and Lindsay Decker

Using ArcPy to Automate Contour Snapping

Jordan Ellison

How Does Proximity to Predator Activity Centers Affect Nest Site and Success in Flammulated Owls (*Ptiloscoptes flammeolus*)?

Justin Culman

Investigating Variations in Coral Reef Morphology Using Photomosaics and Analysis of Percent Coverage

Alexa Hoffman and Francis Russell

Neighborhood Facilitation and Inhibition Drives Spatial Distribution of Seedlings and Saplings at an Abrupt Treeline

Joe Gunning

Colorado Population Change Over Time in 3D

Joel Burley

Legal Documents and GIS for Utilities - What Is Legally Owned and Potential Issues

Kathy Arbogast

Fire District Map in Support of Rural Mountain Area Fire Districts

Kristy Bruce

Wasatch Canyons: Recreation Concentration

Kathryn Kummel and Michelle Kummel

Using 3D Drone-based Digital Models To Investigate

Anthony Bates

The Effect of Climate on Fire in California's Central Valley

Rosemary Hatch and Chris Nicholson

From Drifts to Dams: Following Wyoming's Water Resources through Story Maps

Kevin McNinch and Michael Tinker

Connecting Data to the National Hydrography Dataset

Greta Robison

Informing Progress: Improvements in Reporting for Environmental Consulting

Hayley Thompson

Examining NHD's VisibilityFilter Attribute: What Is It, Where Is It Available, and What Is the Accuracy?

Nathaniel Penrod

How Hot is the Hot Spot: Analyzing Hot Spot Techniques in Crime Mapping Applications

Richard Yates

Shifting Representation: Rocky Mountain Fur Company Trade Network (1823-33)

Robert Thayer and Christopher White

Jefferson County Open Space, Park and Trails Atlas

Robert Thayer and Christopher White

White Ranch Park Map Suite (Kiosk, Brochure, Website Map)

Christopher White and Robert Thayer

Jefferson County Open Space Organizational Data | Now and Then: A Relational Model Tale

Robert Thayer and Christopher White

Black Bear Trail Map



ESRI HELPS OUR USERS CREATE SMART COMMUNITIES.

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POST CONFERENCE TOURS

Friday, September 21, 2018

NOTE: All tours require advance registration to attend. You can update your registration online at www.gisinthetrockies.org

NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION (NOAA)

Located in Boulder, Colorado, NOAA supports a powerful array of research, data collection and dissemination programs. The excursion will begin with a brief sightsee of the building. Following this will be a discussion with some of NOAA's Digital Elevation Model (DEM) developers, customized for the GISITR group! These developers generate seamless bathymetric – topographic DEMs that are used for coastal inundation modeling. The tour will finish at the 'Science on a Sphere' (SOS), a giant animated globe that is must see for all. Projected images on the SOS will continue to focus on the topic of the DEM, and will also include 'eye-candy' images picked especially for our crew that will undoubtedly blow your mind.

HARD ROCK MINING TOUR

Mining is a vital part of Boulder County's history. Three hundred million years ago, the Ancestral Front Range uplifted about 30 miles west of where the current Front Range is today. Weathering and erosion wore those ancient peaks away and buried them in sediment and debris thousands of feet thick. Dinosaurs evolved and went extinct. Shallow seas advanced and retreated. Then uplift activity happened again 65 million years ago, which set the stage for hard rock mining heritage. Hard rock mining was Boulder County's leading industry, attracting the majority of new residents to the mineral-rich mountains during the boom of the late 1800s. Gold, silver, lead, zinc, and tungsten have all been part of Boulder County's colorful mining history. The tour will begin at the Nederland Mining Museum, which is an educational delight in itself. From there, vans will be ready to drive our group to a couple of relic mine sites on Boulder County Parks and Open Space properties. You will learn about the rich history of each site as you stand on the same ground and see the remnants of structures and tools which are fundamental pieces to the stories you'll hear.

LAWS WHISKEY HOUSE

'A great whiskey, like a great story, is meant to be shared.' This tour is the grand finale of the conference, the true spirit of TGIF, where you can exchange stories with your conference cohorts in a different kind of environment. This tour consists of an in-depth educational session of the whiskey-making process at Laws Whiskey House. Each batch is milled, cooked, fermented, distilled, and aged on-site, utilizing heirloom grains from family-owned Colorado farms. You will learn exactly where the grains grow, and the entire processes of mashing, fermentation, distillation, and aging. Following your educational session, you will tour the production facility and rack house and finish with a formally-guided whiskey tasting. And so the stories go....

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CONFERENCE SCHEDULE AT A GLANCE

Day 1
(September 19)

Day 2
(September 20)

Registration <i>Lobby</i>	7:30a – 5:00p	7:30a – 3:00p
Vendor Exhibition <i>Inverness Hallway</i>	8:00a – 7:00p	8:00a – 3:30p
Opening Plenary – Salla Hanninen <i>Alpine Ballroom</i>	8:30a – 10:00a ←	<i>The Future of Mobility</i>
Presentation Sessions* <i>Alpine Rooms 1-4, Conifer/Evergreen Rooms</i>		8:30a – 10:00a
National Geographic's Giant Map of Colorado <i>Aspen Room</i>	Interactively Explore Colorado	→ 8:30a – 12:00p
Morning Break <i>Upper Mountain View</i>	10:00a – 10:30a	10:00a – 10:30a
Presentation Sessions* <i>Alpine Rooms 1-4, Conifer/Evergreen Rooms</i>	10:30a – 12:00p	10:30a – 12:00p
Poster Session <i>Upper Mountain View</i>	10:00a – 5:00p Vote for your favorite!	<i>Posters remain up all conference long</i>
Lunch is Available <i>Upper & Lower Mountain View</i>	12:00p – 1:00p	
CompassData Mobile & Aerial Imagery Solutions <i>Booth 10/Outside on Patio</i>	Ongoing Demos of the MX7, new Trimble & Orbit software, Aerial Camera Pod, and more!	
Second Day Keynote – Cory Reppenhagen <i>Alpine Ballroom</i>	<i>GIS and Your Local Weatherman</i> →	1:00p – 2:00p
Career Development Academy** <i>Aspen Room</i>	Presentations and mock interviews	→ 2:00p – 4:00p
Early Afternoon Break <i>Upper Mountain View</i>		2:00p – 2:30p
Presentation Sessions* <i>Alpine Rooms 1-4, Conifer/Evergreen Rooms</i>	1:00p – 3:00p	2:30p – 3:30p
Late Afternoon Break <i>Upper Mountain View</i>	3:00p – 3:30p ←	Meet the poster presenters
Presentation Sessions* <i>Alpine Rooms 1-4, Conifer/Evergreen Rooms</i>	3:30p – 5:00p	
Social Event & Geography Quiz! <i>Lower Mountain View/ Outside on Patio</i>	5:00p – 7:00p ←	Poster winners will be announced; CompassDrone DJI Drone Giveaway

*See the full conference program for session details and room assignment.

**More details regarding the Career Development Academy on GISITR website & conference program.