GIS

IN THE ROCKIES

Premier Geospatial Conference
of the Rocky Mountain West **2016**

GIS IN THE ROCKIES

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GIS
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Premier Geospatial Conference
of the Rocky Mountain West **2016**

September 21-22, 2016
The Cable Center, Denver, Colorado

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WELCOME

Welcome and thank you for attending the 29th Annual GIS in the Rockies Conference! The 2016 Planning Committee is excited you're here and is ready to showcase a variety of new offerings at this year's conference!

Which innovations are leading the charge in the world of GIS? Maybe it's UAVs, web development, mobile applications, big data, citizen science, or open source…the list goes on and on. However, one thing is clear — year after year, GIS continues to grow and develop, touching every conceivable part of our lives. The GIS in the Rockies Conference taps into cutting edge GIS and is an essential mechanism for sharing new trends across the GIS community. This is why, year after year, we can say that this will be the best GIS in the Rockies Conference yet!

We encourage you to head over to the Opening Plenary and Second Day Keynote to listen to our two dynamic keynote speakers, Matt Sheehan and Brian Timoney, as they capture the audience with their perspectives on the world of GIS.

If you haven't already heard, we upgraded the Job Fair into the newly-formed, inaugural Career Development Academy! We believe this academy will offer relevant career development discussion and advice for many years to come, whether you are new to GIS or a professional wishing to further your career.

We are excited to partner with CompassTools, our Platinum Sponsor, to bring you a demo of the latest field data collection tools, as well as a new and fun addition to the conference, a GNSS Scavenger Hunt!

That's just the beginning. In addition to an always outstanding technical program, we are offering a Web Gallery, an Advanced OpenStreetMap workshop, National Geographic's Giant Traveling Map of Colorado, a National Map Corps Map-A-Thon, and a collection of exciting post-conference tours. No matter how you slice it, GIS in the Rockies 2016 has something for you.

If this is your first GIS in the Rockies Conference, we hope you walk away excited about GIS and its future and have an opportunity to develop new networking connections. If you are a conference alumnus, welcome back and thank you for returning. Your attendance is greatly appreciated and is imperative to making the conference a success!

Kerry Shakarjian & Mike Johnsen
2016 GIS in the Rockies Planning Committee Co-Chairs

2016 GIS IN THE ROCKIES PLANNING COMMITTEE

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Career Development Academy
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Poster Session / Web Gallery
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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

MATT SHEEHAN

"Is This the Dawn of a New Era for GIS?"

Born in England, Matt Sheehan is a passionate geographer. He holds a BSc in Physical Geography from the University of London and a MSc in GIS from the University of Utah. Matt learned GIS focused programming to understand how to solve "where" focused problems. He has moved from a mindset of "If I build it they will come"' to setting up a company which systematically guides customers from "where" based problems to solutions.

BRIAN TIMONEY

"Mapping Ourselves Into Oblivion"

Brian Timoney is a Colorado-based spatial consultant with broad experience in GIS and data-driven applications in a variety of contexts including Defense, Oil & Gas, and Federal, State, and Local government. Brian has been active in the local geospatial community for over 15 years in a variety of organizing roles including the current Denver Geospatial Amateurs which highlights local innovators in mapping and data visualization.

As a long-time advocate of open-source software, Brian was part of the local team that brought the international FOSS4G conference to Denver in 2011. Additionally, he co-organizes the JS.Geo conference series which focuses exclusively on the power of mapping in the browser. Timoney has spoken at numerous industry conferences such as ESRI PUG and O'Reilly Where 2.0.

Brian writes about geospatial issues at his blog Mapbrief.com, where he debates the proper role of public map interfaces, cartography as effective communication for web-sized attention spans, and the economic value of open data. Timoney's geographic curiosity has taken him to 38 countries and 47 states.

Brian holds a BA in Philosophy-Economics from Columbia University, a MS in Geography from Penn State University, and an honorable discharge from the US Marine Corps.

CONFERENCE EVENTS

Web Gallery
Wednesday, September 21, 10:00 a.m. - 11:00 a.m. & 1:00 p.m. - 3:00 p.m. / Cable Today & Tomorrow Room
Based on suggestions from prior conference attendees to expand the Poster Session, this year's conference includes a new interactive poster showcase called the Web Gallery. The Web Gallery highlights local, regional, and federal geospatial web-based applications. Participants include the City of Aurora, DRCOG, NREL, and NOAA. Attend the morning session for brief presentations on each application. Presenters will be available to answer questions during the afternoon session.

Field Demo of Data Collection Tools
Wednesday, September 21, 1:00 p.m. - 3:00 p.m. / Outside on the Patio
Join CompassTools for a hands-on field demo of the latest data collection tools. Trimble Geospatial hardware: V10, MX7, R1-R2, Geo's and Juno's too. Trimble Geospatial software: TerraFlex, Unity for Water, Field Inspector for Gas utilities, and more. Test the latest generation of laser rangefinders from LTI: Higher accuracy, longer distances plus their new compact Total Station. Check out the new advancements in GeoJot+: cloud based workflow for photos, forms, location on your smart devices, and much more. Free evaluations of all hardware and software available.

Social Event & Geography Quiz
Wednesday, September 21, 5:00 p.m. - 7:00 p.m. / Daniels Great Hall
Following regular conference activities, join us for the conference social event, featuring appetizers, wine, beer and soft drinks. Mingle with fellow attendees and test your geo knowledge with an interactive quiz featuring prizes. No travel required – the social event is on the main exhibit floor in the Daniels Great Hall.

Event Sponsored by LocationTech   LocationTech

Advanced OpenStreetMap Workshop
Thursday, September 22, 8:30 a.m. - 10:00 a.m. / Saeman Briefing Room
OpenStreetMap (OSM) is the collaborative project to create a free editable map of the world by volunteers using local knowledge, GPS traces, and openly licensed sources. Among many other uses, OSM is being used to support humanitarian relief efforts. Many GIS professions, academics, and students have been introduced to OSM through humanitarian mapathons, where an easy to use, in-browser editor called iD is usually used. During this workshop, participants will discover through hands-on exercises how to access the power of the more advanced Java OpenStreetMap (JOSM) editor. Participants will explore JOSM's building tool, extrude mode, way accuracy mode, support

CONFERENCE EVENTS (CONTINUED)

for topology, validation function, search function, filtering, support for OSM "relations", support for GPX traces, and interface to Mapillary, a crowd sourced street level imagery project. Participants will first gain an understanding of the unique and flexible OSM data structure that has allowed the project to evolve over its 12-year existence to cover not only its namesake streets, but also points of interest, buildings, land cover, land use, trails, aeronautical features, maritime features, and hundreds of other types of features. Understanding of the OSM data structure will enable participants to quickly grasp the concepts of JOSM. The knowledge attained will enable more efficient contributions to OSM and provide ideas applicable to the participants' professional and academic careers. JSOM – as its name suggests – is written in Java, and participants are encouraged to bring a laptop with Java installed in order to follow along with the exercises.
Note: This workshop requires prior registration.

National Geographic's Giant Map
Thursday, September 22, 8:30 a.m. - 12:00 noon / ACA/Triax Conference Room
Check out the latest teaching tool from National Geographic's Giant Traveling Maps program – state maps that will travel to schools, libraries, and museums! Each state (plus the District of Columbia) is receiving a map from the National Geographic Society in the fall of 2016. 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.

GNSS Scavenger Hunt
Thursday, September 22, 10:00 a.m. - 12:00 noon /
Meet at CompassTools Car in front of The Cable Center
Join CompassTools for a GNSS Scavenger Hunt using the latest mobile software! All skill levels are welcome. Use your smart device or borrow one of Trimble's latest field units to navigate to great prizes. Get there early to use a Trimble R1 with your smart device for improved accuracy. The more accurate you are, the better chance of winning! To

participate, you need to create a TerraFlex trial. Your email address is added to the CTI TerraFlex account and joined to the scavenger project. Points are tasked to your email address, and during the scavenger hunt you navigate to hidden clues, collect data about the hidden points, and export data into a map service (ArcMap or Google Earth).

Put it on a Map: The National Map Corps Map-A-Thon
Thursday, September 22, 10:30 a.m. - 11:30 a.m. / Saeman Briefing Room
The US Geological Survey's National Map Corps (USGS TNMCorps) is a citizen science initiative that relies on volunteers to edit structure points within the United States. Their efforts are vital for ensuring that the structures data going into the USGS National Structures Database, The National Map, and ultimately US Topo maps, are high quality and current. Join us as we introduce our new web editor! You will learn the process of collecting and improving structures data by adding new features, removing obsolete points, and correcting existing data. Your contributions will assist the USGS in providing the nation with accurate mapping information. Beginners are welcome! All you need is a computer and a willingness to learn! You must bring your own computer to the event.
Note: This event requires prior registration.

Career Development Academy
Thursday, September 22, 1:00 p.m. - 4:45 p.m. / Cable Today & Tomorrow Room
This new conference feature is designed for anyone preparing for new opportunities in GIS – from students and young professionals new to the field, to seasoned professionals seeking advancement. Visit GIS society and university booths on the Mezzanine to learn how and why to seek professional certifications and continuing education opportunities. Discuss career-related topics at informal roundtables hosted by GIS professionals from the public and private sectors. Attend a workshop to hone your interview skills and build your resume; then, practice a mock interview with a local hiring professional. Join us for great afternoon of networking and hands-on learning! Attendance at the Career Development Academy is complimentary and open to the public.

Note: Due to extraordinary interest, the maximum number of attendees has been reached, and registration for the Career Development Academy workshop is currently closed. However, we are accepting additions to our waitlist and will notify attendees on the waitlist if a spot becomes available. Even if you do not attend the workshop, you are welcome to participate in the roundtable discussions and mock interviews and can visit the mezzanine booths to get valuable information.

Event Sponsored by University of Denver UNIVERSITY of DENVER

DAY 1 CONFERENCE PROGRAM: WEDNESDAY, SEPT. 21

Left side

Time	Opening Plenary in The Malone Theater		Keynote by Matt Sheehan
8:30 – 9:45			

Morning Break from 9:45a to 10:00a - *Light breakfast and refreshments in Daniels Great Hall*

Rm	The Malone Theater	Barbara Bresnan Boardroom	Delaplaine Newsroom
Track	*Using GIS to Support Collaboration, Coordination, and Cooperation across Various Levels of Government (GISCO)*	*Development & Programming in GIS*	*Lessons from the Intersection, the GIS Practitioner, and the Land Surveyor (PLSC)*
10:00 / 10:15	**Andrew Stauffer** — Creating a Quick Map Configured to US Topo Specs Using the Topo TNM Style Template	**Michael Heirendt** — Using ESRI's JavaScript API to Disperse GIS Data	**Todd Beers** — An Introduction to the Public Land Survey System (PLSS)
10:30 / 10:45	**Brandi Rank	Claire Brewer** — Mapping ROW in Unincorporated Adams County	**Heather Widlund** — Automating Regional Data Integration for Emergency Services with Python	**Pamela Fromhertz** — Datums - How Important Are They?
11:00 / 11:15	**Grant Garstka** — Mapping Marijuana: Eligible Dispensary Locations in the City of Denver	**Andy Gup** — Geospatial JavaScript - So Many Choices, So Little Time	**Warren Geissler** — Understanding the Language of GIS and CAD
11:30 / 11:45	**Bruce Reagan	Judy Steele** — Using GIS in the Marijuana License Permitting Process	**Shyam Parhi	Geospatial Data Complexity in Enterprise Level Automated Tool**	**Blaine Horner** — Denali Two: Confirming the Elevation of the Highest Mountain in North America
12:00	Lunch is available from 12:00p to 1:00p		

Field Demo of Data Collection Tools - *Hands-on Demo by CompassTools from 1:00p to 3:00p outside on the patio*

Track	*Using GIS to Support Collaboration, Coordination, and Cooperation across Various Levels of Government (GISCO)*	*GIS in Conservation*	*Lessons from the Intersection, the GIS Practitioner, and the Land Surveyor (PLSC)*
1:00 / 1:15	**Charles Osterman** — Using GIS and Asset Management to Make Data Driven Decisions	**Kevin Miller	Broad-Scale Assessment, Planning and Management of Public Lands** ; **Chris Woodward	Under the Hood of an REA: What is within a Rapid Ecoregional Assessment**	**Steven Parker** — Creating Custom Projection Files for Ground Adjusted Coordinate Systems
1:30 / 1:45	**Kim McAndrews	Heather Hoelting** — GIS and Emergency Response: The Critical Role of GIS in a 911 Environment	**Sam Litschert	Applications of the BLM's Rapid Ecoregional Assessments and Other Broad-Scale Data** ; **Hannah Friedrich** — Ecological and Social Resilience to Climate Variability: The Case of the Bourgou Floodplain Vegetation of the Inland Niger Delta, Central Mali	**Joey Stone** — How Advancements in GNSS Technology Will Influence the Relationship Between Surveying and GIS
2:00 / 2:15	**Stephanie Oliver** — Improving GIS Response for Emergency Management		
2:30 / 2:45	**Dominick Cisson** — ArcGIS + Online Time Reporting = Live Online Vote Center Reporting in 2016	**Jennifer Horsman** — A Climate Change Vulnerability Framework and Custom Visualization Tool ; **Nicholas Kotlinski	Automated River Classification Using GIS-Delineated Functional Process Zones in the Western U.S. and Mongolia**	**Craig Amey** — GIS for Surveyors: A GIS Tool for Researching Internal Surveying Control Information

Afternoon Break from 3:00p to 3:30p - *Snacks and refreshments while networking with GIS professionals!*

Track	*Using GIS to Support Collaboration, Coordination, and Cooperation across Various Levels of Government (GISCO)*	*GIS in Conservation*	*Planes, Drones, and Features (ASPRS-RMR)*
3:30 / 3:45	**Matthew McLamb	Chase Anderson** — Deploying an Enterprise GIS for the Town of Snowmass Village	**Paul Millhouser	Geolocation by Light: Following the Migration of Lesser Kestrels of Mongolia** ; **Ellen Finelli** — National Hydrography Dataset Plus High Resolution (NHDPlusHR) Status	**Michael Tuffly** — Creating a Burn Severity Map Using Classification and Regression Tree (CART)
4:00 / 4:15	**Helmut Lestinsky** — Print On Demand (POD) and Map Automation	**Ariel Doumbouya** — Hydrologic and Cartographic Generalization: VisibilityFilter and NHDPlusHR	**Kristina Yamamoto** — The Lands They Are A'Changing: Evaluating Change on a National Scale
4:30 / 4:45	**Brian Raber	Jason Caldwell** — Government - Private Sector Collaboration Creates Sustainable and Cost Effective Geospatial Programs	**Cynthia Miller-Corbett	Analysis of Lidar-Derived Stream/River Features and Enhancements to the NHD**	**Blaine Horner** — High Precision Surveying / Applications with UAVs
5:00	**Social Event & Geography Quiz!**		
7:00			

Presentation time slots include Q&A and transition between speakers

Right side

"Is This the Dawn of a New Era for GIS?"

Poster Session from 10:00a to 5:00p on the Mezzanine - *Vote for your favorite poster!*

	Kahn Conference Room	Saeman Briefing Room	Cable Today & Tomorrow Room
	Vendor Showcase	*GIS: A Medium for Local and Regional Development (RM-URISA)*	*Web Gallery*
10:00 / 10:15	**Mel Philbrook** — Bettering Our GNSS Data Collection: How Do You Really Know the Accuracy and Precision of Your GPS/GNSS Field Data?	**Jim Castagneri** — A Spatial Analysis of Bicycling Behavior in Colorado Using Census Data	**Jesse Varner** — National Oceanic and Atmospheric Administration (NOAA) ; **William (Bill) Keever** — City of Aurora, CO
10:30 / 10:45	**David Siddle** — Rapid Data Collection and Mobile Data Management for Local Governments and Municipalities	**Michael Tinker	National Hydrography Dataset Network-Linked Data Registry in USGS ScienceBase** ; **Eric Drummond	Seth McClean** — Colorado Trail System — A Collaborative Effort to Map Our Trails	**Jon Duckworth** — National Renewable Energy Laboratory (NREL) ; **Ashley Summers** — Denver Regional Council of Governments (DRCOG)
11:00 / 11:15			
11:30 / 11:45	**David Vaillancourt** — ArcGIS Online: Management Tips and Tools for Success	**Patrick Noonan** — Challenges to Implementing an Enterprise GIS Landbase Maintenance Program	-- No Talks Scheduled --
12:00	Lunch is available from 12:00p to 1:00p		

	Vendor Showcase	*GIS: A Medium for Local and Regional Development (RM-URISA)*	*Web Gallery*
1:00 / 1:15	**Joe Pilimai** — Transforming Asset Management Inspections Leveraging the GIS	**Fredrick Easton	Doug Barker** — Integration of Utility Locations, Land Owner Tracking, and Right-of-Way Mapping to Support Planning-Level Design of Over 200 Miles of Water Pipeline	*Hands-on Interactive Web Demos from NOAA, City of Aurora, NREL, and DRCOG*
1:30 / 1:45	**Quint Pertzsch	Todd Henderson** — GIS, Work, and Asset Management — A Powerful Trio	**James Fee** — Pragmatic Decisions in GIS Data Sharing Portals	The Web Gallery highlights local, regional, and federal geospatial web-based applications. Attend the morning session for brief presentations on each application. After lunch, the presenters will be available to answer any questions.
2:00 / 2:15		**Joseph Kerski** — Why Data Quality Matters — Now More Than Ever	
2:30 / 2:45	**Anthony Palizzi** — Benefits of Large Volume Production of High Density Airborne Lidar Using Geiger Mode Technology	**Peter Batty** — Enterprise Strategy for Mobile Geospatial Applications	

Poster Session on the Mezzanine - *Meet the poster presenters during the break!*

	Vendor Showcase	*GIS: A Medium for Local and Regional Development (RM-URISA)*	
3:30 / 3:45	**James Pardue** — An Introduction to Spike and the Application of Photo Measurement for Field GIS	**Yu Zhou	Jie Wu** — Ring-Pattern of Older Adult Population in Urban Areas	-- No Talks Scheduled --
4:00 / 4:15	**Vincent Cerone** — New HP PageWide XL - Game Changing Technology for Printing Full Color Wide-Format Geospatial Information & Maps	**Larry Schaner** — Top 5 Greatest Concerns of Those Seeking to Procure Geospatial Mapping Services	
4:30 / 4:45	-- No Talks Scheduled --	**Jim Castagneri** — Geographic Programs Supporting the 2020 Census	
5:00	**Poster winner will be announced!**		

DAY 2 CONFERENCE PROGRAM: THURSDAY, SEPT. 22

Rm	The Malone Theater	Barbara Bresnan Boardroom	Delaplaine Newsroom
Track	*FOSS4G in the USA and Around the World*	*GIS in Conservation*	*Planes, Drones, and Features (ASPRS-RMR)*
8:30	**Rafael Moreno | Dave Murray** Facilitators and Inhibitors for the Integration and Use of FOSS4G in the Geospatial Science and Technology Arena	**Frank Orr** Visualizing, Ranking, and Predicting Fish Habitat Quality: A Mapplication Development Story	**John Kosovich** Overview and User Perspective of USGS 3DEP Lidar
9:15	**Matthew Baker** Developing and Implementing Spatial ETL Processes with Open Source Tools	**Alison Gallensky | Aaron Hall** Identifying Wetland Gems in the Rio Grande National Forest	**Daniel Getman** Spatial Analysis at the Continental Scale: A Practical Approach
9:45	**Matthew Baker** | Building Safe Neighborhoods with Open Source Tools	**Kathryn de Venecia** | Geospatial and Temporal Population Analysis of Shortgrass Prairie Birds as a STEM Community Service Project	
10:00	Morning Break from 10:00a to 10:30a - *Light breakfast and refreshments in Daniels Great Hall*		
10:30	GNSS Scavenger Hunt from 10:00a to 12:00p - *Meet out front by the CompassTools car*		
Track	*FOSS4G in the USA and Around the World*	*GIS in Conservation*	*Planes, Drones, and Features (ASPRS-RMR)*
	Jon Duckworth Bringing Spatial Analysis to the Web: Web GIS Decision Tools at NREL	**Brandon Lemire** Soil and Moisture Information Linking to the Amoeba-Plague Relation within Prairie Dog Colonies	**Rebecca Lasica** Science, Scale, and Innovation — When Remote Sensing Analytics Drive Solutions in the Modern Enterprise
11:00			
11:15		**Christopher Park | Christopher Ness** Off-The-Shelf Data Collection Solutions for Weed Management	**Su Zhang** Characterizing Pavement Surface Distress Conditions with Hyper-Spatial Resolution Natural Color Aerial Photography
11:30	**Robert Dzur** GRASS GIS Point Cloud Exploratory Data Analysis: An Open Source Toolkit for Point Cloud Data Processing	**Emmalee Dolfi | Holly Winscott** Strategies and Tips for Large Scale Data Collection — The Trust for Public Land's ParkServe™	**Jeff Orlowski** Petroglyphs, Social Trails, and Strava
12:00	Lunch is available from 12:00p to 1:00p		
1:00	Second Day Keynote in The Malone Theater **Brian Timoney**		
1:45	Afternoon Break from 1:45p to 2:00p - *Snacks and refreshments*		
Track	*FOSS4G in the USA and Around the World*	*Web Mapping*	*Planes, Drones, and Features (ASPRS-RMR)*
2:00	**Rafael Moreno** Why FOSS4G in the Preparation of the Next Generation of Geospatial Professionals	**Travis Sondgerath** | Development of an ArcGIS Online Web-Application for Real-Time Laboratory Capacity Monitoring	**Bill Timmins** Considering a UAV — Now What?
2:15		**Eben Dennis** | Towards Cartographic Standards for Web-Based Flood Hazard Maps	**Caitlin Reusch** | UAVs and the FAA: What You Need to Know to Fly
2:30		**William Carter** Colorado Oil & Gas Wells Over Time	
2:45	**Brady Hustad | Jarrod Skulavik** The Open Source GIS Platform That Runs Pokémon Go	**Kirby Page-Schmit** | QGIS Cloud and ArcGIS Online Comparison: Novice Design from a Historian's Perspective	**Harold Schuch** Practical Geomatics and Science
3:00			
3:15	-- No Talks Scheduled --	-- No Talks Scheduled --	-- No Talks Scheduled --
3:30			

Presentation time slots include Q&A and transition between speakers

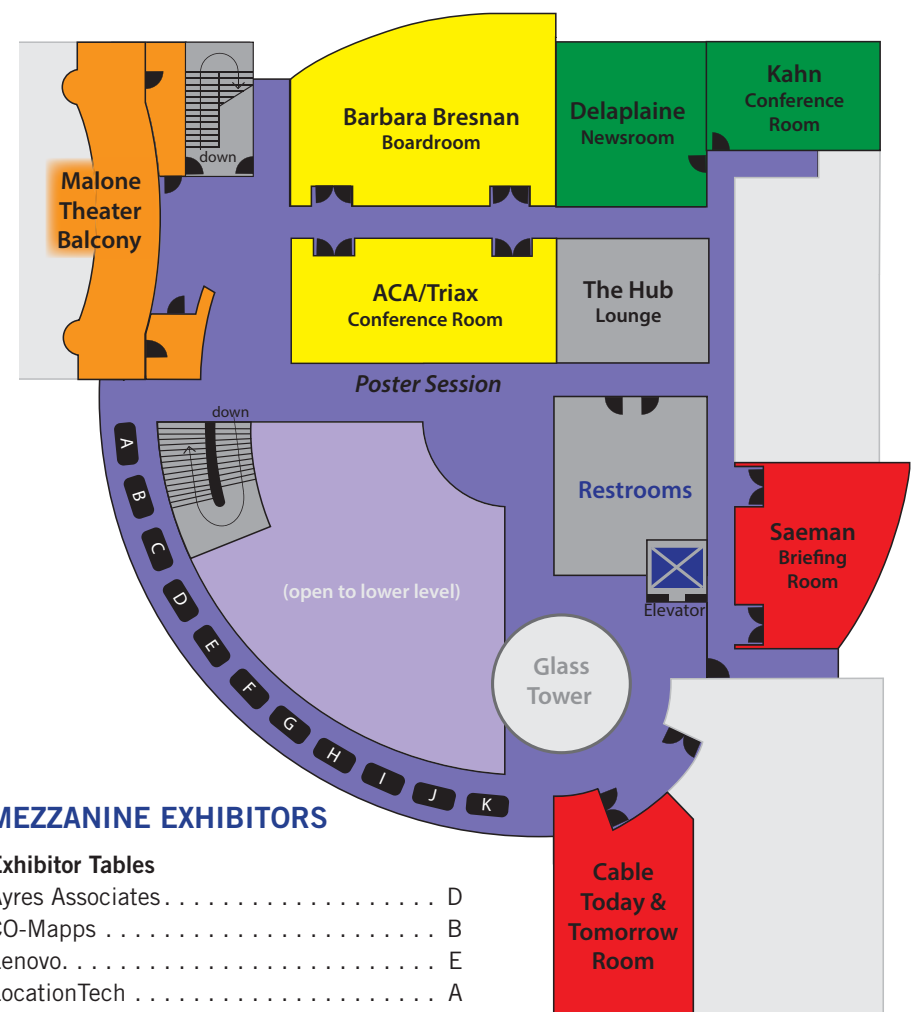| Kahn Conference Room	Saeman Briefing Room	ACA/Triax Conference Room
GIS in Education	*In-Conference Workshops*	
Jennifer Muha Evolving the Classroom: An Experiment to Increase Learning and Comprehension Using a "Flipped Classroom" Model	**Advanced OpenStreetMap Workshop** *Mike Thompson and Rachel Stevenson* Discover through hands on exercises how to access the power of the more advanced JOSM (Java OpenStreetMap) editor. Participants will explore JOSM's building tool, extrude mode, way accuracy mode, support for topology, validation function, search function, filtering, support for OSM "relations", support for GPX traces, and interface to Mapillary, a crowd sourced street level imagery project. ***(Requires sign-up prior to attendance)***	**National Geographic's Giant Map** *Presented by Rebecca Theobald* Check out the latest teaching tool from National Geographic's Giant Traveling Maps program – state maps that will 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.
Elizabeth Tulanowski Addressing Challenges to Effective Learning in GIS Classes with a Variety of Interests and Skill Levels		
GIS in Education Panel	*In-Conference Workshops*	
Sophia Linn (*Moderator*) University Partnerships: Applied Geospatial Projects	**The National Map Corps Map-A-Thon** *Erin Korris and Rachel Stevenson* The US Geological Survey's National Map Corps is a citizen science initiative that relies on volunteers to edit structure points within the United States. Learn the process of collecting and improving structures data by adding new features, removing obsolete points, and correcting existing data. ***(Requires sign-up prior to attendance)***	**National Geographic's Giant Map** *Presented by Rebecca Theobald*
-- No Talks Scheduled --	-- No Talks Scheduled --	
Lunch is available from 12:00p to 1:00p		
"Mapping Ourselves Into Oblivion"		
		Cable Today & Tomorrow Room
-- No Talks Scheduled --	-- No Talks Scheduled --	**Career Development Academy** Join us for a great afternoon of networking and hands-on learning! Attendance at the Career Development Academy is complimentary and open to the public. Schedule of Events: 12:50p - 3:00p | Registration 1:00p - 1:45p | Interview Skills & Resume Building Workshop 2:00p - 2:05p | Sponsor Announcement 2:10p - 2:55p | "Ask a Professional" Roundtable Discussions 3:15p - 4:45p | Mock Interviews

THE CABLE CENTER - 1ST FLOOR

The Malone Theater

up

108

up

Exit to Outside
Patio Seating

Daniels Great Hall

Restrooms

116
113   115
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Sign In

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Info/
Registration

EXHIBITOR BOOTHS

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THE CABLE CENTER - 2ND FLOOR

Malone
Theater
Balcony

down

Barbara Bresnan
Boardroom

Delaplaine
Newsroom

Kahn
Conference
Room

ACA/Triax
Conference Room

The Hub
Lounge

Poster Session

A
B
C
D
E
F
G
H
I
J
K

down

(open to lower level)

Restrooms

Elevator

Glass
Tower

Saeman
Briefing
Room

Cable
Today &
Tomorrow
Room

MEZZANINE EXHIBITORS

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CO-Mapps . . . . B
Lenovo. . . . . E
LocationTech . . . . A
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    Department of Geography . . . . J

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POSTER SESSION

Casey Fortman & Derek Hoshijo
A Structured Approach to Schema Conversion in a Federal World

Zara Hickman
Assessing Field Site Suitability for Paleoecological Avalanche Research Through GIS Analysis

Daniel Carver
Assessment of Global Land 30 Classification of Temperate and Tropical Mexican Forest

Jason Isherwood
City of Phoenix Enhanced Flood Risk Analysis Estimated 100-Year Flood Damages

Hannah Friedrich
Ecological and Social Resilience to Climate Variability

Marcia Rickey & Jenna Jonker
EMPSi GIS in Bureau of Land Management Resource Management Plans: A Case Study

Kathryn de Venecia
Geospatial and Temporal Population Analysis of Shortgrass Prairie Birds as a STEM Community Service Project

Benjamin Glennon
GIS and Avalanche Susceptibility: Logistic Regression Analysis and Hazard Mapping

Tammi Renninger
Growth. Growth?

Melissa James
High School Graduation Rates vs Violent Crime in Denver 2010-2012

Mehran Ghandehari
Hydrologic Flow Accumulation Modeling Using Surface Area

Kathleen R. Weimer & Carson J.Q. Farmer
Indicators of Spatial Autocorrelation Applied to Cesarean Section Rates from 1990-2014

Stephen Mitchell
Jefferson County, Colorado: Major Wildfires, 1996 - 2016, Topographic Map and 3D Representation

Stephen Mitchell
Jefferson County, Colorado: Physical Features Topographic Map and 3D Representation

Brian Woodward
Mapping Spruce Beetle Outbreak Severity and Distribution in Colorado Using Landsat and Integrative Spatial Modelling

Alex Rice
New Mexico - Be Lightning Aware

Ariel Doumbouya & Karen Adkins
NHDPlus High Resolution

Brandon Lemire
Possible Indicator for Non-Stationarity in Cache la Poudre Watershed and Potential Relationship with Climate Variability

Matt Liapis
Snowbird & Alta Ski Resorts, Little Cottonwood Canyon, Utah

Michael Heirendt
Using ESRI's JavaScript API to Disperse GIS Data

Brian Best & Kathleen Arbogast
Using Facility Use Survey Data to Create a Future Use and Transition Plan

Jeanette Hall & Karen Houck
Using Satellite Imagery as a Tool to Enhance Geological Mapping

Joel Murray
Utilization of GIS Software to Develop As-Built Terrains for Hydraulic Modeling

Erin Korris
Volunteers of The National Map Corps

Jalynda Mckay
Water & Climate Web Atlas: An Interactive Application for Wyoming Stakeholders

Enes Yildirim
Web-Based Flood Loss Estimation and Emergency Support System

Grant Garstka
What Does 5,280 Look Like?

7th Annual Rocky Mountain Surveyors Summit

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FEBRUARY 15-17, 2017~ ARVADA CENTER

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- Exhibitors
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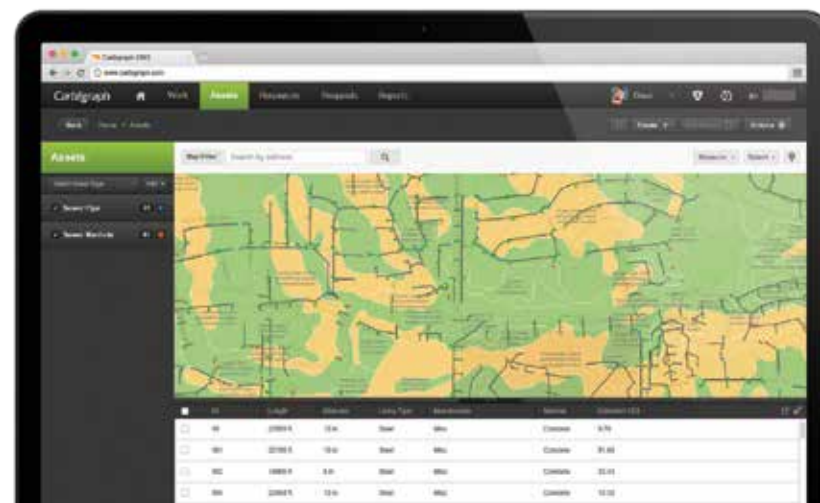- Go to www.plsc.net for more information

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Charles Osterman, GISP
GIS Analyst | Adams County, Colorado

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Publish maps of road grading history to identify hotspots
Create maps of planned street maintenance
Update GIS data from the field with mobile technology

POST CONFERENCE TOURS

Friday, September 23, 2016
NOTE: All tours require advance registration to attend. You can update your registration online at www.gisintherockies.org

BOULDER EMERGENCY OPERATIONS CENTER TOUR
The Boulder Emergency Operations Center, located in Boulder, Colorado, plans, coordinates, and supports a wide-range of activities that help prepare for, respond to, and recover from disasters and large-scale emergencies, while also reducing vulnerabilities to hazards. GIS plays a critical role in the emergency response. This event consists of a guided tour of the Emergency Operations Center and will cover how GIS is integrated into the EOC and the creation and distribution of dynamic maps during disasters. http://www.boulderoem.com

DIGITALGLOBE HEADQUARTERS TOUR
Tour DigitalGlobe's headquarters in Westminster, Colorado, and see firsthand how we are leveraging the GBDX platform to process imagery, extract information, and provide solutions for our customers. https://www.digitalglobe.com   *[Registration is closed]*

DENVER INTERNATIONAL AIRPORT ENTERPRISE GIS PROGRAM
The Denver International Airport tour will investigate how GIS helps support a wide variety of departments at the airport, including Planning, Operations, Finance, Securities, and Asset Management. "DEN Maps" a GIS web viewer platform enabling airport staff to view, analyze, and create geospatial data will be highlighted, as well as a mobile GIS tool aiding Operations in the day-to-day management of the airfield. A tour of the airfield will also give attendees a closer look at various types of data collected and managed by the GIS group, much of which is geared towards compliance/standards with the FAA Airports GIS program. http://www.flydenver.com   *[Registration is closed]*

TOUR ONE COMPASS!
Want to peek behind the curtain of a 20+ year old GIS company with four vibrant divisions? Learn why each division was created and how we leverage the power of GIS every day. CompassCom, a MRM (Mobile Resource Management) solution for locating, mapping, and messaging built on and for Esri users. CompassData, a worldwide GCP (ground control point) division makes imagery and LIDAR better by delivering precision Survey, Mapping, and GIS data via a cloud based archive. CompassTools, a Trimble, LTI, GeoJot, Esri, MX7 Mobile Mapping hardware/software/imagery dealer. Plus, our newest division, CompassDrone dedicated to everything UAS/UAV for the GIS industry. Proud to be DJI's first Industrial Geospatial dealer! The tour will include hands-on demos of each the divisions' solutions and opportunities to ask our experts for insights on how we use GIS every day! www.compasstoolsinc.com

CONFERENCE SCHEDULE
AT A GLANCE

	Day 1 (September 21)	Day 2 (September 22)
Registration *Daniels Great Hall – Lower Level*	7:30a – 5:00p	7:30a – 3:00p
Vendor Exhibition *Daniels Great Hall – Lower Level*	8:00a – 7:00p	8:00a – 3:30p
Opening Plenary – Matt Sheehan *The Malone Theater*	8:30a – 9:45a ←	"Is This the Dawn of a New Era for GIS?"
Presentation Sessions[*]		8:30a – 10:00a
Advanced OpenStreetMap Workshop *Saeman Briefing Room*	*Space is limited; sign up now* →	8:30a – 10:00a
National Geographic's Giant Map *ACA/Triax Conference Room*	**Interactively Explore Colorado** →	8:30a – 12:00p
Morning Break *Daniels Great Hall – Lower Level*	9:45a – 10:00a	10:00a – 10:30a
GNSS Scavenger Hunt *Meet out front by the CompassTools car*	**Use the latest mobile software** →	10:00a – 12:00p
The National Map Corps Map-A-Thon *Saeman Briefing Room*	*Space is limited; sign up now* →	10:30a – 11:30p
Presentation Sessions[*]	10:00a – 12:00p	10:30a – 12:00p
Poster Session *Daniels Great Hall Mezzanine*	10:00a – 5:00p ← **Vote for your favorite!**	*Posters remain up all conference long*
Web Gallery *Cable Today & Tomorrow Room*	10:00a – 11:00a 1:00p – 3:00p	**See cutting-edge web applications**
Lunch is Available	12:00p – 1:00p	
Second Day Keynote – Brian Timoney *The Malone Theater*	"Mapping Ourselves Into Oblivion" →	1:00p – 1:45p
Career Development Academy^{**} *Cable Today & Tomorrow Room*	**Workshop, roundtables, and mock interviews** →	1:00p – 4:45p
Early Afternoon Break *Daniels Great Hall – Lower Level*		1:45p – 2:00p
Presentation Sessions[*]	1:00p – 3:00p	2:00p – 3:30p
Field Demo of Data Collection Tools *Outside on the Patio*	1:00p – 3:00p ←	**Hands-on demo by CompassTools**
Late Afternoon Break *Daniels Great Hall – Lower Level*	3:00p – 3:30p ←	**Meet the poster presenters**
Presentation Sessions[*]	3:30p – 5:00p	
Social Event & Geography Quiz! *Daniels Great Hall*	5:00p – 7:00p ←	**Poster winner will be announced**

*See the full conference program for session details and room assignments.
**See the Career Development Academy schedule for more details; registration open 12:50p – 3:00p.