

2018 ESRI UC

Mining Events and Activities

Dear Esri User Conference Mining Attendee,

We are excited to welcome you to the 2018 Esri User's Conference! We have a great lineup of sessions for you to choose from on the newly defined Mining track. To help guide you through the conference and some of the benefits offered to you as a Mining User, we created this simple guide to some of our favorite activities and events we think you should check out while you are in San Diego.

Checklist to UC Success

1. **Download the Esri Events App:** Download the [Esri Events App](#) and have all the UC has to offer at your fingertips.
2. **Attend the Plenary Session:** Join Esri's President Jack Dangermond, and get a glimpse at how GIS is *Inspiring What's Next*, the theme for this year's conference. Here is the full line up of [Plenary speakers and events](#). The Plenary begins promptly at 8:30 am Monday morning with doors opening at 7:45 am. Plan to arrive a few minutes early to secure a good seat.
3. **Review Jack Dangermond's UC Q&A:** We like to maintain open and ongoing conversations with our users. [Check out the answers to common questions about software development, products, industries, education, and support](#). The Q&A is truly awesome this year, there's a wealth of information, even if you can only read the most important issues to YOU.
4. **Esri User Conference Guide:** Below is a wrap up of our recommended stops for the Mining industry. If you're looking for a more expansive view of what UC has to offer, check out the [Esri User Conference Guide](#).

Activities for Family & Friends

1. **UC Kids Fair:** Come explore the world using maps and GIS at the Esri UC's GIS Kids Fair. It's a great way for you and your children to have fun together and learn more about maps and GIS. Free and open to everyone.

Tuesday, July 10 – Thursday, July 12; Marriott Marquis – Marina Ballroom, Salon D
2. **Esri 5K Fun Run/Walk:** Walk or run this flat waterfront course as it follows the Embarcadero Marina Park North and the boardwalk area. Water stations are offered en-route, and chip timing provides accurate race results. The starting gun goes off promptly at 6:30 am; start/finish line: Hilton Bayside – Embarcadero Boardwalk; cost: \$30, pre-registration required in badge pick-up area of main conference center in days prior.

Wednesday, July 13 6:30 am
3. **Family Night:** Show your family and friends what GIS is all about when the Exhibit Pavilion is open to anyone accompanied by a registered attendee.
Wednesday, July 11, 4:00pm-6:00pm.
4. **Party at Balboa Park: Thursday, July 12, 5:30pm-10:00pm**
Come and party with your established and new friends at San Diego's Balboa Park. There will be beautiful museums, great food, awesome entertainment, interactive games and activities for the whole family. \$50 for guest tickets; children 12 and under are free. Includes food, entertainment, and activities for the whole family.
5. **Join Us at the Ball Park: Games July 9-15**
Watch the hometown Padres take on the Los Angeles Dodgers and the Chicago Cubs at Petco Park. Discounted tickets are available for all Esri User Conference attendees.

2018 ESRI UC

Mining Track Sessions

The Mining track takes place on Wednesday, July 11th through Thursday, July 12th, [here is a customized agenda](#) to help plan your day. To find other Natural Resources sessions and events please search the [online agenda](#) and download the [Esri Events app](#) to create your personalized schedule. You can also build your schedule from your desktop and then access it on your mobile device using the app. Sign in with your Esri Account, search by keyword and then click on the star at the top of the event description to add it to your schedule. We've also included a summarized breakdown of the Mining paper sessions and events below:

User Paper Sessions, and Activities		
Wednesday, July 11		
8:30 AM – 9:30 AM	Data Management and Sharing	SDCC, Room 28 C
10:00 AM – 11:00 AM	Mining Operations	SDCC, Room 28 C
11:30 AM – 12:30 PM	Mining Special Interest Group Meeting	SDCC, Room 28 C
1:00 PM – 2:00 PM	Mobility Discussion	SDCC, Room 28 C
2:30 PM – 3:30 PM	Real-Time Ops and HSE	SDCC, Room 28 C
Thursday, July 12		
10:00 AM – 11:00 AM	Mining Solutions and Artisanal Risks	SDCC, Room 28 C
1:00 PM – 2:00 PM	Modeling Conservation	SDCC, Room 28 C

See the abstracts on [page 5 and 6](#). This agenda is subject to change. Visit the [Esri Events app](#) for current agenda details.

Socials

Mining Industry Social

Rockin' Baja Lobster, Gaslamp Quarter
Sunday, July 8, 6-9 pm

PUG/MUG Social

This is a traditional social event for the pipeline, petroleum, mining and geoscience community, a chance to reconnect with colleagues, clients, vendors, and friends from across the industry. Join us in a relaxed, informal atmosphere for an evening of music and refreshments.

San Diego Marriott Marquis, Coronado Terrace
Tuesday, July 10, 6-8:30 pm

Thank You to our Supporting Partners of the Mining and PUG/MUG Socials!



SDCC = San Diego Convention Center
Please note: All listings subject to change; not every paper or event may be presented here.

2018 ESRI UC

Technical Workshops

In addition to the paper sessions, there are a wealth of [Technical Workshops](#) available throughout the week. You'll find everything from product updates, map design sessions, open conversations on workflows for the office and the field, Cloud Configuration and Security options, and many more. Here are a few we recommend:

- Solving WebMap Challenges
- Designing a WebGIS Security Strategy
- Best Practices in Designing an Enterprise GDB
- Architecting the ArcGIS Platform – Best Practices
- ArcGIS Enterprise – The Road Ahead
- ArcGIS and the IoT
- Real-Time and Big Data Stores
- Insights for ArcGIS Advanced Topics
- 3D in ArcGIS Pro
- 3D Feature and Subsurface Analysis
- Any of the many Mobile Sessions

The EXPO

Natural Resources Showcase

The Natural Resources Showcase should be your first stop to meet with Esri industry experts to help with your challenges, demonstrate industry-specific solutions, and discuss best practices. Learn about emerging trends and hear firsthand about ArcGIS as a complete platform for Mining. The Natural Resources Neighborhood is a great place to share your story, learn from your peers, see demonstrations and meet with Esri staff.

Expo Hall, SDCC

Tuesday, July 10 & Wednesday, July 11
Thursday, July 12

9:00 AM – 6:00 PM
9:00 AM – 1:30 PM

There are [250 exhibitors](#) on the main show floor from Tuesday through Thursday. It's a great opportunity to browse new technologies and pick up ideas from other industries that you can apply back to your own work. We encourage you to wander and you'll be surprised by the diversity and interesting things you find.

These sponsors and exhibitors are also a good start for your exhibit browsing:

Booth	Org	Booth	Org
1627	Autodesk	727	OSIsoft
1011	Carlson	2026	Pix4D
308	CoreLogic	534	Safe Software
1015	Data East, LLC	115	Voyager Search
1108	DigitalGlobe	1912	WDT WeatherOps
1013	LandWorks, Inc.	1813	WhiteStar Corporation
527	Leica Geosystems		

Stay connected with the Mining GIS community all year long!

- Twitter: [@EsriMining](#) (use #EsriUC while you are here)
- LinkedIn: Esri [Mining group](#)
- **COMING SOON!** Esri's Mining GeoNet Community

Product Areas

Visit the extensive Esri Product Areas for some one-on-one time with knowledgeable Esri product staff to ask technical questions, check the health of your data, or discuss implementation steps. We recommend checking out the Enterprise, Mobility and Imagery areas on the EXPO floor. If you are arriving early there are some [Technical Preconference Seminars](#) Saturday-Sunday, 8:30 am-5:00 pm (you must register to attend), for in-depth, expert-led training and discussion on the latest GIS techniques and technologies.

2018 ESRI UC

EXPO cont.

Esri Startup Zone

Another area you won't want to miss is the Esri Startup Zone (SUZ) on Tuesday, Wednesday, and Thursday in Hall A of the expo showcase! This high energy and innovative area is hosted by the Esri Startup Program and features the work of 24 up-and-coming businesses that have integrated spatial capabilities within their product offerings and help Esri customers gain even more value from their investments in ArcGIS. Check out the SUZ [UC blog](#) for details on all these great startups!

Here are a few to consider checking out:

- Argis Solutions, booth Z2
- Meemim, booth Z9
- SkyMap Global, booth Z24

Sustainable World Community

At Esri, we believe that GIS is a critical tool to enable organizations to make the world a better place. When applied to Sustainable Development, Humanitarian Assistance, and Conservation, GIS helps organizations and people make better decisions about how to maximize the impact of limited resources to affect People, Planet, Prosperity, and Peace. Visit the Sustainable World Community expo area to connect directly with exhibitors from nonprofits and global organizations working to apply the Science of Where to their respective missions. Learn from these exhibitors and other Esri partners who will be presenting on their work in our Sustainable World Community Spotlight Theater. Engage with Esri staff at the SWC demonstration tower to discuss and see demonstrations of GIS solutions. Connect with us in the Sustainable World Community at UC, and contribute your GIS skills and expertise to creating the future we all want for future generations.

[Check out all of the Sustainable World Community events at UC.](#)

Map Gallery

Map Gallery Opening & Evening Reception, Monday July 9, 3:30pm-7:00pm SDCC Sails Pavilion (Upstairs)

The [Map Gallery](#) is the place to be Monday evening and is also a very popular place to take a break throughout the week to learn about the many ways geospatial technology is applied around the world. Browse 800+ maps that showcase the work of ArcGIS users from more than 100 countries, or search for your interest areas using terminals in the gallery. Here's a list of Mining related maps and a few general interest ones that caught my eye. We encourage you to browse and pick up some great map-making ideas outside your usual domain.

Panel ID	Title	Organization	Industry
B-19-05	Congolese Cobalt Conflict: Cobalt Mine Accessibility and Security in the Democratic Republic of the Congo	Tufts University	Mining
E-06-05	Designated Dipping Bedrock Area	Jefferson County Open Space	Mining
A-13-05	Historical Geologic Map of Hemphill County, Texas	Potter Randall 9-1-1	Mining
B-05-03	Fishing Spot Finder	Oakland County	None
F-07-09	Paranormal Eclipse Activity	SC Emergency Management Division	None
D-09-02	Distillery Tours of Kentucky	Stantec	None
F-01-08	Will Robots Kill Suburbia	University of Redlands	None
D-08-05	Grey Wolf Suitable Habitat Locations in Yellowstone National Park	Cal Poly Pomona	None
B-13-04	Geospatial Analysis of Natural Resources and Potential Water Contamination in the Former Bears Ears National Monument	Stony Brook University	None
C-01-09	Celebrate Woman in Science: Who Has Influenced You to Work in STEM?	Port of Tacoma	None

We hope that the information contained here provides a helpful start to exploring the UC this year – there are very many other activities to enjoy and expand your learning – so please enjoy exploring to the fullest.

Best Regards

Geoff Wade

Community Outreach Lead
On behalf of the whole
Esri Natural Resources Team



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Mining Paper Sessions

*Agenda subject to change. Please reference [online agenda](#) for most current session details.

Data Management and Sharing

MonGeoCat-Discovering the Treasures of Mongolia's Geological Archive Through GIS

Munkhbileg Namsrai, Otgonbaatar Altanbasan

With the goal to reveal the treasures maintained in Mongolia's huge Geological Archive, the Mongolian Geological Catalogue system MonGeoCat was implemented in 2017. It facilitates finding documents, maps and data through a hybrid combination of a web-based GIS and a catalogue system, which are completely integrated. The system is open to the public and can be used both on desktops and through smart phones and tablets while in the field. Complementary modules allow field data collection.

Open Data – Making It Easy to Share Free Geospatial Data in Nevada

Rachel Micander

Creation of map and data services are an important part of modernization within the Nevada Bureau of Mines and Geology (NBMG). Many datasets can be viewed and queried through existing web apps, but are not all accessible through one platform. The ArcGIS Open Data platform provides us with a solution. Our goals were to compile all NBMG data in a single platform and expand our data footprint. We hope to establish the NBMG open data site as the central clearinghouse for GIS data in Nevada.

Mining Operations

Integrating and Improving Traditional Workflows Using Mobile Data Capture

Finnian O'Connor, Dave Donaldson, David Donaldson, Teck

Traditional data workflows in mineral exploration begin with recording data in a field notebook. With the recent evolution of mobile data capture applications from Esri the data capture for geoscience, community and safety data have been transitioned to a combination of Survey123 and Collector which has led to increased efficiency and effectiveness in the overall data workflow. Having captured the data, use of Dashboards then allows quick visualization of summary information.

Drilling Dashboard - A Data Story

Fernando Lopez, Alamos Gold

The Island Gold mine, an underground mining operation in Northern Canada was acquired by Alamos Gold (AGI) in 2017. Assimilation of the operation to AGI's GIS standards involves re-thinking their data cycle and the implementation of GIS. The challenge involves integration of legacy records of one million meters drilled, plus evolving spatial datasets. As AGI grows and assumes new projects, the continuing challenge for Geo-Informatics is how to manage enormous datasets efficiently and elegantly.

Mobility Discussion

Mobile Applications Applied to Mining Workflows

Jeff Shaner, Esri

Over the past couple of years, the Esri mobile capabilities have expanded considerably. As a result, take-up has accelerated, yet some classic challenges remain – platform of choice, accuracy, security, workflows, support, etc. Please join us for an interactive discussion of what's possible and what's to come with Jeff Shaner, Esri Product Manager for Mobile Apps.

Mining Abstracts cont.

Real-Time Ops and HSE

Optimize Health and Safety Inspections with Workforce, Collector and Survey123

Rebecca Kahrhoff, Christian Whitehead, Freeport McMoran

GIS can have a tremendous impact on Health and Safety of Mining operations. From optimizing routine inspections to tracking incidents in real-time, GIS applications can not only greatly improve H&S reporting but identify new opportunities for optimization.

Dashboard Utilization as Equipment Productivity Monitoring Tool at Grasberg Mine

Heri Setiono, PT Freeport Indonesia

PT Freeport Indonesia operates up to 140 trucks, 7 shovels and 15 loaders in Grasberg surface mine. PTFI utilize Dashboard Theme from Webappbuilder for ArcGIS (developer edition) by leveraging near real time information from Dispatch system as an operation dashboard to monitor the equipment productivity including the latest equipment status, cumulative tonnage production, trucks statistics from and to either shovel or crusher, statistics of material load by equipment, etc.

Mining Solutions and Artisanal Risks

GIS based Dolomite Risk Management - ArcGIS Online Implementation

Tankiso Mabote

Geological conditions in and around Kumba mining operations makes the area susceptible to sinkhole formation and poses a risk to employees and communities. This paper presents work done between GIS and Geotechnical Teams at Kumba to develop a GIS based decision support system that uses: A GIS derived dolomite risk map to highlight risk areas InSAR subsidence monitoring Kumba is now better equipped to respond to dolomite related incidents and ensure safety of employees and communities.

ArcGIS Platform Best Practices for Mineral Exploration- Esan Eczacibasi Case

Maral Can Emre, Eczacibasi Esan

Mineral exploration is about one thing: Location. Spatial data is the most important data asset of a mining company. Sharing and analyzing this data is as important as capturing and visualizing them. Exploration geologists are desktop GIS users by nature, however these personal works of geologists are hard to make use of when you cannot spread them throughout the organization. This presentation is about how ArcGIS platform helps us in Esan to create and share our organizational memory.

Modelling and Conservation

Geologic Report Workflows w/ ArcGIS Pro and ArcGIS Online - Lessons Learned

Roger Bannister, Unimin/Sibelco

As responsible miners and community members Unimin/Sibelco engages in a number of conservation efforts at our mine sites worldwide. Story Maps provide a platform for communicating these conservation efforts both internally and with the world using a unique combination of interactive maps, charts, and images.

Validation of 3D Drillholes in ArcGIS Pro

Michael Cunningham, SRK Consulting

Implementing an Architectural design pattern in Visual Studio with C# for developing an ArcGIS Pro add-in for importing and creating boreholes in 3D space. This includes implementing a suite of tools for validating the borehole database ensuring no overlap or duplicate segments, as well as allowing user to fix issues by flagging values. Thus, users can import, validate results before passing on to the Resource geologist for Mineral Resource estimates in a mining software package.