

SMRI FALL 2021 CONFERENCE ANNOUNCEMENT



September 19–22 | Galveston, Texas, USA

solutionmining.org

Research Presentation

Depending on research project estimated completion dates, it is likely there will be two or three oral research reports presented Monday morning at this conference. More information will be provided on the Conference Schedule in mid-August.

Fall 2021 Sponsorships

Sponsorships help defray costs of hosting conferences, keep conference fees affordable, and allow more of the member dues to be directed towards active research. Members or non-members may be sponsors. SMRI's 2021 sponsorship information is available online or you may contact Dawn Langlains for more information. No commercial advertising will be accepted, but SMRI will acknowledge contributions of all sponsors. We thank the sponsors of the Fall 2021 Galveston SMRI Conference:

DIAMOND: Empire Wireline, LLC; and WSP

GOLD: Enventure Global Technology; Lane Power & Energy Solutions, Inc; Lonquist & Co LLC; and Sonic Surveys

SILVER: Cavern Solutions; RESPEC; SubTerra Engineering; Tejas Tubular Oilfield Services; and Geostock Sandia, LLC.

BRONZE: Alpha Geoscience; Salt Cavern Storage LLC; Seal-Tite International; SOCON Sonar Well Services; and Stream-Flo Industries

APP SPONSOR IS STILL OPEN: \$1500.

Future Conferences

Spring 2022 3-6 May	SMRI Conference Rapid City, South Dakota, USA
Fall 2022 18-21 Sept	SMRI European Conference Krakow, Poland
Spring 2023 23-26 April	SMRI Conference Detroit, Michigan, USA
Fall 2023 1-4 October	SMRI Conference San Antonio, Texas, USA

Conference Schedule

All times are in Central Daylight Time (CDT)

Saturday, September 18

8:00 am–12:30 pm

Research Committee Meeting

1:30 pm–4:30 pm

Leadership Committee Meeting

Sunday, September 19

8:00 am–5:00 pm

Technical Class, "Development of a Cavern Storage Project, Cavern Basics"

(optional with an additional charge. This class will be repeated as a similar subject during the Spring 2022 Rapid City Conference)

6:30 pm–8:30 pm

Icebreaker Reception *(optional)*

Monday, September 20

8:00 am–10:00 am

Business Meeting *(Members Only)*

10:30 am–5:00 pm

Technical Paper Presentation, Day 1

10:30 am–1:30 pm

Friends and Spouses Activity

2:00 pm–4:30 pm

Moody Gardens Shuttle to The Strand

6:30 pm–9:30 pm

Conference Dinner *(optional/additional charge)*

Tuesday, September 21

8:00 am–5:00 pm

Technical Paper Presentation, Day 2

9:30 am–4:30 pm

Friends and Spouses Tour

Wednesday, September 22

9:45 am–4:15 pm

Field Trips:

8:45 am–4:45 pm

#1: Galveston's Museums

#2: Johnson Space Center

Conference Assistance

SMRI Membership Issues:

John Nadeau | Executive Director

Phone: +1 518-579-6587

Email: jnadeau@solutionmining.org

Registration Assistance:

Dawn Langlains |

Conferences and Education

Phone: +1 918-914-2499

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Technical Class:

Development of a Cavern Storage Project, Cavern Basics”

Limited Capacity. Similar subject will be offered during Spring 2022 conference in Rapid City, parallel to small Rock Mechanics Technical Class in RESPEC’s laboratory

Sunday 19 September 2021, 8:00 am – 5:00 pm (CDT)

Technical Class “Development of a Cavern Storage Project, Cavern Basics” is designed as a beginning course and overview of fundamental disciplines to be considered when developing a cavern storage or brine mining project. The tentative list of topics includes geological background and site investigation methods, wells drilling, logging and completion, laboratory testing of salt and non-salt material, rock mechanical design of caverns, solution mining, gas cavern thermodynamics, product filling and related activities (commissioning and integrity testing, plugging and abandonment, etc).

The Technical Class courses are usually organized both for beginners new to cavern construction technologies and, alternatively, for advanced young engineers and geologists with 5 or more years of experience. The intent for this class is to provide a comprehensive overview of cavern fundamentals for entry-level professionals. Future courses in the planning stages are: “Cavern Exploration” (Fall 2022) and “Leaching Technology” (Fall 2023).

SMRI Technical Classes always allow time for discussions and questions, and there are opportunities for related discussions during breaks and lunch. Each participant will receive a USB drive of the class papers and conference papers.

For class questions, please contact:

Technical Class Chair 2021

Andreas Reitze | SOCON Sonar Control
Kavernenvermessung GmbH
Phone: +49 5121 99819-28
Email: reitze@socon.com

Technical Class Organizing Committee 2021

Fritz Wilke (Research Coordinator), Eric Busch, and Joe Ratigan

Program Chair 2021

Dan Noack | Plains All American
Phone: +1 713-646-4462
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Assistant Program Chair 2021

Yvan Charnavel | Storengy
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Technical Class Registration Fees

Members	\$400
Member Regulator	\$150
Non-Members	\$650
Non-Member Regulators*	\$400
Students, if space is available	*No Charge

(* - must contact John Nadeau)



In-Person Attendee Registration Information

Each person attending any part of the technical conference must be in the SMRI database and must register for the conference. Online registration and payment in advance are required by all persons attending. No registrations will be held or accepted without payment. All attending non-technical spouses and friends must be registered as “guests” before completing your registration’s online payment. Space for most events is limited.

The in-person delegate registration fee covers the Sunday Icebreaker, breakfasts, AM/PM breaks, and lunches on Monday and Tuesday. The fee also covers a USB drive that contains all papers presented during the conference. There will be no conference books printed. Note that there will be an additional \$250 charge if registering after 3 September, if space is available.

Members	\$400
Non-Members	\$850

Discounts available for Class Instructors and one Speaker per paper.

University students of related subjects must contact SMRI’s Executive Director John Nadeau (jnadeau@solutionmining.org) to apply for discounted registration.

Registration Dates

13 July	Online registration for members begins
6 August	Non-member registration begins
3 September	Registration ends

Potential Remote Attendee Registration Information

Due to the ongoing global health pandemic and travel restrictions, SMRI may broadcast the Galveston meeting as a hybrid format. The current plan would be to live stream the Technical Presentations, followed by on-demand access to the individual presentations. The upload of the on-demand presentations may be delayed a few days to enable processing and uploading of the files. Virtual attendees must register similar to the in-person attendees using a separate link to be posted to the registration page.

The remote delegate registration fee will be same as the in-person rates and cover the cost to record and transmit the live feed broadcast, the site to host the on-demand videos, and a file that contains all papers presented during the conference. There will be an additional \$250 charge if registering after 3 September. *Decision on hybrid component will be made by August 15.*

Hotel and Travel Information

Hotel Reservations:

SMRI room rate: \$179.00 from June 21-Aug 26
72 hour minimum cancellation policy.

[Click here for website reservations](#)

By Phone: 888-388-8484.

The hotel is an educational tourist destination. The non-profit destination uses nature to educate and excite visitors about conservation and wildlife. Moody Gardens also has a RideFilm Theater with motion-based pod seating. The MG 3D Theater features the largest screen in the state of Texas, 4D Special FX Theater, paddlewheel cruise boat, a hotel, golf course and a convention center. Moody Gardens features three main pyramid attractions: the Aquarium Pyramid, which is one of the largest in the region and holds many species of fish and other marine animals; the Rainforest Pyramid, which contains tropical plants, animals, birds, butterflies, reptiles, and a variety of other rainforest animals including free-roaming monkeys and two-toed sloths; and the Discovery Pyramid, which focuses on science-oriented exhibits and activities. To look at the hotel and offerings, use: www.moodygardens.com.

Moody Gardens | 1 Hope Blvd | Galveston, TX



Transportation:

(These prices and travel times are approximate and not binding)

Moody Gardens is approximately 72 miles from George Bush International Airport (IAH) and 41 miles from William P. Hobby Airport (HOB). There are several ways to get to Moody Gardens from both.

From IAH:

Taxi or bus (3 hrs 20 mins / up to \$120)
Shuttle (1.5 hrs / up to \$150)
Car rental of your choice

From HOB:

Taxi (1 hr / up to \$140)
Shuttle (1 hr / up to \$70)
Car rental of your choice

If you are renting a car, reserve NOW. Choices are limited and prices are high.

Icebreaker

Join SMRI friends from 6:30-8:30 pm on Sunday, 19 September, for appetizers, wine, beer, coffee, tea, and soft drinks. It's a great way to kick off the Fall 2021 Galveston Conference. The event will be on the 9th floor in the Shearn's Restaurant and overflow areas. No charge for delegates. Additional fee for guests.

Monday Night Dinner

\$100 per person. Maximum of 300 guests.

Join SMRI delegates and friends at Moody Gardens "Palm Beach" outdoor venue for a casual dinner event. The beach-inspired menu will be created by Moody Gardens Chefs just for SMRI. Fee includes fantastic food, beer, wine, soft drinks, and more. Oh, And don't forget the live music! Come join the fun!

Spouses/Friends

Monday Fun Day!

Monday, September 20; 10:30 am- 1:00 pm
\$60 per person, 30 participants max.

Paint like Picasso! Join Paint, Sip & Sea for a 2+ hour painting session and a lovely Mimosa Brunch! Fee includes all you need to create your masterpiece, the Mimosa Brunch, and instruction/advice. Come casual and let your creativity shine!

Tales of Glorious Galveston!

Tuesday, September 21; 9:00 am-3:30pm
\$90 includes Segway and tour, guide and Red Light Tour, shuttle service, and gratuities.

9:30-11:30 am (with a break) — Start the day Segway-ing with SegCity on a Magical History Tour! This tour gives you VIP access to one of the country's oldest port cities. Home to more millionaires than New York City, it is now one of the largest examples of 19th century Victorian living in the nation. It's easy. It's fun. See places off of the beaten track. Get your Seg Legs on!

11:30 am-1:15 pm — Lunch on your own

1:30-3:30 pm — From the author of *Galveston's Red Light District: A History of The Line* (The History Press, 2018) comes a riveting journey through the forgotten parts of downtown Galveston that were once bustling with wild parties and generous offerings of hourly love. Join renowned author and speaker Kimber Fountain as she brings to life the tales—both tragic and triumphant—of Galveston's historic Red Light District.

Wednesday Field Trips

Field Trip 1: Galveston Museums

Depart at 9:45am. Return about 5:20 pm. Cost is \$50 per person; includes transportation, admission fees, docents, and gratuities.

Stop 1 (10 am-12:30 pm): The Ocean Star Offshore Drilling Rig Museum and Education Center is docked at Pier 19 in Galveston. The Ocean Star is a wonderful showcase in a perfect location for an "offshore" experience.

Stop 2 (12:45-1:15 pm): Lunch on your own; many nearby restaurants

Stop 3 (1:30-4 pm): The 1877 Elissa & Texas Seaport Museum. Share the adventure of the high seas at the Texas Seaport Museum, home of the celebrated 1877 tall ship ELISSA. Explore the decks of this floating National Historic Landmark which has also been designated one of America's Treasures by the National Trust for Historic Preservation.

Walk ELISSA's decks with a docent, and imagine the days when daring sailors challenged the world's oceans. In the adjacent museum and theater, witness the story of ELISSA's dramatic rescue from the scrap yard and her meticulous restoration. *Shuttle leaves the Pier at 4:10 pm.*

Field Trip 2: Johnson Space Center

Depart at 8:45 am. Return about 4:45 pm. Cost is \$60 per person. Fee includes admission, tram tour, guides, and transportation. The bus will make a lunch stop at T-Bone Tom's at around 2:00 pm for lunch on your own. Bus departs there around 3:30 pm.

For more than 50 years, NASA's Lyndon B. Johnson Space Center (JSC) in Houston has led our nation and the world on a continuing adventure of human exploration, discovery and achievement. The center has played a vital role in powering our country into the 21st century through technological innovations and scientific discoveries. The Johnson Space Center was established in 1961 as the Manned Spacecraft Center, the home and Mission Control Center for the U.S. human space flight program. In 1973, it was renamed in honor of the late President, and Texas native, Lyndon B. Johnson. The Johnson Center's \$1.5 billion complex occupies 1,620 acres southeast of downtown Houston, in the Clear Lake area.



Technical Paper List With All Authors

Galveston, Texas, USA: 19–22 September 2021

Author(s)	Organization(s)	Title
Brandon Lampe	WSP	Developments on the Relationship Between
Jerry Smart	Fluor Federal Petroleum Operations, LLC	Improvements to Mechanical Integrity Testing Equipment at the U.S. Strategic Petroleum Reserve
Biao Qiu	Agapito Associates	Transient Heat Transfer Analysis and Temperature Modeling for Solution Mining Caverns
Alessandra Simone	GHD Services Inc.	Preparing for a Hydrogen Future – Constraints and Alternatives for Hydrogen Storage
Brandon Schwartz Duc Nguyen	John and Willie Leone Family Department of Energy and Mineral Engineering –The Pennsylvania State University	Techno-economic analysis of enhanced performance of large-scale wind power generation using underground hydrogen storage
Murad Abuaiasha	Mines ParisTech	Non-isothermal two-phase hydrogen transport in rock salt during cycling in underground caverns
Kurt Loeffl ¹ , Chris Thompson ²	(1) Texas Brine Co. (2) 4C Exploration Ltd.	Updated Geologic Interpretation of White Castle Salt Dome Based Upon Recent Remapping of the Dome Integrated with Cavern Well Data
Chris Thompson ² , Kurt Loeffl ¹	(1) Texas Brine Co. (2) 4C Exploration Ltd.	Quantification of Seismic Imaging Accuracy using Reverse Time Migration at White Castle Salt Dome, Iberville Parish, Louisiana
Steven Sobolik	Sandia National Laboratory	Effect of the Addition of a Low Equivalent Stress Creep Mechanism to the Analysis of Geomechanical Behavior of the SPR West Hackberry Site
Sophie Minas	WSP	Hydrogen Salt Cavern Design
Mike Farris	Lonquist	Contractor Risk Management xFactor
Yfantis G., Hasselkus F., Passaris E., McMichael C., Slingsby J.	Atkins (SNC-Lavalin Group)	Optimising cavern decommissioning budget focusing on cushion gas volume extrapolation
Benoît Brouard ¹ , Vassily Zakharov ¹ , Pierre Bérest ²	(1) Brouard Consulting, Paris, France; (2) Ecole Polytechnique, Palaiseau, France	Creep-closure rate and induced subsidence in a cluster of salt caverns
John Runciman, Jueren Xie	C-FER Technologies	Assessing Casing Deformations in Salt Cavern Storage Wells Using Multi-finger Caliper Data Analysis
Bill Goodman		A Phoenix Rises from the Ashes: Birth of the International Salt Company Following the Demise of the National Salt Company Monopoly
Brandon Bartosh	Intrepid Potash - Moab LLC	An updated history of Solution Mining at the Cane Creek Mine, Moab, UT - 2006 to 2021
Kellie McNamara	LaDNR	LaDNR Regulatory Update
Arnaud Reveillere	Geostock	Teutschenthal - 1988 ethylene leakage