Los Angeles Basin Section
Society of Petroleum Engineers

Recipient of the SPE President's Section Award for Excellence & a SPE Gold Standard Section

A Message from the Chair

Carbon Capture, LNG exports, Global Energy Transition, Energy Storage

Dear Colleagues,

As January dawns upon us, it's an opportune moment to reflect on the latest developments in our industry. Sustainability, technological advancements, and global energy transitions continue to shape our journey.

In Kern County, California, there's an exciting development - the unveiling of the state's first review of a carbon capture and sequestration project. This is a significant step toward mitigating carbon emissions. Additionally, the U.S. EPA has released draft Class VI permits for CRC's Carbon TerraVault project, which involves CO_2 injection and storage in California. These initiatives underscore the growing importance of CCUS in our efforts to combat climate change. South America is making strides in carbon capture and storage (CCS) legislation. Brazil is moving toward becoming the first South American nation to pass CCS legislation, demonstrating the increasing recognition of carbon capture and storage as a vital tool in reducing emissions worldwide.

The United States became the top LNG exporter in 2023 and is poised to maintain record levels in 2024 highlighting the continued global demand for natural gas and its role in the energy mix. Looking globally, Africa is on track to surpass Europe in geothermal capacity by 2030.

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LASPE Website
connect.spe.org/LosAngelesBasin/Home

The LASPE Technology in Person Meeting
will be Tuesday Jan 9th at 11:30AM, at The Navy Golf Course in Cypress
"Industry-University Collaboration to Meet Geologic CO2 Storage Needs During Energy Transit"
presented by Professor Behnam Jafarpour, USC

See page 3 for Details

This trend highlights the global shift toward renewable energy sources, and it's crucial that we stay informed and engaged in this transition.

Machine learning and engineered materials are making waves in carbon storage well integrity, showcasing innovative solutions applied in our industry. Energy storage technologies are becoming key enablers for renewable energy. Understanding the role of storage solutions in the broader energy landscape is essential for our industry's future.

These developments emphasize the ever-evolving nature of our field and the need for us to adapt and innovate continuously. I encourage all of you to stay engaged with these topics and consider how they might shape your work and career.

Thank you for your continued dedication to the LA Basin Section of SPE. Together, we can drive positive change in our industry and contribute to a sustainable and energy-efficient future.

Sincerely,

Andrew López
SPE LA Basin Section Chair 2020-2024
aslopez@burnsmcd.com

The SPE LA Basin Golf Tournament will be held on May 3rd at The Navy Course in nearby Cypress. CA. This year it's a shotgun start!! See page 9 of the newsletter for details and registration

Society of Petroleum Engineers
Los Angeles Basin Section
www.laspe.org

THE DECEMBER SPE TECHNOLOGY LUNCHEON

Tuesday January 9th 11:30 AM

LOCATION: THE NAVY GOLF COURSE 5660 Orangewood Ave, Cypress, CA

Speaker: Professor Behnam Jafarpour, University of Southern California

Industry-University Collaboration to Meet Geologic CO2 Storage Needs During Energy Transit

Lunch Price: $25.00 (Students $10) Make your Lunch Selection from Menu Below
Cash or Check RSVP with the Number of your selection & Side Dish to:
tcfrankiewicz@gmail.com

Credit Card RSVP make your Lunch Selection on the Zeffy Web Site using the following link:

https://www.zeffy.com/en-US/ticketing/aee105fd-2606-4e52-b122-a18dbfb59a5c

Lunch Menu Selections for SPE Technology Luncheon

•Selections are served with Choice of French Fries, Sweet Potato Fries, Cottage Cheese, Cole Slaw or Green Salad

1. **California Burrito**
   a. Carne Asada, Pico de Gallo, Cheese, Avocado Spread, Fries, Jalapeño Crema, Flour Tortilla
2. **Baja Style Fish Tacos**
   a. Corn Tortillas, Cod, Lime Cilantro Slaw, Cotija Cheese, Jalapeño Lime Sauce
3. **Grilled Chicken Sandwich**
   a. Chicken, Monterey Jack Cheese, Applewood Bacon, Lettuce, Tomato, Chipotle Aioli, Sourdough
4. **Pulled Mushroom Tacos**
   a. [Vegan] Portobello Mushroom, Shiitake, Onions, Cilantro and Mexican Spice, Tortilla with Pickled Onions and Garlic Lime Sauce (Does Not Include Side)
5. **Cubano Sandwich**
   a. Ham, Carnitas, Pickles, Swiss Cheese, Hoagie Roll

Industry-University Collaboration to Meet Geologic CO2 Storage Needs During Energy Transition

Abstract:

Geologic CO2 storage (GCS) is recognized as a feasible approach to curbing CO2 emissions and achieving climate change mitigation goals during the transition to cleaner energy sources. The safe and effective deployment of commercial GCS requires advancements in various technological fronts, encompassing robust site screening and selection, accurate multi-physics modeling and prediction, cost-effective monitoring and verification, as well as efficient and dependable risk assessment and management workflows. Successful GCS implementation also hinges on strategic workforce development and outreach plans. To confront the challenges associated with GCS deployment it is imperative to form collaborative research programs across diverse disciplines in partnership with key stakeholders from industry and government. In this talk, I will present an overview of our recent initiative to establish a National Science Foundation Industry-University Collaborative Research Center (IUCRC), entitled CO2 Storage Modeling, Analytics, and Risk Reduction Technologies (CO2-SMART). CO2-SMART is a collaboration between USC and Penn State that aims to create a multidisciplinary research and technology development program that aims to address GCS deployment challenges through industry-driven research, workforce development, and outreach activities. I will present example projects to illustrate how recent advances in AI can be combined with domain knowledge to develop efficient modeling and decision support tools for GCS implementation.

Bio for Prof Jafarpour:

Behnam Jafarpour is a Professor in the Mork Family Department of Chemical Engineering and Material Science at the University of Southern California, with joint courtesy appointments in the departments of Electrical and Compute Engineering-Systems and Civil and Environmental Engineering. His research lab, the Subsurface Energy and Environmental Systems, focuses on developing new technologies for improved characterization, forecasting, and management of subsurface energy and natural resources by integrating advanced system-theoretic and machine learning techniques with fluid flow and transport modeling in porous media. Dr. Jafarpour received his Ph.D. and S.M. degrees in Civil and Environmental Engineering and Electrical Engineering and Computer Science, respectively, from MIT in 2008. He is a distinguished SPE member and the Energy Simulation Industrial Research Chair in Subsurface Energy Data Science. He serves as Associate Editor for Computational Geosciences and is on the Editorial Board of Mathematical Geosciences. Dr. Jafarpour is the Principal Investigator of the NSF-IUCRC Planning Grant to establish the CO2-SMART Center and serves as the Associate Director of the USC Ershaghi Center for Energy Transition.

THE January SPE TECHNOLOGY LUNCHEON

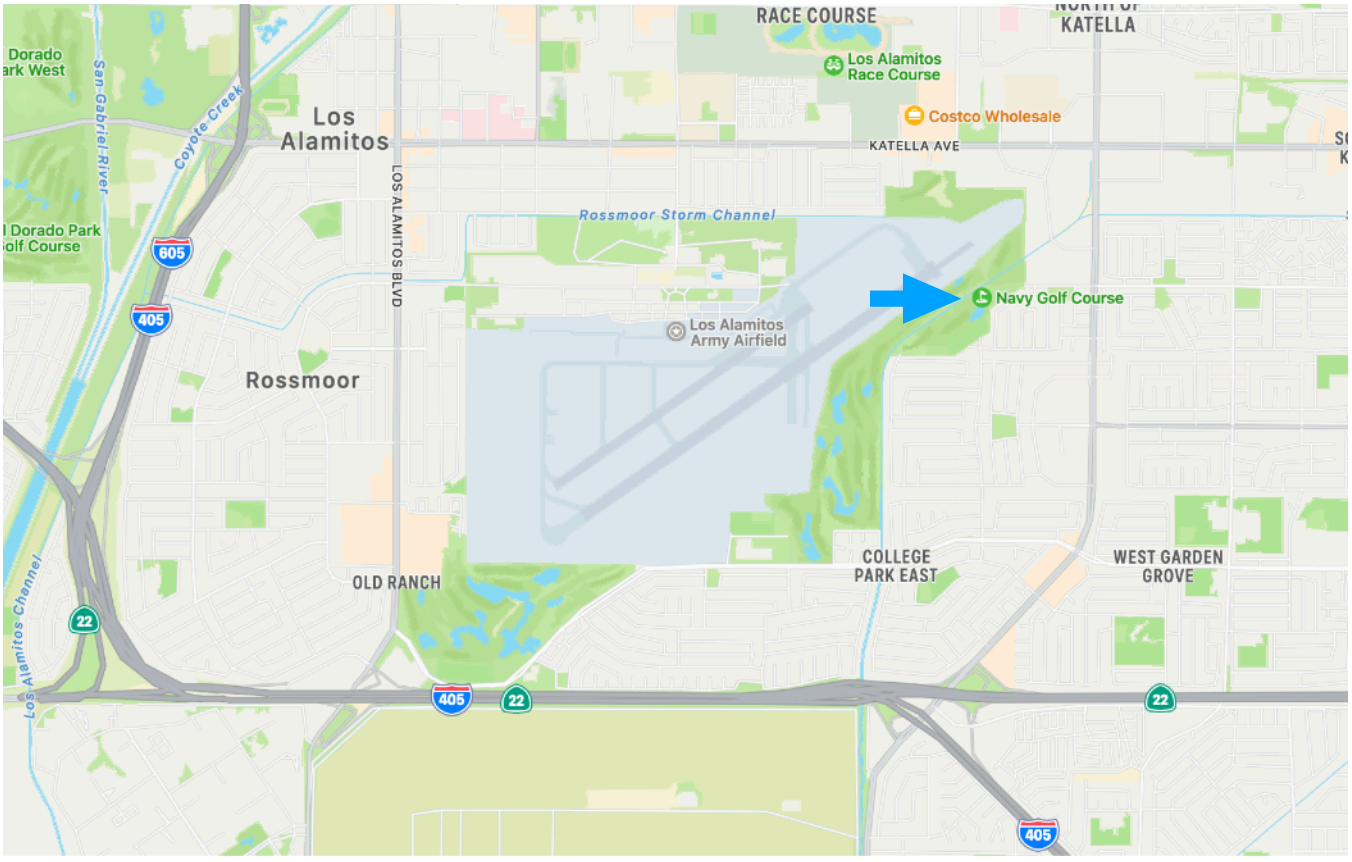
Tuesday January 9th 11:30 AM

LOCATION: THE CLUBHOUSE AT THE NAVY GOLF COURSE
5660 ORANGEWOOD AVE. CYPRESS, CA 90630

DIRECTIONS:

From the 605 Freeway---
•Exit and go East on Katella
•Turn South onto Valley View
•Turn West onto Orangewood & you're there!

From the 405 or the 22 Freeways---
•Carefully Follow Freeway signs to
•Exit at Valley View / Bolsa Chica
•Go North on Valley View for 1 mile
•Turn West onto Orangewood & you're there!



SPE LA BASIN SCHOLARSHIP GOLF TOURNAMENT

May 3, 2024 – FRIDAY

The Navy "Destroyer" Course
5660 Orangewood Ave., Cypress, CA 90630

CHECK IN: 07:00 to 07:45

08:00 SHOTGUN START

REGISTER AT https://spelabasingolf.com

INCLUDES RANGE BALLS, CART, BUFFET LUNCH, RAFFLE PRIZE TICKETS & MORE

SPONSORSHIPS ARE AVAILABLE

FOR INFORMATION CONTACT
TCFRANKIEWICZ@GMAIL.COM 714-475-8699

...more on Golf

THE SPE LA BASIN SECTION IS A 501(c)(3) NON-PROFIT ORGANIZATION
TOURNAMENT PROCEEDS FUND SPE LA BASIN SECTION SCHOLARSHIPS & OUTREACH PROGRAMS
A PORTION OF YOUR REGISTRATION MAY BE TAX DEDUCTIBLE

SPE International — Los Angeles Basin Section

INDIVIDUAL PLAYERS:		**$ 200**
FOURSOME:	4 PLAYERS	**$ 800**
PAR package:	4 PLAYERS + TEE SPONSORSHIP + 5 RAFFLE TICKETS/PLAYER	**$1000** Save $130
BIRDIE package:	8 PLAYERS + TEE SPONSORSHIP + 5 RAFFLE TICKETS/PLAYER	**$1800** Save $210
EAGLE package:	12 PLAYERS + TEE SPONSORSHIP + 10 RAFFLE TICKETS/PLAYER	**$2800** Save $330

RAFFLE TICKETS: $5 each, $20 for 5-tickets

****BUFFET LUNCH & ON-COURSE SOFT DRINKS INCLUDED FOR ALL PLAYERS****

SPONSORSHIPS:

- **TEE SPONSORSHIP: $ 250 (18 Available)**
- **REFRESHMENTS SPONSOR: $ 500 (2 Available)**
- **LUNCH SPONSORSHIP: $1000 (3 Available)**
- **SCHOLARSHIP SPONSOR: $ 500 to $2000**

****Raffle Prize donations are greatly appreciated****

Please visit the Tournament Website for Registration and Sponsorship opportunities

https://spelabasingolf.com

For golf tournament questions contact
TCFRANKIEWICZ@GMAIL.COM 714-475-8699

SPE STUDENT CHAPTER REPORT

USC SPE Chapter January Report

SPE International
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USC

USC SPE Chapter Seminar

Topic: Transitioning from Student to Engineer

Mr. Dylan Chennault

Mr. Dylan Chennault has embarked on a diverse professional journey at Aera Energy, starting as a production engineering intern in 2019 and progressing to roles such as a data science intern and subsurface reliability engineer. He currently serves as a heavy oil production surveillance engineer. In addition to his contributions at Aera, Mr. Chennault has taken leadership roles as the USC campus lead and executive chair of the LGBT+ Allies ERG. Internally, he teaches courses on SQL and is developing a data science/machine learning course. His educational background includes a BS in Chemical Engineering with a Minor in Accounting from USC (2021) and an MS in Data Science Engineering from UCLA (2024). Mr. Chennault holds a PE petroleum license, showcasing his expertise in the field. His leadership extends to roles such as the President of the USC Society of Petroleum Engineers and positions at the SJV Society of Petroleum Engineers. Additionally, he serves on the board of directors for the Center for Sexuality and Gender Diversity in Bakersfield. Mr. Chennault's professional interests cover ML/AI application in petroleum engineering, efficient operations, safety-conscious cost optimization, energy storage, carbon management, equity and inclusion, and staff development. Outside of work, he enjoys hiking, camping, and international travel.

Date: 01/24/2024
Time: 12:00 PM. PST
Where: Zoom and in-person in RTH 326
Zoom Link: https://usc.zoom.us/j/96528050961
Meeting ID: 965 2805 0961

SELECTED SPE UPCOMING EVENTS 2023-2024

Jan 9* 2024	**Professor Jafarpour, USC Department of Engineering Industry-University Collaboration to Meet Geologic CO2 Storage Needs During Energy Transit**
Feb 12,* 2024	**LASPE Distinguished Lecturer Rawdon Seager Carbon Capture and Storage and the CO2 Storage Resources Management System (SRMS)**
April 14 - 18 2024	**SPE WRM 2024** Crowne Plaza Hotel, Palo Alto General Chair: Mark McClure, mark@resfrac.com Technical Program Chair: Roland Horne, horne@stanford.edu
May 3 2024	**SPE LA BASIN SHCOLARSHIP GOLF TOURNAMENT** MAY 3 at the Navy "Destroyer" Golf Course 7:00 -7:30 AM Check in, 8 AM Shotgun Start
	* Asterisk * on a date indicates a Board of Directors meeting starts at 10:30 am prior to Petroleum Technology Luncheon. All are welcome to attend.

DEADLINES FOR NEWSLETTER ARTICLE SUBMISSION

Month Published	1st Submission Call	Last Submission Call	No Submissions Accepted After	Newsletter Publish Date
Feb	1/15	1/22	1/25	2/1
Mar	2/12	2/19	2/26	3/1
April	3/18	3/25	3/28	4/2

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2023 - 2024 LASPE OFFICERS, BOARD & CONTACTS

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Robert Schaaf	Past Chair - Board Member	rpschaaf@gmail.com
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