SPE WORKSHOP

17-18 SEPTEMBER 2026 | HARBIN, CHINA

CNPC

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SPE workshop

Development and Utilisation of Underground Space

REGISTER TODAY

DEVELOPMENT AND UTILISATION OF UNDERGROUND SPACE

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About the Workshop

SPE Workshop: Development and Utilisation of Underground Space

The development and utilisation of underground space is being driven by advances in integrated subsurface development, including the design and operation of multi-use storage hubs, CO2 plume migration and containment, reservoir characterisation and injectivity optimisation.

This workshop will feature three core technical themes: construction and operation of natural gas underground storage; advancements in Carbon Capture, Utilisation, and Storage (CCS/CCUS) technologies; and development of new-type underground storage (including other gases, hydrogen, geothermal energy, oil, minerals, etc.). It will address critical challenges including subsurface uncertainty, storage capacity estimation, containment risks, regulatory and liability frameworks and economic viability.

UNLOCK EXPERT INSIGHTS on geological sequestration and emerging underground storage technologies to drive scalable, sustainable solutions.

ACCELERATE COLLABORATION and knowledge exchange to foster long-term partnerships and coordinated progress in underground space utilisation.

HARNESS DIGITAL AND AI innovations to improve subsurface decision-making, boost operational efficiency and optimise storage performance.

EXPAND YOUR PROFESSIONAL NETWORK by connecting with international energy experts, researchers, and subject matter experts.

Who Should Attend?

- ASSET INTEGRITY
- CCS/CCUS
- DATA INTEGRATION AND MODELLING
- DIGITAL AND DATA SCIENCE
- DRILLING AND COMPLETIONS
- GEOMECHANICS
- GEOPHYSICS: MODELLING, IMAGING, INTERPRETATION AND PROCESSING
- GEOSCIENCE
- HYDROGEN
- INTEGRATED RESERVOIR CHARACTERISATION, MODELLING AND SIMULATION
- MEASUREMENT, MONITORING AND VERIFICATION (MMV) SOLUTIONS
- PRODUCTION AND OPERATION MANAGEMENT
- PRODUCTION ENGINEERING AND TECHNOLOGY
- REGULATORS / POLICY MAKERS
- RESEARCH, DEVELOPMENT AND ACADEMIA
- RESERVOIR ENGINEERING
- SUBSEA AND SUBSURFACE MANAGEMENT
- WELLS MANAGEMENT

OUR COMMITTEE MEMBERS

Take a look at Committee Members from well-known organisations in the industry

NOT AN SPE MEMBER?

Join SPE today and receive a discounted registration rate for this workshop and other SPE events.

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Programme Schedule

THURSDAY, 17 SEPTEMBER 2026	
0800 – 0850 hours	Registration and Welcome Refreshments
0850 – 0900 hours	Safety Announcement
0900 – 1000 hours	**Welcome Remarks and Keynote Address**
1000 – 1030 hours	Group Photo/Coffee and Tea Break
1030 – 1100 hours	**Expert Presentation I**
1100 – 1130 hours	**Expert Presentation II**
1130 – 1200 hours	**Expert Presentation III**
1200 – 1400 hours	Networking Luncheon
1400 – 1530 hours	**Panel Session 1: Cutting-Edge Technology Trends in Diversified Underground Space Utilisation**
1400 – 1530 hours	**Technical Session 1: Optimisation Technologies for Enhanced Storage Performance in Complex Geological Conditions**
1530 – 1600 hours	ePoster Session 1/Coffee and Tea Break
1600 – 1730 hours	**Technical Session 2: Design Technologies for New Types of Underground Gas Storage Facilities**
1600 – 1730 hours	**Technical Session 3: Integrated Geology-Engineering Modelling and Simulation Technologies for Underground Gas Storage**
1800 hours onwards	Welcome Dinner

FRIDAY, 18 SEPTEMBER 2026	
0800 – 0900 hours	Registration and Welcome Refreshments
0900 – 1030 hours	**Panel Session 2: Business Models and Policy Orientations for Diversified Underground Space Utilisation**
0900 – 1030 hours	**Technical Session 4: Fundamental Theories and Key Technologies for CO2 Flooding Utilisation**
1030 – 1100 hours	ePoster Session 2/Coffee and Tea Break
1100 – 1230 hours	**Technical Session 5: Advanced Reservoir Characterisation, Trapping Mechanisms, and Storage Optimisation for CO2 Sequestration**
1100 – 1230 hours	**Technical Session 6: AI-Enabled Digital and Intelligent Evaluation and Operations for Underground Space Utilisation**
1230 – 1400 hours	Networking Luncheon
1400 – 1530 hours	**Technical Session 7: Long-Term Integrity, Monitoring, and Containment Assurance for CO2 Geological Storage**
1400 – 1530 hours	**Technical Session 8: Technological Progress and Practical Applications in the Construction of New Types of Underground Storage**
1530 – 1600 hours	ePoster Session 3/Coffee and Tea Break
1600 – 1730 hours	**Technical Session 9: Current Status and Development Trends in Comprehensive Underground Space Utilisation**
1600 – 1730 hours	**Technical Session 10: Advances in Simulation Studies on Storage Mechanisms for New Types of Underground Storage**
1730 – 1800 hours	**Workshop Summary and Closing Remarks**
1800 hours onwards	Networking Dinner

REGISTER TODAY

VIEW FULL TECHNICAL PROGRAMME

Visit our website to view full technical programme today!

SAVINGS AVAILABLE

Early Bird and Group Registration Savings Available.

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Thursday, **17** September 2026

0900 - 1000
Welcome Remarks

OPEING ADDRESS
Jennifer L. Miskimins
2026 SPE President
Head of Petroleum Engineering Department
Colorado School of Mines

WELCOME REMARKS
DOU Lirong
Workshop Co-chair
Academic Chair of SPE Beijing Section
Research Institute of Petroleum Exploration and Development (RIPED), CNPC

KEYNOTE ADDRESS
LYU Weifeng
Vice President
Research Institute of Petroleum Exploration and. Development (RIPED), CNPC

KEYNOTE ADDRESS
Joris Grimbergen
Vice President, Development & Subsurface LNG & CCS, **Shell**

1000 – 1030 | GROUP PHOTO/COFFEE AND TEA BREAK

1030 – 1100
EXPERT PRESENTATION I

1100 – 1130
EXPERT PRESENTATION II

1130 – 1200
EXPERT PRESENTATION III

1200 – 1400 | NETWORKING LUNCHEON

1400 – 1530
PANEL SESSION 1: CUTTING-EDGE TECHNOLOGY TRENDS IN DIVERSIFIED UNDERGROUND SPACE UTILISATION
Session Moderator: LI Qun, **CNPC**
This panel will explore emerging technology trends in underground space development, sharing lessons learnt, best practices, and pathways to accelerate storage and utilisation solutions for energy security, advance decarbonisation, and support sustainable development.

1400 – 1530
TECHNICAL SESSION 1: OPTIMISATION TECHNOLOGIES FOR ENHANCED STORAGE PERFORMANCE IN COMPLEX GEOLOGICAL CONDITIONS
Session Manager: Martin PANG, **Shell**
This session will explore technologies to optimise underground storage performance in complex geological settings, covering reservoir characterisation, injection strategies, pressure management, monitoring, and approaches to improve storage efficiency and integrity.

1530 – 1600 | EPOSTER SESSION 1/COFFEE AND TEA BREAK

1600 – 1730
TECHNICAL SESSION 2: DESIGN TECHNOLOGIES FOR NEW TYPES OF UNDERGROUND GAS STORAGE FACILITIES
Session Manager: WANG Tongtao, **Chinese Academy of Sciences**
This session will uncover technologies and engineering approaches for developing underground storage facilities, focusing on innovative designs, optimisation, performance evaluation, and solutions that enhance safety, efficiency, and storage reliability.

1600 – 1730
TECHNICAL SESSION 3: INTEGRATED GEOLOGY-ENGINEERING MODELLING AND SIMULATION TECHNOLOGIES FOR UNDERGROUND GAS STORAGE
Session Managers: GUI Feng, **Baker Hughes**; FU Anqing, **CNPC Tubular Goods Research Institute**
This session will highlight advances in integrated modelling and simulation technologies for underground gas storage, covering reservoir characterisation, storage performance optimisation, and integrity assessment to enable safe, reliable, and efficient operations.

1800 ONWARDS | WELCOME DINNER

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Friday, **18** September 2026

0900 – 1030

PANEL SESSION 2: BUSINESS MODELS AND POLICY ORIENTATIONS FOR DIVERSIFIED UNDERGROUND SPACE UTILISATION

Session Moderator: Léon Beugelsdijk, **Shell**

This panel will explore how policy and business innovation can unlock underground space as a strategic infrastructure asset, covering commercial models, investment mechanisms, regulatory frameworks, carbon markets, strategic storage policies, and cross-border collaboration.

0900 – 1030

TECHNICAL SESSION 4: FUNDAMENTAL THEORIES AND KEY TECHNOLOGIES FOR CO2 FLOODING UTILISATION

Session Managers: YUAN Bin, **China University of Petroleum-East China (UPC)**; JIA Ninghong, **RIPED, CNPC**

This session will focus on advances in CO2 flooding utilisation technologies, covering enhanced oil recovery, reservoir optimisation, flow assurance, and storage integrity assessment to support efficient resource utilisation and carbon management.

1030 – 1100 | EPOSTER SESSION 2/COFFEE AND TEA BREAK

1100 – 1230

TECHNICAL SESSION 5: ADVANCED RESERVOIR CHARACTERISATION, TRAPPING MECHANISMS, AND STORAGE OPTIMISATION FOR CO2 SEQUESTRATION

Session Managers: GUI Feng, **Baker Hughes**; FAN Yilin, **Colorado School of Mines**; CUI Boyu, **Falkor**

This session will showcase advances in CO2 storage technologies, covering reservoir characterisation, trapping mechanisms, storage optimisation, mineralisation, well integrity assessment and innovative storage pathways to support secure and efficient carbon sequestration.

1100 – 1230

TECHNICAL SESSION 6: AI-ENABLED DIGITAL AND INTELLIGENT EVALUATION AND OPERATIONS FOR UNDERGROUND SPACE UTILISATION

Session Managers: LI Jianjun, **PipeChina Energy Storage Technology Co., Ltd.**; LAI Xin, **RIPED, CNPC**

This session will explore AI-enabled digital technologies for underground space utilisation, covering uncertainty analysis, intelligent modelling, optimisation, automation, and data-driven approaches to improve subsurface evaluation and operational performance.

1230 – 1400 | NETWORKING LUNCHEON

1400 – 1530

TECHNICAL SESSION 7: LONG-TERM INTEGRITY, MONITORING, AND CONTAINMENT ASSURANCE FOR CO2 GEOLOGICAL STORAGE

Session Managers: GUI Feng, **Baker Hughes**; FAN Yilin, **Colorado School of Mines**; CUI Boyu, **Falkor**

This session will address long-term CO_2 storage integrity, covering well integrity, containment assurance, monitoring, risk assessment, and digital technologies to enhance the safety and reliability of geological storage projects.

1400 – 1530

TECHNICAL SESSION 8: TECHNOLOGICAL PROGRESS AND PRACTICAL APPLICATIONS IN THE CONSTRUCTION OF NEW TYPES OF UNDERGROUND STORAGE

Session Manager: FENG Yongcun, **China University of Petroleum-Beijing (CUP)**

This session will examine advances in new underground storage technologies, including CO2 and hydrogen storage, salt cavern energy storage, reservoir engineering, well integrity, geomechanics, and engineering applications.

1530 – 1600 | EPOSTER SESSION 2/COFFEE AND TEA BREAK

1600 – 1730

TECHNICAL SESSION 9: CURRENT STATUS AND DEVELOPMENT TRENDS IN COMPREHENSIVE UNDERGROUND SPACE UTILISATION

Session Manager: WANYAN Qiqi, **RIPED, CNPC**

This session will explore emerging developments in underground space utilisation, including energy storage, geothermal repurposing of depleted reservoirs, sustainable waste management, hydrogen generation, and innovative subsurface technologies.

1600 – 1730

TECHNICAL SESSION 10: ADVANCES IN SIMULATION STUDIES ON STORAGE MECHANISMS FOR NEW TYPES OF UNDERGROUND STORAGE

Session Managers: LIU Yuxuan, **Southwest Petroleum University**; ZHAO Yulong, **Southwest Petroleum University**

This session will explore simulation and modelling of underground storage mechanisms, including hydrogen and CO2 storage, compressed air energy systems, subsurface transport behaviour and reservoir performance evaluation to improve long-term storage reliability.

1730 – 1800 | WORKSHOP SUMMARY AND CLOSING REMARKS

1800 ONWARDS | NETWORKING DINNER

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Sponsorship support of the event helps offset the cost of producing workshops and allows SPE to keep the attendance price within reach of operation level-individuals, those who benefit most from these technical workshops.

Sponsors benefit both directly and indirectly by having their names associated with a specific workshop. While SPE prohibits any type of commercialism within the workshop room itself, the Society recognises that sponsoring companies offer valuable information to attendees outside the technical sessions.

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Complimentary Full Workshop registrations	10	6	3	1
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Company logo in all workshop Mobile App attendee emails	✓	✓	✓	✓
Company logo listed on workshop brochure	✓	✓	✓	✓
Option to display one company bunting**	✓	✓	✓	✓

*Include 1 Oblong Table + 2 Chairs
**Company to provide bunting

Sponsorship packages are offered on a first-come, first-served basis. Please contact Renee Wong at rwong@spe.org to verify the availability of a particular sponsorship package.

Enhance Brand Identity

Enhance and strengthen your brand identity to a targeted audience

Maximise Visibility

Expand and maximise your brand and organisation's visibility and longevity at the event in-person and on the mobile app

Reinforce Relationships

Reinforce your organisation's relationships with key industry practitioners

Demonstrate Commitment

Demonstrate your commitment to the industry through support

Who We Are

SPE is the largest individual member organisation serving managers, engineers, scientists and other professionals worldwide in the upstream segment of the oil and gas industry.

The Society of Petroleum Engineers (SPE) is a not-for-profit organisation. Income from this event will be invested back into SPE to support many other Society programmes. When you attend an SPE event, you help provide even more opportunities for industry professionals to enhance their technical and professional competence. Scholarships, certification, the Distinguished Lecturer programme, and SPE's energy education programme Energy4Me® are just a few examples of programmes supported by SPE.

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Workshops offer sponsors unique access to a focused group of key decision-makers in the oil and gas industry. While SPE prohibits any type of commercialism within the workshop itself, it recognizes that sponsoring companies offer valuable information to attendees.

For a detailed list of available sponsorships, including benefits and pricing, contact Renee Wong at **rwong@spe.org.**

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