Copenhagen Section
Solutions. People. Energy.℠

SOCIETY OF PETROLEUM ENGINEERS
SPE NEWS
COPENHAGEN SECTION

FROM THE SECTION CHAIRMAN

DEAR SPE MEMBERS AND STUDENTS,

The 2025/2026 season is coming to an end for the SPE Copenhagen Section, and it has been an interesting and active year.

We began the season with a gathering at Kirsten Piils in Dyrehaven, north of Copenhagen, where we honored Professor Alexander Shapiro from *DTU Chemical Engineering* for his valuable contributions to the Section as Faculty Chair.

In September, *Innargi* hosted SPE Distinguished Lecturer Pejman S. Omrani from *TNO* in the Netherlands. Pejman gave an inspiring presentation on how the integration of digital tools and models can improve the production and operation of geothermal systems. He showed how AI and machine learning can be used with real-time production data and unstructured information to support better operational decisions. In the future, we will see much more data-driven decision-making, not only in geothermal energy but also in oil and gas.

Distinguished Lecturer Samba Ba

On September 1, 2026, *Distinguished Lecturer* Samba Ba will visit SPE Copenhagen to present "Building an Industry 4.0 Agentic AI for Autonomous Directional Drilling." The abstract is available on SPE.org. Continuing the AI theme, SPE has also developed a fine-tuned AI model, and on May 18, 2026, a deep-dive webinar on the new EnRG-LLM was shown on SPE EnergyStream. The recorded webinars can be found on SPE EnergyStream.

In October, we had a memorable and suitably scary *Halloween* experience at *DTU Offshore*, where their advanced laboratory facilities were presented through a Halloween Murder Mystery. The tour included coreflooding, AFM, QEMScan, FTIR spectroscopy, mass spectrometry, chromatography, dynamic high-resolution micro-CT scanning, capillary electrophoresis, fluorescence and MOF-based sensors, NMR, XRD, X-ray microtomography, and scale production laboratories.

More advanced technology was presented to us at *Welltec* in Allerød in December, where we were brought up to date on the robotic technologies used in fishing operations. It is incredible to see how interactive and efficient fishing operations can be today, using robots and real-time measurements. Over the years, Welltec has generously given SPE Copenhagen members and students several laboratory tours, and every time we see something new. This year, they showed us a tool capable of assembling components with one-micron accuracy.

After the New Year, we continued with more laboratory visits. *NOV* gave our members a guided tour of their facilities in Brøndby. The materials science involved in the design of subsea production systems is impressive. NOV's flexible pipes, for example, are designed for high temperatures of up to 130°C, high pressures of up to 621 bar, water depths of 2,500 meters, and highly dynamic marine environments.

In March, *BlueNord* kindly hosted a meeting where we received an update on the key geopolitical movements and market fundamentals shaping global energy markets. Joachim Kjendlie from *Rystad Energy* presented perspectives on oil and gas demand and supply, as well as emerging trends in renewables and low-carbon energy. Joachim also presented Rystad's forecast on how the

closure of the Strait of Hormuz could affect oil prices. His forecast proved to be more or less spot on, as we have seen a significant increase in oil prices while the closure has continued. BlueNord's Lucile Franoux also gave an inspiring talk on how oil and gas operators work with Scope 1, 2, and 3 emissions.

Speaking of emissions, *TotalEnergies* has made significant progress with Project Bifrost, which aims to position the Danish North Sea as part of a European CCS hub. Esbern Hoch, Asset Manager for Bifrost Phase 2 & Midstream at TotalEnergies Denmark, took us through key developments in offshore CO_2 storage, including project maturation, collaboration across the CCS value chain, and the broader vision for the Danish North Sea.

For our final meeting of the season, we will welcome *Distinguished Lecturer* Diego A. Vazquez Anzola, Managing Director of *APES – Energy Evolution*, a project development and decarbonization consulting firm. He will speak about the crucial importance of selecting suitable geological sites for CO_2 storage.

In addition, Mette Furstnow, former SPE CPH Board member and Project Greensand Manager at *INEOS* Energy, will present how years of preparation have helped Project Greensand manage the uncertainties of an emerging CO_2 storage market. This work has included validation of the offshore storage site, CO_2 pilot injection, cross-industry agreements with emitters, close collaboration with authorities on storage site applications and permitting, third-party certifications, engineering, and construction. Together, these efforts have prepared the project for CO_2 injection operations.

We will also hold ***the AGM on 10 June*** at *INEOS*, where we will elect the new board for the coming season.

I would like to take this opportunity to thank the board members who are stepping down.

Mette Juncker Brædstrup

Thank you to Mette Juncker Brædstrup for more than 12 years on the SPE Copenhagen Board, including many years as our Treasurer. Mette has kept us on track with calm discipline: sending sponsorship letters, asking for budgets when ideas grew, and gently questioning whether a magician was really needed for the annual party. Her steady work, good judgement, and commitment have meant a great deal to the Section. Thank you, Mette.

Jonathan Hastings

For more than 14 years, Jonathan Hastings has been a trusted and highly valued member of the SPE Copenhagen Section Board. Over the years, he has served as Programme Chairman, Membership Chairman, and Section Advisor, contributing steadily to the Section's activities, continuity, and professional community. We are grateful for his long-standing commitment, his experience, and the dedication he has brought to SPE Copenhagen. Thank you, Jonathan.

Michal Stepien

Thank you to Michal Stepien for his contribution to the SPE Copenhagen Board. During his time on the Board, Michal has brought energy, technical insight, and valuable drilling expertise. We are grateful for his work and wish him all the best going forward.

Natalia Krygier

Thank you to Natalia Krygier for her contribution to the SPE Copenhagen Board. From her earlier work with Young Professionals to her role as Programme Chair, Natalia has helped strengthen our technical programme and bring people together around relevant and engaging meetings. We are grateful for her commitment and wish her all the best going forward.

Warm regards,

Peter Tybjerg
SPE Copenhagen Section Chair

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ONE YEAR IN THE FIELD – REFLECTIONS OF A YOUNG FIELD ENGINEER AT WELLTEC

In the coming month, I will mark my first year as a Field Engineer at Welltec. Looking back, it feels both like yesterday and like a lifetime ago. This first year has been intense, challenging, humbling, and incredibly rewarding — all at the same time.

When I joined Welltec straight out of university, I knew that field engineering would be hands-on and dynamic. What I did not fully appreciate was how transformative it would be — both professionally and personally.



Petros Papadopoulos

FROM THEORY TO REALITY

> University gives you the fundamentals. The field teaches you the rest

As engineers, we spend years solving structured problems with clear inputs and defined solutions. In the field, reality is rarely that tidy. Operations are influenced by weather, logistics, equipment limitations, time pressure, and the unexpected — always the unexpected.

During my first offshore job, I quickly understood that preparation is everything. Tool string assembly, function testing, risk assessments, client meetings — each step matters. There is no "pause button" once operations start. You are part of a chain where every link must hold.

That responsibility can feel heavy at first. But it is also what makes the role so meaningful.

THE PRIVILEGE OF RESPONSIBILITY

> One of the most rewarding aspects of being a Field Engineer is ownership

You are not just analysing a problem from a desk — you are there. You see the operation unfold. You work closely with the client, offshore crews, and your onshore support team. When a job is completed successfully, you feel it deeply because you were part of every stage.

There is something uniquely satisfying about watching a tool perform exactly as intended after hours of preparation. Seeing data come in and confirming that the intervention achieved its objective is a moment of quiet pride that is hard to replicate elsewhere.

Field engineering accelerates growth. In one year, I have learned more about operations, communication, and decision-making under pressure than I imagined possible.

THE HUMAN SIDE OF THE FIELD

> Beyond the technical learning, the people are what make the experience truly special

Working in different countries and on different

installations exposes you to diverse cultures, work styles, and perspectives. Offshore and on-site environments build strong bonds quickly. When you spend long shifts solving problems together, you develop a level of trust and teamwork that is hard to describe.

As a young engineer, being surrounded by experienced supervisors and specialists is an invaluable opportunity. Listening to their stories and absorbing their practical knowledge has been one of the biggest advantages of working in the field.

THE CHALLENGES WE DON'T ALWAYS TALK ABOUT

> Of course, field engineering is not only the highlight reel

The continuous travel can be demanding. Being away from family and friends for extended periods requires adjustment. Plans change last minute. Mobilizations happen quickly. You learn to pack efficiently and to adapt even more efficiently.

Fatigue management, maintaining routines, and staying connected to your personal life become conscious efforts rather than automatic habits.

There are also operational pressures. When things do not go according to plan — and sometimes they do not — the responsibility feels very real. You must remain calm, analytical, and solution-oriented. These moments are challenging, but they are also where the most growth happens.

The field does not just test your technical competence. It tests your resilience.

WHY I WOULD CHOOSE IT AGAIN

> Despite the challenges – or perhaps because of them – I would choose this path again without hesitation

Field engineering has given me confidence. It has pushed me beyond my comfort zone. It has taught me that adaptability is just as important as technical knowledge. Most importantly, it has shown me how impactful our work can be when theory meets execution.

As I approach my one-year anniversary at Welltec, I feel grateful — for the trust placed in me, for the colleagues who have supported me, and for the opportunity to learn every single day.

To students and young professionals considering a field-based role: it is not the easiest path, but it is one of the most rewarding. If you are willing to embrace uncertainty, take responsibility, and continuously learn, the field will shape you into a stronger engineer — and a stronger professional.

Online SPE Meeting

SPE Aberdeen, Copenhagen, Germany and Stavanger is thrilled to invite you to an upcoming online event dedicated to connecting our wider community and showcasing the fantastic work happening across the European SPE Sections.

Whether you are a long-time member, a student, or simply interested in the energy industry landscape across Europe, this event is a unique opportunity to gain cross-regional insights and network with peers.

MAY 27 AT 15:30 | ONLINE MEETING

OPEN TO ALL SPE MEMBERS AND INTERESTED INDUSTRY PROFESSIONALS

During this session, representatives from various ***European SPE Sections*** will deliver 15–20 minute presentations. This is designed as a casual, community-building session where you will get a firsthand look at:

REGIONAL INDUSTRY TRENDS

Discover the leading industry topics dominating different markets. For example, you will hear about Denmark's focus on CCUS, new Field Developments (including HPHT), geothermal energy, and aging offshore infrastructure.

FUTURE OUTLOOKS

Gain valuable perspectives on the general outlook for the energy industry in the coming years across different European regions.

SECTION HIGHLIGHTS

Learn about the demographics, activities, and student chapters that make each regional Section unique.

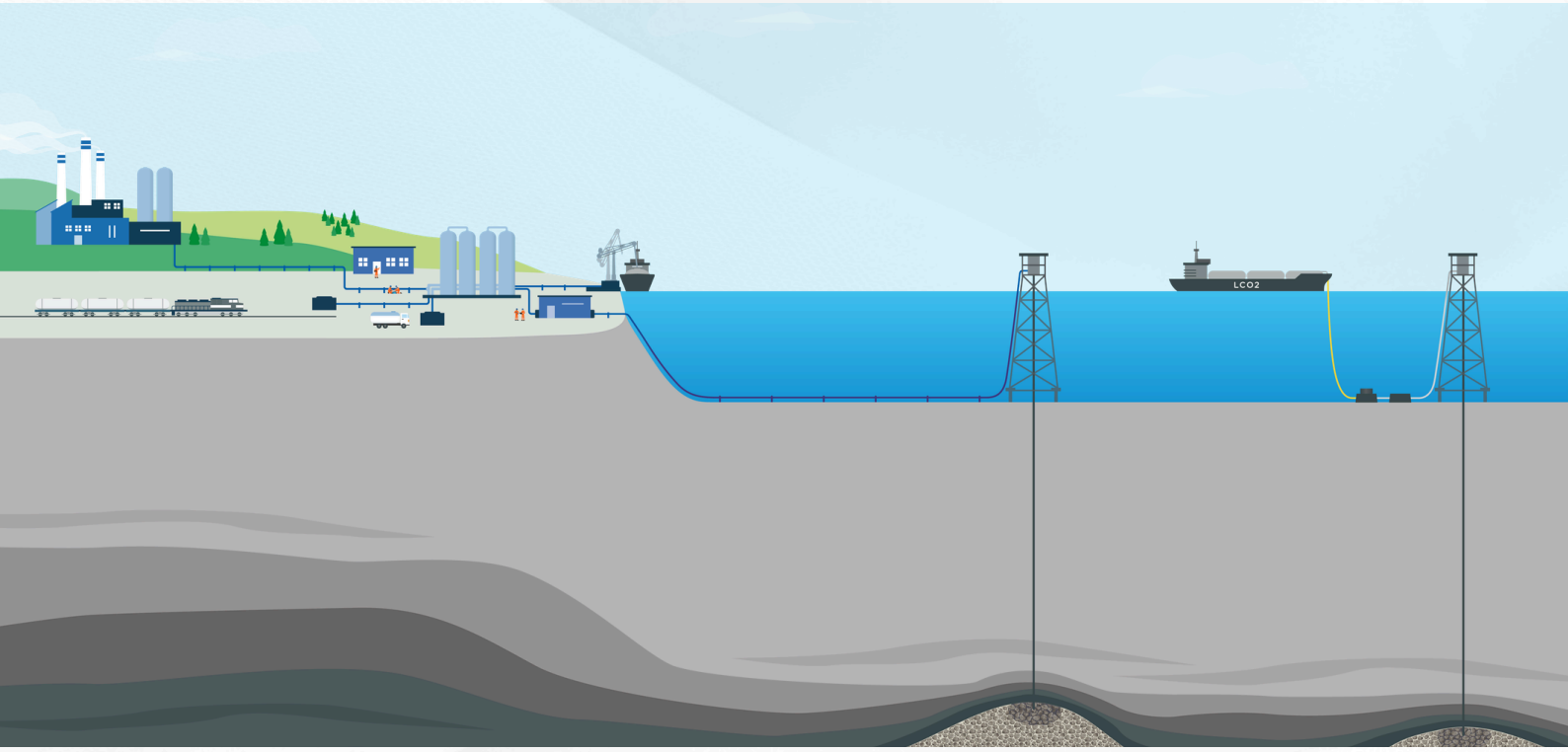
LESSONS LEARNED

Hear what strategies are working best across Europe for community engagement, and discuss the common challenges our industry faces today.

WEDNESDAY, 27 MAY

Join **HERE**

ONLINE MEETING (NO PRIOR REGISTRATION REQUIRED)



PROJECT BIFROST
PIONEERING THE DANISH NORTH SEA IN BECOMING A EUROPEAN CCS HUB

As Europe accelerates efforts to reduce industrial emissions, new infrastructure is needed to manage CO_2 at scale. In Denmark, Project Bifrost is being developed to meet this need - establishing offshore CO_2 storagein the Danish North Sea and helping connect emitters to long-term storage solutions.

Project Bifrost is an integrated Carbon Capture and Storage (CCS) development designed to transport CO_2 from industrial sources and store it permanently deep beneath the seabed. By linking onshore capture with offshore safe storage, the project addresses emissions from sectors where alternatives such as electrification are limited such as cement, petrochemical and waste-to-energy.

Building on decades of offshore experience, the project leverages existing infrastructure, proven subsurface knowledge and Denmark's favorable geological conditions. Depleted oil and gas reservoirs and deep saline aquifers provide the foundation for secure, long-term CO_2 storage.

From North Sea expertise to new value chains

The Danish North Sea has a long history of hydrocarbon production. Project Bifrost builds on this legacy, applying established offshore capabilities to support emerging large-scale CO_2 management solutions.

CO_2 captured from industrial facilities will be transported via ship or pipeline to offshore sites, where it will be injected into geological formations located deep below the seabed. These formations have contained hydrocarbons for millions of years and are carefully assessed to ensure safe and permanent storage.

By reusing existing assets where feasible and

integrating transport and storage systems, the project is designed to enable scalable CO_2 management while optimizing development efficiency.

Phased development toward a European hub

Project Bifrost is being developed in phases, allowing early deployment while enabling expansion as demand grows.

The first phase focuses on the Dagny and Harald storage licenses, where existing infrastructure and well-understood geology support the initial establishment of offshore CO_2 storage. The second phase centers on the Inez license, expanding storage capacity and strengthening the project's role in a wider European CO_2 network.

Through this phased approach, Bifrost is designed to grow in line with market needs and evolving transport networks, supporting emitters not only in Denmark but across Northern Europe, providing storage for up to 15 million tons of CO_2 per year.

Supporting industrial decarbonization

CCS is considered an important solution for emissions that cannot be avoided through other measures. Project Bifrost is therefore designed as an open-access infrastructure, enabling industrial emitters to connect to offshore storage capacity via flexible transport solutions.

With operations targeted early 2030s, the project is expected to store substantial volumes of CO_2 over its lifetime, contributing to emissions in hard to abate industrial sectors.

As an EU-designated Project of Common Interest (PCI), Bifrost plays a strategic role in the development of cross-border CO_2 infrastructure and supports the broader deployment of CCS across Europe.

FACT BOX: PROJECT BIFROST

LOCATION: Danish North Sea

PROJECT TYPE: Offshore CO_2 transport and storage (CCS)

OBJECTIVE: Establish a long-term CO_2 storage hub for Denmark and Northern Europe

PHASES AND OWNERS:

- Phase 1:

Dagny and Harald licenses. Owners: TotalEnergies (operator) 45%, CarbonVault 35% and Nordsøfonden 20%

- Phase 2:

Inez license. Owners: TotalEnergies (operator) 65%, Mitsui 15% and Nordsøfonden 20%

STORAGE CONCEPT: Depleted oil and gas reservoirs and saline aquifers

PLANNED START OF OPERATIONS: Around 2030

ESTIMATED TOTAL STORAGE POTENTIAL: Up to 15 million tons of CO_2 per year

EU STATUS: Project of Common Interest (PCI)

VALUE CHAIN: Capture → transport (pipeline/ship) → safe and permanent offshore storage

www.bifrost-ccs.com

SPE Meeting

SPE Distinguished Lecturer Presentation

Annual General Meeting

Lookback at the 2025/26 season
Finance Statement for approval and budget for 2026/27
Outgoing 2025/26 board
Election of the incoming 2026/27 board

INEOS Presentation on Project Greensand

17:00 -18:00 Networking
18:00 - 19:00 SPE Distinguished Lecturer Presentation by Diego A. Vazquez Anzola
19:00 Sandwiches & drinks
After/During Sandwiches & Drinks: Annual General Meeting followed by a presentation by INEOS on Project Greensand

INEOS

WEDNESDAY, 10 June

Please sign-up no later than 6 June 2026

Register HERE

INEOS OIL & GAS DENMARK | TEKNIKERBYEN 5, 1. SAL.| 2830 VIRUM

CARBON STORAGE RISKS AND COSTS: BUSTING PERCEPTIONS AND MYTHS

Abstract: Carbon Capture and Storage (CCS) has historically faced challenges in achieving commercial-scale success across various regions globally.

The conversation often circles back to pervasive beliefs regarding CCS, namely the assertion that it is excessively risky and costly.

This presentation highlights a range of successful global CCS projects and the diverse business strategies they employ, some of which operate independently of governmental subsidies or carbon pricing.

The adequate and proportionate understanding of the role of Geological CO_2 Storage Regulations and Technical Standards is highlighted, as they are frequently perceived as the primary enablers of the CCS industry.

This lecture will explore the crucial importance of selecting suitable geological sites for CO_2 storage. It will also address operational challenges in managing fluids with unique thermodynamic properties and examine how existing legacy wells, whether repurposed or not, can affect the risk and cost aspects of CO_2 storage projects.

Adequate site selection, operational considerations and the impact of legacy wells are essential aspects associated with successful implementation of CCS at scale. Furthermore, the discussion concludes with reflections on Value generation beyond direct economic revenue, highlighting scalability and maturation time as key performance indicators for CO_2 storage projects.

Biography: With two decades of energy sector experience, Diego has worked on diverse projects, from hydrocarbon exploration to carbon capture and storage (CCS) and sustainable energy solutions. Diego's portfolio includes significant involvement in prominent commercial CCS projects like Northern Lights (Norway), Aramis and Porthos (Netherlands), Endurance (UK), Gorgon (Australia), Prinos (Greece), Lang-Lebah (Malaysia), Arthit (Thailand), and DongHae (South Korea). Diego specializes in translating CO_2 storage regulations into detailed operational plans.

Diego's consulting company collaborates with organizations like Halliburton or SLB, and he is an Advisory Board Member for a New York-listed startup focused on optimizing CC(U)S costs.

SEE DIEGO'S CCS RELATED PUBLICATIONS AND PRESENTATIONS



Diego A. Vazquez Anzola
Principal Decarbonization Strategies & Actions

INEOS PRESENTATION - GREENSAND PROJECT FUTURE

Greensand project Future is approaching CO_2 injection operations. With Denmark's first license for permanent CO_2 storage, we are soon to welcome CO_2 emitters to their new terminal at the Port of Esbjerg, where the purpose-built Carbon Destroyer 1 vessel has just arrived at the quayside.

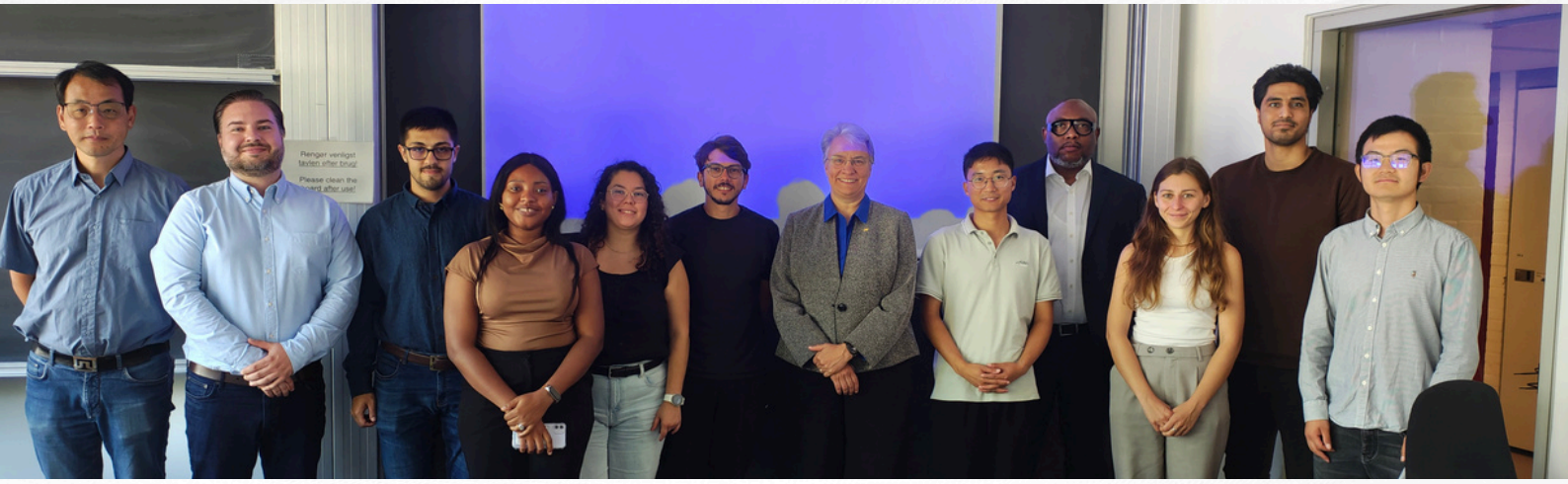
This achievement is the result of years of preparation managing the uncertainties of an emerging CO_2 storage market, including validation of the offshore storage site, CO_2 pilot injection, cross-industry agreements with emitters, close collaboration with authorities on storage site application and permitting, third party certifications, engineering, and construction.

At the SPE meeting, Mette Lind Fürstnow, Project Greensand Manager at INEOS Energy, will share insights into this complex, cross-disciplinary project, which is soon to go live.

CELEBRATING 20 YEARS OF THE SPE DTU CHAPTER



Honoring Our Roots and Embracing the Future



This year marks a major milestone for our community: the ***20th anniversary of the SPE DTU Student Chapter.*** For two decades, the chapter has been a cornerstone for students passionate about subsurface engineering and the energy sector, fostering connections that span from university halls to lifelong careers.

NAVIGATING A SHIFTING LANDSCAPE

This anniversary arrives during a period of significant transition. With the dedicated petroleum engineering program at DTU discontinued and only a few specialized courses remaining on related topics, the student chapter faces a unique set of challenges. However, this shift mirrors the broader evolution of our industry. The future of petroleum engineering is no longer solely about traditional oil and gas. It is rapidly expanding to encompass critical energy transition pillars like CO_2 storage, geothermal energy, and beyond.

A LIFELONG PROFESSIONAL NETWORK

As we look at the evolving curriculum, a vital question arises: How can SPE remain relevant to today's DTU students? The answer lies in our strong alumni network. It is incredibly rewarding to see how many DTU alumni are still active members of the SPE Copenhagen section. This strong retention demonstrates that SPE is not just a student organization, but a professional home. The foundation built in the student chapter seamlessly

transitions into a valuable resource for networking, knowledge sharing, and professional development throughout one's career.

THE ONGOING NEED FOR SUBSURFACE EXPERTISE

Furthermore, we must continue to advocate for the visibility of petroleum-related topics. The core competencies developed in these fields, such as fluid dynamics, reservoir modeling, and drilling technologies, are far from obsolete. They are absolutely critical for executing current and future projects across various sectors, including emissions reduction and sustainable energy extraction. Subsurface expertise remains as vital as ever.

CALL TO ACTION: SHARE YOUR MEMORIES!

As we prepare to officially celebrate this 20-year milestone later this year, we want to hear from you! We are calling on all current and former members to help us build a visual and written history of the chapter. **Please share your photos, personal impressions, and favorite memories from your time in the SPE DTU Student Chapter.** Whether it's from a field trip, a guest lecture, or a social event, your contributions will help us honor our shared history at the upcoming anniversary celebration.

Please send your submissions to

mawir@dtu.dk.







SELECTED UPCOMING SPE EVENTS

23 - 25 Jun 2026
Istanbul, TUR

SPE Europe Energy Conference and Exhibition



15 - 16 September 2026
London, ENG, GBR

IADC/SPE Managed Pressure Drilling & Underbalanced Operations Conference & Exhibition



09 - 11 March 2027
Stavanger, Norway

IADC/SPE International Drilling Conference & Exhibition



20 - 21 April 2027
Aberdeen, SCT, GBR

SPE European Well Integrity Symposium



12 - 13 May 2027
The Hague, Netherlands

ISPE International CCUS Conference



EVENT CALENDAR

27 May | 15:30 - 17:00 | Online

TOPIC	SPE European Collaboration Meeting
Speakers	SPE Copenhagen SPE Aberdeen SPE Germany SPE Stavanger
HOST	SPE Copemhagen | Online

10 June | 17:00 - 21:00 | Face to Face

TOPIC	Carbon Storage Risks and Costs: Busting Perceptions and Myths
Speakers	SPE DL Diego A. Vazquez Anzola
TOPIC	Greensand Project
Speakers	Mette Furstnow
HOST	INEOS | Teknikerbyen 5 | 2830 VIRUM

1 September | TBD | Face to Face

TOPIC	Building an Industry 4.0 Agentic AI for Autonomous Directional Drilling.
Speakers	SPE DL Samba Ba
HOST	TBD



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