Digital Horizons: Energizing Transformation in Oil and Gas, & Beyond

SPEAKER PROSPECTUS

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Accenture	LSU
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GTI Energy	TechnipFMC
IBM Consulting	TECNICAS REUNIDAS
Jaajitech Digital	University of Houston

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CONFERENCE PROFILE

DTOG provides insight into digital technology for the energy industry when you attend ASME's new conference, "Digital Horizons: Transformation in Oil and Gas, & Beyond." This event will equip you with breaking research and findings you can use to make the most of the technological advances sweeping the industry.

SESSION TYPES

This event explores the key topics and challenges highlighting the pivotal role of digital transformation in reshaping and enabling a more effective energy landscape.

- Plenary Talks
- Panel Sessions
- Technical Sessions
- Networking Reception
- Workshop
- Short course

HOTEL

DTOG 2025 will take place at the **Hyatt Regency Houston West**

Rate: $139++ per night

Reservation information can be found on the the event website

TECHNOLOGY

Projection, PA system, wireless slide advancer, and microphone will be available to Plenary Speakers.

REGISTRATION

Keynotes, Plenaries, and Panelists will receive a complimentary single day registration for the date of their engagement

Technical Presentation Authors and Attendees can view registration fees on the event website.

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TECHNICAL TRACKS

The deadline to submit an abstract for presentation only is July 15, 2025

We invite authors and individuals who are working on practical, real-world, end-to-end digital solutions that involve machine learning and artificial intelligence applicable to the three tracks below.

An acceptable presentation abstract submission is one that is technically sound, free from personalities and bias (especially of a commercial nature), one in which the author supplies information in a form readily available to the public or adds a new concept or development to existing technical knowledge.

More information, including how to submit and registration fees, can be found on the ASME Event Site.

https://event.asme.org/DTOG/Program/Call-for-Abstracts-Track-Topics

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TECHNICAL TRACK 1

Digital Challenges in Oil & Gas Industry

The oil and gas sector is undergoing a transformative digital revolution, integrating advanced technologies to optimize production, reduce costs, and enhance sustainability. This track delves into innovative digital solutions tailored for both onshore and offshore operations, focusing on challenges unique to unconventional reservoirs, complex wells, and emissions monitoring. Discussions will highlight real-time asset monitoring, AI-driven failure predictions, hybrid modeling approaches, and advancements in automation and machine learning. Attendees will gain insights into how computer vision, IoT, and edge computing are reshaping safety, inspection, and operational efficiency. Additionally, this track explores best practices in data governance, cybersecurity, and emerging standards for AI/ML implementation, paving the way for a digitally empowered oil and gas future.

Topics
- Digital Solutions for Onshore Production Optimization
- Predictive Analytics for Real-Time Asset Monitoring in Oil & Gas
- Offshore Well Optimization Modeling
- Digital Transformation in Drilling Operations
- Digital Solutions for Emission Monitoring
- Computer Vision Applications in Oil & Gas
- Generative AI in Oil & Gas
- Ensuring Data Quality for Advanced Analytics in Oil & Gas
- Data Governance for Secure & Compliant Analytics
- IoT and Edge Computing for Oil & Gas Monitoring
- Digital Transformation in Chemical Treatment for Wells
- Standardizing AI/ML Applications in Oil & Gas
- Automation via AI/ML in Oil & Gas Operations
- Digital Solutions for Artificial Lift Technologies
- Adaptive Models for Multi-Physics Analytics in Oil & Gas
- Cybersecurity in Oil & Gas
- Case Studies in AI/ML in Oil & Gas
- Entrepreneurial Innovations in Oil & Gas
- General Topics

TECHNICAL TRACK 2

Digital Challenges in Renewable Energy/ Storage

As the global energy sector shifts toward renewables, the need for digital solutions in wind, solar, hydrogen, and energy storage systems has never been greater. This track addresses the digital transformation challenges faced by renewable energy providers, from optimizing offshore wind farms and batteries to integrating multi-physics systems for holistic efficiency. Participants will explore cutting-edge topics such as AI-driven predictive maintenance, adaptive modeling, and the role of neural networks in analyzing renewable energy data. The track also emphasizes the importance of data governance, compliance with regulatory frameworks, and robust cybersecurity measures. Case studies and entrepreneurial showcases will spotlight groundbreaking projects that demonstrate how digital innovations are driving sustainability and shaping the future of clean energy.

Topics

- Digital Solutions for Offshore Wind Energy
- Predictive Analytics for Real-Time Asset Monitoring in Renewables
- Digital Solutions for Hydrogen Generation and Storage
- Forecasting for Renewable Energy Production
- Digital Solutions for Energy Storage
- Computer Vision Applications in Renewables
- Generative AI in Renewables
- Ensuring Data Quality for Advanced Analytics in Renewables
- Data Governance in Renewables
- IoT and Edge Computing for Renewable Energy Monitoring

- System-of-Systems Analytics in Renewable Energy
- Standardizing AI/ML Applications in Renewables
- Automation via AI/ML in Renewable Operations
- Optimization for Renewable Energy Grid Integration
- Adaptive Models for Multi-Physics Analytics in Renewables
- Cybersecurity in Renewables
- Case Studies in AI/ML in Renewables
- Entrepreneurial Innovations in Renewable Energy
- General Topics

TECHNICAL TRACK 3

Breaking into AI

Breaking into artificial intelligence (AI) through machine learning (ML) or generative AI requires a structured approach that balances foundational knowledge, hands-on experience, and continuous learning. Individuals should start by building a strong mathematical foundation in linear algebra, calculus, probability, and statistics, as these concepts underpin ML algorithms. Programming proficiency, particularly in Python, is crucial.

Teams and organizations aiming to integrate AI should focus on fostering a culture of experimentation and learning. Companies can start small by identifying problems that AI can solve, assembling cross-functional teams with domain expertise, and leveraging pre-trained models or cloud-based AI services before developing custom solutions. Upskilling employees through internal training, workshops, or collaborations with AI research institutions can accelerate adoption. Organizations should also prioritize ethical AI practices, data governance, and model interpretability to ensure responsible implementation.

With sessions on ethical AI, workforce augmentation, and entrepreneurial innovations, this track offers a holistic view of AI's pervasive influence. Whether you're looking to harness AI's potential for your industry or stay ahead in this rapidly evolving landscape, this track is your gateway to understanding and leveraging the power of AI across boundaries.

Topics

- AI-Driven Innovations in Medicine & Pharma
- AI in Supply Chain & Operations Optimization
- AI in Sports Performance and Analysis
- AI in Creative and Digital Industries
- AI for Environmental Sustainability

- AI in Risk Management and Compliance
- AI-Driven Innovations in Materials Science
- AI In Business Intelligence/ GenBI
- AI-Driven Workforce Transformation
- Revolutionizing Customer Experience with AI

- Accelerating Discovery using AI
- Cybersecurity in AI
- Case Studies in AI/ML
- Entrepreneurial Innovations in AI
- General Topics

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Conference: October 27 – 28
Workshop and Short Course: October 29
Houston, TX

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