



Oil & Gas Digital Twin Conference & Exhibition 2024

May 02 - 03, 2024 | 100% Virtual

Discover latest solutions and emerging trends in the industries!

Our current & previous sponsors:



Day 1 | Thursday, May 02, 2024


(Agenda as of 2 May, 2024 and subject to change)

● Sponsored Sessions ● Booked Sessions ● Available Sessions

08:15
Opening Remarks

08:30
Operation excellence & Digital transformation go hand-in-hand


- Digital Transformation – Driving the adoption & Future of Operation Excellence
- Operational efficiency improvement opportunities from average to top quartile performers , with DX
- DX impact on Operation Excellence:

 **Arun Kumar**
General Manager (Operation Excellence & Engineering), **HPCL-Mittal Energy Limited**



09:00 | PLATINUM SPONSOR
AI-driven optimization in real-time, across oil and gas operations

- Optimizing complex production and process systems requires predictability in real-time
- Physics-informed AI (PIAI) is a breakthrough AI model builder that fuses physics-based simulation and process data, with models built in hours not months
- Advisory control enables operators to enhance profitability and reduce carbon footprint in real-time
- The approach is highly flexible and portable—applicable to myriad use cases suitable even when data sets are sparse


 **Linnea Russell**
Asset Performance Product Manager, **SLB**

 **Greg Fallon**
CEO, **Geminus.AI**



09:30
Uncomplicate Liquid Cooling: Save Power & Drive Digital Twin Performance with Self-Contained Liquid Cooling

- Microconvective Liquid Cooling: Overcome thermal challenges in digital twin computations using single-phase direct liquid cooling technology.
- Efficient Liquid Cooling Deployment: Explore JetCool's innovative, self-contained liquid cooling systems on Dell PowerEdge servers, reducing server power consumption by up to 15%.
- Futureproof Server Infrastructure: Implement a phased liquid cooling strategy with Dell PowerEdge servers, transitioning from self-contained to facility-ready setups.

 **Dr. Bernie Malouin**
Chief Executive Officer, **JetCool**



10:00
Data informed decision making: how to let data and intuition work in a great marriage.

- Did you know that 58% of software companies base their regular business decisions on intuition alone?
- Do you agree that these companies are endangering the future of their existence by NOT incorporating objective data in their decision making process?
- How you can improve your teams in a sustainable manner by leveraging metrics?
- The importance of metrics, which ones to choose as the most effective set in your context and how to get started with collecting all necessary data.
- How to make more effective decisions by letting data and intuition work in harmony.


 **Stephan Vlieland**
Hiring Manager, **Shell**



Networking Break _____ 10:30 (1 hour)

11:30
Current state of the Mexican natural gas network

- Mexican Grid Expansion History
- Changing regulatory framework
- What is Next?
- Conclusions

 **Carlos Tapia**
Chief Executive Officer and Owner, **Balam Energy**



12:00
The future of digital twins in orbital Spaceport construction and microgravity mining operations in the 5th Industrial Revolution.

- The Space Economy is the 5th Industrial Revolution.
- Just as oil fueled the 4th Industrial Revolution, so too will "rare earth" minerals mined from asteroids and meteors fuel the economy of the 5th Industrial Revolution.
- This presentation will outline the crucial role that digital twins, AI and autonomy play in successfully launching expeditions to capture Quadrillion dollar resources in microgravity.

 **Samson Williams**
serial entrepreneur and accidental investor, **University of New Hampshire**

 **George Pullen**
Blockchain, Deep Tech and Space Economics, **University of New Hampshire**



12:30 | SESSION SPONSOR
The Digital Twin. It's not just for breakfast anymore.


- If the lifecycle of a plant could be compressed into a single day, engineering, and constructing that plant would occur over breakfast. And as they say, breakfast is the most important meal of the day. To take this analogy a step further, what is eaten for breakfast can potentially affect how lunch and dinner goes. In other words, a terrible breakfast could lead to a terrible day - lunch and dinner are had through bad choices.
- This goes on, and eventually a transformation is needed. And like all digital transformations, they are painful and expensive. And this "breakfast" doesn't have to be at The Four Seasons. It can be prepared in the average company's own kitchen, using tools likely already owned and used.
- Getting the digital twin right in the beginning and using it the way it is meant to be used - a key component in today's Operations Technology - can prevent a costly digital transformation later. It has the capability to push the facility to first-quartile performance much faster than ever expected or envisioned.

 **James Haw**
Vice President of Automation and Digital Strategy, **Operations Technology Specialists, LLC**



13:00
The challenges of Green Field vs Brownfield DT

- Asset Information Management
- Project Datasets Handover
- Management of Change

 **Alberto Iniesta Serrano**
Director - Worley Customer Solutions, **Worley**



Networking Break _____ 13:30 (30 Min.)

14:00 | SESSION SPONSOR
Leveraging Digital Twins for Private Networks in Oil & Gas


- Revolutionizing in-building cellular design in oils and gas with digital twins to eliminate repetitive surveys and deliver superior network performance.
- How to cut costs, improve worker safety in hazardous environments, and future-proof your infrastructure with this cohesive network design approach.

 **Nazim Choudhury**
Director Market development, **ibwave**



14:30
Insertion of Artificial Neural Network Algorithms into Digital Twins for Process Monitoring

- Companies rely on various equipment to produce goods and services, but degradation over time can lead to failures. Maintaining equipment in good condition is crucial to ensure production performance and prevent additional costs, downtime, and environmental damage. Maintenance, aiming for availability, reliability, and safety, is essential. However, many maintenance models face challenges by considering only the health of components without information about system reliability. The increase in production data can be an advantage, and predicting failures through a neural network trained with operational data can be valuable support for

 **Silvio Cesar Godinho Teixeira**
Company man in Buzios, **Petrobras**



15:00
Advanced digital twin technology from the nuclear sector – Applicability in the oil&gas.

- The presentation explores HADRON lab's pioneering efforts at IFE, emphasizing AI, data, and robotics for safety in nuclear and other critical industries.
- Ongoing and upcoming European projects and working groups will be showcased, reflecting IFE's cutting-edge research.
- Advanced trends in digital twin and robotics innovation promoted by the DigDECOM conference, hosted by IFE as an international center, will be highlighted.

 **István Szóke**
Research Manager of the Applied Physical Sciences department, **Institute for Energy Technology**



End of Day 1 _____

Day 2 | Friday, May 03, 2024

(Agenda as of 2 May, 2024 and subject to change)

● Sponsored Sessions ● Booked Sessions ● Available Sessions


08:15

Opening Remarks

08:30

Generative AI : Experiences in business applications for Procurement & SupplyChain

- Gen AI Potential : Look beyond drafting emails and images. Gen AI can do much more for day to day tasks like Market Intelligence, Contract Analytics and Autonomous Negotiations.
- Data confidentiality concerns : Are you comfortable sending your data & queries to cloud-based AI models ? Laptop based locally running AI models are a potential solution.
- Experiences from real experiments : I'll share one of the following usecases:
- Market intelligence : Comparison of outputs from 4-5 models (Cloud vs Laptop, Large model vs small model)
- Autonomous Negotiations : Negotiations between two BOTs.



Lovleen Chadha
Founder & CTO, **qapp.ai**



09:00

Making a Business Case for Developing an E-Governance Solution for Process Safety Management (PSM) Compliance

- This presentation will describe the key issues faced by both the government regulatory bodies and process plant facilities, with the current non-digital (manual) method of PSM implementation, audit, and compliance. Recent modernisation initiatives of safety regulations undertaken by federal regulatory bodies such as OSHA and EPA in the United States are explained in the context of achieving the PSM compliance effectively and efficiently. The presentation will also report the outcome of a study on detailed comparison between OSHA's 1992 regulatory impact analysis study and 2023 information collection requirement burden hour and cost estimate and will report the estimated the total economic burden of PSM compliance on the existing and future PSM covered facilities in the United States. The presentation will also unveil the idea of an e-governance solution that will potentially eliminate all the efficiency and effectiveness concerns faced by regulatory bodies and process plants in achieving a successful PSM implementation and comprehensive regulatory compliance in the United States of America.



Dheeraj Kumar Narang
Technical lead, Digital Manufacturing Services, **University of Science & Technology, PA**



09:30 | **GOLD SPONSOR**

Inspection and IMR Transformation using Generative AI

- Using AI to create an optimized Life of Field plan
- Enaimco Operational Twin - Use cases driving IMR and Life of Field optimization
- Enaimco Vision for the Future




John Cadigan
Director of Projects, **Enaimco**



10:00

Data to Digital Twin in Oil and Gas Industry

- Brief Overview of Organization
- Digital Execution in EPC
- Data is Oil



Vinayak Kharche
Head Of Information Systems and Automation, **Adani Petrochemicals**




Networking Break 10:30 (30mins)

11:00 | **GOLD SPONSOR**

Revolutionizing Oil & Gas Operations: Unleashing the Power of Digital Twins with IAPM

- The Digital Twin Revolution: Explore the transformative potential of digital twins in the oil & gas industry, and how they enable real-time monitoring, predictive maintenance, and improved decision-making.
- IoT-Driven Data Insights: Learn how Internet of Things (IoT) data sources are harnessed to create a comprehensive digital replica of your assets, providing unparalleled insights into operations, safety, and efficiency.
- AI-Powered Asset Management: Discover how Artificial Intelligence (AI) supercharges your asset management strategies, optimizing maintenance, reducing downtime, and enhancing the ROI of your oil and gas assets with IAPM.



Matteo Dariot
Business Development and Sales Manager, **Bosch**



11:30

Innovations in Productivity Maximizing Digitalization Strategies.

- We (23 plants) did a study for AFPM on digitalization in action in global projects and results are reported in the presentation.
- Specifically highlighted is AI data management, digital engineering and planning in pre-fee applications and the digitalization surrounding construction in maintenance and capital projects.




George Perrett
Operational Excellence Director, **Peri USA**



12:00

Leveraging Digital Twin and Generative AI to gauge their impact on operational efficiency and productivity

- Understanding Digital Twins
- Transforming Chemical Manufacturing with Digital Twins
- Generative AI and Digital Twins Usecases at IOCL
- Key Considerations for Success and Future Planning



Manish Grover
Executive Director (Strategic IS & IS), **Indian Oil**




Networking Break 12:30 (30mins)

13:00

Using Generative AI in Brownfield Engineering Projects in the Upstream Oil & Gas Sector

- In recent years, we have seen rapid advancements in fields such as artificial intelligence (AI), predictive analytics, and machine learning. While these technologies hold great promise for improving our lives and making
- The future
- Benefits for Brownfield Operations
- Risks (Opportunities/Threats)



Emmanuel Haizel
General Manager - Engineering & Projects, **Mansa Engineering**




13:30

Available Session

14:00

Revolutionizing Industry: The Autonomous Process Plant and Digital Twin Integration

- Automates plant operations with Digital Twin technology linking process and control models
- Optimizes plant areas using basic regulatory (PID), advanced regulatory (Cascade, Ratio, Feedforward), or Advanced Process Control (APC)/Model Predictive Control (MPCD)
- Enhances data collection with smart sensors, ensuring proper maintenance of plant assets
- Integrates equipment and process data to navigate the best production path, revolutionizing process design




Brad Carlberg
Consulting Control Systems Engineering, **BSC Engineering**



14:30 | **SESSION SPONSOR**

Using AI / ML and Data Analytics to Optimize the STO (Shutdown, Turnaround , Outage) Work Process and Performance

- STO events have large business impact on an asset due to the cost of the event, the lost profit opportunity while the asset is offline, and the potential for safety and environmental impacts during the event.
- Many of industry's leaders have adopted a standard STO work process that contains key elements to deliver high degrees of STO readiness.
- Experience shows that the critical success factors for achieving desirable STO outcomes involves both the quality of the work process and the quality of its implementation.
- AI/ML techniques help us better understand large and highly complex data to help organizations make better decisions and optimize their work process to derive greater value and achieve better STO performance (quality of the work process)
- This presentation will provide real life examples of how we have used AI/ML to improve STO process and outcomes for oil and gas companies.




Brett Schroeder
CEO, **AP-Networks**



15:00

Digital twins in manufacturing operational excellence

- Differences in approaches to digital twins – planning, simulation, prediction, real-time/live
- Live digital twins in the manufacturing world
- Examples from existing projects and where is the money



Michal Ukropec
CEO, **Twinzo**



End of Day 2