24–25TH MARCH, ABERDEEN

Fiber-Optic Sensing for Field Development

Asset Integrity & Optimization Workshop

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24–25TH MARCH, ABERDEEN

FIBER-OPTIC SENSING FOR FIELD DEVELOPMENT
ASSET INTEGRITY & OPTIMIZATION WORKSHOP

CONFERENCE PROGRAMME

Distributed Fiber-Optic Sensing (DFOS) systems now provide comprehensive downhole monitoring for production allocation, injection conformance, stimulation effectiveness, time-lapse seismic measurements, and well integrity protection. Recent advances in fibers, cables, sensors, deployment methods, and data processing have delivered superior quantitative monitoring results, with growing applications in low-carbon energy and storage projects. These improvements create value from early development through full asset lifetime.

This workshop addresses fiber-optic monitoring advances for optimizing reservoir and field operations through field case studies. It will interest professionals in reservoir engineering, production engineering, well engineering, geology, and geophysics.

Booking Information

MEMBERS	NON-MEMBERS	STUDENTS, UNEMPLOYED, RETIRED
£400 +VAT	£500 +VAT	£100 +VAT
BOTH DAYS	*BOTH DAYS*	*BOTH DAYS*

CHAIRPERSONS

CHAIR	**Steven Mathias,** Interpretive Software
CO-CHAIR	**Dennis Dria,** Myden Energy Consulting
CO-CHAIR	**Richard Tøndel,** Equinor
CO-CHAIR	**Michael Webster,** Expro

PROGRAMME COMMITTEE

Mahmoud Farhadiroushan, Silixa

Samantha Grandi, Shell

Mikko Jaaskelainen, Halliburton

Pierpaolo Marchesini, bp

Jane Mason, ADNOC

Euan Murdoch, Aramco

Hilde Nakstad, ASN

Isabelle Pellegrini, Archer

Pierre Ramondenc, SLB

P.F. Roux, Baker Hughes

Brian Seabrook, ExxonMobil

Sam Gorgi, Consultant

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TECHNICAL AGENDA

MONDAY, 23 MARCH - EVENING

18:00–19:30	**Welcome Reception**	

TUESDAY, 24 MARCH - MORNING

07:30–08:00	Registration Check-in	
08:00–08:15	**Chairperson's Welcome and Introduction**	
08:15–09:00	The untapped potential of Fiber Optic Monitoring in the Upstream	**Mark Agnew,** Global Wells & Production Engineering Chief, ExxonMobil
09:00–10:30	**Session 1: CCS and New Energies DFOS Applications** Fiber optic sensing is emerging as a pivotal enabler for CCS projects and the broader energy transition. This session will explore how various distributed fiber optic measurements can be leveraged to monitor CO2 injection, plume migration, caprock integrity, and long-term storage security. Beyond CCS, we welcome contributions dealing in hydrogen storage, geothermal operations, and renewable integration, where fiber optics provides real-time, scalable surveillance in challenging environments.	CHAIRS **Mikko Jaaskelainen,** Halliburton and **Jane Mason,** ADNOC
Presentation 1	New Energies DFOS Applications: From Oil & Gas Upstream to Energy Diversification	**Lena Urmantseva,** AP Sensing
Presentation 2	Geothermal Case study	**Vasiliy Skutin,** Expro
Presentation 3	DAS VSP Data from Well Tubing Versus Well Casing in CO2 Injector and Monitor Well	**Oscar Barrios-Lopez,** Halliburton
10:30–11:00	**Coffee, Networking & Exhibition**	
11:00–12:30	**Session 2: Production and Injection Monitoring: What value does Fiber bring?** Production and injection has been measured with conventional sensors for decades. What added value does fiber bring? What information can fiber contribute that cannot be achieved by conventional sensors? This session explores fibers unique contribution and value to production and injection monitoring.	CHAIRS **Pierpaolo Marchesini,** bp and **Mike Webster,** Expro
Presentation 1	Insights into CO_2 Injection-Induced Flow Mechanisms from the Project Poseidon Injection Test with Distributed Acoustic Sensing	**Aurelien Cherubini,** FEBUS Optics

TECHNICAL AGENDA

TUESDAY, 24 MARCH - AFTERNOON

Presentation 2	DTS Value in Gas Injection Wells	**Fuad Atakishiyev,** bp
Presentation 3	Integrated DAS and DTS for Production and Injection Monitoring: Understanding Dynamic Fluid Behavior Across the Full Wellbore	**Erick Jimenez,** Silixa
12:30–13:30	**Lunch**	
13:30–15:00	**Session 3: Well Integrity; Recent deployments of DFOS to address, identify, diagnose or forecast ell integrity issues** This session presents deployments of DFOS technologies or analysis of data that has been used to diagnose potential well integrity issues and ideally optimize a responses to address any identified causes or mitigate potential risks.	CHAIRS **Euan Murdoch,** Aramco and **Mahmoud Farhadiroushan,** Silixa
Presentation 1	Enhancing Well Integrity with Disposable Fiber Optic Systems	**Andrew Garioch,** WellSense
Presentation 2	In-wellbore & behind-casing DTS in CO2 Injection wells	**Mehdi Zaidouni,** LSU
Presentation 3	Examples of in-well applications based on DTS data	**Kevin Constable,** Equinor
15:00–15:30	**Coffee, Networking & Exhibition**	
15:30–17:00	**Session 4: Emerging and Enabling Technology Advancements** The growth of Distributed Fiber-Optic Sensing (DFOS) has been significantly influenced by new and emerging technologies which have broadened its applications and enhanced its effectiveness. The intersection of advanced materials and hardware, data analytics, and IoT technologies is driving the evolution of DFOS, making it more versatile and indispensable across various applications, from energy production to environmental conservation. This session is presenting some of the latest developments in this domain.	CHAIRS **Hilde Nakstad,** ASN and **Dennis Dria,** Myden Energy Consulting
Presentation 1	Enabling Reliable Fiber-Optic Connectivity in Subsea Completions Using an Opto-Electric Wetmate System	**Josh Montanez,** SLB
Presentation 2	Fiber Optic Sensors for Distributed Sensing of Electromagnetic Parameters	**Anbo Wang,** Sentek Instrument
Presentation 3	Field validation of 3-C Optical seismic sensing array in a borehole deployment	**Jakob Haldorsen,** MagiQ Technologies
18:30–20:30	**Networking - Reception/Dinner**	

TECHNICAL AGENDA

WEDNESDAY 25 MARCH - MORNING

07:30–09:30	**Session 5: Beyond the wiggles: DFOS for geophysical applications** Distributed Fiber Optic Sensing (DFOS) is rapidly transforming geophysical workflows—from borehole to surface and hybrid survey geometries, from conventional seismic measurements to advanced reservoir and fluid properties. The technology is progressing from interpreting wiggles to quantifying pressure and deformation, and from manual data analysis to scalable automation. As our understanding of DFOS deepens, we now focus on extracting attributes, performing inversions, and integrating fiber optic data with other geoscience datasets to enhance subsurface characterization and reduce uncertainty. Equally critical are innovations in hardware and instrumentation—such as optimized cable designs, interrogator units tailored for seismic acquisition, and improved coupling methods—that underpin reliable data acquisition and broaden DFOS applicability. This session invites contributions that showcase innovative workflows for DFOS data processing or interpretation, demonstrate its value in integrating geosciences for reservoir monitoring, management, and optimization, or present advances in hardware that enable robust and scalable deployment.	CHAIRS **Samantha Grandi,** Shell and **P.F. Roux,** Baker Hughes
Presentation 1	Knowledge-sharing on use of DFOS technology for induced seismicity monitoring	**Estelle Rebel,** TotalEnergies
Presentation 2	Smart interrogation for 4D DAS reservoir monitoring	**Per Eivind Dhelie,** AkerBP
Presentation 3	Reflection Imaging and Full Waveform Inversion of Seabed DAS Data: Insights from the Ekofisk PRM	**James Richards,** Viridien
Presentation 4	Acquisition of a Seabed DAS trial over Deepwater Subsalt Reservoirs	**Samantha Grandi,** Shell
09:30–10:00	**Coffee, Networking & Exhibition**	

TECHNICAL AGENDA

WEDNESDAY 25 MARCH - MORNING

10:00–12:00	**Session 6: Interpretation & AI Applications** With sometimes TB of data to process and complex interpretation scenarios to validate, the task can quickly be daunting to provide timely, actionable insights based on distributed sensing. This session focuses on the tools and techniques recently developed (or revisited) to facilitate this process. Presenters will be encouraged to share the specific challenges associated to their interpretation field (e.g., geophysics, flow profiling, wellbore integrity) and explain how their methodology aims at addressing them, supported by examples of field applications. The goal is to foster the exchange of lessons learned and to encourage the audience to define best practices and new areas of development jointly, in an intimate and interactive environment.	CHAIRS **Pierre Ramondenc,** SLB and **Sam Gorgi,** Consultant
Presentation 1	From Raw to Insight: Unlocking Value with a Fiber Optic Data Platform	**Stefan Dümmong,** Equinor
Presentation 2	Fiber Optic at the center of a multi-measurand Ecosystem: examples of deployments in various geographies and platforms	**Theo Cuny,** SLB
Presentation 3	Distributed Acoustic Sensing and Machine Learning: Challenges, Constraints, and SSL-Based Mitigation Strategies.	**Camille Huynh,** FEBUS Optics
Presentation 4	Offshore Success - Calibrated Temperature from Distributed Strain Sensing (DSS)	**Sam Buist,** bp
12:00–13:00	**Lunch**	

TECHNICAL AGENDA

WEDNESDAY 25 MARCH - AFTERNOON

13:00–14:30	**Session 7: Interventions & Stimulation** The continuous drive to lower intervention costs, increase ultimate recovery and reduce emissions is fostering the development of novel, more efficient intervention and stimulation workflows. Reduce the number of runs, optimize well spacing, make decisions on the fly with 24/7 intelligent monitoring and computation at the edge, etc. This session aims at illustrating how DFO enables and underpins these new solutions.	CHAIRS **Brian Seabrook,** ExxonMobil and **Isabelle Pellegrini,** Archer
Presentation 1	Development and Field Trial of a Single Use Bare Optical Fiber Conveyance System for Horizontal Wells	**Annabel Green,** WellSense
Presentation 2	Estimating Slippage Conditions Affecting Signal Quality in Retrievable Fiber Optic Sensing Cables for Wells of Arbitrary Trajectory	**Michel LeBlanc,** Halliburton
Presentation 3	Continuous DAS & DTS Monitoring for Complex Leak Detection	**Ehsan Nikjoo,** Weatherford
14:30–15:00	**Coffee, Networking & Exhibition**	
15:00–16:30	**Session 8: Project Valuation Realizing Value from Fiber Optic Sensing** Distributed Optical Sensing (DFOS) technologies are becoming more widely deployed, and in parallel, general project valuation is increasingly challenged. This session will explore how value can be addressed, in order to justify cost and operational complexity, as well as the technical and organizational enablers to realize value from DFOS.	CHAIRS **Richard Tøndel,** Equinor and **Steven Mathias,** Interpretive Software
Presentation 1	Seeing Beyond the Wellbore: Unlocking Reservoir Insight with 3D DAS VSP Imaging.	**Sam Buist,** bp
Presentation 2	Detecting Gas Lift Valve Chattering and Glass Plug Breakage with Fiber Optics	**Salvador Ruz & Alireza Roostaei**, Equinor
Presentation 3	Beyond Self-Noise: Characterizing the performance of Engineered Single-Mode Fibers per SEAFOM MSP-02 for Subsea DAS Applications	**Andreas Ellmauthaler,** Woodside & **Mikko Jaaskelainen,** Halliburton
16:30–16:35	**Chairperson's closing remarks**	

IMPORTANT INFORMATION

ACCESSIBILITY

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Attendees will receive 1.6 CEUs. One CEU equals 8 contact hours of participation. CEUs will be awarded through SPE Professional Development for participation and completion of an SPE workshop. A permanent record of a participant's involvement and awarding of CEUs will be maintained by SPE.

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WORKSHOP FORMAT

Workshops maximize the exchange of ideas among attendees and presenters through brief technical presentations followed by extended Q&A periods. Focused topics attract an informed audience eager to discuss issues critical to advancing both technology and best practices. Many of the presentations are in the form of case studies, highlighting engineering achievements and lessons learned. In order to stimulate frank discussion, no proceedings are published and members of the press are not invited to attend