



EAGE

EUROPEAN
ASSOCIATION OF
GEOSCIENTISTS &
ENGINEERS

Eighth EAGE Borehole Geophysics Workshop

ADVANCED SOLUTIONS FOR SUSTAINABLE ENERGY

29 SEPTEMBER - 1 OCTOBER 2025 • AL KHOBAR, SAUDI ARABIA

• Programme

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TECHNICAL COMMITTEE

The Technical Programme Committee is integral to the workshop and enables EAGE to continue its mission in the development and application of geosciences to promote innovation and technical progress in communities worldwide.

Nestor Alexander Palacios Aponte (Co-Chair)	Aramco
Andres Chavarria	LUNA - OptaSense - Silixa
Charles Cooper	bp
Eric Verschuur	Delft University of Technology
Fela Aromolaran	Independent Consultant
Howard Simpson	Independent Consultant
Jakob B.U. Haldorsen	MagiQ Technologies
James Bailey	VSProwess
Jan H. van der Mortel	Independent Consultant
Jeelani Bhat	Halliburton
Martin Karrenbach	Independent Consultant
Phil Armstrong	Independent Consultant
Marsha Sakina	SLB
Rob Stewart	Director, Allied Geophysical Lab, University of Houston
Roman Pevzner	Professor, Curtin University
Steve Oates	Shell
Vladislav Lesnikov	TotalEnergies
Will Wills	Avalon Sciences
Muhammad Waqas	ADNOC
Tiago de Bittencourt Rossi	Petrobras
Gang Yu	BGP Inc.
Helen Saaler	Baker Hughes

WORKSHOP OVERVIEW

For decades, borehole geophysics has been a game-changer in the oil and gas industry—powering breakthroughs in well-to-seismic correlation, refining velocity models, enhancing drilling precision, and unlocking insights into reservoir behaviour.

Today, as the global energy landscape shifts toward sustainability, the need to monitor reservoirs with greater accuracy—and lower uncertainty—is more critical than ever. This need extends far beyond traditional oil and gas, touching industries like geothermal energy, geotechnical engineering, and carbon capture, utilization, and storage (CCUS).

Driving this evolution are cost-effective fiber optic technologies, such as Distributed Acoustic Sensing (DAS) and next-generation 4C optical point sensors, which are transforming long-term downhole monitoring. In parallel, advancements in surface seismic acquisition—especially with the rise of nodes and DAS—enable multi-survey recording both at the surface and downhole. The fusion of these technologies is unlocking powerful new possibilities in subsurface imaging and monitoring, aligning geophysics with the goals of a cleaner energy future.

As Borehole Geophysics returns to Saudi Arabia for its landmark eighth edition, we are thrilled to welcome a global audience to a workshop that has become a cornerstone event in the energy sector. Join us for cutting-edge insights, collaborative learning, and a shared vision for a more sustainable world.





TOPICS

1. Borehole data acquisition and greener operations

- Efficiency in data acquisition, lower carbon footprint
- Environmentally friendly sources and downhole sensors

2. Conventional VSP applications and robust well ties

- DAS and 3C Sensors VSP applications, including imaging, multiples, $Q(z)$, etc.
- Seismic while drilling, VSP lookahead and drilling operations

3. Time-lapse VSP monitoring

- CCUS
- Geothermal
- Oil and Gas exploration and development

4. AVO, Anisotropy and Inversion

- Modeling vs Insitu measurements
- Quantitative analysis and reducing uncertainty

5. Microseismic Monitoring and Passive Seismic

- Caprock Integrity
- Thermally Induced Fracturing
- Injection Induced Fracturing

6. Bridging the scale gap of acoustic measurements

- From ultrasonic, sonic, VSP to surface seismic scales
- Deep sonic imaging
- Joint velocity model calibration

7. Handling of Big Data

- Big Data Integration (in particular DAS)
- Local vs. Cloud Computing
- Automated solutions

STRATEGIC PROGRAMME

Opening address speaker



Dr. Aiman Bakhorji

Director of Geophysical Imaging Department, Aramco Exploration

Keynote speakers



Abdulrahman Shuhail

Chief Technologist for the Geophysics Technology Division, Aramco EXPEC Advanced Research Center

Keynote Title: Innovations in Borehole Seismic: Overcoming Challenges and Driving Technological Advancements



Dr. Umair Bin Waheed

Associate Professor at the Department of Geosciences and Data Analytics & AI Program Lead at the Center for Integrative Petroleum Research (CIPR), KFUPM

Keynote Title: Real-time Microseismic Monitoring in the Era of Machine Learning and DAS

GENERAL INFORMATION

Venue Information

voco® Al Khobar

Address:

Dhahran Road, Al-Thuqbah, King Abdullah Street, Al Khobar
31952, Saudi Arabia

Contact: +966 13 869 6666

EAGE Registration Desk

We encourage delegates to visit the EAGE Registration Desk to learn about membership benefits and upcoming events to make the most of your EAGE involvement. We welcome feedback on EAGE's activities for us to improve upon our membership services.

Badge collection will open at the following times:

29 September 2025	7.30 am – 9.00 am (UTC+01:00.)
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Photo and Video Regulations

Photography and video/audio recording of any kind are strictly prohibited in the technical sessions.

EAGE strives to bring you the greatest and latest of scientific and technical advances. Due to the importance of the technical content, EAGE upholds a photography and videography policy, in an endeavour to protect these leading-edge technologies.

Wi-Fi

Delegates may connect to free Wi-Fi at the venue. Wifi details will be provided onsite.

Deliverables

The following are included in the delegate fee

- Access to workshop technical sessions
- Daily Luncheon
- Daily Morning and Afternoon refreshments
- Event proceedings via EAGE's EarthDoc (*for EAGE members only*)
- Complimentary EAGE Membership will be included for the remainder of 2025 (*for fully paid non-members*)



TECHNICAL PROGRAMME

Oral Presentations

Monday, 29 September 2025

SULTANA BALLROOM	
08:00	Registration & Welcome Coffee
08:30	HSSE From Hotel voco® Al Khobar
08:35	Welcome by Chairperson Nestor A Palacios (Aramco)
08:45	Opening Address by Dr. Aiman Bakhorji (Director of Geophysical Imaging Department, Aramco Exploration)
SESSION 1 - Borehole Data Acquisition & Greener Operations Session Chairs: Will Wills (Avalon Sciences) & Helen Saaler (Baker Hughes)	
09:15	Surface Linear Vibrator: field test of a novel permanent seismic source - V. Lesnikov ^{1*} , N. Brooks ² , S. Li ³ , A. Huffman ⁴ , M. Verliac ⁵ ¹ TotalEnergies; ² GPUSA; ³ SensorEra; ⁴ HighPeak Energy Inc.; ⁵ TotalEnergies
09:35	Land Walkaway VSP: from Acquisition to Inversion - M. Benalshaikh ^{1*} , M. Tayeb ¹ , H. Marzooq ¹ , H. Alfaraj ¹ ¹ Saudi Aramco
09:55	Vibroseis Harmonic From Noise to Signal - Case Study of ZVSP in a highly deviated well - M. Alsinan ^{1*} , H. Almarzooq ¹ , A. Shaiban ¹ ¹ Saudi Aramco
10:15	Morning Coffee Break
10:45	Optical Seismic Accelerometer Performing at High Temperatures - J. Haldorsen ^{1*} ¹ MagiQ Technologies
11:05	Systematic Cross-Domain Analysis of Ground Force Signal - M. Almubarak ¹ , H. Almarzooq ^{1*} , W. Wenxiu ² , Y. Sun ² ¹ Aramco; ² Aramco Research Center - Delft

Oral Presentations

Monday, 29 September 2025

11:25	Enhancing Well Seismic Acquisition in Deepwater with DAS and Hybrid Wireline Cable: Balancing Efficiency, Data Quality, and Environmental Stewardship - T. Rossi ^{1*} , A. Martinez ² , M. Galaguz ² , R. Alvar ² , G. Almeida ² , V. Alves ² , T. Sueoka ² , A. Malik ² , N. Adu-Gyamfi ² , R. Barcelos ² ¹ Petrobras; ² SLB
11:45	Session Q & A
12:05	Lunch Break - Horizon Restaurant
SESSION 2 - Conventional VSP applications and robust well ties Session Chairs: Vladislav Lesnikov (TotalEnergies) & Jan H. van der Mortel (Independent Consultant)	
13:05	The reconstruction of robust shallow velocity profile using a disposable fibre - A. AIDawood ^{1*} , E. Alfataierge ¹ , A. Shaiban ¹ ¹ Aramco
13:25	Enhanced Imaging of Walkaway VSP data for Complex Geological Structures using Horizon-Based Velocity Modelling - A. Shaiban ^{1*} , H. Marzooq ¹ ¹ Saudi Aramco
13:45	Geo-stopping at the top of carbonate by reducing the depth uncertainty using seismic while drilling, near-bit gr, and resistivity real-time data, a novel carbonate reservoir entry strategy in deep water malaysia - S. Das ¹ , M. Cox ² , P. N Tynan ³ , H. Saaler ^{4*} , R. Ridhuan B Khalid ⁵ , A. Hakimi Wong Abdullah ⁶ ¹ Baker Hughes; ² Petronas Carigali Sdn Bhd
14:05	VSP-assisted interpretation of 3D seismic data in the Mahanadi and Andaman Basins, India - R. Stewart ^{1*} , L. Shen ¹ , U. Shahriar ¹ , N. Gungor ¹ ¹ University of Houston
14:25	Enhancing fault identification in the complex geological structures of Sanga Sanga Region with Offset VSP - Y.I. Cakra ^{1*} , T. Nugraha ¹ , Y.R. Apranda ¹ , S. Hartanto ¹ , A. Darmawan ¹ , D.L. Rahmani ² , I. Eliza ² ¹ PT Pertamina Hulu Indonesia; ² SLB
14:45	Session Q & A
15:05	Afternoon coffee Break
SESSION 3 - DAS (Part I) Session Chairs: Jeelani Bhat (Halliburton) & Vladislav Lesnikov (TotalEnergies)	
15:35	3D DAS-VSP data acquisition, processing and integrated interpretation in Junggar Basin - G. Yu ^{1,2,3*} , S. Zhang ¹ , H. Chen ¹ , S. An ^{1,2} , Z. Cai ^{1,2} , B. Liu ^{1,2} , M. Xiao ^{2,3} , J. Wu ^{1,2} , Y. Chen ^{1,2} ¹ BGP Inc. CNPC; ² Optical Science and Technology (Chengdu) Ltd.; ³ Chengdu University of Technology
15:55	Signal-to-Noise Ratio Enhancement in DAS VSP Data Using Adjacent Trace Stacking Techniques - H. Almomin ¹ , A. Shaiban ^{1*} ¹ Saudi Aramco
16:15	Session Q&A
16:25	Closing Remarks by Workshop Chairperson



Disclaimer: The programme is confirmed as of publishing date and may be subject to change without prior notice.

Oral Presentations

Tuesday, 30 September 2025

SULTANA BALLROOM	
08:00	Registration & Welcome Coffee
08:30	Welcome by Chairperson: Review of Day 1 & Welcome to Day 2
SESSION 4 - Microseismic Monitoring and Passive Seismic Session Chairs: Jakob B.U. Haldorsen (MaqIQ Technologies) & Jan H. van der Mortel (Independent Consultant)	
08:40	Keynote 1 - Real-time Microseismic Monitoring in the Era of Machine Learning and DAS - Dr. Umair Bin Waheed (KFUPM)
09:10	Microseismic monitoring with borehole DAS during CCUS operations onshore Japan - S. Nakayama ¹ , T. Mouri ^{2*} ¹ INPEX Corporation; ² JOGMEC
09:30	Advancing Passive/Microseismic Technology to Monitor Subsurface Reservoir During CO2 Injection. - R. Bitrus ^{1*} , A. Aljaber ^{2*} , E. Smirnov ¹ , J.Z. Ahmed ² , M. Waqas ² , M. Abdelrahman Mohamed ² , F. Ofowena ² , V. Ryzhov ¹ ¹ Tenzorgo; ² ADNOC
09:50	The Impact of Preprocessing on DAS Micro-seismic Event Detection - H. Almomin ^{1*} , M. Park ² ¹ Saudi Aramco; ² Stanford University
10:10	Morning Coffee Break
10:40	Effective fracture network description based on microseism in China's hydraulic fracturing test site - F. Heng ^{1*} , T. Liu ¹ , M. Zhao ¹ , L. Yan ¹ , N. Li ¹ ¹ BGP
11:00	Revolutionizing Hydraulic Fracturing: Thailand's First Borehole Microseismic Monitoring Success in an onshore Oil Field - T. Tongpet ^{1*} , P. Boonyasatphan ¹ , D. Weeramethachai ¹ ¹ PTTEP
11:20	The Critical Role of Pre-Survey Design in Microseismic Monitoring and Moment Tensor Inversion: Recent Advances, Challenges, and Future Directions - P. Ranjan ^{1*} , J. Le Calvez ¹ ¹ SLB
11:40	Session Q&A
SESSION 5 - Time-lapse VSP monitoring Session Chairs: Phil Armstrong (Independent Consultant) & Helen Saaler (Baker Hughes)	
12:00	An evaluation of the effect of VSP and surface acquisition geometries on 4D velocity estimates - R. Valensi ¹ , A. Ben-Hassine ^{1*} , R. Baina ¹ , V. Lesnikov ² ¹ Opera; ² TotalEnergies
12:20	Time-Lapse VSP Monitoring of CO2 WAG Injection in a Carbonate Reservoir: Abu Dhabi Case Study - M. Waqas ¹ , M. Mohamed ¹ , J.Z. Ahmed ¹ , F.O. Ofowena ¹ , A. Al Hamed ¹ , R. Guerra ² , A. Al Bulushi ² , S. Dogra ² , S. Gupta ² , S. Ali ² , Y. Chen ² , P. Armstrong ^{3*} , M. Lal Khaitan ^{2*} ¹ ADNOC; ² SLB; ³ Independent Consultant
12:40	DAS VSP Monitoring of CO2 Plume in Carbonate Saline Aquifer Onshore Abu Dhabi - M. Waqas ¹ , G. Cambois ¹ , O. Kirstetter ¹ , A. Martinez ¹ , J. Mason ¹ , J. Cowell ¹ , M. Mahgoub ¹ , A. Al Neyadi ¹ , Y. Chen ² , H. Li ² , D. Yu ² , X. Ji ² , G. Yu ^{2*} ¹ ADNOC; ² BGP
13:00	Session Q&A
13:20	Lunch Break - Horizon Restaurant

Oral Presentations

Tuesday, 30 September 2025

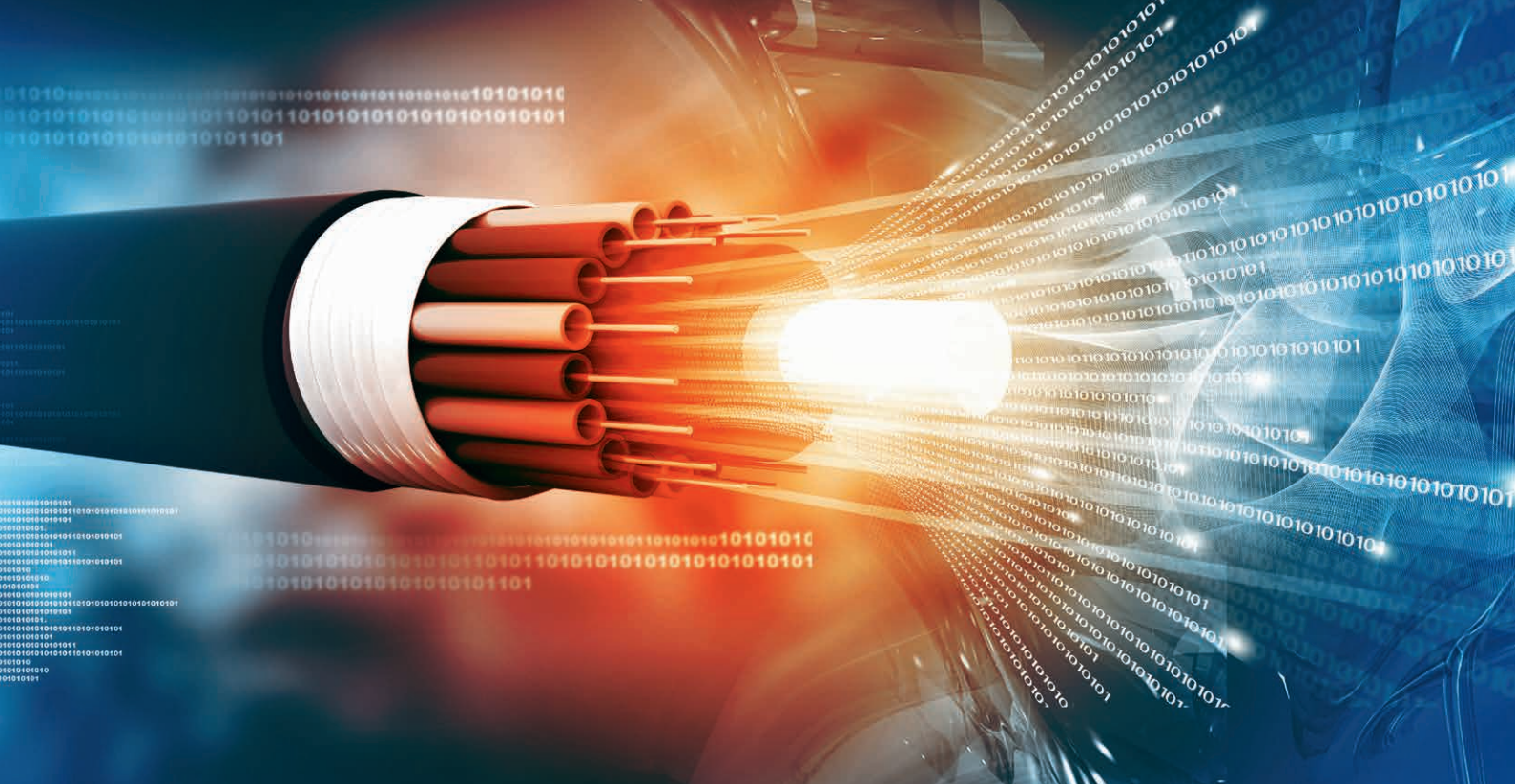
SESSION 6 - AVO, Anisotropy and Inversion	
Session Chairs: Nestor Alexander Palacios Aponte (Aramco) & Robert Stewart (University of Houston)	
14:20	First-arrival Raypath & Traveltime Modeling of a 2D Walkaway VSP Survey under Attenuating VTI Media - M.F. Darwis ^{1*} , F. Bouchaala ¹ , M.K. Riahi ¹ ¹ Khalifa University
14:40	Observed anisotropic effects of fractures in a hot dry rock geothermal reservoir by shear-wave polarisation analysis - S. Soulas ^{1*} , W. Wills ¹ , S. Bridger ¹ , T. Tubridy ¹ , B. Kaack ¹ , C. Naville ² ¹ Avalon Sciences Ltd; ² IFP Energies Nouvelles
15:00	Joint migration inversion of VSP walk-away lines offshore Abu Dhabi - B. El Marhoul ^{1*} , E. Verschuur ¹ , T. Ishiyama ² , M. Asaka ² , A. Al-Khamiri ³ ¹ Delphi Studio for Imaging; ² INPEX; ³ ADNOC Offshore
15:20	Afternoon Coffee Break
15:50	Quantitative Interpretation and Imaging of Walkaway VSP Data: Navigating Rough Terrain and Complex Subsurface - H. Almarzooq ^{1*} , R. Alzayer ¹ , N. Hamad ¹ ¹ Aramco
16:10	Acquisition Requirements for Inversion for Fracture Parameters with 3D DAS VSP Data - W. Cao ^{1*} , T. Mizuno ¹ , M. Khaitan ¹ ¹ SLB
16:30	Session Q&A
16:50	Closing Remarks by Workshop Chairperson
19:00	Workshop Dinner - Blue Garden Restaurant

Oral Presentations

Wednesday, 1 October 2025

SULTANA BALLROOM	
08:00	Registration & Welcome Coffee
08:30	Welcome by Co-Chairs: Review of Day 2 & Welcome to Day 3
SESSION 7 - Bridging the Scale Gap in Acoustic Measurements Through AI Session Chairs: Jan H. van der Mortel (Independent Consultant) & Jakob B.U. Haldorsen (MaqIQ Technologies)	
08:40	Keynote 2 - Innovations in Borehole Seismic: Overcoming Challenges and Driving Technological Advancements - Abdulrahman Shuhail (Aramco)
09:10	Fracture detection using S-wave reflections and Stoneley wave from Full-Waveform sonic data - M. Altayeb ^{1*} , T. Tonellot ¹ , Y. Altowairqi ¹ ¹ Saudi Aramco
09:30	Shear wave sonic log estimation from petrophysical data utilizing machine learning models, lower indus basin paki-stan - A. Abdullah ^{1*} ¹ Lmkr
09:50	Field VSP Lookahead Inversion for Velocity via Temporal Convolutional Networks - H. Almarzooq ^{1*} , U. Bin Waheed ² , M. Alfarrarj ² , S. Hanafy ² ¹ Aramco; ² KFUPM
10:10	Morning Coffee Break

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Oral Presentations

Tuesday, 30 September 2025

10:40	Using a Convolutional Neural Network To Differentiate Between Events and Production-related Seismic Signals: A case study from the Sultanate of Oman - J. Williams ^{1*} , M. Beninger ¹ , T. Pugh ¹ , A. Kassam ¹ , Y. Al Sulaimi ² , S. Azri ² ¹ ESG Solutions; ² Petroleum Development Oman
11:00	Deep Learning for Multichannel Log Prediction Tool using Drilling Data and Gamma-Ray Log - Y. Alshaheen ^{1*} , A. Ali ¹ , P. Golikov ¹ , E. Alfataierge ¹ ¹ EXPEC ARC, Saudi Aramco
11:20	A kick in the salt, a case study of a water inflow using sonic log advanced processing - T. de Bittencourt Rossi ^{1*} Petrobras ¹
11:40	Session Q&A
Breakout Sessions	
12:00	Introduction to Breakout Sessions & Discussion
13:00	Lunch Break - Horizon Restaurant
SESSION 8 - DAS (Part II) Session Chairs: Jeelani Bhat (Halliburton) & Vladislav Lesnikov (TotalEnergies)	
14:00	Transforming CCS and Reservoir Surveillance: DAS, Elastic FWI, and Microseismic for High-Resolution CO2 Plume and Reservoir Dynamics Monitoring - J. Le Calvez ¹ , K. Jansen ¹ , K. Jansen ¹ , G. Andreolli Ribeiro ¹ , D. Hill ² , P. Bettinelli ¹ , C. Cavalleri ¹ , P. Ranjan ^{1*} ¹ SLB; ² Sintela
14:20	Borehole seismic imaging using DAS: Horizontal wells, FORGE geothermal site, & elastic waves - R. Stewart ^{1*} , Y. Wang ¹ ¹ University of Houston
14:40	Session Q&A
14:50	Closing Remarks by Co-Chairs
15:00	Afternoon coffee break
15:30	End of Workshop

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REGISTRATION

(All registration rates are in USD)

Registration Fees: Workshop & Two Short Courses (All Access)

REGISTERED AND PAID	EARLY REGISTRATION 30/6/25 - 24/8/25	REGULAR REGISTRATION 25/8/25 - 15/9/25	LATE REGISTRATION 16/9/25 - 1/10/25
EAGE Green Member ^{1,5}	1650	1900	2100
EAGE Bronze/Silver/Gold Member ^{1,5}	1490	1750	1950
EAGE Platinum Member ^{1,5}	1490	1490	1490
Non-member ³	1750	2000	2200

Registration Fees: Workshop & One Short Course

REGISTERED AND PAID	EARLY REGISTRATION 30/6/25 - 24/8/25	REGULAR REGISTRATION 25/8/25 - 15/9/25	LATE REGISTRATION 16/9/25 - 1/10/25
EAGE Green Member ^{1,5}	1450	1700	1900
EAGE Bronze/Silver/Gold Member ^{1,5}	1290	1550	1750
EAGE Platinum Member ^{1,5}	1290	1290	1290
Non-member ³	1550	1800	2000

Registration Fees: Short Course Only

REGISTERED AND PAID	EARLY REGISTRATION 30/6/25 - 24/8/25	REGULAR REGISTRATION 25/8/25 - 15/9/25	LATE REGISTRATION 16/9/25 - 1/10/25
EAGE Green Member ^{1,5}	575	675	825
EAGE Bronze/Silver/Gold Member ^{1,5}	525	625	775
EAGE Platinum Member ^{1,5}	525	525	525
Non-member ³	680	780	930

Registration Fees: Workshop Only

REGISTERED AND PAID	EARLY REGISTRATION 30/6/25 - 24/8/25	REGULAR REGISTRATION 25/8/25 - 15/9/25	LATE REGISTRATION 16/9/25 - 1/10/25
EAGE Green Member ^{1,5}	1150	1400	1600
EAGE Bronze/Silver/Gold Member ^{1,5}	990	1250	1450
EAGE Platinum Member ^{1,5}	990	990	990
Non-member ³	1250	1500	1700
EAGE Student Green Member ^{1,2,5}	375	425	475
EAGE Student Bronze/Silver/Gold Member ^{1,2,5}	300	350	400
Student Non-member ^{2,3,4}	400	450	500

SOCIAL PROGRAMME

Workshop Dinner

Tuesday 30 September, 19:00hrs - 21:00hrs

Venue: Blue Garden Restaurant

Southern Corniche Rd, Al Khobar 34612, Saudi Arabia

CONTACT

For more information on the workshop, please get in touch with the EAGE MEA team via middle_east@eage.org or +971 4 369 3897.

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