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& CALL FOR REGISTRATION

EMBRACING CHANGE -
CREATIVITY FOR THE FUTURE



EAGE ANNUAL

81ST CONFERENCE + EXHIBITION

LONDON | UNITED KINGDOM



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Welcome

EAGE President's Welcome



Welcome colleagues,
What is the real change affecting our industries, our universities and our membership today?
I am very excited about what we will find out while covering this topic at our upcoming 81st EAGE Annual Conference and Exhibition, taking place in London, UK between 3-6 June 2019.

In 2009, while I was attending a conference in Rio de Janeiro there was a talk comparing rigor and creativity in our industry. I am reminded of this now, as I believe rigor and creativity are the way to open a new chapter in our industry, and to make our planet great again! I think and I hope that creativity will be the leverage of change. I also think that our volatile markets are reasons to foster rigor at all levels of our organizations. This is the way to the future. I encourage EAGE members, as well as others from the geoscience and engineering community and beyond, to attend the 81st EAGE Annual Conference and Exhibition in London. There is every reason to believe that we can hold another fantastic event offering participants an unrivalled opportunity to catch up with the latest developments in technology and services, network with peers and also enjoy the vibrancy of London.

The whole package includes a high-level, genuinely multi-disciplinary technical programme, several industry focused EAGE Forum Sessions tackling hot topics, workshops, short courses, field trips, student events, special interest group meetings, not to mention our legendary conference evening. All this is complemented by our world-class exhibition, supported by all the main industry players as well as a wealth of young innovative companies. No Annual is the same of course, and every year we try to improve the experience for our participants. I commend the Local Advisory Committee on their work to ensure that our time in London will be both innovative and memorable. For example, we are committed to further develop the petroleum geology content in the technical programme to reflect the importance of the discipline in resolving the E&P issues in increasingly complex geological structures and all changes and transition in geosciences.

In the transition from a hydrocarbon-based industrial society, we know that oil companies and the service sector will need to continue to find and produce oil, and probably have to do this in a volatile price environment. In this context we see organizations across the world focusing on Big Data and machine learning as an avenue to maximizing the value of current and legacy data.

We also intend to promote the 'Start-Up Area' in the exhibition. This was a popular initiative introduced in recent years where new companies with innovative ideas are provided with the opportunity and platform to introduce themselves to the wider geoscience community at a discounted rate.

These are just some of the ways in which EAGE is pushing boundaries to foster new thinking, in an effort to meet the increasingly daunting business challenges facing many of our members and partner organizations. I am confident that those of you who come to London in June will be more than satisfied with the comprehensive range of activities and the stimulating environment which our Annual engenders. I personally look forward to hosting the Opening Ceremony, including the presentation of our annual awards. It will be the beginning of a week in which it will be my pleasure to meet fellow geoscientists and engineers, many for the first time, all anxious to advance our professional disciplines in this period of transition and move to a greener and cleaner planet.

See you there!

Jean-Jacques Biteau

EAGE President 2017-2019

LAC Chairman's Welcome



The 81st EAGE Conference and Exhibition will be held at the ExCeL Centre in London, 3-6 June 2019. The EAGE conference always provides a fantastic venue for geoscientists and engineers to meet and find out about the latest developments across a wide range of themes, activities and industries. I'm sure London 2019 will not disappoint.

The Local Advisory Committee is working closely with the EAGE to help shape the conference to be relevant

to today's opportunities and challenges.

Our theme is "**Embracing change – creativity for the future**". This reflects the changes that are occurring in the world and our role as geoscientists and engineers in helping to solve some of the big question of our time. The world is demanding more energy and raw materials, whilst at the same time, also demanding a lower carbon future. Digital technologies are affecting everyone's daily life and driving a revolution in how work is done across all industries. In some countries, the energy and extractive sectors are facing a challenge to attract and retain the best talent.

As part of the **opening ceremony**, we will be debating the question of 'what will the oil and gas industry look like in 2030?'

This will be followed over the next days with three **forums**, where all delegates are invited to listen and participate. Thought leaders and practitioners will discuss some of the big questions facing us:

Session 1: Delivering the World's Low Carbon Energy Needs

Session 2: The Roles of Geoscientists and Engineers in the Changing Energy and Technology Landscape.

Session 3: New Technologies for Geoscience and Engineering

The fundamental understanding and application of science continues to be developed and innovated. EAGE 2019 will, as ever, showcase a world class **technical programme**.

A rich **student programme** is being planned where participants will be challenged to 'think outside the screen'. Events will include interview coaching and a virtual reality experience. The 'Laurie Dake Challenge' will return - teams can test their skills developing (virtually) a UK oil field.

If you're interested in attending a **workshop** we have a broad range of options to choose from. And finally, three **field trips** will be open to all participants – including students.

If you're willing to get involved either by technical submission, session chair or volunteering your time to review abstracts then please visit the EAGE website for more information.

On behalf of the Local Advisory Committee, I look forward to welcoming you to the ExCeL Centre in London next June.

Howard Leach

LAC chair



EAGE Annual 2019 Overview*

Saturday 1 June	Sunday 2 June	Monday 3 June	Tuesday 4 June	Wednesday 5 June	Thursday 6 June	Friday 7 June
Registration						
Registration	Registration	Registration	Registration	Registration	Registration	Registration
Technical programme						
	Workshops	Workshops	Technical Programme	Technical Programme	Technical Programme	Workshops
	Short Courses	Short Courses	EAGE Forum Session			Short Courses
	Field Trip	Field Trip				Field Trip
		Opening Session & Awards Ceremony	EAGE Forum Session	EAGE Forum Session		
				Annual General Meeting for Members (EAGE)		
		Your Career Symposium	Session for Young Professionals	Session for Professional Women in Geoscience and Engineering		
Student programme						
	Laurie Dake Challenge	Minus CO ₂ Challenge	Student Programme	Student Programme	Student Programme	
Exhibition						
		Exhibition	Exhibition	Exhibition	Exhibition	
Social programme						
		Icebreaker Reception	Family Member Tour	Conference Evening		

*May be subject to changes.

Times will be posted on the website (www.eageannual2019.org) in due course.

Local Advisory Committee

Howard Leach (Chair)	BP
Iain Bartholomew	Siccar Point Energy Limited
Iain Brown	Consultant
Chris Drage	PGS
Marc Gerrits	Shell
Hatem A. Hendi	Saudi Aramco
Matthew Jackson	Imperial College
Sarah Laird	Halliburton
Alex Maskell	University of Cambridge
Andy Witt	BP
John Williams	BGS
Brenda Wyllie	UK O&G Authority
Sophie Zurquiyah	CGG

Important Dates

Registration Opens	1 December 2018
Early Exhibition Rate Deadline	1 December 2018
Call for Abstracts Closes	15 January 2019
Early Bird Registration Deadline	15 March 2019
Regular Registration Deadline	15 May 2019
Onsite Registration Deadline	6 June 2019

Essential Info

About London

London, a historic city and a world capital of business and finance, will play host to the EAGE Annual 2019. Fine-dining, wonderful sights and a rich web of outstanding museums and galleries will make for a spellbinding time for our delegates from across the world. The network of universities and high-level businesses associated with The City, will ensure that this annual will be our greatest yet and the world's most significant event in geoscience and engineering.

Venue

ExCeL is London's largest conference and exhibition venue. This venue is situated alongside Canary Warf and London City Airport in a stunning Waterfront setting by Royal Victoria Dock. All within easy access of central London.

App Information

The EAGE Annual 2019 will take advantage of the EAGE Event App, which can be found by searching 'eage event app' in the Apple App Store and on Google Play. Install the app on your iPhone or Android device and enter the code 'eage2019'. The App will allow you to plan your personal schedule, take part in live questions during our Forum Sessions, check out our list of exhibitors and consult our plan of the venue.

Contact Us

Connect with us on Facebook, LinkedIn and Twitter for the latest updates on the EAGE Annual 2019. You can also reach out using abstracts@eage.org for questions regarding the technical programme, or registration@eage.org for other issues.

Press Information

Members of the press, with proper press accreditation, are invited to join us for the EAGE Annual 2019. A Press Pass includes an invite to our Opening Ceremony, the EAGE Forum Sessions and our exhibition. Please contact us at communications@eage.org for more details.





Highlights

Opening Ceremony

Join us for our opening ceremony, where our president set the stage for the week of activities. This will be followed by our opening debate, featuring key industry figures discussing: **'Getting fit for the future - what will the Oil & Gas industry look like in 2030?'**. The ceremony will close with our award ceremony, celebrating some of the greatest achievements in the field and congratulating our dedicated members.

EAGE Forum Sessions **NEW**

To complement our scientific content and bridge the gap between the developments from our technical programme and the innovations showcased by our exhibitors, EAGE is proud to host a dedicated number of industry focused EAGE Forum Sessions (formerly known as the executive programme). The Forum Sessions bring together leaders from the industry to discuss the most pressing issues facing the field. We invite all delegates, of both the conference and exhibition to join us for this deep dive into the most important topics being tackled by the industry.

This year's Forum Sessions include:

- Session 1: Delivering the World's Low Carbon Energy Needs**
- Session 2: The Roles of Geoscientists and Engineers in the Changing Energy and Technology Landscape.**
- Session 3: New Technologies for Geoscience and Engineering**

Special Sessions with EAGE communities

Are you a member or would you like to learn more about the two Special Interest Communities of EAGE? Their Special Sessions are fantastic opportunities for discussing key issues and networking with **Young Professionals** and **Women in Geoscience & Engineering**.

Annual General Meeting for Members

Is there anything you ever wanted to know about EAGE but haven't had the chance to ask? Curious to meet the EAGE Board and discuss the association's strategy? If so, the Annual General Meeting for Members (AGMM) is where you should be! Members are encouraged to engage with the Board and share ideas and thoughts on EAGE and its future.

Meet the Committees

The mission and activities of EAGE are supported by two divisions as well as by a number of permanent committees. Come to meet committees' representatives in an informal atmosphere and chat about the committees' mission, work, and possibilities for engagement.

EAGE Mentoring Programme 2019 **NEW**

In 2019, EAGE introduces a new Mentoring Programme, open to all members who seek to receive or share career advice, learn about a different field or support a young professional. Applicants will be guided through a productive mentor/mentee experience and are also invited to join our on-site activities if attending the EAGE Annual!

EAGE Community Hub

The Community Hub integrates all activities EAGE organizes for its communities, to support them with their professional, educational and personal growth. From career advice to motivational speeches, activities for EAGE's special interest groups, student activities and Bookshop featuring lots of geo-titles, the Hub is the one-stop-shop for everything EAGE has to offer.

Career Advice Centre

Looking for a new challenge in the geoscience industry? The demand for energy will increase and companies need talented people to help develop conventional and unconventional energy sources. Visit the Career Advice Centre to build towards your professional, educational and career development. The programme includes one-on-one career advice, speeches, discussions, presentations and more!

Technical Programme

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Introduction

The official opening session takes place on Monday 3 June and the Technical Programme runs Tuesday 4 June – Thursday 6 June. The programme consists of e-Poster/oral presentations and a number of special sessions. In addition, workshops, field trips and short courses are offered on Sunday 2 June, Monday 3 June and Friday 7 June. The combination of all these events offer visitors the widest possible choice to get up-to-date with new knowledge and insights covering every aspect in geoscience and related engineering topics. In order to provide students with an even greater platform to the wider geoscience community, this year our student technical programme has been incorporated into the wider programme.

Call for Abstracts

Authors are invited to submit an extended abstract for the technical programme. The submission deadline for the EAGE Annual 2019 is **15 January 2019, 23:59 hrs (GMT+1)**. Please refer to the EAGE Annual 2019 website to find out more about the submission process and instructions or contact us at abstracts@eage.org.

Call for Reviewers and Chairpersons

In preparation of our annual event, EAGE is looking for reviewers to evaluate the extended abstracts that have been submitted. Abstract evaluations from reviewers are essential to assure the success and quality of the Technical Programme. EAGE is also in search of chairpersons to co-chair oral or e-Poster sessions. Should you be interested in reviewing or chairing, please refer to the Technical Programme section of the EAGE Annual 2019 website for more information and contact details or contact us at abstracts@eage.org

Travel Grants

The EAGE PACE programme and EAGE Student Fund continue to enable individual geoscientists and students to actively participate in the 81st EAGE Conference & Exhibition. Those who submitted an abstract to the Technical Programme can apply for support. Applications are possible until **31 January 2019 (23:59 hrs, GMT +1)**. For more details and conditions, please refer to www.eageannual2019.org › Technical Programme › Travel Grants.

EAGE Hardship Programme

EAGE supports its long-term members facing difficulties, to ensure that they can attend our flagship event and maintain their professional competitiveness in today's job market. Unemployed long-term members can apply for a registration fee waiver as well as for a discount on the registration fees for EAGE-organized short courses at this event. To learn more and apply, please refer to www.eage.org › Membership › EAGE Economic Hardship Programme.

Accepted submissions available on EarthDoc

All the accepted submissions will be added to EAGE's online database EarthDoc and will be available approximately 14 days prior to the event. The extended abstracts will also be available via the Mobile App.

Dedicated Sessions

As in previous years dedicated sessions will be offered to complement the Technical Programme. If you wish to contribute to any of the following dedicated sessions as a presenter, please submit your extended abstract, via the call for abstracts process on the website, before **15 January 2019, 23:59 hrs (GMT +1)**.

The dedicated sessions are:

- › Best of Petroleum Geoscience (in collaboration with the Geological Society of London)
- › Education in the Future
- › Emerging Technologies and Innovative Methods Driving the Next Generation of Exploration Discoveries on the UKCS
- › From Rock Chip to Seismic
- › What's On in Geoscience 2015? - Geoscience Innovation Environments
- › What's On in Geoscience 2025? - Geoscience Start-Up Case Studies
- › Geothermal - Technical Advances and Cross Disciplinary Cooperation in collaboration with the International Geothermal Association
- › Key Innovation and (Potential) Game Changing Developments
- › Near-Surface Geoscience - Global Significance, Markets, Applications and Case Studies
- › Source Rocks, Seals and Reservoirs - A Whole Story and Continuous Lithological and Petrographical Components
- › European Super-Basins
- › Sustainability - Our Business and the Community
- › Geothermal - The Entrepreneur, Business Models & Politics
- › Recent Exploration Discoveries
- › Salt Tectonics Case Studies



Workshop Package

At the EAGE Annual 2019, you have the possibility to attend several insightful and exciting workshops. We will be organizing a total of 19 workshops, taking place on Sunday, Monday and Friday.

If you find more than one of our workshops interesting, you can register for them, as long as you select one per each day. Special fees apply for workshop package registrations. Find out more on the EAGE Annual 2019 website.



Sunday 2 June

Workshop 1

Attenuation: Challenges in Modelling and Imaging at the Exploration Scale

Conveners: H. Chauris (MINES ParisTech), F. Gamar (CGG), R. Plessix (Shell) and Y. Wang (Imperial College London)

Seismic attenuation plays an important role in subsurface characterisation. The techniques for modelling and estimating attenuation are still largely evolving. The objective of the workshop is to review the recent advances in this field at the exploration scale and to invite researchers from both the modelling and imaging sides.

Workshop 2

Seismic Inversion for Marine Overburden Characterization

Conveners: M.E. Vardy (SAND Geophysics), M. Vanneste (NGI), A.W. Hill (BP Exploration), K.J. Campbell (Fugro), S. Hviid (Orsted) and E. Cauquil (TOTAL Exploration & Production)

We propose a workshop that will bring together all parties involved in the development, interpretation, and application of seismic inversion results for marine site investigation. We want to stimulate an open debate that involves everyone associated with the site investigation process, including: geophysicists and other geoscientists, who develop and apply the inversion methods; geotechnical engineers, who incorporate the results into engineering ground models and subsequent infrastructure design; and end-clients, who finance and over-see the whole project cycle.

Workshop 3

Multi-Component Seismic Data Processing

Conveners: B. Kamel (Saudi Aramco)

Multi-component seismic data had proved its merit in characterizing reservoirs as many documented case studies showed. PS converted waves jointly with conventional PP seismic data provide more constrained and robust solutions when imaging subsurface as well as inverting elastic moduli that are transformed to reservoir properties. Processing such seismic data is more challenging compared to conventional PP seismic data due to the asymmetry in raypaths caused by velocity variation between P and S waves. This workshop will highlight optimal processing workflows that improve quality of multi-component seismic data. Moreover, the workshop will focus on processing workflows that can be optimized for specific objectives such as fractures characterization and accurate estimation of reservoir properties. Anisotropic processing for this type of data will be highlighted emphasizing its impact on improving subsurface images, in particular.

Workshop 4

Could Time-lapse (4D) Seismic Technology become Crucial in Improving Large Carbonate Reservoirs Recovery?

Conveners: Y. Elouair (Saudi Aramco) and C. MacBeth (Heriot-Watt University)

Time-lapse (4D) seismic technology is a key enabler for improved hydrocarbon recovery and more cost-effective field operations. In the last two decades, we have witnessed a large number of case studies showing how 4D seismic data are used for reservoir surveillance, how they provide valuable insight on dynamic reservoir properties such as fluid saturation, pressure, and temperature, and how they add value to reservoir management. However, most of the success stories were experienced with offshore clastic reservoirs while the large remaining reserves are rather onshore carbonate reservoirs such as in the Middle-East region. This workshop aims to engage multidisciplinary professionals to discuss key necessary concepts that would be necessary to further increase the use of 4D seismic technology in large onshore carbonate field environment.

Workshop 5

Role of Geomechanics in Characterizing Natural Fracture Systems in the Carbonate Reservoirs

Conveners: K. Hawas (Saudi Aramco), G. Couples (Heriot-Watt University) and A. Subaie (Saudi Aramco)

Characterization of naturally fracture reservoirs is very challenging because of their complexity and heterogeneity. Therefore, a detailed study should be conducted to accurately characterize, predict and model fracture networks in order to predict future reservoir performance. This workshop is designated to explore the role of applying geomechanics on natural fracture prediction & modeling.

Workshop 6

Reservoir Computing by Neural Networks

Conveners: A. Al-Moqbel (Saudi Aramco) and V. Demyanov (Heriot-Watt University)

Reservoir characterization and modelling challenge faces the increasing volumes of information to be coherently accounted for in the digital era reservoir operations. This includes the high quality digital data in vast volumes (seismic, continuous reservoir surveillance, etc) and heritage data, which is often variable quality and subject to uncertainty in interpretation and convention (sedimentary logs, core, wireline, analogues, etc). The workshop aims to provide an overview of the state-of-the-art neural computing reservoir applications and set up a round discussion of the opportunities provided by computer based learning to tackle difficult data and uncertainty rich reservoir problems.

Workshop 7

Integration of Marine CSEM in the Exploration Workflow

Conveners: J.P. Morten (EMGS ASA), T. Wiik (Equinor ASA) and F. Miorelli (CGG)

This workshop will bring together the key CSEM competencies to discuss imaging technology, interpretation methodologies, and practical experience on integrating CSEM in exploration. A focal point will be how uncertainties in inversion results can be handled in exploration workflows to give robust input to risking and drilling decisions.

Monday 3 June

Workshop 8

Broadband Processing: Multiscale Processing of Both Low and High Temporal and Spatial Frequencies and Possible Combination with Potential Field Data

Conveners: M. Francis (Schlumberger) and X. Campman (Shell)

The now familiar term broadband, challenges data processing to rethink some conventional assumptions. Algorithms optimised for conventional bandwidth may need change to working with broader bandwidths. In this workshop we invite participants to explore pitfalls, challenges and solutions. We also propose to include potential fields to review if these are problems just for seismic or synergies exist with potential fields.

Workshop 9

Exploration and Monitoring of Geothermal Reservoirs

Conveners: D. Bruhn (GFZ Potsdam), S. Buske (TU Bergakademie Freiberg) and A. Manzella (IGG/ CNR)

Geophysical techniques play an important role for the successful exploration and exploitation of geothermal reservoirs, in particular if they are linked to a profound characterization and monitoring of the reservoir. This workshop presents the current state-of-the-art of such geophysical methods including case studies as well as the road ahead.

Workshop 10

Machine Learning: Algorithms Hungry for Data

Conveners: O. Dubrule (Total), M. Thompson (Equinor), D. Irving (Teradata) and L. Mosser (Imperial College London)

Deep learning applications are now developed for seismic interpretation, geological modelling, or reservoir simulation. All these methods need to be fed with large datasets of well understood quality. This workshop will discuss the most promising methods and the opportunities for our industry to build and manage these datasets.



Workshop 11

Reservoir Characterization and Monitoring from Inversion and Joint Inversion of Seismic and Non-seismic Methods

Convener: D. Colombo (Saudi Aramco), G. Wilson (Halliburton), N. Cuevas (Schlumberger) and E. Slob (TU Delft University)

The fluid flow in the reservoirs produces multiple geophysical signatures that can be analyzed through multi-physics measurements and inversion of seismic, electromagnetics and gravity. Combination of surface to borehole techniques involving distributed acoustic sensing and permanent EM monitoring can provide the necessary resolution with enhanced sensitivity to deliver new insights and opportunities for the future life of reservoirs.

Workshop 12

Exploration and Capital Discipline: Can We Collaborate Our Way into Faster, Better, More? – The Triquel

Convener: H. Mannaerts-Drew (BP) and C. Munn (BP)

The objective of this workshop series is to identify collaborative practices and ways to continue to boost exploration activity globally. Since 2014, most oil companies did cut into their discretionary exploration budget and despite the oil price strengthening, it is expected that capital spend will continue to be disciplined for the foreseeable future. A first workshop of this kind was held during the EAGE Conference in Paris in 2017, followed by a workshop at the Copenhagen EAGE Conference in 2018. In 2019, the London workshop will summarise the results achieved to date and explore how the 'digital revolution' may support faster exploration decision making from seismic to drilling.

Workshop 13

Core Workshop - Continental Drylands Systems

Convener: O. Wakefield (British Geological Survey), S. Banham (Imperial College London) and E. Hough (British Geological Survey)

Sedimentary deposits from continental dryland systems are commonly well suited towards the hosting of fluids; resulting from generally good bulk porosity and permeability. However, the inherent lithological diversity can greatly impact fluid flow. This workshop provides insights to such issues using siliciclastic and evaporite cores from UK onshore and offshore.

Friday 7 June

Workshop 14

Uncertainty Quantification in Seismic Modelling and Inversion

Conveners: A. Gesret (Mines ParisTech), P. Sochala (BRGM), J. Messud (CGG) and K. Osypov (Chevron)

Quantifying uncertainties on inverted Earth model parameters in the industrial context of tomography and imaging is crucial to reduce exploration and production risks. The aim of this workshop is to address the challenge of uncertainty quantification at a reasonable cost and a better evaluation of the "input" uncertainties.

Workshop 15

Reproducing Research with the Marchenko Method and Inversion with the SEISCOPE Toolbox

Conveners: J. Thorbecke (Cray), J. Brackenhoff (TU Delft), L. Métivier (Univ. Grenoble Alpes) and R. Brossier (Univ. Grenoble Alpes)

In this workshop we will reproduce results and use software of reproducible research papers about the Marchenko method and the SEISCOPE toolbox. After the theory is briefly explained, the participants will work in groups on a few problems during the hands-on sessions and present their results to the other groups.

Workshop 16

Induced Seismicity – Past, Present and Future

Conveners: B. Dost (KNMI), M. van der Baan (University of Alberta), W. Ellsworth (Stanford University), L. Eisner (Seismik), J. Verdon (University of Bristol) and E. van Dedem (Shell)

Mitigation of induced and triggered seismicity is of increasing interest worldwide. The workshop is intended to discuss developments in monitoring, modelling, and mitigation, covering a broad range of applications, including gas production and storage, geothermal projects, hydraulic fracturing treatments, salt-water disposal and mining projects.

Workshop 17

Live 3D Geological Models, from Core to Simulation and Real-Time Field Economics

Conveners: M. Sarraj (Saudi Aramco) and J. Nieto (Saudi Aramco)

An effective way of maximizing an asset's value is by making informative and sound economic decisions through utilizing the all acquired reservoir data in a timely manner. This can be accomplished by reducing the turnover time of data processing, QC, interpretation, analysis, modeling and simulation, or in other words, from data to information and then knowledge. This workshop shall address the ways of collaboration between different disciplines and the roles of technology as ways towards Live Geological and Simulation Models.



Workshop 18

Integrated Core and Seismic Data: Facies Mapping of Lacustrine Turbidites in the North Falkland Basin

Conveners: D. McCarthy (British Geological Survey), T. Dodd (British Geological Survey) and P. Richards (Falkland Island Government)

Turbidite systems can form extensive, high-quality hydrocarbon reservoirs within lacustrine basins. Accurate modelling of these systems can be achieved by integrating seismic amplitude maps and core data. This workshop illustrates how this can be achieved using ~455 metres of core and 3D seismic from the Sea Lion dataset from the North Falkland Basin.

Workshop 19

Role of Geological Science in the Decarbonisation of Power Production, Heat, Transport and Industry

Conveners: D. Schofield (BGS), S. Geiger (Heriot-Watt University) and P. Ringrose (Equinor/NTNU)

This workshop is a follow up to the joint EAGE and Geological Society of London 2018 Bryan Lovell meeting on the 'Role of geological science in the decarbonisation of power production, heat, transport and industry'. The workshop will provide an opportunity to develop a community roadmap around decarbonisation, providing an opportunity for industry professionals, academics and policy makers to identify emerging topics in the energy transition.

Short Courses

EAGE offers a selection of one – and two-day short courses, brought to you by acknowledged experts (both industry professionals and academics). All short course registration fees include the course materials and lunch.

Sunday 2 & Monday 3 June

Short course 1

Migration and Velocity Model Building

Instructor: P. Gerritsma (Gerritsma Geophysical Training and Consultancy)

Migration aims to yield a proper image of the subsurface structure. It requires as input a representative macro velocity of the subsurface. Migration and velocity model building are intimately related. Both processes have a number of alternative implementations. This course gives an overview of their principles and algorithms.

Monday 3 June

Short course 2

Applied Oilfield Geomechanics

Instructor: J. Herwanger (MP Geomechanics)

Applied Oilfield Geomechanics teaches practical methods to build geomechanical property models and describes the process

of calibrating geomechanical models to field observations. This is followed by applications ranging from wellbore stability to fault re-activation.

Friday 7 June

NEW COURSE: Short course 3

Carbonate Reservoir Characterization

Instructor: M. Deville de Periere (Badley Ashton)

This carbonate reservoir characterization course focuses on the analysis of carbonate depositional textures and the subsequent diagenetic modifications as the main controls on the pore system evolution, heterogeneity and complexity. The intricate inter-relationship of the depositional and burial history can be unravelled to allow the prediction of reservoir facies, and hence, aid reconstruction and development of three-dimensional reservoir models. This course demonstrates the value of understanding pore system evolution as a part of large-scale volumetric assessments and the development of carbonate reservoirs.

SEG course

Practical Solutions in Rock Physics

Instructor: Manika Prasad

This course is designed to give an introduction to rock physics, methods to evaluate laboratory data and theoretical models, and key scientific issues surrounding their evaluation.

Field Trips

If you are looking for a more hands-on activity to complement your attendance to the conference and exhibition, why not register for one of our field trips?

Monday 3 June

Field trip 1

Jurassic Coast World Heritage Site

Field trip leaders: M. Simmons (Halliburton) and H. Johnson (Imperial College London)

The Wessex Basin forms an excellent study area for petroleum geology. We will examine some classic outcrops and identify those features which have significance in forming subsurface hydrocarbon accumulations and their successful exploitation. We will also discuss the evolving depositional setting and tectono-stratigraphic evolution of the basin.

Monday 3 June

Field trip 2

Urban Geology of Piccadilly

Field trip leaders: R. Siddall (UCL) and S. Day (Geological Society of London)

This trip will begin with a visit to the Geological Society of London to view 'the map that changed the world', William Smith's 1815 geological map of England, Wales and Scotland. Examination of the map will show that the outcropping geology of central London consists of sediments of Eocene and younger age. From here, a guided walking tour will visit several localities to observe a range of very different rocks that can be observed across the city.

Friday 7 June

Field trip 3

Shallow-marine Tidal Sandstones and Reservoir Analogues: Cretaceous Folkestone Sands Formation, Weald Basin

Field trip leaders: M. Wells (BP), G.J. Hampson (Imperial College London) and J.R. Maynard (Exxon Mobil)

This field trip will focus on the Wealden and Lower Greensand stratigraphy and general basin evolution of the Weald Basin, southeast England. A classic field area within a short drive of London.



Social Programme

Monday 3 June, 18:00 - 20:00 hrs Icebreaker Reception (Exhibition)

The icebreaker reception is a great way to start off the week and mark the beginning of the EAGE Annual 2019 Conference & Exhibition. It is the perfect way to meet exhibitors and delegates from around the world, in an informal setting. A variety of free drinks and food will be served throughout the exhibition area.

Wednesday 5 June, 19:00 - 23:30 hrs Conference Evening

The conference evening gives the attendees the chance to unwind, enjoy good food and drinks, in good company. The Conference Evening is not included in all registration types. Please consult www.eageannual2019.org.

Family members

We welcome all family members to join us in London. All registered family members have access to the social programme, which includes the Icebreaker Reception and the Conference Evening. In addition, registered family members will have access to the Exhibition and the family members' tour on Tuesday 4 June (included in the fee). More information about the family members' tour will be published on the website.

Students

Theme: Think Outside the Screen

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Introduction

This year's exciting and comprehensive Student Programme is themed 'Think Outside the Screen'. We constantly expand and develop the programme, while maintaining core fundamental offerings in up-to-date industry knowledge and skill development.

Student registration

Registration for a minimum of three activities in the Student Programme is required. Changes or registering for additional activities can be done online up to two weeks prior to the event or onsite.

Student Travel Grants

Students who have submitted an abstract can apply for a Student Travel Grant, see page 7 for more information.

Laurie Dake Challenge 2019

Sunday 2 June

Challenge finalists will present their findings to an expert jury, after months of working on a dataset (provided by **BP**) of a discovered hydrocarbon resource. Universities and industries are invited to attend the presentations and witness the competition between the best multi-disciplinary student teams in the world!

Enter the Challenge

To qualify for the Laurie Dake Challenge, students are expected to unleash their creativity and technical excellence to 1) interpret an exploration data set, 2) generate the most attractive prospect(s), and 3) win the licensing round. Deadline to submit and enter the competition is **21 December 2018, 23:59 hrs (GMT +1)**. Sign up now to win fantastic rewards!

MINUS CO₂ Challenge 2019 (Applications Closed)

EAGE and its community are committed to investing in a cleaner future, and helping our industry tackle the challenges of producing energy in a low-carbon fashion. That's why EAGE is inviting students across the world to enter Minus CO₂ Challenge. Students, in teams of maximum five, are asked to enter this challenge and tackle a dataset, provided by **Equinor**, of a subsurface hydrocarbon resource and asked to devise a method of retrieving the resource with zero net emissions of CO₂.

The dataset is supplied by **Equinor** and the Challenge is sponsored by **Total** and **Schlumberger**.

Student Activity: The Igloo

A 360 degrees sound and vision experience: Step into the virtual world of the Igloo Dome. Powered by **BP** and located in the EAGE Community Hub, the Igloo offers a unique opportunity to immerse yourself in the action.

Trial Interviews (Day 1)

Tuesday 4 June

Time: 10:00 – 16:00 hrs

Networking Café

Tuesday 4 June

Time: 14:00 – 16:00 hrs

Meet up with senior industry and academic experts for advice on professional development.

Trial Interviews (Day 2)

Wednesday 5 June

Time: 10:00 – 16:00 hrs

Exhibition Tour

Wednesday 5 June

Time: 13:30 – 14:30 hrs

Meet a selection of exhibiting companies and find out what they have in store. Participating is the perfect way to get better acquainted with the industry.

EAGE Geo-Quiz

Wednesday 5 June

Time: 15:00 – 17:00 hrs

This is where university students are challenged to showcase their geoscientific knowledge and skills learned during their studies. Up to 50 teams, including the winning teams of the regional Geo-Quiz battles, will be put to the test as they compete to outwit each other, striving to win fabulous prizes!

Motivational Speech

Thursday 6 June

The EAGE Community Hub will be the centre for the motivational speaker as a highlight of the Student Programme.

Student Challenge: Travel Grant Hunt Draw

Thursday 6 June

Compete in our travel grant hunt at the Conference and Exhibition and win one of the travel grants to the EAGE Annual 2020.

Exhibition

EAGE brings together emerging technologies, state-of-the-art innovations, leading companies and organizations at the Exhibition. Around 350 companies from around the world will showcase the latest technologies, new product launches and valuable industry services. Enhance your product knowledge; see, touch, experience and understand cutting edge technologies; and meet the people behind the products. Share ideas with professionals from around the world. Grow a network of invaluable contacts for benchmarking, partnering and building your company and career.



EAGE and our exhibitors are looking forward to your visit!
Find the latest information at www.eageannual2019.org

Exhibit amongst the leaders of the industry

EAGE's well-qualified, highly-technical audience provides your company the opportunity to showcase its products and services while fostering new relationships and enhancing current ones. For more information please contact us at exhibition@eage.org or refer to the EAGE Annual 2019 website.

List of Exhibitors and Sponsors

As of: 26 October 2018

 = Sponsor

A

Amplified Geochemical Imaging GmbH
ARK CLS Ltd
Avalon Sciences


B

Baker Hughes, a GE company
BGP Inc 
BP 



C

C&C Reservoirs
Cable & Supplies Inc.
CGG Services SAS
CVA Europe Holding

D

DEA Deutsche Erdoel AG
DECO Geophysical SC
DELL EMC
Delft Inversion
DownUnder GeoSolutions (London) Pty Ltd 
Dynamic Graphics Ltd
Dynamic Technologies DTCC

E

EMGS
Eliis
Emerson
Engenius
EOST Strasbourg
Eurotech Computer Services Norway AS
ExxonMobil 
Equinor 

F

Fairfield Geotechnologies
Fraunhofer ITWM
Fugro Norway AS

G

GEO ExPro GeoPublishing Ltd
Geofizyka Torun S.A.
Geolab
Geomatrix Earth Science Ltd
Geophysical Insights 
Geophysical Technology Inc
Geosoft Inc.
Geospace Technologies Corp.
GeoTeric
Geovariances
Giga Infosystems GMBH

H

Heriot-Watt University
HGS (India) Limited
HGS Products B.V.

I

IHSMakit
Ikon Science Ltd
InApril AS
INOVA Geophysical
INT Inc.
International Seismic Co (iSeis)
ION

J

JSC Marine Arctic Geological Expedition (MAGE)

K

Katalyst Data Management
Kyoto University

M

MagSeis AS
Marac Enterprises Inc.
Mictham 

N

NORSAR Innovation AS

O

OCTIO AS
OvationData Limited
OYO Corporation

P

PetroMarker AS
Petrosys Europe Ltd
PetroTrace Limited
PGS Exploration (UK) Ltd.
Polarcus

Q

Qeye Labs ApS

R

Repsol 
Rock Physics Technology
Rosgeo Overseas AG
RPS Energy

S

Sander Geophysics
Saudi Aramco 
Saudi Geophysical Consulting Office
Schlumberger Technology Corporation
Seabed Geosolutions
Searcher Seismic
Seiche
Seismic Image Processing Ltd
Seismic Source Company

Sercel
Sharp Reflections GmbH
Shearwater Geoservices Ltd. 
Shell 
Silixa
Sinopec Geophysical Corporation
Sonardyne International Ltd.
Spectrum Geo Ltd.
SYRLINKS

T

TDI-Brooks International Inc.
TechnoImaging
TEEC GmbH
TEECware
TERRASYS Geophysics GmbH & Co. KG
TGS
Thermo Fisher Scientific (Formerly FEI)
Total 
Troika International Ltd

V

Verif-i Limited
Vinci Technologies
VSProwess Ltd

W

WEIHAI SUNFULL GEOPHYSICAL EXPLORATION EQUIPMENT
Western Geco 
Wintershall
Wireless Seismic Inc.

Z

Zonge International Inc.

Registration Open Now!

For information on fees, registration deadlines, and discount options, please check out www.eageannual2019.org.

Register early to Save on your Entrance to the Most Significant Multi-disciplinary Geoscience and Engineering Event in the World.

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