

**EAGE**

INCLUDING



**SECOND ANNOUNCEMENT &  
CALL FOR REGISTRATION**

**DELIVERING FOR THE ENERGY CHALLENGE:  
TODAY AND TOMORROW**



# **EAGE ANNUAL**

**82ND CONFERENCE + EXHIBITION**

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If you want to sponsor the most significant advancements in geoscience and engineering by sponsoring the EAGE Annual 2020, please contact us at [sponsoring@eage.org](mailto:sponsoring@eage.org) for more information or refer to [www.eageannual2020.org](http://www.eageannual2020.org).

# Welcome

## LAC Chairman Welcome



Dear colleagues,  
Preparations continue apace for EAGE 2020 in Amsterdam, with pleasing progress across the board.

As previously noted, one of the greatest challenges facing the industry today is delivering solutions which address energy security, energy equity and environmental sustainability - the three core dimensions of the energy transition. In NW Europe, but also globally, we are seeing increased focus on the ramifications of climate change, their impact on the traditional Oil and Gas business model, the importance of new, adjacent energy solutions, the future of existing and future geology graduates and much more.

The theme of the conference, "Delivering for the ENERGY CHALLENGE: today and tomorrow" addresses the full spectrum of the challenge with an interesting proposed line up of forums with diverse speakers and relevant examples. We also plan a field trip to look at diverse energy solutions and a wide spectrum of exhibitors reflecting the breadth of the industry in The Netherlands.

The foundation of the conference is manifested in the form of high quality papers and papers. Please do continue to submit your abstracts for selection, and reserve your place at the conference.

I look forward to seeing you in Amsterdam in 2020.

Marc Gerrits  
EAGE 2020 LAC Chair  
Shell EVP Exploration

## EAGE Annual 2020 Overview\*

Saturday 6 June	Sunday 7 June	Monday 8 June	Tuesday 9 June	Wednesday 10 June	Thursday 11 June	Friday 12 June
<b>Registration</b>						
Registration	Registration	Registration	Registration	Registration	Registration	Registration
<b>Programme</b>						
	Workshops	Workshops	Technical Programme	Technical Programme	Technical Programme	Workshops
	Short Course	Short Course	EAGE Forum Session 1	EAGE Forum Session 4		Short Course
	Field Trip	Field Trip	EAGE Forum Session 2	EAGE Forum Session 5		Field Trip
		Opening Session & Awards Ceremony	EAGE Forum Session 3	Annual General Meeting for Members		
		YP Symposium	Young Professionals Session	Women in Geoscience & Engineering Session		
<b>Student Activities</b>						
	Laurie Dake Challenge		Student Activities	Student Activities	Student Activities	
<b>Exhibition</b>						
		Exhibition	Exhibition	Exhibition	Exhibition	
<b>Social Programme</b>						
		Icebreaker Reception	Family Member Tour	Conference Evening		

\*May be subject to changes.  
Times will be posted on the website ([www.eageannual2020.org](http://www.eageannual2020.org)) in due course.

## Local Advisory Committee

Marc Gerrits	Shell
Jeroen Abels	ONE-Dyas B.V.
Annemieke van den Beukel	Shell
Greg van de Bilt	Panterra
Hans de Bresser	University of Utrecht
Aafke Bouma	Shell
Marit Brommer	IGA
Serge van Gessel	EuroGeoSurveys
Lucia van Geuns	The Hague Centre for Strategic Studies
Berend Scheffers	EBN
Erik Sens	Shell
Jonathan Shearman	ExxonMobil
Ivo Vos	SGS Subsurface Consultancy
Femke Vossepoel	TU Delft

## Important Dates

<b>Registration Opens</b>	December 2019
<b>Call for Abstracts Deadline</b>	15 January 2020
<b>Early Bird Registration Deadline</b>	15 March 2020
<b>Regular Registration Deadline</b>	15 May 2020
<b>Onsite Registration Deadline</b>	11 June 2020



## Essential Info

### About the EAGE Annual 2020

A place where you can see the familiar faces of the industry, but also meet the most forward thinking and inspirational people in the field, the EAGE Annual is the networking place to be next year! Bringing together a state-of-the-art Technical Programme and an Exhibition where companies introduce their groundbreaking products and services, our event is sure to have your agenda full and your desire to learn satisfied.

### About Amsterdam

Home to some of the world's biggest museums, iconic locations in a vibrant environment and, of course, its 400-year-old Canal Ring, Amsterdam is a mix of old world tradition and a modern outlook. The city has established itself over the years as a key launchpad into the European market, with its stable business climate, diverse talent pool, and entrepreneurial mindset.

### Getting around Amsterdam

For this year's Conference & Exhibition, the transportation ticket is **not included** in the registration fee. You can make use of a variety of different types of transportation tickets for Amsterdam's public transport network. Please refer to our website for more information and choose the best option for your trip.

### App Information

The EAGE Annual 2020 will take advantage of the EAGE Event App, which can be found by searching for 'EAGE event app' in the Apple App Store and Google Play. Install the app on your iPhone or Android device and enter the code 'eage2020'. 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 (App available April 2020).

### Get in Touch

Connect with us on Facebook, LinkedIn and Twitter for the latest updates on the EAGE Annual 2020. You can also reach out using [abstracts@eage.org](mailto:abstracts@eage.org) for questions regarding the technical programme, or [registration@eage.org](mailto:registration@eage.org) for other enquiries.

### Press Information

Members of the press, with proper press accreditation, are invited to join us for the EAGE Annual 2020. A Press Pass includes an invite to our Opening Session, the EAGE Forum Sessions and our Exhibition. Please contact us at [communications@eage.org](mailto:communications@eage.org) for more details.

## Highlights

### Opening Session

Join us for our opening session, where our president, Michael Poppelreiter, sets the stage for the week of activities. This will be followed by a vivid opening debate, featuring key industry figures discussing: **“Delivering for the GREAT ENERGY CHALLENGE: today and tomorrow”**. The session will close with our Awards Ceremony, celebrating some of the greatest achievements in the field and congratulating our dedicated members.

### EAGE Forum Sessions

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 focused EAGE Forum Sessions. More details on page 6.

### Sessions with EAGE Communities

Are you a member or would you like to learn more about the four Special Interest Communities of EAGE? Their Sessions are fantastic opportunities for discussing key issues and networking: Young Professionals and Women in Geoscience & Engineering will host Special Sessions on Tuesday and Wednesday, while the Decarbonization & Energy Transition group will lead one of the dedicated sessions of the Technical Programme.

### 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 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 meet committees' representatives in an informal atmosphere and chat about the committees' mission, work, and possibilities for engagement.

### EAGE EU Affairs / Horizon 2020

EAGE has decided to explore opportunities in the EU Public Affairs arena, thereby expanding the services offered to our community. The purpose of this initiative is to identify the potential funding opportunities for EAGE and its society, as well as understanding the relevant policies, its impacts and opportunities for the geoscience world. During the exhibition, EAGE will provide a platform for interested parties to meet, look at open calls and discuss potential partnership opportunities for Horizon 2020 in the form of a Brokerage Event.

### EAGE Mentoring Programme 2020

Several participants of the EAGE Mentoring Programme 2020 will meet in person at the Annual Conference for the first time. You can enrich your experience at the event by signing up as a mentor or mentee.



### 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.

### Digital Transformation Area

As EAGE looks to the future for new ways of working smarter, faster and more efficiently, we are delighted to include the Digital Transformation Area in the Exhibition programme - exclusively for those working in the digital energy arena, providing solutions around people, processes and technology.

The area will explore the use of existing technologies such as the cloud and High Performance Computing, as well as innovative and futuristic ideas including Virtual Reality and AI. EAGE will bring these specialists together to give technical presentations in the Exhibition and to showcase their state-of-the-art solutions. Participation in the area will include presentation opportunities in the dedicated theatre.

### Geothermal Area

In this brand new area, EAGE aims to bring together energy companies, service companies, operators and research centres which focus heavily on geothermal energy exploration. We would like to especially encourage experts from the hydrocarbon industry to participate and explore future business opportunities.



# EAGE Forum Sessions

The Forum Sessions bring together leaders from the industry to discuss the most pressing issues facing the field. We invite all delegates of the conference and/or exhibition to join us!

## Opening Debate

**Monday 8 June | 16:00 - 18:00**

**'Delivering for the Great Energy Challenge: Today and Tomorrow'**

Delivering solutions which address the three core dimensions of the energy transition – energy security, energy equity, and environmental sustainability - is one of the greatest challenges facing the industry. These three goals constitute a 'trilemma', entailing complex interwoven links between public and private actors, governments and regulators, economic and social factors, national resources, environmental concerns, and individual behaviours. The debate will enable participants from diverse industry backgrounds to articulate their views of the energy trilemma and what they believe is needed to succeed.

## Forum Session 1

**Tuesday 9 June | 8:30 - 10:00**

**'Preserving O&G Industry License to Operate in a Complex Stakeholder World: Case Studies from Europe'**

The sudden and rapid decline in the sustainability of the Groningen gas field attests to the power of stakeholders in the debate on the future of the Oil and Gas industry, particularly onshore Europe. Societal license to operate is an increasingly important 'non-technical risk'. There is an increased requirement for oil and gas companies, regulators, politicians and others to manage their existing and new investments to ensure continued support from society. The forum will debate the dilemmas, using Groningen and other case studies from Europe, with representatives from the diverse set of stakeholders.

## Forum Session 2

**Tuesday 9 June | 10:30 - 12:00**

**'New Technologies for the Energy Needs of the Future'**

Continued oil and gas price pressures, the need for sustainable oil and gas solutions, the Digital Revolution and the Energy Transition all speak to the opportunities and threats provided by new technology. This panel will focus on the potential impact of digital change, big data and new ways of working. It will also examine the cross-over of subsurface technologies from the O&G business to other industry segments such as geothermal as well as potential technical opportunities arising from increasingly prominent forms of energy provision such as solar and wind.

## Forum Session 3

**Tuesday 9 June | 13:30 - 15:00**

**'Geoscience Careers for Future Energy Supply'**

With the Energy Transition, Geoscience students and recent graduates, particularly in Western Europe, are understandably concerned about the long term viability of their careers as well as the appeal of working in an increasingly vilified Oil and Gas industry. This panel will examine the viability of long term employment and career options for new and mid level geoscientists, while also addressing the variety of careers available, career longevity and how the industry can continue to attract the talent needed.

## Forum Session 4

**Wednesday 10 June | 8:30 - 10:00**

**'Recent Exploration Discoveries'**

The oil and gas exploration business is evolving quickly. Changes that were initially triggered as a fast reaction to lower prices now look like a structural repositioning of the sector. The energy transition challenges the need for exploration-led growth with a weaker long-term demand outlook. Throughout this period successful explorers have continued to make world-class discoveries that will become important new sources of supply. These demonstrate how the best opportunities that can compete in a world seemingly awash with resources. The purpose of this session is to highlight the best new discoveries and discuss how companies are adapting to the new exploration world.

## Forum Session 5

**Wednesday 10 June | 13:30 - 15:00**

**'Educating Future Energy Professionals – a Holistic Perspective'**

The Energy Transition is upon us and the world of work is rapidly changing where Digital Technology disrupts business models and changes the way work is done. While digital immigrants need to keep up with digital natives, hierarchies disappear, and millennials and Gen Z generations feel entitled to rapid career growth in a compelling workplace. Against this backdrop, how do companies and academia adapt their learning & development approaches to respond to this changing landscape and to develop the future Energy Professionals the world requires?

## Technical Programme

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### Introduction

The official opening session takes place on Monday 8 June and the Technical Programme runs Tuesday 9 June – Thursday 11 June. The programme consists of e-Poster/oral presentations and a number of dedicated sessions. In addition, workshops, field trips and short courses are offered on Sunday 7, Monday 8 and Friday 12 June. The combination of all these events offers 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, the 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 2020 is 15 January 2020, 23:59 (GMT+1).** Please refer to the EAGE Annual 2020 website to find out more about the submission process and instructions or contact us at [abstracts@eage.org](mailto: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 2020 website for more information and contact details or contact us at [abstracts@eage.org](mailto: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 EAGE Annual Conference & Exhibition. Those who submitted an abstract to the Technical Programme can apply for support. Applications are possible until 31 January 2020 (23:59 GMT +1). For more details and conditions, please refer to [www.eageannual2020.org](http://www.eageannual2020.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](http://www.eage.org) › Membership › EAGE Economic Hardship Programme.

### Accepted submissions available on EarthDoc

All 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.

The dedicated sessions are:

- › Carbonate Systems
- › Key Innovations and Potential Game Changers
- › Best of Petroleum Geoscience
- › Best Practice in Core Description
- › Getting inside the Reservoir
- › Induced Seismicity
- › Integrated Reservoir Modeling in the Cloud
- › Depositional Processes and Stratigraphic Modelling
- › Modified Salinity Water Flooding in Carbonate Reservoirs
- › Energy Recovery from Fractured Reservoirs: Computational Challenges, Experimental Achievements and Field Applications
- › Petroleum Systems of NW Europe
- › Deep Water Systems
- › Decarbonization and the Energy Transition



# Workshop Package

At the EAGE Annual 2020, you have the possibility to attend several insightful and exciting workshops. We will be organizing a total of 17 workshops, taking place on Sunday, Monday and Friday.

You can register for the Workshop Package, where you can pick and choose any workshops you want to attend. Special fees apply for workshop package registrations. Find out more at [www.eageannual2020.org](http://www.eageannual2020.org).

## Sunday 7 June

9:00 - 17:00

### Workshop 1

#### Open Source Data and the Future of Industry Benchmarks

**Convener:** A. Citlali Ramirez (TGS)

Working with open datasets provides significant opportunities to collaborate and accelerate digital maturity across applied geosciences. There are open datasets: government releases, synthetic, and few private releases. Types, amount, diversity, and quality varies greatly. What's the value of data? What's the value of industry benchmarks? How can we best mature digital capabilities? In this workshop, we will review the status, share AI/ML needs/experience, and map a path for industry benchmarks.

### Workshop 2

#### Acoustic and Elastic Wave Equation Imaging and Velocity Model Building

**Conveners:** R.É. Plessix (Shell)  
E. Li (National University of Singapore)  
A. Ratcliffe (CGG)  
M. Lacasse (ExxonMobil)

In this workshop we discuss the pros and cons of acoustic and elastic waveform inversion for velocity model building. We highlight where and when we need to consider the elastic nature of the seismic data in order to perform an accurate update of the Earth model.

### Workshop 3

#### Uncertainty Quantification and Visualisation in Geological Modelling

**Conveners:** J. Ten Veen (TNO-Geological Survey of the Netherlands)  
D. Maljers (TNO-Geological Survey of the Netherlands)  
J. Stafleu (TNO-Geological Survey of the Netherlands)  
F. Busschers (TNO-Geological Survey of the Netherlands)

This full-day workshop will cover all aspects of uncertainties in geological modelling. Main topics include model accuracy, model precision and uncertainty visualization. We start with a morning session for non-specialists, followed by an afternoon session with topic-related sessions including keynote lectures and case-studies.

### Workshop 4

#### Integrated Applications of Non-seismic Geophysics (gravity, magnetism and electromagnetics)

**Conveners:** S. Witte (Shell)  
R. Streich (Shell)  
S. Hallinan (CGG)  
M. Jegen (GEOMAR)

Exploration is targeting increasingly challenging geological settings and in many of these areas seismic imaging is difficult. This workshop will bring together technical experts from industry, service providers and research institutions to discuss how the integration of multiphysics (seismic and non-seismic data) can guide geological interpretation in a cost-effective way.

### Workshop 5

#### Geothermal Workshop: From exploration to production in a low-enthalpy environment

**Conveners:** J. Schaaf (EBN)  
H. van Lochem (EBN)  
H. Rueter (HarbourDom)  
J.D. van Wees (TNO)  
P. Vardon (Delft University of Technology)

The workshop aims to discuss low-enthalpy geothermal energy from exploration to production. Starting from exploration strategies and play development, presentations on reservoir characterization, modelling and simulations will follow. Production issues and heat distribution will be discussed. The workshop will be a mix of presentations, posters and interactive round table discussions.

### Workshop 6

#### Introduction to Geoscience Input into Well Planning and Design

**Conveners:** M. Ecclestone (EBN)  
D. van Leverink (EBN)

This 1-day "Introduction to Geoscience Input Into Well Planning and Design" workshop provides an overview of key geoscience deliverables and how these are integrated and communicated within the well delivery team prior to and during well planning and design to support safe, cost-competitive and quality well design that caters for prognosed subsurface conditions and associated uncertainties.

Monday 8 June

9:00 - 16:00

**Workshop 7**

**Artificial Intelligence Techniques for Reservoir Management**

**Conveners:** D. Guerillot (Texas A&M University at Qatar)  
J. Bruyelle (Texas A&M University at Qatar)

During the last 10 to 20 years, dedicated research efforts to build intelligent systems in exploration and production have been numerous. This workshop is devoted to applications on artificial intelligence techniques in reservoir simulation. Here, we would like to evaluate the capacities of these applications to forecast dynamic reservoir productions.

**Workshop 8**

**Future of Seismic Acquisition**

**Convener:** X. Campman (Shell)  
A. Citlali Ramirez (TGS)

In this workshop we aim to present an overview of where the seismic acquisition industry stands and discuss future directions.

The main topics will revolve around:

1. Technical developments required to address more flexible acquisition styles.
2. New collaborative/commercial models to keep acquisition affordable and to stimulate new technology development.

**Workshop 9**

**High Resolution Full Waveform Inversion: Is it only cosmetics, or is there any value for imaging and interpretation?**

**Conveners:** T. Allemand (CGG)  
M. Francis (Schlumberger)  
G. Lambaré (CGG)  
D. Vigh (Schlumberger)

This workshop will focus on high resolution velocity models provided by Full Waveform Inversion. In particular, we will try to understand their pitfalls, as we know we do not use the correct physics, as well as highlight the value they can bring for interpretation.

**Workshop 10**

**Characterization and Modelling of Carbonate Reservoirs for Geothermal, Hydrocarbons and Storage Purposes**

**Conveners:** B. Jaarsma (EBN)  
K. Geel (TNO)

This workshop comprises aspects of mapping, modelling and managing fractured and /or karstified carbonate reservoirs. Contributions will be on case studies from geothermal, hydrocarbons and (gas / fluid) storage projects. Participants will have different backgrounds – from geoscientist to engineers – enabling multi-disciplinary crossover between different industries and academia.

**Workshop 11**

**Energy Storage in the Subsurface - Key enabler for a reliable future energy system**

\*Half day programme

**Conveners:** R. Groenenberg (TNO)  
J. Koornneef (TNO)  
S. van Gessel (TNO)

Large-scale subsurface energy storage is currently the only option to secure supply of energy during prolonged periods with calm winds and no sunshine. In this workshop, we will review the current state of play and potential of subsurface energy storage technologies, and discuss the research challenges to advance them towards application.

**Workshop 12**

**Enhanced Oil Recovery (EOR) in Europe: A roadmap for a successful implementation**

**Conveners:** TBC

Different EOR research and applications have performed in Europe that still require dissemination and brainstorming. This workshop is expected to gather experts to discuss lessons learnt, ideas/trends including all phases of EOR project implementation. The insights will help gaining experience from successful pilot/field applications, companies and academia.



Friday 12 June

9:00 - 17:00

**Workshop 13**

**Low Frequency Seismic Data Acquisition and its Impact on Imaging and Inversion**

**Conveners:** A. Ziolkowski (University of Edinburgh)  
J. Dellinger (BP)  
A. Brenders (BP)  
N. Tellier (Sercel)  
F. ten Kroode (Shell)  
G. Baeten (Shell)

We will discuss the acquisition and resulting processing benefits of increased low-frequency energy and will place special emphasis on quantifying the lowest frequency of interest and the corresponding S/N level that must be generated during seismic acquisition to reap these benefits in imaging and inversion.

**Workshop 14**

**Subsurface Uncertainty Quantification - Towards stochastic models**

**Conveners:** M. Brzostowski (Schlumberger)  
C. Esmersoy (Schlumberger)  
S. Re (Schlumberger)

In this workshop we will focus on how to quantify these uncertainties, representing the subsurface as a stochastic model rather than a single deterministic model as we typically do today. Understanding these uncertainties and their roots will also help devise ways of reducing them. As such, we want to emphasize the seismic and non-seismic tools, well data, applications, and case histories available to the industry.

**Workshop 15**

**Internal Multiple Removal - Status, challenges, and road ahead**

**Conveners:** L. Zhang (Delft University of Technology)  
C. Kostov (Schlumberger)  
K. De Vos (Shell)

Internal multiple reflections are often ignored in production processing of seismic data because of the complexity to predict them and the challenges in subtracting them without touching primary reflections. This is changing now. More and more effort is devoted to the removal of internal multiple reflections and several new schemes have been developed.

In this workshop we would like to bring attention to the current status and remaining challenges of internal multiple reflection prediction and removal technology. We also would like to discuss future possibilities for internal multiple reflection removal.

**Workshop 16**

**Putting Carbon Underground - Key strategies to reach Net Zero Emissions**

**Conveners:** D. Vazquez Anzola (Shell)  
B. Stewart  
C. Coll (IFC)

The workshop will review and discuss the impact that these technology advances on CCS/CCU can have for the successful commercial implementation of CCS/CCU, the root causes stopping private financing and the potential solutions. The risks of underdelivering on CCS/CCU projects and government incentives that might be required to help to mobilise private capital will also be addressed.

**Workshop 17**

**Unlocking the Power of Drill Cutting for Managing Risks in Energy Exploration**

**Conveners:** A. Hofmann (SGS)  
H. Boro (SGS)  
L. Ursel (Biota Technology)  
M.A. Caja (Repsol)

This workshop introduces several innovative technologies and workflows that use drill cuttings, collected during the drilling of a well, to characterize the subsurface strata. Since drill cuttings are collected across the entire well bore (and not just along specific sections) they allow a continuous characterization of the subsurface, from overburden to target section. The presentations and interactive exercises of the workshop address mineralogical and rock-mechanical properties from cuttings, microbial stratigraphy based on drill cuttings, and reservoir rock physics properties estimation from drill cuttings using advanced data analytics.





## 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?

### Sunday 7 June

#### Field trip 1

#### **Building Stones of Amsterdam. A Geological Walk.**

**Field trip leader:** C.W. Dubelaar (senior geologist)

The Evening Stone Walk in the City of Amsterdam will take you along several monuments and statues of natural stone. Starting at the Rijksmuseum we will take a closer look to the mineralogy, the fossil content, the colour texture and the weathering phenomena of the different stone types.

### Monday 8 June

#### Field trip 2

#### **Energy Transition in the Province of North Holland**

**Field trip leaders:** J. van der Molen (TNO)

M. Middelburg (EBN)

During the past centuries, the Province of North Holland has contributed to several energy transitions ranging from the excavation of peat in the past, to the current production and storage of natural gas and, more recently, the production of geothermal heat and development of other renewable technologies. During this fieldtrip we will visit various examples including a geothermal project, a windfarm and gas storage facility.

#### Field trip 3

#### **Dinantian Carbonates: A new geothermal play?**

**Field trip leaders:** S. Tolsma (TNO)

G.J. Vis (TNO)

G. Bertotti (Delft University of Technology)

E. van Ewijk (EBN)

Dinantian carbonates are the target reservoir for Ultra Deep Geothermal exploration in the Netherlands. This field trip will visit an active geothermal facility, outcrops in Germany and discuss current exploration activities. The day ends in one of the Netherlands' best vineyards "Wijndomein St. Martinus".

### Friday 12 June

#### Field trip 4

#### **Site Visit to the Open Innovation Centre for Well Technology**

**Field trip leader:** J.H. Brouwer (TNO)

The Open Innovation Center for Well Technology started on January first 2019 with the intention to accelerate the development of sustainable subsurface applications (in particular Geothermal and Subsurface Storage) by making available innovative technologies and products that address the full lifecycle of a well. The Center is housed in the former Shell Well Laboratory in Rijswijk and is equipped with test setups that allow field-scale development of new technologies regarding drilling, completion, operation, re-use, and abandonment of wells. You will visit the three halls with setups for mechanical testing, pressure testing, drilling, and flow control. We will also visit the multi-phase Donau flow-loop as well as the Rig and associated borehole.

## Short Courses

EAGE offers a selection of one-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 7 June

#### Short course 1

##### **Petroleum Exploration Strategy**

**Instructor:** J.J. Biteau (Total Professor Associate)

This course aims at describing the way that petroleum explorationists can use nowadays contracts, partnerships, as well as economic criteria in the oil and gas industry.

Chapter 1: Introduction

Chapter 2: Definitions, elements of strategy, partnerships, Reserves and costs

Chapter 3: Evaluation of Exploration projects

Chapter 4: Partnerships, Contracts and mining acreage

Chapter 5: Missions and role of the Geoscience / Exploration Manager in headquarters/affiliates / Manager Career, a mix of experiences

Chapter 6: Practical case study

### Monday 8 June

#### Short course 2

##### **Geophysical Monitoring of CO<sub>2</sub> Storage**

**Instructor:** M. Landrø (NTNU)

Upon completion of the course, participants will be able to understand the possibilities and challenges related to geophysical monitoring of a CO<sub>2</sub> injection process. The course is designed for geoscientists working in oil companies, service companies and research organisation.

### Friday 12 June

#### Short course 3

##### **Machine Learning for Geoscientists with Hands-on Coding**

**Instructor:** E. Naeini (Earth Science Analytics)

This course aims to layout the reality of artificial intelligence, machine learning, deep learning and big data. The basic principles of machine learning and some of the most widely used algorithms will be discussed followed by hands-on coding some typical examples.

## Social Programme

### Icebreaker Reception (Exhibition)

**Monday 8 June | 18:00 - 20:00**

The icebreaker reception is a great way to network, start off the week and mark the beginning of the EAGE Annual 2020 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.

### Afternoon Drinks (Exhibition)

**Tuesday 9 & Wednesday 10 June | 16:00 - 17:30**

What better way to close the day than joining the afternoon drinks at the Coffee Plazas at the Exhibition, for a relaxed and informal networking atmosphere with colleagues and new connections.

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### Family Members

**Tuesday 9 June**

We welcome all family members to join us in Amsterdam. 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 9 June (included in the fee). More information about the family members' tour will be published on the website.

### Conference Evening

**Wednesday 10 June | 19:00 - 23:30**

The conference evening gives attendees the chance to unwind, enjoy good food and drinks, in good company. The Conference Evening is included in the full delegate registration only. For more information on location, entertainment, and other details, please consult [www.eageannual2020.org](http://www.eageannual2020.org).



## Student Activities

Sponsored by



### Introduction

This year we offer a diverse number of Students Activities, aimed at helping students to enhance their network and support their future as part of the geoscience and engineering community. We invite students to participate in the EAGE Annual 2020 and engage in the educational and entertaining activities.

Most of the Student Activities are organized in the EAGE Community Hub.

### Student Travel Grants

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

### Laurie Dake Challenge 2020 Sunday 7 June | 8:30 - 17:00

For 2020, the Laurie Dake Challenge contest will again invite university students to work on cross-disciplinary geoscience and engineering integration challenge. The data set for the competition is provided by Shell based on discovered hydrocarbon resource.

Laurie Dake Challenge sponsors:



### Enter the Challenge

To qualify for the Laurie Dake Challenge, students are expected to unleash their creativity and technical excellence to 1) defining an appraisal programme for a block in the in the Norwegian Sea, 2) generate the most attractive prospect(s), and 3) win the licensing round. Deadline to submit and enter the competition is 21 December 2019, 23:59 (GMT +1).

Register your student team now via the website and compete in the challenge!

## Company Presentations

Tuesday | Wednesday | Thursday

Listen to our Student Activities main sponsors, each of them is presenting their point of view on the current Geoscience Industry and the career opportunities for students in a 15 minute presentation in the EAGE Community Hub. Exact time schedule available on our website > Students section.

### Networking Café

Tuesday 9 June | 14:30 - 16:00

The EAGE Community Hub will change scenery and become the place to meet your peers and industry professionals in a relaxed and informal environment.

### Exhibition Tour

Wednesday 10 June | 13:30 - 14:30

Students meet a selection of exhibiting companies. This is an excellent activity that helps to network with potential future employers and have fun.

### EAGE Global Geo-Quiz

Wednesday 10 June | 15:00 - 17:00

Another fun challenge is the EAGE Geo-Quiz where you can win fabulous prizes! Put you know-how to the test and compete with up to 50 teams showing your geoscientific knowledge. A fast paced quiz with a lot of fun.

### Student Challenge: Travel Grant Hunt Draw

Thursday 11 June | 10:30

Students are challenged by companies and partner universities on the exhibition floor. Anyone who successfully completes all stops will have the chance to win one of the 3 travel grants for the upcoming EAGE Annual 2021 in Madrid. The announcement of the winners will take place in the EAGE Hub and winners must be present in person.

**We are looking forward to seeing you there!**

### Students and the EAGE Student Fund

Together with the sponsors, the student activities at the EAGE Annual 2020 are made possible through the EAGE Student Fund. To learn more about the Fund and the activities supported, visit [eagestudentfund.org](http://eagestudentfund.org).



# 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.eageannual2020.org](http://www.eageannual2020.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. **If you wish to book a booth, please contact us at [exhibition@eage.org](mailto:exhibition@eage.org).** For more information refer to the EAGE Annual 2020 website.

## List of Exhibitors and Sponsors

As of: 8 November 2019

 = Sponsor

### #

3DHISTECH LTD.

### A

ARK CLS Ltd

### B

BGP Inc.   
BP 

### C

Cable & Supplies Inc.  
CGG  
Chevron   
CVA

### D

Delft Inversion  
dGB Earth Sciences BV  
DMT Petrologic  
DUG   
Dynamic Graphics Ltd  
Dynamic Technologies (DTCC)

### E

Earth Science Analytics  
Earth Signal Processing  
Eliis  
EMGS ASA  
Engenius Software  
EOST Strasbourg  
EPI Group  
Equinor   
ExxonMobil 

### F

FEBUS OPTICS  
Fraunhofer ITWM

### G

Gardline  
GEO ExPro Magazine | GeoPublishing Ltd  
Geodevice LLC  
Geofizyka Torun S.A.  
Geolab Ltd.  
GEOLOG  
Geophysical Insights   
Geophysical Technology Inc  
Geospace Technologies Corporation   
GeoTeric  
GeoTomo LLC  
Geovariances  
GK Processing

### H

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

### I

Ikon Science Ltd  
InApril AS  
INOVA Geophysical  
International Seismic Co (iSeis)  
ION

### K

Katalyst Data Management  
Kyoto University

### M

Magseis Fairfield ASA  
Marac Enterprises  
Marine Arctic Geological Expedition (MAGE)  
Maritim Management AS  
Mitcham Industries Inc.

### O

OCTIO AS  
OYO Corporation

### P

PanTerra Geoconsultants B.V.  
Parallel Geoscience  
PartnerPlast AS  
PetroMarker AS  
Petrosys  
PetroTrace Limited  
PGS  
Phoenix Geophysics Ltd.  
Polarcus

### Q

Qeye Labs ApS

### R

RadExPro seismic software (by DECO)  
Realtimeseismic  
Repsol   
Resoptima  
Rock Flow Dynamics  
Rock Physics Technology  
Rogii  
ROGII Inc  
RPS  
RT Clark

### S

SAExploration  
Sander Geophysics  
Saudi Aramco   
Saudi Geophysical  
Scintrex  
Schlumberger Technology Corporation  
Seamap Pte Ltd  
Searcher Seismic  
Seiche Marine Acoustic Solutions

Seismic Image Processing UK Ltd  
Seismic Source Company  
Sercel  
SGS Nederland B.V. (Subsurface Consultancy)  
Sharp Reflections GmbH  
Shearwater Geoservices Ltd.   
Shell   
Sino Geophysical Company  
Sinopec Geophysical Corporation  
Sonardyne International Ltd  
Sound Oceanics  
Sound QI  
Springer Nature  
SYRLINKS

### T

Target Energy Solutions  
Technomaging  
TEEC GmbH  
Teledyne Marine  
TERRASYS Geophysics  
TGS  
The Easycopy Company  
Total SA   
Troika International Ltd

### V

Verif-i Limited  
Vinci Technologies

### W

WEIHAI SUNFULL GEOPHYSICAL EXPLORATION EQUIPMENT CO., LTD.  
Western Geco 

### Z

Zonge International Inc.

# Registration Open Now!

For information on fees, registration deadlines, and discount options,  
please check out [www.eageannual2020.org](http://www.eageannual2020.org).

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

## EAGE

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ENGINEERS

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