Exciting programme planned for 2012

Raymond Cahill, regional manager, Middle-East

Raymond Cahill, regional manager, Middle-East, writes: The first issue of 2012 EAGE Newsletter Middle East comes out at a very busy time for all of us within the industry. The achievements of 2011 have seemed to just roll into the New Year for EAGE’s Middle East office.

In 2011, EAGE Middle East conducted six successful technical workshops, two of which were first time events requested directly from our members to be developed by EAGE. Borehole Geophysics took place in January 2011 in Istanbul to a full house of 111 participants, and also hosted two short courses each again fully subscribed. In view of the event’s success, a follow up meeting is being planned for 2013.

2011 came to an end with the second new conference in December, the first International Conference on Engineering Geophysics in Al Ain, UAE. The conference was hosted by the Al Ain Municipality and UAE University in association with EAGE Middle East.

Moving from 2011 into 2012, it would only be right to mention the tremendous efforts made in 2011 were supported fully by EAGE’s Middle East Regional Council, chaired by Ahmad Al-Suwaidi, ADMA-OPCO and whose council members dedicated their time, ideas, and influence to ensure many of the goals set for 2011 were achieved and strong plans were put in place for 2012 to the benefit of all EAGE members. One of the key goals set for 2012 is the focus put on developing relationships with students in the region, building new student chapters, finding ways to help fund student activities and developing the ongoing successful Student Lecture Tours throughout the region. Another key goal is EAGE’s cooperation with the geoscience societies in the region ensuring that we bring to their attention and for the benefit of their members top class industry lectures.

The New Year started with another first time EAGE workshop on Applications & Challenges of Rock Physics for Quantitative Geophysical Interpretation in Dubai, UAE. The workshop was attended by over 80 professionals bringing experts in rock physics and seismic inversion as well as specialists in general quantitative geophysics together to discuss the above mentioned E&P evolving challenges. The workshop started with a short course delivered by Dr Per Avseth.

Trivia Question

Q: When was the Organization of the Petroleum Exporting Countries (OPEC) founded?

A - 1973
B - 1960
C - 1951
D - 1968

See answer p. 7.

Browse the new EAGE Bookshop

With the start of the New Year our new EAGE Bookshop is live. Check the website to see how the interface has changed completely to make it easier for you to browse our library of publications.

The Bookshop offers a collection of well over 600 publications for professionals, students, and anybody who has an interest in the geosciences. EAGE members receive attractive discounts on the books, CD-ROMs, and DVDs available.

Some of EAGE’s bestselling publications:

- Geological 3D Modelling by K.E. Zakrevsky
- Seismic Geomechanics: How to Build and Calibrate Geomechanical Models using 3D and 4D Seismic Data (EET 5) by J. Herwanger and N. Koutsabeloulis
- Atlas of sedimentary structures in estuarine and tidally-influenced river deposits of the Rhine-Meuse-Scheldt system. Their application to the interpretation of analogous outcrop and subsurface by A.W. Martinius and J.H. Van den Berg

Visit www.eage.org/bookshop to find more details about these publications and many more!

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Lecture gives students a mineral perspective

Dr David Roberts, former head of geology at Staffordshire University, UK has made a big impact with his 2011–12 Student Lecture Tour (SLT) in the Middle East. Audiences at the well-attended sessions were enthused about the presentations designed to meet the interest of students at all geoscience levels and inspire some to pursue a new research direction.

Dr Roberts visited the Texas A&M University of Qatar, Sultan Qaboos University in Oman, the United Arab Emirates University, and The Petroleum Institute, Abu Dhabi to deliver the hot topic: ‘Minerals: Who Needs Them, Who Supplies Them and How Much Is There?’ He also visited major universities in Egypt and Tunisia. A total of 240 earth science students and faculty members from related disciplines were in attendance.

For Dr Roberts this was an encore lecture tour as he was a popular 2008–2009 presenter of the SLT EU programme. His lecture observes and questions the global demand and supply of minerals and the role of geology in this process. Some of the generic aspects apply equally to oil and gas.

We are already planning the new topic for the upcoming SLT Middle East and North Africa tour 2012-2013 on ‘Which Energy Resources for our Future? A Challenge for a Sustainable Development’. Locations and dates will be announced soon.

The SLT programmes provide EAGE the opportunity to promote the latest science for the geoscience and engineering student communities as well as identify for students that EAGE is a support source for their career development. In addition to the SLT programme the EAGE sponsors Student Chapters and their activities, travel grants, student-organized events, and much more. For a full overview of activities please visit the EAGE website at www.eage.org/students.

Strong plans put in place for 2012

Continued from p.1.

and Prof Tor Arne Johansen on Exploration Rock Physics and Seismic Reservoir Prediction attended by 34 participants and setting the stage for an extremely productive workshop. The active Technical Committee led by Mohammed Al-Otaibi, Saudi Aramco and Jalal Khazanehdari, Schlumberger ensured a successful outcome for this first time workshop.

This year will also see EAGE’s expansion into new territories with the 1st EAGE Workshop on Oil Hydrocarbon Exploration & Field Development from the 29 April - 2 May in Istanbul, Turkey. The ongoing interest in Iraq and its development prompted the workshop which has gained very strong support from many supporting companies. EAGE will also venture into Jordan in September to run the 1st workshop on Dead Sea sinkholes and will be conducting an Integrated Reservoir Modelling Conference in Dubai from the 25-28 November.

2012 and 2013 will also see the return of some of most successful ongoing series of workshops starting with the 3rd EAGE/ SPE Workshop on Tar Mats 20-23 May, May, 4th Arabian Plate 9-12 December and the 4th Passive Seismic Workshop on 17-20 March 2013. There has been continual interest in these workshops and year on year developments in techniques and technologies has promoted the continuation, expansion, and need to share with peers’ results from previous objectives set out. 2013 will also bring other firm favourite workshops including subsalt imaging and naturally fractured reservoirs.

Another key goal which EAGE has strived to achieve was stronger cooperation with our sister societies and we are pleased to announce that 2012 will see AAPG, EAGE, and SPE work together in bringing a shale workshop to the Middle East from the 15-17 October in Muscat, Oman. EAGE and AAPG will also be cooperating again on the next tight gas workshop in 2013.

As always your feedback to the office will be most welcome and you can contact me personally on rcl@eage.org with any questions or suggestions that you would like to see within EAGE Middle East over the coming year.
Meet the DGS president

Saleh Al-Dossary, current president of the Dhahran Geoscience Society, looks ahead to his term in office and discusses continuing collaboration with the EAGE Middle East office.

What do you hope to achieve as current president of DGS?
I am committed to continue the success of this great organization. Together with the newly elected board I will focus on activities that enhance the knowledge, intellectual growth, and collaboration of our membership. My personal goal is to increase membership participation and to ensure activities such as technical presentations, field trips, social activities, and dinner meetings meet the needs of the membership. I am passionate and committed to making DGS both fun and valuable to our members. I also would like to see more young professional talents participate and volunteer in DGS activities.

What led you to volunteer your time, energy and knowledge to DGS?
Love of science and love of working with people, and my personal passion to make a difference. I also enjoy learning and I want to learn from DGS and I would like members to learn from DGS. Also I welcome new experiences as I could never have had this experience except by volunteering.

How do you see the future of DGS?
DGS will continue to grow and will be a society that its members will enjoy. DGS will become a fountain of knowledge and experience for its members and be the nucleus for members’ networking, ideas, knowledge sharing, and social activities.

What plans does DGS have with EAGE ME and the Association in general?
DGS is already an affiliated society of EAGE and our relationship has always been going in the right direction. We look forward to continuing this fruitful relationship and to participate in EAGE activities, especially in the Middle East. We also will be working very closely with EAGE ME to share knowledge and to further enhance our cooperation with EAGE in general. As a recognition of our special relationship with EAGE, DGS invited Dr Len Srnka, EAGE vice president to present at our January dinner meeting.

Student Fund is building

An important step in the growth of the EAGE was the setting up of the special EAGE Student Fund in 2008. The aim was to improve and expand the activities and financial help which the Association could provide for the next generation of geoscientists and engineers.

The initiative definitely struck a chord with some of the major companies, especially in the E&P business which is heavily represented in the EAGE membership. Current sponsors include Shell, CGG-Veritas, WesternGeco, BP and Fugro with every expectation that other companies will join them. Thanks to this generous support EAGE has been able to continue increasing its focus on the needs of students considering a career in the oil and gas industry or other geoscience and engineering related fields. EAGE intends to continue these initiatives on behalf of students encouraging more companies and institutions to consider sponsorship of the Student Fund.

The EAGE Student Fund dedicates itself to supporting EAGE student activities and participating in EAGE events and activities in Europe, Middle East, North Africa, Latin America and Asia pacific. Support is provided in one way or another to student conference programmes, lecture tours, boot camp, the annual field challenge and some other student-related activities such as the setting up of student chapters in academic institutions. In addition some money is made available for travel grant, scholarships and awards, and support for free student membership.

Society and its president
The Dhahran Geoscience Society (DGS) was established to help provide for the technical and professional development of its members in geology, geophysics, and related sciences, especially in the exploration for, and development of, petroleum and mineral resources within the Arabian Peninsula. The society activities include regular monthly meetings, field trips to local and out-of-kingdom locations, technical seminars, special projects, and publications. Membership includes subscription to the monthly newsletter ‘The Oil Drop’, and the quarterly geoscience journal ‘Geo Arabia’. The society is also a co-sponsor of the regional ‘GEO’ conferences. There are some 1000 members of DGS, which is open to all Eastern Province geoscientists. DGS is an affiliated society of AAPG, EAGE, and SEG.

President Dr Saleh Al-Dossary received a BS (1991) in computer science with a minor in geophysics from New Mexico Institute of Mining and Technology, an MS (1997) from Stanford University, California, and a PhD (2004) from the University of Houston, Texas, both in geophysics. He worked for Saudi Aramco in the Dhahran Geophysical Research Group, contributing to attribute and edge-preserving smoothing developments.

Al-Dossary now works in Saudi Aramco’s Exploration Application Services Department, developing new seismic processing, attributes, and prestack depth-migration algorithms. He has two patents in seismic edge preserving and detection technology, and is the author and/or co-author of several articles published by the SEG. He received the Distinguished Employee Award in Saudi Aramco Exploration Application Services Department in 1999 and the Outstanding Student Award at the University of Houston in 2003. Al-Dossary is married and has two sons and three daughters and says that some of his main interests outside work are watching and playing soccer.
Oman Mountains field trip reveals Khuff reservoir architecture

Bastian Koehrer (Wintershall) and Michaela Bernecker (German University of Technology in Oman) write: A three day field trip to study the geology of the Khuff Formation in the Sultanate of Oman proved to be an excellent appetizer prior to the Third Arabian Plate Geology Workshop held last November in Kuwait. Michael Pöppelreiter (Shell, Kuwait) and Bastian Koehrer (Wintershall, Germany) led an international inter-disciplinary group of 17 participants representing various E&P companies as well as academic institutions beginning the trip in Muscat and heading in the direction of the Saiq Plateau (Oman Mountains). The Field Trip was sponsored by Kuwait Oil Company.

The first stop of the day was on the Nizwa road which provides a regional geological overview of the area. Besides the Permian to Cretaceous carbonate platform deposits of the Jabal al-Akhdar region and their time-equivalent basin deposits (Hawasina), the geology and former economic significance of the famous Semail ophiolites were explained. From Birkat Al Mawz the group aimed for Wadi Mua’ydin, the mountain road leading to the Saiq Plateau which was reached around noon. An overview stop (Lady Diana Point) at the Precambrian-Permian angular unconformity offered a rare opportunity to study basement rocks, consisting of tillites and slates. At Hail al Yaman, the group spent the remaining afternoon studying the thin sliver of initial Khuff clastics and the overlying open-marine, transgressive part of Khuff Sequence 6 (Wordian).

The morning of the second day was dedicated to Khuff Sequence 5 (Capitanian) exposed on the cliff opposite the Jebel Akhdar Hotel. The outcrop offered ample opportunity for informal discussions on Khuff carbonate ramp facies types, stratigraphic architecture, reservoir quality, and regional outcrop-subsurface correlations. A road-side stop at the water station on the way towards Shnoot village gave the chance to overview the Khuff Sequence 4 (Wuchiapinian), the grainiest unit of the whole section.

In the afternoon participants spent an interesting and relaxing cultural tour around Saiq village admiring the fruit and flower gardens of the ‘green mountain’ (Jabal Akhdar). Summary presentations by the field trip leaders about the whole Khuff platform development in the evening after dinner were very good for prompting further discussions in the field the next day.

On the last day, the group hiked down to the impressive, extensive ‘Amphitheatre’ outcrop exposing Khuff Sequences 3 (Changhsingian) and Khuff Sequences 2/1 (Induan). Climbing over the famous Permian/Triassic boundary, the greatest extinction event in Earth’s history, the relevance of the Triassic part of the Khuff as one of the main reservoir units across the Middle East was debated with interest.

Topical short course available at the Tar Mats Workshop

Now in its third edition, the EAGE/SPE Workshop on Tar Mats addresses the major challenges in developing and managing oil reservoirs with tar mats, and is currently one of the hot topics in the E&P industry in general and more specifically in the Middle East. The workshop will take place on 20–23 May 2012 in Abu Dhabi, UAE. You can read more about this event on page 6.

Ahead of the workshop, short courses will be on offer from invited experts. One will be from Dr Julian Zuo, reservoir engineering advisor from Schlumberger who will deliver a half-day course entitled ‘Introduction to Asphaltene Gradients and Tar Mat Formation in Hydrocarbon Reservoirs’. The background for this course is that the integration of new breakthroughs in petroleum science (the Yen-Mullins model and the Flory-Huggins-Zuo EOS) with new DFA technology (Insitu Fluid Analyzer, IFA) is providing a broad array of new applications to address major reservoir concerns such as connectivity and compartmentalization, heavy oils, tar mat formation, and fluid disequilibrium: all these are important for reservoir evaluation and production. The IFA measures exactly the input needed by the FHZ EoS and this short course introduces new technology and applications. Areas to be covered include:

- Brief introduction to downhole fluid analysis (DFA)
- Review of cubic equations of state (EOS)
- Review of EOS-based fluid characterization based on DFA measured
- Introduction to compositional gradients
- Flory-Huggins-Zuo (FHZ) EOS and Yen-Mullins model of asphaltene
- Application of FHZ EOS to asphaltene gradients
- Simulation of tar mat formation using FHZ EOS
- Application of FHZ EOS to mobile heavy oil and explanation of tar mat formation for heavy oil.

EAGE invites professionals from the oil and gas industry to join this highly topical event. The course will be held on Sunday 20 May 2012. Registration is now open at www.eage.org.
Put these upcoming ME events on your calendar!

Over the last few years, EAGE has been building a programme of workshops (series and one-offs) and conferences in the Middle East region where professionals at every level from experienced professional to new recruit can gather and discuss particular aspects of the E&P business with experts in the field. The next few months will see a number of these events take place, listed below. Mark these dates in your calendar!

First EAGE Workshop on Iraq
Hydrocarbon Exploration & Field Development
29 April – 2 May 2012, Istanbul, Turkey
This workshop on Iraq is the first of its kind organized by EAGE. The main objective is to exchange knowledge between Iraqi G&G experts and the international geoscience community. Learn from Iraqi experts’ rich experience of exploring and developing fields in Iraq and better understand the geological challenges. At the same time, this is an opportunity to introduce and discuss technologies and best practices which can meet the challenges ahead. Natik Al Bayati - Oil Advisor to Prime Minister of Iraq - will be the keynote speaker. Registration is open!

Third EAGE/SPE Workshop on Tar Mats
Oil Reservoirs with Tar Mats: Challenges & Opportunities (Evaluation, Characterization, Development & Management)
20–23 May 2012, Abu Dhabi, UAE
Oil companies in the region are being confronted by major challenges in developing and managing oil reservoirs with tar mats. The workshop will cover interesting reservoir development case studies, more fundamental aspects such as the origin of tar mats and heavy oil and very practical aspects, such as tar mat and heavy oil characterization, modelling, simulation, and production strategies and technologies. Prior to the workshop a short course is also on offer entitled ‘Introduction to Asphaltene Gradients and Tar Mat Formation in Hydrocarbon Reservoirs’ by Dr Julian Zuo, reservoir engineering advisor from Schlumberger. Registration is open!

EAGE Workshop on Dead Sea Sinkholes
Causes, Effects & Solutions
23–26 September 2012, Amman, Jordan
The sinkholes in relation to the terminal lake level’s lowering were observed for the first time in the dried-up Lynch Strait in the early 1980s, retrospectively, from aerial photographs acquired at that time. Since then, many questions have cropped up on the causality behind the formation of these sinkholes. This workshop aims to answer these questions. The workshop is aimed at practising geologists, hydrogeologists, geophysicists, geochemists, mine engineers, civil engineers, academia, and NGOs.

One day will be dedicated to a guided tour along the coast of the Dead Sea. The Trip Leaders will explain the evolution of the landscape and the areas most affected by the lowering of the terminal lake level based on diachronic analysis of photographs and satellite images. The area of new hotels (Suweimeh) will be observed in regards to subsidence. The bridge of the Wadi Mujib will be analyzed in relation to the regressive erosion caused by the base level lowering. The agricultural area of Ghor Al Haditha will also be the frame of a discussion about the location of hazardous areas with regard to active tectonics. Call for Papers deadline: 15 March 2012 / Registration opens 1 May 2012

Conference on Integrated Reservoir Modelling
Are we doing it right?
25–28 November 2012, Dubai, UAE
Three-Dimensional Reservoir Modelling, which is the topic of this workshop, has experienced tremendous progress in the last decades. The technology is now routinely used by IOCs, NOCs, and service companies. Academic research also significantly contributes, while students are trained to run case studies with new modelling tools at university. To minimize the uncertainty associated with these models, they need to be constrained by as many geological concepts and as much multi-disciplinary data as possible. In addition to well data, quantified geological concepts, seismic, and dynamic data are the main sources of information. Emerging approaches couple reservoir models with geomechanical models or provide multi-scale workflows from pore to reservoir simulation scale. The speed of integration is also crucial, as the ‘seismic to simulation’ workflow still takes far too much time. Call for Papers deadline: 30 April 2012

Fourth Arabian Plate Geology Workshop
Late Jurassic/Early Cretaceous Evaporite-Carbonate-Siliciclastic Systems of the Arabian Plate
9–12 December 2012, Abu Dhabi, UAE
The goal of this workshop series is to align the regional geological understanding and applied nomenclature of the key hydrocarbon-bearing stratigraphic intervals of the Arabian Plate. Both local and regional contributions from oil companies, research institutes, and universities are solicited to build consistent, time-based stratigraphic models. This workshop will focus on the Late Jurassic to Early Cretaceous (Oxfordian to Valanginian) interval that is characterized by world-class siliciclastic, evaporite and carbonate seal/reservoir sequences, and source rocks. A core workshop within the event aims to display materials from a number of producing fields spanning the entire Gulf region, and the possibility of virtual reality outcrop presentations. An optional geological field trip to Oman and/or UAE is also being planned. Call for Papers deadline: 1 May 2012
More papers than ever have been submitted for both the technical programme and student programme at EAGE’s Annual Conference & Exhibition from 4-7 June 2012 in Copenhagen, Denmark, resulting in what will become the most comprehensive EAGE technical programme to date. All the accepted submissions will be added to EarthDoc and will be available approximately 14 days prior to the event.

The technical programme consists of oral and poster presentations. Workshops, field trips, and short courses will also be offered. The oral and poster sessions will run from 5–7 June. The workshops, technical field trips, and short courses are scheduled before and after the conference on Sunday 3, Monday 4, and Friday 8 June. As always a parallel student programme will run from 5–7 June, themed ‘Building Your Future!’

All these aspects of Copenhagen 2012 cover a wide range of geoscience disciplines.

To complement the technical programme we offer an Executive Session and the EAGE Forum, which are open to all conference delegates.

The EAGE Forum which was launched successfully in 2011 will this year be devoted to ‘Responsible Security of Natural Resources’ with Julian Rush as moderator. Contributors to the Forum will come from a wide range of oil companies, service companies, universities, and institutes. Please refer to our website for more information. The Executive Session on Arctic Exploration & Production on Thursday 7 June will be chaired by Alastair Fraser (Imperial College) and Jeroen Peters (Shell). Topics to be discussed include Local Community Engagement; Technical Challenges; and Environmental Aspects in the Long Term. Executive speakers will be from a wide range of oil companies, service companies, universities and institutes covering the Arctic region.

You can register before 16 March 2012 to benefit from the early registration fees! For more information please visit the EAGE website (www.eage.org).

Geoscience research and meetings in the Middle East are well represented in EarthDoc, the online database of the European Association of Geoscientists & Engineers (EAGE), which recently passed the milestone of 40,000 scientific documents, less than five years since its launch in 2007.

The database, accessible for subscribers and members of the EAGE and other professional societies, contains thousands of technical articles from scientific journals plus papers presented at over 200 geoscience events worldwide.

Nearly 4000 of the technical documents relate to the Middle East. This reflects growing interest in the region and its oil and gas E&P operations and challenges. All the presentations from EAGE-related events in the region can be found on EarthDoc, and this of course includes the nearly 25 events organized by the regional office since it was established in 2006. In addition the proceedings of major meetings such as the GEO and IPTC series in which the EAGE is associated are also included in the database. A big bonus is that prior to every EAGE-supported event papers are available for download for members and subscribers two weeks ahead of time.

EarthDoc (www.earthdoc.org) has experienced tremendous growth in its mission to satisfy demand in the geoscience community for authoritative references to the latest technology and operations worldwide. It is a powerful research tool for scientific investigation and exchange, and contains all the scientific articles from EAGE flagship magazine First Break and other technical journals, such as Geophysical Prospecting, Petroleum Geoscience, and Near Surface Geophysics. Papers, abstracts, and presentations from key geoscience meetings worldwide are also available on EarthDoc. Its cooperation with other societies is growing, resulting in more event papers.

In addition, the database includes a growing number of papers and articles available in other languages.
PDO joins technology facilitator

Petroleum Development Oman (PDO) has joined Industry Technology Facilitator (ITF), based in Aberdeen, Scotland with an office in Abu Dhabi, to help drive new solutions for securing and maximizing reserves and delivering enhanced oil recovery (EOR). The company will be working with other high-profile Middle East members of ITF including Kuwait Oil Company (KOC) and Saudi Aramco to support international technology development.

Sultan Al-Shidhani, study centre manager for PDO said: ‘Joining ITF provides us with the opportunity to address the technology challenges we are facing in a joined up approach with other operators. Oil in Oman is becoming more challenging to develop with a rising number of EOR and sour (hydrogen sulphide) projects, so technology has a growing role to play.’

ITF is planning to launch a Gulf Cooperation Chapter this year with Middle East operators, with the task of focusing mainly on setting and solving regional technology challenges. ITF members share funding and risk on bringing forward new solutions through joint industry projects (JIPs). Innovators are offered up to 100% funding to develop their technology and retain full intellectual property rights.

To date ITF has launched more than 170 JIPs from early stage projects through to field trials and commercialization.

Lebanese seismic ready for licensing round

Officials from the Lebanese Ministry of Energy and Water have signed a contract extension with Spectrum for the licensing of the ‘LEB-02’ and ‘EMED-00’ multi-client seismic datasets offshore Lebanon ahead of a planned licensing round.

Spectrum’s suite of East Mediterranean products is comprised of four seismic surveys totalling 22,645 km of 2D data including 5526 km over Lebanese waters. With the recent discovery of the major deepwater gas fields in the south Levantine Basin, hydrocarbon exploration in the region has increased significantly. Spectrum’s dataset covers the entire highly prospective Levantine Basin, considered to contain the most exciting exploration plays in the Mediterranean. The Spectrum dataset provides structural insight of the basin and includes a detailed grid over Lebanese acreage, enabling companies to efficiently review hydrocarbon prospectivity ahead of the first Lebanese bid round.

Following the signing ceremony, which extends the existing arrangement by a further five years, Spectrum said that it will be reprocessing the LEB-02 seismic survey in time for the forthcoming Lebanese bid round expected during the first half of 2012. This complements the enhancement of the EMED-00 survey which was completed in 2011.

PI students prove greenhouse gas debate winners

Students from the Petroleum Institute (PI), Abu Dhabi were among the winners of debate trophies at the 2012 Young Future Energy Leaders (YFEL) programme at the World Future Energy Summit (WFES).

Mohamad Yousef Alklih, Anas K. A. Najy and Sara Bakhti, from Petroleum Engineering Department, were participating in a debate entitled ‘Should China, India, and US be required to immediately place aggressive and legally binding limits on their greenhouse gas emissions in order to set in motion actions that will prevent catastrophic climate change?’

The YFEL programme, led by Masdar Institute of Science of Technology, an independent, research-driven graduate-level university founded in 2009, aims to develop future leaders in the fields of advanced energy and sustainability and to provide opportunities for YFEL members to share their innovative ideas with their peers as well as government, industry and academic leaders.

The programme involves presentations and speeches from industry leaders, debate competitions, panel discussions, students’ presentations besides attending some events from the WFES such as the Sheikh Zayed Future Energy Prize ceremony.

The PI students were among the 150 international students and young professionals chosen from 400 applicants from international universities such as MIT, Harvard University, Imperial College London, and Masdar Institute along with several others.

Trivia answer

B - 1960
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**Calendar of key EAGE events**

**April 2012**
29 Apr - 2 May 2012  
EAGE • First EAGE Workshop on Iraq – Hydrocarbon Exploration & Field Development  
Istanbul, Turkey | www.eage.org

**May 2012**
20-23 May 2012  
EAGE • Third EAGE/SPE Workshop on Tar Mats  
Abu Dhabi, UAE | www.eage.org

**June 2012**
4-7 June 2012  
EAGE • Copenhagen 2012 - 74th EAGE Conference & Exhibition incorporating SPE EUROPEC 2012  
Copenhagen, Denmark | www.eage.org

**September 2012**
3-5 September 2012  
EAGE • Near Surface Geoscience 2012  
Paris, France | www.eage.org  
23–26 September 2012  
EAGE • EAGE Workshop on Dead Sea Sinkholes  
Amman, Jordan | www.eage.org

**October 2012**
15–17 October 2012  
AAPG/EAGE/SPE • Shale Gas Workshop  
Muscat, Oman | www.eage.org

**November 2012**
25–28 November 2012  
EAGE • Integrated Reservoir Modelling: Are we doing it right?  
Dubai, UAE | www.eage.org

**December 2012**
9–12 December 2012  
EAGE • Fourth Arabian Plate Geology Workshop  
Abu Dhabi, UAE | www.eage.org