Education Tour 13

17-18 SEPTEMBER
Nanjing, China

20-21 SEPTEMBER
Beijing, China

24 SEPTEMBER
Mumbai, India

26 SEPTEMBER
Dehradun, India

1 OCTOBER
Kuala Lumpur, Malaysia

3 OCTOBER
Perth, Australia

Education Tours

Started in 2006, Education Tours are the flagship programme of EAGE and have already attracted thousands of participants. EAGE Education Tours (EET) consist in a 1-day course presented by an acknowledged academic or industry expert visiting various locations worldwide. These courses are specifically designed to appeal to a wide audience, giving EAGE members from all over the world affordable access to the latest developments in Geosciences.

All Tours come with a dedicated electronic version course book, which can be acquired in our Bookshop, and are also available as in-house courses upon request.

Accreditation

In March 2013 EAGE became the first official Continuing Professional Development (CPD) Provider of the “European Geologist” title, which is a professional accreditation established by the European Federation of Geologists (EFG). In order to obtain and maintain this title, the holder must provide a record of high quality CPD activities, which include the short courses like the ones presented in this brochure. For an overview of the provided points for EAGE Short Courses and for more information about this accreditation system and corresponding EAGE learning activities please visit www.eage.org and www.LearningGeoscience.org.

Host opportunity

Hosting an EET course is a great deal! The host company should provide a training room and arrange lunch and coffee breaks. In exchange, EAGE will include your company’s logo in our promotional material and allow you to send 10 free participants to the course.

If your company would like to host an EET course, write to Irene (ing@eage.org)

EAGE Economic Hardship Programme

EAGE recognizes the current challenging status of the industry and, priding itself on the inclusive character of the Association, now has a special economic hardship assistance programme in place to reach out to its members.
Registration fees

All fees include digital course material lunch and coffee breaks.

Professionals

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<th>Registered and paid</th>
<th>Until 21 July (Early bird)</th>
<th>10 September (Late)</th>
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<tr>
<td>EAGE</td>
<td>€ 75</td>
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<td>Non-member*</td>
<td>€ 150</td>
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Students

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<th>Registered and paid</th>
<th>Until 21 July (Early bird)</th>
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<td>EAGE</td>
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<td>Non-member*</td>
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*Non-member fee includes EAGE Membership for 2018.

To qualify for the reduced student registration fee:
- Students must be enrolled in a full time study programme at a recognized university or institute.
- The registration must be accompanied by a copy of a student ID card and/or official proof of enrolment.
- Student non-members cannot be older than 34 years of age (when registering).

For online registration and group bookings, please refer to the event website at events.eage.org.

17 SEPTEMBER - 3 OCTOBER 2018

Velocities, Imaging, and Waveform Inversion - The Evolution of Characterizing the Earth’s Subsurface
Dr Ian Frederick Jones (ION, UK)

CPD Points: 5

Course Description
The course is designed for: practising geoscientists who desire to better understand the principles and limitations of both current and emerging technologies involved in subsurface parameter estimation and imaging, and geoscience students. Following this course, participants should ideally understand how contemporary velocity estimation methods work, and what approximations are involved in obtaining computationally tractable solutions.

In using sound waves to characterize the Earth’s subsurface, we can employ ray-theory and/or wave-theory, and both migration algorithms and parameter estimation schemes employ one or other of these theoretical descriptions. In this course, we’ll review the evolution of the industry’s approaches to building earth models via velocity estimation and imaging, outlining the evolution from ray tomography to full waveform inversion, and look towards the emerging possibilities for replacing imaging techniques with direct subsurface parameter inversion methods.

The approach will be mostly non-mathematical, concentrating on an intuitive understanding of the principles, demonstrating them via case histories, and will be divided into the following sections:

- dealing with the near surface
- the effects of strong vertical velocity contrasts
- the effects of strong lateral velocity contrasts
- waves versus rays
- model building using ray methods (tomography)
- model building using wavefield extrapolation methods (FWI)
- data examples and comparisons
- future developments

The first three sections outline the nature of the problems we face when building images representing subsurface impedance contrasts, and the next three deal with the technology we deploy to address the problems. In addition, I’ve included three appendices to outline: the historical development of model building; anisotropy; and pre-processing considerations for complex imaging. Several of the individual chapters build on a series of recent tutorial papers which I published in First Break. However, only the key points from these tutorial papers are included, so I refer readers to the original papers for more detail and/or a range of real data examples for each of their topics.
For more information and tailored advice, please visit our Education portal www.LearningGeoscience.org or contact us at education@eage.org