EAGE

EUROPEAN ASSOCIATION OF GEOSCIENTISTS & ENGINEERS

EDUCATION DAYS

RIO DE JANEIRO 2019

27-30 AUGUST 2019 | RIO DE JANEIRO, BRAZIL

EAGE EDUCATION

www.LearningGeoscience.org

Short course Programme

27-28 AUGUST 2019

Top Seals and Fault Seals in Clastic and Carbonate Reservoirs: A Practical Approach
Dr. Dirk Nieuwland

29-30 AUGUST 2019

Rock Physics and Computational Geophysics
Dr. Jose Carcione

Venue

To be defined

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.

Sponsorship

Education Days Rio de Janeiro 2019 offers excellent sponsorship opportunities to create high visibility. For more information, please refer to the EAGE website or contact us at dlz@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.

EAGE Short Course discount
EAGE aims to assist its long-term members who are currently unemployed by providing contributions towards educational programmes. Under this element of the EAGE Economic Hardship Programme, members currently unemployed can attend public short courses at the Education Days Buenos Aires for a discounted course fee equal half of the lowest fee of the respective course (member early fee).
For more information we would like to refer you to the event website at events.eage.org

Registration Fees

One-day Course

Registered and paid	Early (01/02/2019-30/06/2019)	Regular (01/07/2019-01/08/2019)	Onsite/Late (02/08/2019-26/08/2019)
EAGE member	$ 485	$ 525	$ 580
Non-member*	$ 610	$ 650	$ 700

Two-day Course

Registered and paid	Early (01/02/2019-30/06/2019)	Regular (01/07/2019-01/08/2019)	Onsite/Late (02/08/2019-26/08/2019)
EAGE Member	$ 740	$ 815	$890
Non - Member	$ 860	$ 940	$1.015

DISCIPLINES

Geophysics · Geology · Reservoir Characterization · Near Surface · Engineering · Training and Development · Data Science

27-28 AUGUST 2019

Top Seals and Fault Seals in Clastic and Carbonate Reservoirs: A Practical Approach

Dr. Dirk Nieuwland

10 CPD points

Course description

The core of this course is a new powerful method of fault seal prediction and is intended for geologists, geophysicists and reservoir engineers in exploration. The course is based on geomechanics as a sound foundation for structural geological concepts and the behaviour of rocks in the brittle regime. Mechanical rock properties and ways and means to determine these properties form an important element of this course. Following an introduction to geomechanics, the theory of fracturing of brittle, ductile and viscous rocks is treated, illustrated with field examples and case histories. Different deformation mechanisms, based on mechanical rock properties, are treated in relation to realistic geological environments. Cataclasis is introduced as a major sealing mechanism, including a detailed account of the cataclasis process. Paleo-stress analysis is introduced, together with a new tool, the reactivation circle. The course is very practical and focused on application. An exercise based on real data forms an important element of the course. Cases requiring the use of numerical models are discussed but numerical modeling is not part of the course.

Course objectives

Upon completion of the course, participants will be able to:

- Recognize the most appropriate fault seal mechanism for an area of choice and perform a quantitative fault seal analysis. If necessary, perform a paleo-stress analysis as a basis for fault seal prediction;
- Assess top and fault seal integrity for subsurface processes including exploration, field development and subsurface storage of natural gas or CO_2.

29-30 AUGUST 2019

Rock Physics and Computational Geophysics

Dr. Jose Carcione

10 CPD points

Course description

This course presents the fundamentals of the physical principles and computational techniques for wave propagation in anisotropic, anelastic and porous media, including the analogy between acoustic waves (in the general sense) and electromagnetic (EM) waves. The emphasis is on geophysical applications for hydrocarbon exploration, but researchers in the fields of earthquake seismology, rock physics, and material science, -- including many branches of acoustics of fluids and solids (acoustics of materials, non-destructive testing, etc.) -- may also find the material useful. The course illustrates the use of seismic and EM modeling, with an account of the numerical algorithms for computing synthetic seismograms, diffusion fields and radargrams, with applications in the field of geophysical prospecting, seismology and rock physics, such as evaluation of methane hydrate content, upscaling techniques, detection of overpressure, Antarctic and permafrost exploration, exploration of the Earth's deep crust, time-lapse for monitoring of CO2 injection, seismic modeling in geothermal fields, seismic inversion, etc.

Course objectives

On completion of the course, participants will be able to:

- Understand the physics of seismic (and EM) wave propagation and diffusion fields in real media, such as rocks and geological formations;
- Solve complex problems using numerical methods, as finite-differences, Fourier techniques, and machine learning methods;
- Apply these concepts to seismic and EM applications, such as hydrocarbon prospection, earthquakes, surface radar applications, EM low-frequency methods for environmental problems, rock physics, etc.

For more information and tailored advice, please visit our Education portal
www.LearningGeoscience.org or contact us at education@eage.org

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