



## NEWSLETTER

Febbraio 2017

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### Agenda

**15/02/2017:** Deadline for EAGE2017 Call for Abstracts

**15/03/2017** Dead line early registration EAGE2017

**12 - 15/06/2017:** 79th EAGE Conference & Exhibition 2017 – Paris

**01/04/2017:** Deadline abstract submission – 87th SEG international exposition - Houston

### Attività per gli studenti

“Gustavo Sclocchi” Thesis Award 2016

Anche nel 2016 EAGE, la Sezione SPE Italiana ed Assomineraria, che é l'Associazione delle Industrie mineraria e petrolifere italiane, hanno premiato le migliori tesi di laurea e Ph.D. in ingegneria del petrolio e geoscienze svolte presso le università italiane e da studenti italiani all'estero. La cerimonia di premiazione è tenuta luogo a San Giuliano Milanese nel dicembre 2016. Nella premiazione, EAGE era rappresentata dal prof. Giancarlo Bernasconi, membro dello Student Committee EAGE.

I quattro vincitori, da 36 partecipanti, hanno vinto 2400Euro, altri cinque in menzione speciale hanno vinto una membership EAGE o SPE. I vincitori sono:

#### Theses Awards 2016 winners:

- Alessandro Caia – politecnico di Milano  
“Quantitative risk analysis and mitigation of deepwater oil well blowout”
- Francesco Cruciani – Università degli studi di Perugia  
“The Lamu Basin Deepwater Fold-and-Thrust Belt (East Africa)”
- Marco Fonnesu – University College Dublin  
“Hybrid event bed processes, facies trends and distribution in deep-water turbidite systems”
- Claudia Zoccarato – Università di Padova  
“Data Assimilation in Geomechanics: Characterization of Hydrocarbon Reservoirs”

**Theses Awards 2016 special mentions:**

- Maria Cristina Bellantonio - Università di Ferrara  
"ROTZO FORMATION'S NAPHTHOGENIC HORIZONS (CALCARI GRIGI GROUP, JURASSIC, EASTERN PO PLAIN): SURFACE-SUBSURFACE COMPARISON"
- Muhammad Salman Qamar – Politecnico di Torino  
"Comparative Analysis of Compositional Simulation Approaches for Gas Condensate Reservoirs"
- Lorenzo Rosa – Politecnico di Milano  
"The water-energy-food nexus of production from shale oil, shale gas and oil sands"
- Fabio Scalera - Università degli studi di Perugia  
"Petrographic characterization of Testina travertine, Tivoli (Central Italy)"
- Daniela Teodor – Università di Pisa  
"Acoustic and Elastic Full-Waveform Inversion approaches testing in complex geological models: application to Marmousi-2 model"

La prima edizione del Premio Sclocchi ha avuto luogo nel 1993 e dal 2001 esso é stato intitolato a Gustavo Sclocchi, il manager Eni che fu tra i principali promotori di questa iniziativa.



### Attività per gli studenti

Anche quest'anno, come in passato, la Sezione Italiana EAGE-SEG offre una registrazione gratuita a Studenti di Laurea Magistrale o di Dottorato in Geoscienze presso università Italiane per poter partecipare alla 79<sup>a</sup> EAGE Conferenze & Exhibition che si terrà a Parigi tra il 12 e 15 Giugno 2017 e un rimborso spese forfettario pari a 300 euro. Gli studenti possono richiedere l'ingresso omaggio entro:

**Venerdì 14 Aprile 2017**

Alla Sezione Italiana ([eageseg@inogs.it](mailto:eageseg@inogs.it)). Verrà data precedenza a Studenti che sono già iscritti alla Sezione Italiana oppure al SEG o all'EAGE. Ulteriore titolo preferenziale è l'essere co-autore o, meglio ancora, Primo Autore o Speaker di un lavoro scientifico in programma al meeting EAGE di Parigi 2017.

Per ulteriori informazioni su questo evento scientifico, consultare il sito:

<http://www.eage.org/>



### Eventi Scientifici

#### SEG Honorary Lecturer 2017 - Europe

Questa primavera si terrà in Italia, la lezione SEG di Martin Landrø, intitolata:

*New Trends in marine seismic acquisition –  
Possibilities and impact on data quality*

17 Maggio	San Donato Milanese, Italy	Eni
18 Maggio	Perugia, Italy	Università di Perugia
19 Maggio	Pisa, Italy	Università di Pisa

Vedi tutto il programma [qui](#).

#### Abstract:

Conventional marine streamer seismic has changed dramatically in recent years. Today we measure multicomponent seismic data in the water column, the towing depth might vary between 5 and up to 60 m, and the noise characteristic has changed. On the source side, the changes are less obvious: Air gun is still the preferred source, and we have started to experiment by using multidepth sources and more environmentally friendly sources have been developed. The fight against the ghost associated with the free surface will continue. We have seen that the receiver side ghost can be attenuated by using variable streamer depths. Is it possible to do the same for the source ghost, or maybe there are other methods

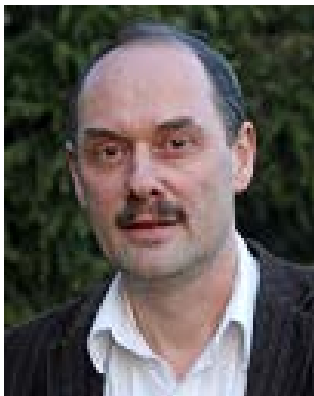
that are more effective? The use of simultaneous seismic sources will lead to cost reductions, and seismic apparition is a new way to achieve this that will be discussed.

In the talk, I will discuss why it is so challenging to generate very low frequencies in seismic acquisition. In principle, low frequencies correspond to movements of large bodies, and there is a limit for the size of an air gun bubble, as well as the size of a marine vibrator. A modern marine seismic streamer is made of solid material, and it is exposed to several types of noise: noise related to the motion of the cable in the water, noise related to weather conditions and sea state, and cultural noise in the water layer. Noise from rigs and ship traffic sets up normal modes in the water layer. The acoustic signal associated with the normal modes varies strongly with water depth, and hence it is very challenging to find an optimal towing depth for the streamer. Experimental data demonstrating the counteracting effects of weather noise, normal mode noise, and other noise types are used to illustrate this complexity.

The most common marine seismic source, the air gun array creates energy within the 5-100 Hz frequency band. Recent measurements show that air gun arrays also emit high frequency (1-100 kHz) acoustic signals. Dedicated field experiments show that the strength of these signals is weak, and that it is possible to reduce it even further by increasing the distance between the guns in the array. Hearing curves of fish and marine mammals vary significantly, and several marine animals have high sensitivity in the frequency range above 1 kHz. Another way to reduce the amount of high-frequency noise is to change the design of the air gun.

A key objective is to show significant improvements within seismic data acquisition and to discuss potential directions for further improvements, both related to efficiency and especially data quality. The talk will focus on data examples.

#### Biography:



Martin Landrø received an M.S. (1983) and Ph.D. (1986) in physics from the Norwegian University of Science and Technology. From 1986 to 1989, he worked at SERES A/S. From 1989 to 1996, he was employed at IKU Petroleum Research as a research geophysicist and manager. From 1996 to 1998, he worked as a specialist at Statoil's research center in Trondheim. Since 1998, Landrø has been a professor at the Norwegian University of Science and Technology, Department of Petroleum Engineering and Applied Geophysics. He received the Norman Falcon award from EAGE (2000) and the award for best paper in GEOPHYSICS (2001). Landrø received the Norwegian Geophysical award (2004) and Statoil's researcher prize (2007). He received the SINTEF award for outstanding pedagogical activity (2009). He received the Louis Cagniard award from EAGE (2010) and the Eni award - New Frontiers in Hydrocarbons (2011). He received the Conrad Schlumberger award from EAGE. Landrø's research interests include seismic inversion, marine seismic acquisition, and 4D and 4C seismic. This includes geophysical monitoring of CO<sub>2</sub> storage. He received the IOR award from the Norwegian Petroleum Directorate (2014). He is a member of EAGE, SEG, The Norwegian Academy of Technological Sciences, and The Royal Norwegian Society of Sciences and Letters.

Per ulteriori informazioni riguardo all'evento scientifico associato, consultare il sito:

<http://www.seq.org>

