

**EAGE**

EUROPEAN  
ASSOCIATION OF  
GEOSCIENTISTS &  
ENGINEERS



# First EAGE/SBGf Workshop on Least Squares Migration

27-28 NOVEMBER 2018 • RIO DE JANEIRO, BRAZIL

- **FINAL ANNOUNCEMENT & TECHNICAL PROGRAMME**

[WWW.EAGE.ORG](http://WWW.EAGE.ORG)



**PETROBRAS**

GOVERNO  
FEDERAL

## TECHNICAL COMMITTEE

Gustavo Catão Alves Co-Chair	Petrobras
Gerard T. Schuster Co-Chair	King Abdullah University of Science and Technology
Sergio Chávez-Pérez	Instituto Mexicano del Petróleo
Nizar Chemingui	PGS
Robin Fletcher	Schlumberger
Felix J. Herrmann	Georgia Institute of Technology
Helmut Jakubowicz	Imperial College London
Mehmet C. Tanis	Hess Corporation
Paul Williamson	Total

## WORKSHOP OVERVIEW

EAGE and SBGf (Brazilian Society of Geophysics) are proud to announce their first joint Workshop on Least Squares Migration due to be held in Rio de Janeiro, Brazil, from 27-28 November 2018.

Least Squares Migration (LSM) has quickly attracted the attention of the global geophysical community as the new high resolution standard in seismic imaging. Combining better reflector resolution and more balanced amplitudes, LSM has the potential to deliver improved seismic images when compared to traditional techniques such as Kirchhoff migration and RTM.

The workshop will be a great opportunity for geoscientists from around the world to review the fundamentals behind LSM, and learn about its advancements, applications to field data, future possibilities, and current limitations. Rio de Janeiro, 180 km from Brazil's 'oil capital' of Macaé, provides an ideal location for discussion of innovative topics in oil and gas exploration and production. Recent bidding rounds for offshore blocks in Brazil have attracted 17 companies, including most of the leading industry players in the industry in search of new exploration opportunities in the country's offshore post and pre-salt areas. With a large exploration effort anticipated in the oncoming years, there can be no better place than Rio de Janeiro to exchange ideas and knowledge to improve our ability to image the subsurface. For workshop participants, the sunny beaches and postcard scenery of this world famous city make this an especially appealing environment in which to meet and network.

## IMPORTANT DATES

Registration opens	1 August 2018
Early Registration Deadline	18 September 2018
Late Registration Deadline	14 November 2018

## ABOUT RIO

Internationally known because of its landscapes, the beautiful beaches of Copacabana and Ipanema and attractions such as the celebrated statue Christ the Redeemer (Christo Redentor), the Sugar Loaf Mountain (Pão de Açúcar) and the iconic Maracanã sports stadium, Rio de Janeiro has been one of Brazil's most popular and frequented tourist destinations for decades. Rio is the second largest city in Brazil and the third largest metropolis in South America.

## WORKSHOP PROGRAMME OVERVIEW

### Tuesday 27 November

07:30 - 09:10 hrs	Registration and Info Desk
12:30 - 14:00 hrs	Lunch
17:00 hrs	End of Day one
18:00 hrs	Icebreaker Reception at Roof Top

### Wednesday 28 November

07:30 - 09:10 hrs	Registration and Info Desk
12:30 - 14:00 hrs	Lunch
18:00 hrs	Close of Workshop

## TECHNICAL PROGRAMME

### Oral Presentations | Tuesday 27 November

GAVEA ROOM	
07:30	Registration & Morning Coffee
09:10	Welcome & Aims - Opening Remarks
09:20	LMSTUKN01 - Keynote Speaker - Bin Wang* (TGS) - Director of Research and Development
Theory and Implementation, I	
10:00	LMSTU01 - Exploring Inversion Strategies in Image Domain Least Squares Migration - B. Pereira-Dias* (Petrobras), C. Guerra (Petrobras), A. Bulcão (Petrobras), R. de M. Dias (Petrobras)
10:25	LMSTU02 - Application of Single-Iteration Least-Squares Migration to the Brazilian Pre-Salt - W. Duarte* (CGG do Brasil Participações), D. Carotti (CGG), A. Khalil (CGG)
10:50	Coffee Break
11:10	LMSTU03 - Applying Least-Squares Migration Methods in Time Imaging: Marine and Land Data Example - S. Dell* (University of Hamburg), M. Gloeckner (University of Hamburg), C. Vanelle (University of Hamburg), D. Gajewski (University of Hamburg)
11:35	LMSTU04 - Zero-Offset Sections with a Deblurring Filter in the Time Domain - S. Feng* (King Abdullah University of Science & Technology), O. Yilmaz (Anatolian Geophysical), Y. Chen (King Abdullah University of Science & Technology), G. Schuster (King Abdullah University of Science & Technology)
12:00	Open Panel Discussion
12:30	Lunch at Restaurant
Multiples is LSM I	
14:00	LMSTU05 - Least Squares Migration Beyond Primaries - N. Chemingui* (Petroleum Geo-Services), F. Liu (Petroleum Geo-Services), S. Lu (Petroleum Geo-Services)
14:25	LMSTU06 - Least-Squares Migration Using Surface-Related Multiples on Data with Large Acquisition Gaps - A. Nath* (Delft University of Technology), D.J Verschuur (Delft University of Technology)
14:50	Open Panel Discussion
15:20	Coffee Break
Multiphysics	
15:40	LMSTU07 - Migration of Viscoacoustic Data Using Acoustic Reverse Time Migration with Hybrid Deblurring Filters - Y. Chen* (King Abdullah University of Science and Technology), G. Schuster (King Abdullah University of Science and Technology)
16:05	LMSTU08 - Multiparameter Deblurring Filter and its Application to Elastic Migration and Inversion - Z. Feng* (King Abdullah University of Science and Technology), G. Schuster (King Abdullah University of Science and Technology)
16:30	Open Panel Discussion
17:00	End of day 1

## Oral Presentations | Wednesday 28 November

GAVEA ROOM	
09:10	Opening Remarks
09:20	LMSWEDKN02 - Keynote Speaker - Nizar Chemingui* (PGS)
Theory and Implementation II	
10:00	LMSWED09 - Iterative Least-Squares Migration without Cycle Skipping - W. Dai* (Schlumberger), X. Cheng (Schlumberger), K. Jiao (Schlumberger), D. Vigh (Schlumberger)
10:25	LMSWED10 - Tomographic Full Waveform Inversion via Iterative Least-Squares Migration by Variable Projection Method - G. Barnier* (Stanford University), E. Biondi (Stanford University), B. Biondi (Stanford University)
10:50	Coffee Break
11:10	LMSWED11 - Neural Network Least Squares Migration - Z. Liu* (King Abdullah University of Science and Technology), G. Schuster (King Abdullah University of Science and Technology)
11:35	LMSWED12 - North Sea Examples of Kirchhoff Least-Squares Migration for Quantitative Interpretation - C. Leone* (Schlumberger)
12:00	Open Panel Discussion
12:30	Lunch at Restaurant
LSM for Complex Geology I	
14:00	LMSWED13 - Keynote Speaker - (TOTAL)
14:40	LMSWED13 - Image-Domain Least-Squares Migration in Rapidly-Varying Media: Practical Considerations - M. Cavalcanti* (Schlumberger), R. Fletcher (Schlumberger), D. Nichols (Schlumberger)
15:05	LMSWED14 - Pre-stack Least-Squares Reverse Time Migration in Presence of Strong Velocity Contrasts - R. Baina* (OPERA), V. Duprat (OPERA), C. Agut (Total)
15:30	Open Panel Discussion
14:00	Coffee Break
Case Studies	
16:20	LMSWED15 - Onshore Mexico Example of Least-Squares Migration for Improved Imaging and Inversion - J. Mathewson* (WesternGeco), C. G. Mayes (WesternGeco), J. R. Cervantes (WesternGeco), J. H. Villalobos (WesternGeco), J. G. Hernandez-Jaime (WesternGeco), J. Jurado-Ramirez (WesternGeco)
16:45	LMSWED16 - Iterative Least-Squares Migration in Practice, Application to a Narrow Azimuth North Sea Dataset - Ø. Korsmo* (PGS), A. A. Valenciano (PGS)
17:10	Open Panel Discussion
17:40	Closing Remarks

## KEYNOTE SPEAKERS

### Bin Wang - Director of Research and Development at TGS

Bin Wang received his bachelor's and master's degree in electrical engineering from Beijing University in China and a PhD in geophysics from Purdue University in USA. He also received an MBA from Southern Methodist University (SMU) in Dallas.

Bin started his geophysical career with Mobil Oil in 1993, and worked for CGGVeritas before joining TGS as a research manager in 2007. He is now the director of research and development at TGS. Bin published over 100 technical papers in the areas of velocity model building, migration and inversion. He was named as one of distinguished lecturers by EAGE in 2010. In 2013, he was selected as an EAGE e-lecturer for least-squares RTM. He was awarded an SEG life membership award in 2014.

### Nizar Chemingui - Department Manager for Seismic Imaging Technology at PGS.

Dr. Chemingui holds a Ph.D. in Geophysics from Stanford University, a Master's degree from Rice University, and a Bachelor degree in Geophysics from the Colorado School of Mines. He joined the seismic industry in 1999. He worked for ExxonMobil in the subsurface imaging division and for GXT (now ION) as a Senior Research Geophysicist. In 2006 he joined PGS and has held various positions in the R&D department. He has authored and co-authored numerous publications and patents on seismic imaging. He received academic and professional awards for his work, including the Cecil H. and Ida Green award in geophysics from CSM and a best paper award in the Leading Edge. He is a member of SEG, EAGE, AGU, and GSH.

### Keynote Speaker from TOTAL coming soon...

The workshop abstracts are available on EarthDoc, EAGE's online geoscience database. EarthDoc enables you to browse through thousands of event papers and journal articles online. EAGE members have free access to EarthDoc ([www.earthdoc.org](http://www.earthdoc.org)). (please find them by: First EAGE/SBGf Workshop on Least Squares Migration.



"Share knowledge to improve techniques in your company"

## REGISTRATION

### Registration fees

All fees are in Dollars (\$). One Dollar of your total registration fee is donated to the EAGE Green Fund.

REGISTERED AND PAID	01/08/2018 - 18/09/2018	19/09/2018 - ON-SITE
EAGE/SBGf member	\$470	\$ 520
EAGE/SBGf student member	\$125	\$ 125
Non-member	\$520	\$ 570
Student non-member	\$150	\$ 150
Speakers	\$300	\$ 300

Please note!

- Please note: to qualify for the member registration fee, your EAGE membership dues for 2018 must have been paid and confirmed. The processing time for the membership applications or renewals is between 3-4 weeks after the event.
  1. The non-member fee includes EAGE membership for 2019.
- Please note: student non-members cannot be older than 34 years of age (when registering).

## VENUE

The Grand Mercure Rio de Janeiro Copacabana, is a luxury hotel in Rio de Janeiro, Brazil well located in Avenida Atlantica, close to the beach, restaurants, and public transport. The hotel offers an impressive sea view and all the services to meet the requirements of an international workshop and its attendees.

Address: Avenida Atlantica, 3716

### Reservations

Please contact Carla Duarte

Mail: [hb292-re@accor.com](mailto:hb292-re@accor.com)

Phone: +552135455400

Website: [www.accorhotels.com](http://www.accorhotels.com)

## VISA

Please check with the Brazilian Embassy of your country if you need a visa for visiting Rio de Janeiro. For any help about Invitation Letters send an e-mail to [eventos@eage.org.br](mailto:eventos@eage.org.br) / [americas@eage.org](mailto:americas@eage.org).

## SPONSORING

The EAGE/SBGf offers excellent sponsoring opportunities to create high visibility for companies and institutions. For more information about sponsoring, please refer to the 'Sponsor Guide' available on **Downloads and Contacts** on the workshop website or contact us via [americas@eage.org](mailto:americas@eage.org). You can also contact Doralis López +57 3106989570

## CONTACT

For up-to-date information, please visit our events website via [events.eage.org](http://events.eage.org) or contact the EAGE Latin America Office via +57 1 4232948 or via [americas@eage.org](mailto:americas@eage.org) or [eventos@sbgf.org.br](mailto:eventos@sbgf.org.br).

### Thanks to our Sponsor

We would like to thank the following sponsors for their generous support:



PETROBRAS

GOVERNO FEDERAL

# See you in Rio de Janeiro!

LATIN AMERICA OFFICE • +57 1 4232948 • [AMERICAS@EAGE.ORG](mailto:AMERICAS@EAGE.ORG)

[www.eage.org](http://www.eage.org)



join us on social media!