EAGE

PROGRAMME & CATALOGUE

EAGE 2020
ANNUAL CONFERENCE + EXHIBITION
··· ONLINE ···

SHEARWATER **Schlumberger**

8-11 DECEMBER 2020
WWW.EAGEONLINE2020.ORG

Table of Contents

Welcome Word from Everhard Muijzert

Dear colleagues,

The EAGE 2020 Annual Conference & Exhibition Online will be held online from 8 to 11 December 2020. The event will be a truly interactive digital experience and be the premier online geoscience and engineering meeting of the year. Our conference is uniquely placed to bring insight to this agenda.

Our members are on the front line evaluating the response to the immediate troubles of the oil and gas sector but also reviewing the financial, environmental and society cost of hydrocarbons in relation to the Energy Transition once a new market balance is reached. This means this year's Forum Sessions should be of exceptional interest offering the views and perceptions of energy industry leaders and environmental safety advocates.

I can say without hesitation that the full Technical Programme provides an unrivalled multi-disciplinary perspective on current practice and research in progress. With over 500 presentations and various tracks to explore, the programme will cover much of the latest research in industry and academia.

Similarly, the digital Exhibition will showcase the continuing advances being made in equipment and services and provide the location for networking and EAGE community information. In these challenging times many of our colleagues face personal and professional difficulties. EAGE members in need can apply to the EAGE hardship programme for a reduction in the conference fees.

Key to this all is to make our online meeting an interactive experience for delegates – a key element of conferences after all. This is reflected in the strong emphasis Q&A section during our technical programme. Presentations will be delivered as short pitches before the floor is opened up for questions. The full presentations will be available in the lead up of the event for delegates to explore.

Exhibitors will be pleased to see not only chat but video and voice conferencing will be available to connect with potential clients. So make sure you pay a visit to our online exhibition during the event days!

Finally, our community can participate in as well as platform-based networking rooms and a range of options to connect to other delegates.

I look forward to seeing you online in December.

Everhard Muijzert
EAGE President 2020-2021

Opening Session

Where do we go from here?
**Tuesday 8 December 2020, 15:00 - 16:00 CET**

The EAGE 2020 Annual Conference Online kicks off with the Opening Session. While the big stage and lights are gone this year, you can still expect a stimulating opening programme which paves the way for a unique virtual conference experience.

Crosstalk Conversation: Where do we go from here?

The programme starts off with brief introductions and review of EAGE's strategy going forward. This is followed by a new feature, the Cross-talk Conversation. Prepare for a lively discussion addressing the questions on everyone's mind: how can geoscience and related engineering professions and businesses deal - now and in the future - with the impact of the Covid-19 pandemic, the collapse of global oil price/demand and the challenge of energy transition?

Take the opportunity to hear an exchange of views from top figures in the energy field on the global economic environment for the oil business, future E&P prospects, potential impact of energy transition and what this all means for geoscience and related engineering business, technology and academia going forward.

The discussion features a panel of prominent figures broadly representing the perspectives of the oil and service companies, academia and environmental agencies, and will be hosted by Andrew McBarnet, author of First Break's monthly Crosstalk column.
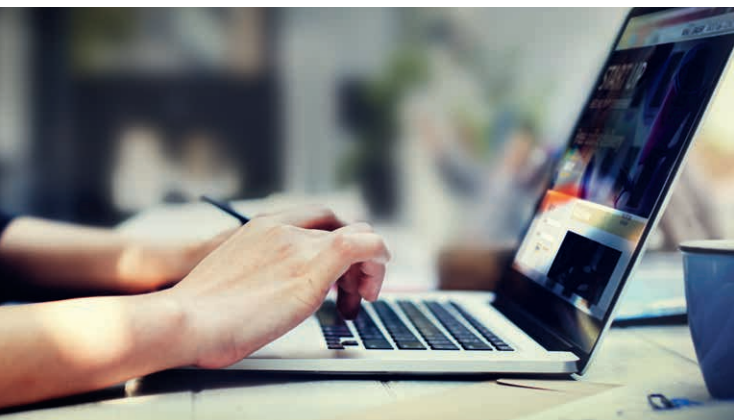
Crosstalk Conversation Participants

Sophie Zurquiyah
CEO, CGG

Jarand Rystad
CEO, Rystad Energy

Marc Gerrits
Executive Vice President Exploration, Shell

Joseba Murillas
Executive Director Exploration and Business Development, Repsol

Jon Erik Reinhardsen
Chair of the Board, Equinor

Scott W. Tinker
Director, Bureau of Economic Geology

EAGE Awards
A special segment will highlight the accomplishments of EAGE members including interviews with two of this year's awardees: Dr. Pejman Tahmasebi and Ms. Gladys Gonzalez.

EAGE 2020 at a Glance

As part of the Opening Session the 'EAGE2020 at a Glance' flash segments will provide a sneak peak into the virtual conference programme while sharing key highlights to look out for the Virtual Community Hub, Forum Sessions and Technical Programme. You can also expect tips and advice for making the most of the online experience.The Opening Session ends with the launch of the main online Technical Programme.

EAGE Forum Sessions

The EAGE Forum Sessions supplement our technical programme with a series of interviews with and discussion between significant figures from the industry and academia addressing important and current themes affecting the geosciences today. Each Forum tackles a different critical topic and participants can engage in the Q&A.

Andrew McBarnet
EAGE Editor Emeritus &
Forum Moderator

Brains, Machines & Rocks:
Assessing the Digital Revolution
Wednesday 9 December, 16:00 - 17:00 CET

The digital revolution is today's hot topic in geoscience-related business and operations. But how much change and value added it really brings about? We discuss with leading experts about the continuing adoption and impact of digitalization on today's E&P operations and where this may lead in the future.

Gabriel Guerra
VP Exploration Transformation, Shell

Maitri Erwin
Principal Program Manager, Microsoft Azure for Energy

Steve Freeman
Director of AI & ML, Schlumberger

Energy Transition: How Fast Really?
Thursday 10 December, 16:00 - 17:00 CET

Some major oil companies have been making significant announcements on Energy Transition and meeting climate mitigation goals. But the jury is still out on how fast progress will be made and whether the global pandemic will accelerate the process. Our online discussion will explore the reality and what it means for the geoscience community.

Iain Stewart
Director, Sustainable Earth Institute, University of Plymouth

Philip Ringrose
Specialist Reservoir Geoscience, Equinor

Bob Fryklund
Vice President, Upstream Energy, IHS Markit

New Era for Geoscience
Friday 11 December, 16:00 - 17:00 CET

A pandemic, struggling economies, a volatile oil and gas industry challenged by environmental concerns, energy transition, and digital technologies are all impacting the role of the geoscientist today and recruitment prospects for the future. We bring together industry and academic experts to talk about the challenges facing the geoscience discipline in a turbulent world.

Andrew Davies
Principle Geoscience Advisor, Halliburton Landmark

Ellie Ardakani
CEO/ Cofounder, Meta Innovation Technologies

Patrick Corbett
Emeritus Professor,
Heriot-Watt University

Philippe Montagnier
VP Geoscience Discipline, Total

Andrea Lovatini
Digital Subsurface Solutions – Geosolutions Global Manager, Schlumberger

Hot Topic Sessions

Join us for two interactive Hot Topic Sessions. Hosted by subject matter experts, but you can join the discussion via chat or live in the session itself!

Rock Physics
Thursday 10 December, 15:00 - 16:00 CET

The field of Rock Physics includes many scientific challenges. One of the big challenges is to bridge the fields of geology and geophysics. Hence, Rock Physics is by nature inter-disciplinary.

Per Avseth
Co-founder & CTO, Dig Science

Hamed Amini
Senior Geophysicist, AkerBP

FWI: Future Perspectives Without the Hype
Friday 11 December, 15:00 - 16:00 CET

FWI has quickly gone from an ambition to reality in recent years thanks to larger computers and significant advances in software. Is FWI only a part of an even larger vision? And where can AI take everything? Will machine learning replace FWI altogether? The sparks are sure to fly in a high voltage clash of opinionated personalities. The three energetic communicators promise to make this an engaging hour of insights, debate and entertainment.

Andrew Long
Chief Geoscientist, PGS

Sheng Xu
Lead Researcher, Equinor

Tariq Alkhalifah
Professor of Geophysics, KAUST

EAGE Bookshop Deals

Throughout EAGE 2020 we will be running special bookshop deals for our delegates. You can find today's deal in the daily email update and in our daily lobby video. Happy reading!

Special Session

Subsurface Uncertainty Quantification - Towards Stochastic Models
Tuesday 8 December, 16:00 - 18:00 CET

Conveners: Matthew Brzostowski (Schlumberger)
Cengiz Esmersoy (Schlumberger)
Simone Re (Schlumberger)

Description:
Exploration, drilling, and production all rely on a subsurface model. This model for the most part is obtained from seismic, offset well data, and other geophysical surface measurements in addition to regional geological understanding.
Experience shows that our subsurface models may have large inaccuracies. A prospect may have a much different size than predicted. Formation tops, faults or salt bodies may show up too early or late compared with the well plan. Predicted geomechanical properties may not agree with what is encountered. All these continue to play a major factor in exploration priorities and risk management.

In this workshop we will focus on how to quantify these uncertainties, representing the subsurface as a stochastic model rather than a single deterministic model as we typically do today. Understanding these uncertainties and their roots will also help device ways of reducing them. As such, we want to emphasize the seismic and non-seismic tools, well data, applications, and case histories available to the industry.

Community Hub

What's an online conference without a place for our community to meet? In addition to a strong technical programme, networking at conferences is key. Because of this we are bringing you the EAGE Community Hub, a familiar place where our communities would gather for fun and interesting discussions or activities, but now fully online. Check out the activities below!

Community Talks | New to EAGE? Ask EAGE Staff!
Tuesday 8 December, 16:00 - 16:15 CET

New to EAGE? Want to learn more about the Association, how to engage during the event and how you can get the most out of your EAGE membership? This is the session for you to join!

Join Caroline Le Turdu, EAGE's Membership & Cooperation Officer for an introduction to EAGE and the exciting activities offered at our Community Hub in the upcoming days.

In addition, we will introduce the EAGE booth - the go-to place for any questions about the association and the conference itself. See you there!

Community Talks | Decarbonization Patterns
Tuesday 8 December, 17:00 - 18:00 CET

Hosted by the EAGE Local Chapter Netherlands in collaboration with EFG (the European Federation of Geologists) this Community Talks will address decarbonization pathways through CCS and geothermal energy applications with guest speakers Hadi Hajibeygi and János Szanyi.

Community Talks | North Sea Exploration: Pioneers and a Life in Exploration
Friday 11 December, 17:00 - 18:00 CET

Hosted in collaboration with PESGB, this Community Talks will invite you to join a lively discussion sparkling from an interview with Malcolm Pattinson.

Speed Mentoring
Launch Tuesday 8 December, 16:15 - 17:00 CET
Wednesday 9 December, 14:15 - 15:00 CET

If you are looking forward to making new connections at the EAGE Annual Online you, make sure to join our speed mentoring! Whether you at the start of your career, or have experience to share, you can sign up to be matched with another attendee at the start of the event and attend in good company. All you need to do is fill in a quick application form: if a mentor or a mentee that fits your criteria is available, you will be connected.

The path forward is up to you: from a one-time chat to a lifelong friendship, mentoring is a 2-way exchange process that can enrich not only your experience in the event but also expand your professional horizons.

Education | Learning Geoscience for the Future
Wednesday 9 December, 15:15 - 16:00 CET

If 2020 teaches us anything, it is that online education is here to stay. With that in mind, EAGE has been working hard in the last few months on creating a new online education platform for its members: Learning Geoscience!

Join us for this session and discover what EAGE has in store for you to keep up-to-date with changes within the geoscience and engineering discipline, remotely. Whether you are a student or an experienced professional looking for new paths in your professional development, you have come to the right place!

Students | e-Summit
Thursday 10 December, 15:00 - 16:00 CET

During the EAGE Annual Online we will be delivering a new student e-Summit. The e-Summit series, which started in April 2020 brings together student & YP panellists together to discuss a specific topic each delivery. Join panellists Alexander Jüstel (RWTH Aachen), Myrna Staring (Fugro), Rumbidzai Nhunduru (Heriot Watt University) and Valérie Krampe (ETH Zurich) for their take on how 2020 has changed their career outlook.

Students | Online GeoQuiz
Friday 11 December, 15:00 - 16:00 CET

The GeoQuiz goes online! No Annual Conference is complete without our student GeoQuiz - one of the traditional highlights of our student offering at our conferences. Many will know the high-paced event at our meetings and this year we are continuing the tradition over the internet. Put your geoscience knowledge to the test and show us what you got!

Students | Networking Café with University Representatives
Friday 11 December, 14:15 - 15:00 CET

Are you currently enrolled at university and orienting yourself on your next steps in academia? Or maybe you are considering a new course to continue your education? In that case, you will likely be faced with university application deadlines soon! In order to help make the best decision possible, join us for our networking cafe. During this session, we will bring together (prospective) students and university representatives to talk about the programme and research focus for their departments in the 2021/2022 academic year.

Interactive Training | Personal Branding on LinkedIn
Wednesday 9 December, 17:00 - 18:00 CET

Speaker: Mark White
We all have them in our online network - those individuals who really seem to be on top of the latest developments and stand out on professional social media. A professional social media presence can be key. But where does one start?

During this interactive training with Mark White, a professional LinkedIn trainer who delivered over 200 LinkedIn training sessions in 2019 alone, you will discover the many tools and new elements LinkedIn offers to support your personal brand. Mark will teach you how to include new elements like Featured, Voice Headline, Increased Headline and how to engage effectively through comments and posts.

Interactive Training | How to Match Your Career with Your Personality
Thursday 10 December, 14:00 - 15:00 CET

Speaker: Nathalie Sagné (NS CONSEIL)
At work, what makes a great team? For many, the answer is to have team members complement each other. Finding the right mix of personalities within a team or company is key to ensuring success as well as job satisfaction. Join this interactive session if you wish to find out more about your personality and how to match it with your ideal job profile. Before the session, make sure to take a free personality test at www.16personalities.com, which will take you about 10 minutes. Our expert Nathalie Sagné will explain during the session how read the test results, re-assess if necessary, and explain how they can be useful for your personal development, self-awareness, professional orientation or team management.

Interactive Session | Dual Careers and HR Challenges in the Global Workplace of 2020
Thursday 10 December, 17:00 - 18:00 CET

Speaker: Gill Gordon
2020 has been a unique year and posed new challenges for industry professionals employed in different countries. This is especially true for dual careers families. Together with Gill Gordon, we will go through some of the main criticality's experienced by employers and employees worldwide this year, and discuss the (new) elements that will need to be considered going forward to improve work conditions.
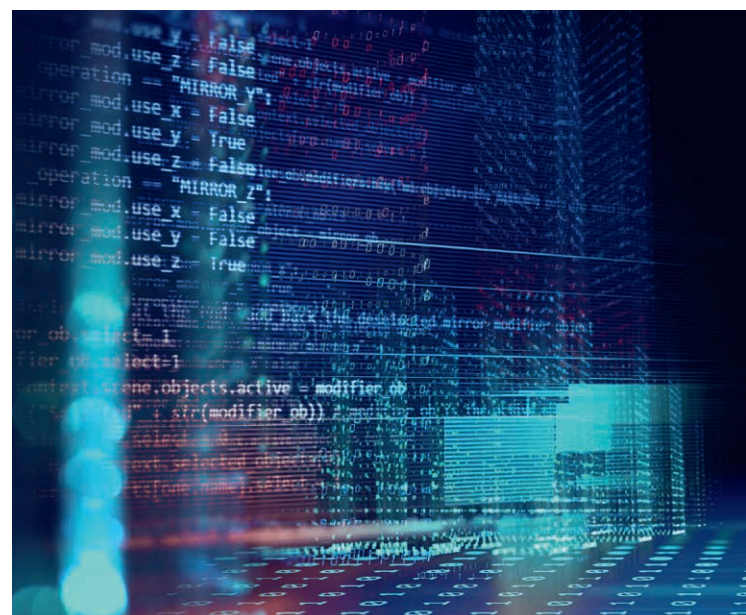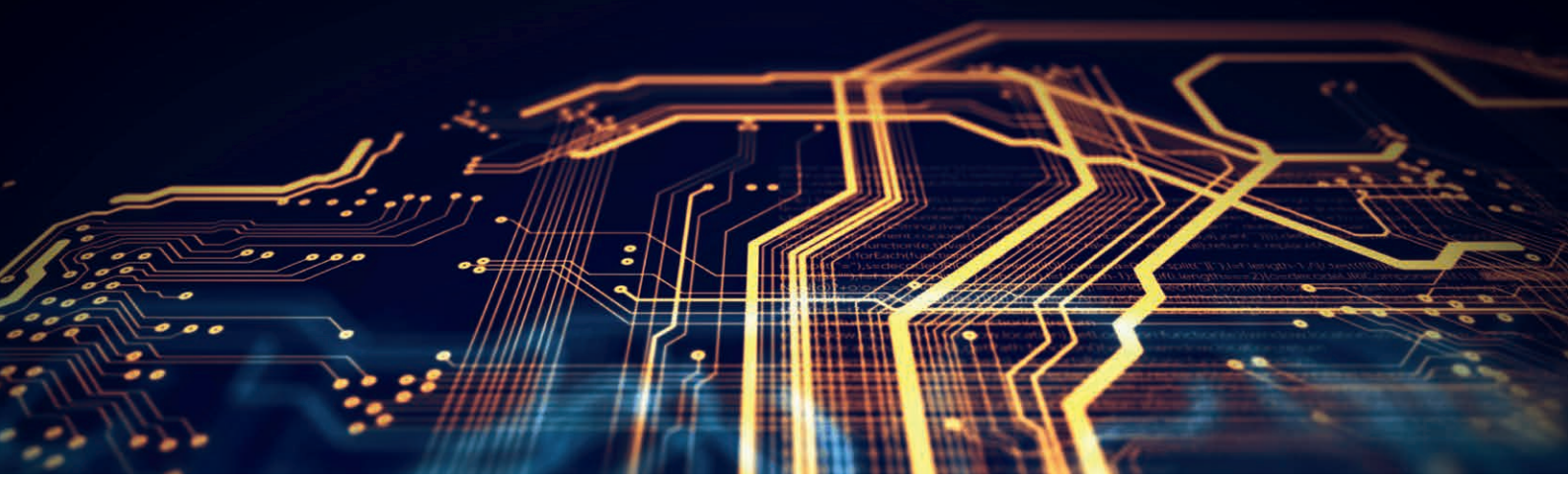
Visit the Online Exhibition

We would like to encourage all of our delegates to network with our partners in our online exhibition. The exhibition has extended opening hours compared to the technical programme allowing for plenty of opportunity to network with our partners and not miss a single presentation whilst doing so.

List of Exhibitors

Exhibition Gold	ArkCLS	Exhibition Silver	Biodentify
Exhibition Gold	BGP	Exhibition Silver	Delft Inversion
Exhibition Gold	CGG	Exhibition Silver	Earth Science Analytics
Exhibition Gold	DUG	Exhibition Silver	EAGE
Exhibition Gold	Eliis	Exhibition Silver	EMGS
Exhibition Gold	Elsevier	Exhibition Silver	GeoExpro
Exhibition Gold	Geospace	Exhibition Silver	GEOTOMO
Exhibition Gold	GeoTeric	Exhibition Silver	GK Processing
Exhibition Gold	Ikon Science	Exhibition Silver	Iraya
Exhibition Gold	ION	Exhibition Silver	KMS Technologies - KJT Enterprises Inc
Exhibition Gold	PGS	Exhibition Silver	Polarcus
Exhibition Gold	Sercel	Exhibition Silver	Qeye Labs
Exhibition Gold	Silixa	Exhibition Silver	Seiche
Exhibition Gold	Sound Qi	Exhibition Silver	SGS
Exhibition Gold	Target	Exhibition Unversity	KAUST
Exhibition Gold	Stryde		
Exhibition Gold	InApril		

List of Sponsors

SHEARWATER	Schlumberger	the human energy company™ Chevron	TOTAL
Main Sponsorship	Main Sponsorship	Student Sponsor	Student Sponsor & Technical Programme Sponsorship
sharpreflections	equinor	TGS	ThermoFisher SCIENTIFIC
Technical Programme Sponsorship	Technical Programme Sponsorship	Technical Programme Sponsorship	Virtual Bag Sponsorship

Technical Programme

Presentations | Tuesday 8 December 2020

15:00 Opening - Crosstalk Debate: Where Do We Go from Here?
Host: Andrew McBarnet (EAGE Editor Emeritus)
Participants: Sophie Zurquiyah (CEO, CGG)
Jarand Rystad (CEO, Rystad Energy)
Marc Gerrits (Executive Vice President Exploration, Shell)
Joseba Murillas (Executive Director Exploration and Business Development, Repsol)
Jon Erik Reinhardsen (Chair of the Board, Equinor)
Scott W. Tinker (Director, Bureau of Economic Geology)

	GEOPHYSICS 1	GEOPHYSICS 2	INTEGRATED SUBSURFACE	SPECIAL SESSION
	Case Histories - Imaging & FWI X. Huang (University of Bergen)	**Microseismic - Applications & Mechanisms** C.E. Birnie (Equinor), T. Seher (TGS)	**Exploration - Integrated Studies** M. Jaya (PETRONAS)	**Subsurface Uncertainty Quantification: Towards Stochastic Models** M. Brzostowski (Schlumberger), S. Re (Schlumberger)
16:00	**Building High-Fidelity Supra-Salt Velocity Model with Adjustive Full-Waveform Inversion -** Z. Chen[1]*, D. Vigh[1], D. Chen[1], W. Ibanez[1], K. Gigandet[1], A. Reisdorf[1], V. Robertson[1], S. Madden[1], M. O'Briain[1] [1]Schlumberger	**Real-Time Drill Bit Tracking with Passive Seismic Data at Grane, Offshore Norway -** M. Houbiers[1]*, S. Bussat[1], F. Hansteen[1] [1]Equinor ASA	**Integrated Reservoir Geology, Seismic Facies, and Production Studies to Determine the Potential of Well Development Area -** A. Zhumabekov[1,2,3]*, Z. Liu[1], X. Wei[2], X. Chen[2], V. Portnov[3] [1]China University of Petroleum - Bejing; [2]BGP CNPC; [3]Karaganda State Technical University	**Towards Uncertainty Estimation in Imaging of Low-relief Structures by Bayesian First-arrival Tomography -** A. Egorov[1]*, I. Silvestrov[1], A. Bakulin · P. Golikov[1] [1]Aramco
	Waveform Inversion Methodology for Deep Structural Imaging Offshore Norway - J. Singh[1]*, L. Braidwood[1], V. Valler[1], O. Michot[2], C. Wang[1], I. Jones[1], R. Bekkeheien[2] [1]ION; [2]OMV Norge	**3D Elastic Passive Source Inversion with an Equivalent Source -** H. Wang[1]*, T. Alkhalifah[1] [1]King Abdullah University of Science & Technology	**Quantitive Analysis of the Impact of Dark Mineral Content on Archaeozoic Basement Gas Reservoir -** H. Lu[1]*, H. Yu[1], L. Fu[1] [1]Bohai Oilfield Research Institute, CNOOC Ltd.	**Combining Stochastic Joint Inversion and Machine Learning for Litho-Fluid Facies Classification and Uncertainty Estimation of Well Logs -** P. Dell'Aversana[1]* [1]Eni SpA
	FWI Velocity Building through Gas Pocket in South China Sea - A Case Study in Baiyun Survey - J. Liu[1], Y. Zhu[1], Z. Li[1], P. Wang[2]*, R. Li[2] [1]CNOOC; [2]Schlumberger	**3D Acoustic Orthorhombic Anisotropic Passive Source Inversion with Full Waveform Inversion -** H. Wang[1]*, T. Alkhalifah[1] [1]King Abdullah University of Science & Technology	**Chalk in the Limelight: Revising Vintage Velocity Models in the Moray Firth and Southern North Sea -** O. Ward[1]*, M. Matta[1], J. Bailey[1], O. Shtukert[1], K. Ramani[1], M.M. Steiger-Jarvis[1], D. Fell[1] [1]Schlumberger	**Q&A Session**
	Full Waveform Inversion Application to the Deep-Sea Terrace of Forearc Basin in Japan Trench - E. Jamali Hondori[1]*, C. Guo[1], J. Park[1] [1]The University of Tokyo	**Fault Reactivation Controlled by Elastic Stress Transfer During Hydraulic Fracturing at Preston New Road, UK -** T. Kettlety[1], J. Verdon[1]*, M. Werner[1], M. Kendall[1,2] [1]University of Bristol; [2]University of Oxford	**Uncertainty Quantification and Visualization in Play Mapping – A New Approach for Play-Based Exploration -** B. Wendebourg[1]*, M. De La Varga[1], F. Wellmann[1], P. Kukla[1] [1]RWTH Aachen	
	Seeing through the Gas - Improved Imaging on Marte with a Dedicated MAZ Velocity Survey - L. Saxton[1]*, J. Northall[1], M. Wingham[1], I. De Lemos[1], X. Song[1], G. Jones[2], I. Espin[2], J. Palmer[2], M. Chappell[2], R. Refaat[2] [1]BP; [2]CGG	**Automatic Microseismic Event Detection in Noisy Environments from Unfiltered Seismic Signals Using Instantaneous Spectral Shannon Entropy -** S.L. Da Silva[1]*, P. Carvalho[1], C.A. Da Costa[1], J. Medeiros[1], G. Corso[1] [1]Federal University of Rio Grande do Norte	**Dynamic Selection of Realizations for Injection Well Location Optimization -** R. Yusefzadeh[1]*, M. Sharifi[1], Y. Rafiei[1], M. Ahmadi[1] [1]Amirkabir University of Technology	
	Uncovering the Kujung Carbonate Facies Complexities in an Undisturbed North Madura Platform, East Java Basin, Indonesia - M.N. Juliansyah[1]*, R.K. Pratama[1], P. Monalia[1], A.K. Wijaya[1], A. Donurizki[1], R. Ismail[1] [1]PETRONAS Carigali Indonesia	**Identifying Microseismic Events in Time-Reversed Source Images Using Support Vector Machine -** C. Song[1]*, T. Alkhalifah[1] [1]King Abdullah University of Science and Technology	**Drilling Portfolio Performance and the Role of Survival Bias in Volume Estimates -** G. Hoetz[1]*, M. Ecclestone[1], V. Van der Kraan[1] [1]EBN B.V.	
	Capturing the Value of Source-Over-Streamer Acquisition for Velocity Model Building at Barents Sea - N. Salaun[1], M. Reinier[1]*, G. Henin[1], G. Gigou[1], A. Wright[1] [1]CGG	**Microseismic Hypocenter Location Using an Artificial Neural Network -** Q. Hao[1], U.B. Waheed[1]*, M. Babatunde[1], L. Eisner[2] [1]King Fahd University of Petroleum and Minerals; [2]Seismik s.r.o.	**Cenozoic Depositional Systems of Offshore Mexico: A Sequence Stratigraphic and Post-Well Analysis Approach to Reservoir Assessment -** A. Kurobasa[1]*, J. Halliday[1], E. Royce-Rogers[1], E. Mortimer[1], N. Walsh[1] [1]TGS Geophysical	
	Seismic Modeling to Mitigate Risk in Well Location - A Case Study in Brazilian Pre-Salt - R. Dias[1], F. Borges[1,2]*, C. Ushirobira[1], C. Carbonari[1], B. Pereira Dias[1], A. Bulcão[1] [1]Petróleo Brasileiro SA; [2]NTNU	**New Perspective of Malaysian Basin through Passive Seismic -** A.H. Abdul Latiff[1]*, A.E. Khalil[2] [1]Universiti Teknologi PETRONAS; [2]Helwan University	**Hydrocarbon Potential of the Malvinas Basin, Southern Argentina -** M. Reynald[1]*, R. James[1] [1]Halliburton	
16:55	**End of session break**			

Presentations | Tuesday 8 December 2020

GEOPHYSICS 1	GEOPHYSICS 2	INTEGRATED SUBSURFACE	SPECIAL SESSION
Full Waveform Inversion 1 R.E. Plessix (Shell Global Solutions International BV)	**Time Lapse Data - Acquisition & Processing** V. Aarre (Schlumberger), G. Hampson (DUG)	**Exploration and Development in Complex Environments** M. Jaya (PETRONAS)	**Subsurface Uncertainty Quantification: Towards Stochastic Models** M. Brzostowski (Schlumberger), S. Re (Schlumberger)

17:00			
Evaluation of Two Numerical Optimization Schemes for Elastic Full Waveform Inversion - O.C. Aquino de Aragão[1]*, I. Pawelec[1], P. Sava[1] [1]Colorado School Of Mines	**4D Ocean Bottom Node Decimation Study over the North Sea Golden Eagle Field -** I. Gregory[1]*, Z. Dobo[1], F. Ebrahim[1], J. Sinden[1], P. McDonnell[2], A. Wilson[2] [1]CGG; [2]CNOOC International	**Improving Field Development Efficiency Based on Integrated Asset Modelling Approach -** E. Padin[1]* [1]Tyumen Petroleum Research Center	**From Data Analytics on Hundreds of Depth Structures to Agile Reservoir Modelling: Some Practical Steps Towards Stochastic Modelling -** P. Thomas[1]*, M. Baker[1] [1]Woodside Energy
Reconstruction of Sharp Interfaces in Time-Domain Full Waveform Inversion - Y. Albuquerque[1]*, A. Laurain[1] [1]University of São Paulo	**Defining Error Bars on 3D and 4D Seismic for 4D Quantitative Interpretation -** M. Hatab[1]*, C. MacBeth[1], H. Amini[1] [1]Heriot-Watt University	**Boosting Barrels by Reservoir Surveillance in a Mature Chalk Field of the Danish Sector -** A. Mehra[1]*, O. Torky[2] [1]Total E&P Danmark; [2]Halliburton	**Quantifying Uncertainty Workshop Review -** R. Bloor[1]* [1]Schlumberger
Full Waveform Inversion Based on the Acoustic-Elastic Coupled Equation - T. Yang[1]*, Y. Liu[1] [1]Tongji University	**Node on Node, Highly Repeatable Acquisition for Reservoir Monitoring, Bonga Field, Offshore Nigeria -** E. Saragoussi[1]*, O. Osabuohien[1], A.O. Adegbite[1], P. Smith[1], P. Kristiansen[1], O. Okpobia[2], I. Yamusa[2] [1]Schlumberger; [2]SNEPCO	**An Integrated Approach for Complex Faulted Reservoir Characterization: A Case Study in Deepwater Nigeria -** W. Han[1], L. Han[1]*, X. Feng[1] [1]CNOOC International Limited	Q&A Session
Full Waveform Inversion Using Wave Equation Reflectivity Modeling - Y. Yang[1]*, J. Ramos-Martinez[1], D. Whitmore[1], A. Valenciano[1], N. Chemingui[1] [1]PGS	**A P-Cable Time-Lapse Seismic Repeatability Study in the Gulf of Mexico -** P. Smith[1]*, B. Mattox[2] [1]WesternGeco; [2]NCS Subsea	**Integrated Prediction of Gas-Bearing Volcanic Reservoirs Using Full Stack Seismic Data in Sichuan Basin of China -** Y. Yang[1]*, C. Dai[1], X. Wang[1], S. Chen[1], S. Dong[1], P. He[1], X. Li[1], Z. He[1], Y. Luo[2] [1]RIPED PetroChina; [2]BGP Research & Development Center	
Hessian Based Reflection Waveform Inversion - J. Cheng[1]*, T. Wang[1], W. Xu[1] [1]Tongji University	**Quantifying 4D Repeatability Improvements with Evolutionary Acquisition on the Gullfaks Field, North Sea -** M. Wierzchowska[1]*, D. Anderson[1], J. Oukili[1], Y. Biryaltseva[2], D. Fischer[2], E. Sadikhov[2], B. King[2] [1]PGS; [2]Equinor	**Seismic Identification of Volcanic Reservoir: A Case from Junggar Basin China -** X. Li[1]*, X. Sun[1], C. Dai[1], Y. Yang[1], Y. Song[1], G. Xu[1], L. Zhang[2], S. Chen[1], X. Wang[1] [1]RIPED PetroChina; [2]Yangtze University	
An Objective Function Based on q-Gaussian Distribution for Full-Waveform Inversion - S.L. Da Silva[1]*, C.A. Da Costa[1], P. Carvalho[1], J. Araújo[1], L. Lucena[1], G. Corso[1] [1]Federal University of Rio Grande do Norte	**Taking Full Advantage of Both PP and PS Converted Wave Data for 4D Time-Lapse Reservoir Monitoring -** P.E. Dhelie[1]*, V. Danielsen[1], K.R. Straith[1], J.A. Haugen[1], A.O. Ndingwan[1], E. Davenne[1], S. Sæl[1], M. Hooke[2], R. Whitebread[2], F. Twynam[2], R.F. Ford[2] [1]Lundin Norway AS; [2]WesternGeco UK	**Inter-Basalt Prospectivity at Elongated Ridges in the NE Atlantic -** B. Manton[1]*, J.M. Millett[1,2], F. Walker[1,2], D. Zastrozhnov[1], D. Maharjan[1], S. Polteau[3], D.A. Jerram[4,5], S. Planke[1,5], R. Myklebust[6] [1]VBPR AS; [2]University of Aberdeen; [3]SurfExGeo AS; [4]DougalEARTH Ltd.; [5]University of Oslo; [6]TGS	Closure Remarks
Optimal Transport Full Waveform Inversion - Applications - D. Carotti[1]*, O. Hermant[1], S. Masclet[1], M. Reinier[1], J. Messud[1], A. Sedova[1], G. Lambaré[1] [1]CGG			
Imaging Complex Fault Structures On-shore Oman Using Optimal Transport Full Waveform Inversion - O. Hermant[1]*, A. Aziz[1], S. Warzocha[1], M. Al Jahdhami[2] [1]CGG; [2]PDO			

Presentations | Wednesday 9 December

	GEOPHYSICS 1	GEOPHYSICS 2	GEOPHYSICS 3
	Full Waveform Inversion 2 J.X. Li (PETRONAS), W.E.A. Rietveld (BP Exploration Operating Co. Ltd)	**Practical Workflows and Novel Acquisition and Inversion of Gravity Data** A. Malehmir (Uppsala University)	**Quantitative Seismic Interpretation and Inversion** Z.Y. Zong (China University of Petroleum)
14:00	**The Influence of Source Wavelet Estimation Error in Acoustic Time Domain Full Waveform Inversion -** P. Pavlopoulou[1,2]*, I. Jones[1] [1]ION; [2]University of Leeds	**Multiphysics and Multidisciplinary Integration Unravels Kirthar Fold Belt Structural Complexity -** A. Battaglini[1]*, M.Q. Asad[2], G. Bancala'[1], I. Guerra[1], S. Panepinto[1], A. Sirtori[1], W. Ahmad[2], U. Farooq[2], S.F. Shah[2] [1]Schlumberger; [2]Pakistan Petroleum Limited	**Presalt Carbonate Reservoir Identification Using Extended Elastic Impedance (EEI) Inversion in Campos Basin, Deep Offshore Brazil -** L. Han[1]*, H. Jia[1], S. Zhang[1], Z. Liu[1] [1]CNOOC International Limited
	Extrapolation of Low Wavenumbers in FWI Gradients by a Deep Convolutional Neural Network - P. Plotnitskii[1]*, V. Kazei[1], O. Ovcharenko[1], D. Peter[1], T. Alkhalifah[1] [1]KAUST	**3D Regularized Focusing Migration for Large-scale Data Based on GPU Parallel Computing -** Y. Ding[1]*, G. Ma[1], Q. Wu[1], T. Wang[1], H. Wang[1] [1]Jilin University	**Vertical Image Projection, an Effective Data Preconditioning for Seismic Inversion -** A. JafarGandomi[1]* [1]Shearwater GeoServices
	Source-Independent Efficient Wavefield Inversion - C. Song[1]*, T. Alkhalifah[1] [1]King Abdullah University of Science and Technology	**Broadband Gravity – Combining Vertical Gravity Data from Airborne Gravity and Airborne Gravity Gradient Systems -** D. Burrows[1], C. Van Galder[1]*, T. Chen[1] [1]CGG	**SSGST-Based Prestack Fluid Mobility Calculation Method and Its Application -** J. Liao[1], H.D. Huang[1], F. Xu[2], J. Zeng[1]*, X.D. Tian[1] [1]China University Of Petroleum, Beijing; [2]PetroChina Changqing Oilfield Company
	Comparing Strategies for Local FWI: FD Injection and Immersive Boundary Conditions - F. Farias[1]*, R. Pestana[1] [1]Universidade Federal Da Bahia	**Petroleum System Evaluation through Potential Field Data Analysis in Frontier Exploration of South Sudan -** S. Ratti[1]*, G. Bancalà[1], L. De Luca[1], A. Sirtori[1] [1]Schlumberger	**Frequency-Dependent AVO Inversion for Viscoelastic Solid-Fluid Decoupling Factor -** Z. Zong[1], Y. Feng[1]*, X. Yin[1], K. Li[1] [1]China University of Petroleum
	A Proposal for Marchenko-Based Target-Oriented Full Waveform Inversion - S.M.A. Shoja[1]*, G.A. Meles[1], K. Wapenaar[1] [1]Delft University of Technology	**3D Inversion of Gravity Data with Lanczos Bidiagonalization and Unstructured Mesh -** K. Danaei[1]*, R. Smith[2], A. Moradzadeh[1], G. Norouzi[1], M. Abedi[1], H. Jodeiri Akbari Fam[2] [1]University of Tehran; [2]Laurentian University	**Comparison of Two Reservoir Characterization Workflows for Estimating 3D Shale Distribution from Seismic Data -** N. De Freslon[1]*, N. Lucet[1], A. Pain[1], N. Desgoutte[1] [1]Beicip-Franlab
	A Sequential Inversion for the Velocity and the Intrinsic Attenuation Using Efficient Wavefield Inversion - C. Song[1]*, T. Alkhalifah[1] [1]King Abdullah University of Science and Technology	**Operating the Absolute Quantum Gravimeter for Reservoir Monitoring -** P. Vermeulen[1], L. Antoni-Micollier[1], G. Condon[1], T. Mazzoni[1], V. Ménoret[1], C. Janvier[1], B. Desruelle[1], J. Lautier Gaud[1]* [1]Muquans	**Deep Neural Network Application for 4D Seismic Inversion to Pressure and Saturation: Enhancing Training Data Sets -** G. Corte[1]*, J. Dramsch[2], C. MacBeth[1], H. Amini[1] [1]Heriot-Watt University; [2]Technical University of Denmark
			Generalized Linear AVO Inversion Based on Zoeppritz Equation in Ray Parameter Domain - R. He[1]*, C. Xie[1], X. Zheng[1], W. Wang[1], E. Wang[1], G. Yan[1] [1]RIPED PetroChina
			A Comparison between Two AVAZ Fracture Detection Methods and Two Post-Stack Fracture Attributes - H. Nosrati[1]*, A. Javaherian[1], M. Zarechahooki[1] [1]Amirkabir University of Technology
14:55	**End of Session Break**		

TOTAL   TGS   equinor   sharpreflections

Presentations | Wednesday 9 December

GEOLOGY	INTEGRATED SUBSURFACE	NEAR SURFACE	DATA &COMPUTER SCIENCE
Clastic Reservoirs and Modelling C.J. Lowrey (Spirit Energy)	**Fields in Production: Case Studies** A. Bounaim (Schlumberger)		**Data Management and ML Driven Seismic Interpretation** A. Laake (Schlumberger), A. St-Cyr (Shell India Markets Private Limited)

	GEOLOGY	INTEGRATED SUBSURFACE	NEAR SURFACE	DATA &COMPUTER SCIENCE
14:00	**Investigating Mass-Transport Complexes Using High-Resolution Depth Seismic Measurements, Angoche Basin, Offshore Mozambique -** C. Abu[1*] [1]WesternGeco	**Hydraulic Fracture Stage Design Optimization of a Dry Gas Field in the North Sea -** E. Barros[1*], P. Ruan[2], R. Ishmuratov[3], J. Hopman[1], R. Fonseca[1] [1]TNO; [2]Wintershall DEA; [3]Wintershall Noordzee		**The Importance of Integrating Visualization and Collaboration in a Digital Transformation Strategy -** P. Schatz[1*] [1]INT, Inc.
	Implementing Orbital Climate Control on Alluvial Stratigraphy in Subsurface Predictive Models - H.A. Abels[1*], T.F. Baars[1], Y. Wang[1], A. Alharbi[1], J.E.A. Storms[1], A.W. Martinius[1] [1]Delft University of Technology	**Accurate Measurement of Seabed Subsidence at the Ormen Lange Field -** H. Ruiz[1], A. Seregin[2], O.P. Skogly[3], A. Libak[1], M. Lien[1*] [1]OCTIO Gravitude; [2]Shell Global Solutions International B.V.; [3]A/S Norske Shell		**Cross-Discipline Cloud-Based Platforms Require a Single Version of Truth Across All Data to Deliver Reliable Decisions -** P. Neri[1*], R. Philo[1] [1]Energistics Consortium Inc
	Decoding the Impact of Tidal Influence vs Burial Diagenesis in the Fogelberg Discovery, Halten Terrace, Norway - P. Milstead[1*], C.J. Lowrey[1] [1]Spirit Energy	**CO2-Hydrocarbon Miscible Gas Injection; Comparison of MMP between Slim Tube, VIT and Capillary-Rise Methods -** M. Mohammadkhani[1*], J. Fahimpur[1] [1]Amirkabir University of Technology		**Influence of Label Conditions on the Effect of Deep Learning Inversion -** P. Yang[1*], R. Guo[1], D. Liu[1], M. Li[1], Y. Zhao J[1], F. Tao C[1], F. Yang X[1] [1]BGP Inc., CNPC
	Evolution in Petrophysical Property Modelling of Clastics Reservoirs - T.S. Murugesu[1*] [1]Petronas	**Water Flood Optimization Opportunity in PAD Well in Greater Burgan -** K. Al-resheedi[1*], E. Hussain[1], S. Rajan[1] [1]Kuwait Oil Company		**AI Fault Delineation: A Case Study Using Valhall OBS Data -** A.K. Cader[1*], L. Gomez Martinez[1], E.J. Kjos[2], H. Anderson[2], H.H. Veire[2], W. Oxborough[2], N. Haller[2] [1]Geoteric; [2]Aker BP
	Effects of Diagenesis on Reservoir Quality of Permo-Carboniferous Glacial Sandstones - Y. Cui[1*], H. Zhao[1], M. Zhang[1], W. Wang[2] [1]Aramco Asia; [2]Saudi Aramco	**Kriging-Based CPTu Data Estimation of Marine Soil Parameters for Conductor Casing Design -** C. Várady[1], P. Silva[1], J. Tenório[1], B. Barboza[1*], J. Santos[1], E. Toledo[1], R. Dias[2], F. Cutrim[2] [1]Federal University Of Alagoas; [2]Petrobras		**Fully Reversible Neural Networks for Large-Scale 3D Seismic Horizon Tracking -** B. Peters[1,2*], E. Haber[1] [1]University of British Columbia; [2]Computational Geosciences Inc.
				U-SaltNet: A Neural Network for Salt Interpretation - H. Zhou[1*], S. Xu[1], G. Ionescu[1], M. Laomana[1], N. Weber[1] [1]Equinor
				A New Era in Geoscience Data Interpretation - Artificial Intelligence Based Solutions - M. Gorlov[1*], R. Miftakhov[1], N. Plaksin[1], O. Pozdnyakova[1], I. Shiryaev[1], S. Fedotov[1], A. Bazanov[1], P. Avdeev[1], I. Efremov[1] [1]GridPoint Dynamics LLC
				Five Years of Experience Applying AI in the Subsurface Data Management Domain - H. Blondelle[1*], A. Juneja[1] [1]Agile Data Decisions
14:55	**End of Session Break**			

Presentations | Wednesday 9 December

	GEOPHYSICS 1	GEOPHYSICS 2	GEOPHYSICS 3
	Full Waveform Inversion 3 R. Kumar (Schlumberger), A. Stopin (Shell Global Solutions International BV)	**Potential Field, Geoelectrical and EM Methods** I. Guerra (Schlumberger), S. Hallinan (CGG)	**Rock Physics Workflows & Theoretical Insights** A. Bounaim (Schlumberger), A.Y. Rozhko (Equinor ASA and University of Stavanger)
15:00	**Relaxing the Initial Model Constraint for Crustal-Scale Full-Waveform Inversion with Graph Space Optimal Transport Misfit Function** - A. Górszczyk[1,2]*, L. Métivier[1,3], R. Brossier[1] [1]Univ. Grenoble Alpes, ISTerre; [2]Institute of Geophysics, PAS; [3]CNRS, Univ. Grenoble Alpes, LJK	**Long Term Monitoring of Karst Processes Using SIP** - F. Mai[1]*, F. Börner[1] [1]Technische Universität Berlin	**Stability Analysis of Different Finite-Difference Methods for the Theory of Wave Propagation in Rock Physics** - L. Jiawei[1]*, G. Zhenwei[1], Y. Wen-An[2], L. Jianxin[1] [1]Central South University; [2]Tsinghua University
	ML-Misfit: Learning a Robust Misfit Function for Full-Waveform Inversion Using Machine Learning - B. Sun[1]*, T. Alkhalifah[1] [1]King Abdullah University of Science and Technology	**CSEM Inversion in the Prior Space** - E. Causse[1]* [1]Equinor ASA	**Stability Analysis of the Biot-Rayleigh and Double-Porosity Theories for Wave Propagation in Saturated Media** - L. Jiawei[1]*, G. Zhenwei[1], Y. Wen-An[2], L. Jianxin[1] [1]Central South University; [2]Tsinghua University
	A Data-Driven Choice of Misfit Function for FWI Using Reinforcement Learning - B. Sun[1]*, T. Alkhalifah[1] [1]King Abdullah University of Science and Technology	**Acoustic, Electrical and Magnetic Effects of Stromboli Volcano Eruption (July-August, 2019)** - S. Riabova[1]*, A. Spivak[1] [1]Sadovsky Institute of Geosphere Dynamics RAS	**A New Rock Physics Model of Shale on the Theory of Micro-Nano Pores** - L. Yin[1]*, X. Yin[1], Z. Zong[1] [1]China University of Petroleum (East China)
	A Robust Phase-Only Reflection Full Waveform Inversion with Multi-Channel Local Correlation - J. Sheng[1]*, J. Mao[1], F. Liu[1], M. Hart[1] [1]TGS	**A Novel 4IR Framework for Interwell Saturation Mapping** - K. Katterbauer[1]*, A.F. Marsala[1] [1]Saudi Aramco	**Effects of Pore Shape on Elastic Properties of Porous Rocks with Digital Rock Physics** - Q. Liu[1]*, D. Cao[1], X. Yin[1], Y. Xie[1] [1]China University Of Petroleum (East China)
	Making Full Use of Well-Log Data in Seismic Inversion: Data-Driven-Based Error Modeling and Regularization - B. She[1]*, D. Xiong[1], C. Song[2], Y. Wang[1], G. Hu[1] [1]University Of Electronic Science and Technology Of China; [2]Chongqing University of Technology	**Mineral Prospecting for Copper-Molybdene Ores in Northern Kazakhstan Using Electromagnetic Sensing and Induced Polarization Technology (EMS-IP)** - A. Belova[1,2]*, Y. Davydenko[1,2,3], D. Gurevich[2], A. Bashkeev[1,2], S. Bukhalov[1], P. Veeken[4] [1]Irkutsk National Reseach Technical University; [2]Gelios LLC; [3]Institute of the Earth's Crust SB RAS; [4]Geops Consultancy	**A Complete Workflow for Predicting S-Wave Velocity in Wells without Mineral Content Data** - G. Wang[1]*, S. Chen[1], X. Li[1,3], J. Liu[2], N. Dong[2], H. Xia[2], L. Liu[2] [1]China University of Petroleum (Beijing); [2]SINOPEC Petroleum Exploration and Production Research Institute; [3]British Geological Survey
	High-Resolution Time-Lapse FWI with Spatio-Spectral Regularization - V. Kazei[1]*, Q. Guo[1], T. Alkhalifah[1] [1]KAUST	**Deep Lithospheric Structure Beneath Dolsk and Odra Faults as a Result of Integrated Magnetotelluric Data Interpretation** - S. Orynski[1]*, W. Jóźwiak[1], K. Nowożyński[1], W. Klityński[2] [1]Polish Academy of Sciences; [2]AGH University of Science and Technology	**The Fate of R in Light of Field Shale Laboratory Tests** - A. Bakk[1]*, R.M. Holt[2], M. Duda[2], C. MacBeth[3] [1]SINTEF; [2]Norwegian University of Science and Technology; [3]Heriot-Watt University
	Full-Bandwidth FWI - T. Kalinicheva[1], M. Warner[1]*, F. Mancini[2] [1]Imperial College London; [2]Woodside Energy		**A Logical Error in Gassmann Poro-Elasticity** - L. Thomsen[1,2]* [1]University of Houston; [2]Delta Geophysics
			S-Wave Velocity Estimation Using Kuster-Toksöz Rock Physics Model Optimized by QPSO Algorithm for Organic-Rich Shales - Z. Liu[1]*, N. Dong[2], Z. Wang[2], J. Liu[2], L. Shi[2] [1]Chang'an University; [2]RIPED, SINOPEC
15:55	**End of Session Break**		
16:00	**Forum Session on "Brains, Machines & Rocks: Assessing the Digital Revolution"** - Gabriel Guerra (VP Exploration Transformation, Shell), Maitri Erwin (Principal Program Manager, Microsoft Azure for Energy), Steve Freeman (Director of AI & ML, Schlumberger)"		

Presentations | Wednesday 9 December

	GEOLOGY	INTEGRATED SUBSURFACE	NEAR SURFACE	DATA &COMPUTER SCIENCE
	Geo-Modelling (Norwegian Petroleum Directorate)	**Fields in Production: Geophysical Monitoring** E. Angerer (OMV Exploration & Production GmbH), I. Magnus (Ingrid Magnus)		**High Performance Computing & Neural Networks** E. Ranaee (Politecnico di Milano), A.H. Smith (Luchelan Ltd)
15:00	**Forward Stratigraphic Modeling Conditioning and Integration with Geostatistics -** A. Miller[1]*, S. Courtade[2] [1]OMV; [2]Schlumberger	**Estimation of Saturation Changes at the Edvard Grieg Field Using Simultaneous 4D Wave-Equation Based AVO Inversion -** P.E. Dhelie[1]*, V. Danielsen[1], K.R. Straith[1], A.O. Ndingwan[1], J.A. Haugen[1], A. Droujinina[2], P. Doulgeris[2], D. Gisolf[2], P. Haffinger[2], M. Zhang[2] [1]Lundin Norway AS; [2]Delft Inversion		**Using of Fluidfft for the Optimal Choice of HPC FFT Library: A 3D Seismic Modeling Example -** O.F. Mojica Ladino[1,2]*, R. Pestana[1,2,3], D.E. Revelo[1,2] [1]SENAI CIMATEC Supercomputing Center; [2]Instituto Nacional de Ciências e Tecnologia em Geofi sica do Petróleo; [3]Federal University of Bahia
	Characterization and Modeling of the Vug and Fracture Network Affecting a Carbonate Reservoir (KMZ - Mexico) - L. Micarelli[1]*, N. De Freslon[1], E.A. Denogean Gonzales[2], L. Ducarme[1], E. Jacquemin-Guillaume[1], A. Moccia[1], T. Piollé[1], J. Reyes[1], J.J. Ríos Lopez[2], M. Weber[1] [1]Beicip-Franlab; [2]PEMEX E&P	**Analysis of the 4D Signal at the Volve Field NCS - An Open Subsurface Dataset -** A. Hallam[1]*, C. MacBeth[1], H. Amini[1], R. Chassagne[1] [1]Heriot-Watt University		**Fault-tolerant wave propagation assisted by independent checkpointing strategy -** A.W. Camargo[1], J. Ribeiro[1]*, N. Okita[1], C. Benedicto[1], T.A. Coimbra[1], J.H. Faccipieri[1], M. Tygel[1] [1]Cepetro
	Geostatistical Interpolation Constrained by Lithofacies - B. Yu[1]*, H. Zhou[1], R. Wang[1], G. Shang[1], Y. An[1], W. Liu[2] [1]China University of Petroleum (Beijing); [2]RIPED CNPC	**Focused and Continuous Ultra-Light Seismic Monitoring: A Gas Storage Example -** E. Morgan[1]*, M. Garden[2], A. Egreteau[2], Y. Boubaker[1], K. Gestin[1], J. Mari[1] [1]SpotLight; [2]OMV		**Highly Scalable Full-Waveform Inversion on the Cloud Using Graphics Processing Units -** N. Okita[1], A.W. Camargo[1], J. Ribeiro[1]*, C. Benedicto[1], T.A. Coimbra[1], J.H. Faccipieri[1], M. Tygel[1] [1]Cepetro
	New Mathematical Geomodel Type Based on Machine Learning - S. Ursegov[1]*, A. Zakharian[2] [1]Skolkovo Institute of Science and Technology; [2]Cervart Ltd.	**Integrating Rock Physics, 4D Inversion and Time-Shifts for Pressure and Waterflooding Discrimination in Jubarte Field (Brazil) -** A. Damasceno[1,2]*, A. Tura[1], J. Simmons[1], G. Vasquez[2] [1]Colorado School of Mines; [2]Petrobras		**Parallel Optimization Strategies of 3D Wavefield Modelling on SuperComputer -** D. Si[1]*, H. Xu[2], X. Meng[1], X. Wei[1], Q. Ma[1] [1]National SuperComputer Center; [2]Tsinghua University
	Field Development Using Seismic Reservoir Characterisation: Sahara Algeria Case Study - T. Barling[1]*, M. Paydayesh[1], C. Leone[1], C. Belguermi[1], M. Francis[1], N. Meddour[1], S. Bettioui[2], H. Halilali[2] [1]WesternGeco; [2]Sonatrach	**Time-Lapse Monitoring of Variation of Pore Fluids Distribution and Reservoir Properties Using FWI in Foam-Assisted EOR -** R. Tamura[1], H. Mikada[1]*, J. Takekawa[1] [1]Kyoto University		**Implementation of Large-Scale Integral Operators with Modern HPC Solutions -** M. Ravasi[1]*, I. Vasconcelos[2] [1]Equinor ASA; [2]Utrecht University
		Research of Daily Variations in the Electric Field at Geophysical Observatory Mikhnevo - S. Riabova[1]* [1]Sadovsky Institute of Geosphere Dynamics RAS		**Boundary Saving and Checkpointing: A Hybrid Memory Strategy for Reverse Time Migration -** J. Ribeiro[1]*, N. Okita[1], A.W. Camargo[1], C. Benedicto[1], T.A. Coimbra[1], J.H. Faccipieri[1], M. Tygel[1] [1]Cepetro
				Extracting Fresnel Zone from Migrated Dip-Angle Gather Using Convolutional Neural Network - Q. Cheng[1]*, J. Zhang[1], L. Liu[1], C. Han[1], Z. Li[2], M. Song[1], K. Yang[1] [1]Chinese Academy Of Sciences; [2]Southern University of Science and Technology
15:55	**End of Session Break**			
16:00	**Forum Session on "Brains, Machines & Rocks: Assessing the Digital Revolution"** - Gabriel Guerra (VP Exploration Transformation, Shell), Maitri Erwin (Principal Program Manager, Microsoft Azure for Energy), Steve Freeman (Director of AI & ML, Schlumberger)"			

GEOPHYSICS 1	GEOPHYSICS 2	GEOPHYSICS 3
Imaging Theory 1 S.-K. Foss (Equinor ASA)	**Seismic Acquisition - OBS & General** J. Brittan (ION), L.A. Vernengo (Pan American Energy Group)	**Seismic Interpretation - Anisotropy & Fractured Reservoirs** H. Chen (Tongji University, School of Ocean and Earth Science), K.E. Ezhov (Gazprom neft - Technology Partnerships)

17:00	**QRTM – Stable and Effective Anelastic Loss Compensation -** N. Da Silva[1], L. Casasanta[1]*, S. Grion[1] [1]Shearwater Geosolutions	**Using Forward Modelling to Guide Exploration Offshore Nigeria -** R. Campbell[1]*, M. Branston[1], E. Saragoussi[1], E. Oraghalum[1], I. Ifeonu[2] [1]WesternGeco; [2]West African Exploration and Production	**Elastic Anisotropy of Transversely Isotropic Rocks Containing Aligned Cracks and Applications to Experiment and Field Data -** S. Xu[1]*, X. Tang[1], Y. Su[1], C. Zhuang[1] [1]China University of Petroleum
	A Deep-Learning Based Bayesian Approach to Seismic Imaging and Uncertainty Quantification - A. Siahkoohi[1]*, G. Rizzuti[1], F. Herrmann[1] [1]Georgia Institute of Technology	**Sparse Acquisition Geometries with Minimum Mutual Coherence -** B. Kuvshinov[1]* [1]Shell Global Solution International B.V.	**The Effective Elastic Properties for Transversely Isotropic Rocks with Randomly Orienting Inclined Penny-Shaped Cracks -** D. Xu[1]*, T. Han[1], S. Liu[1], X. Guo[1], B. Li[1], S. Ren[1] [1]China University of Petroleum (East China)
	High-Resolution Angle Gathers from Iterative Least-Squares Migration - L. Duan[1], D. Whitmore[1], N. Chemingui[1], E. Klochikhina[1]* [1]PGS	**A Suitable Objective Function for Optimizing the Experimental Design for Seismic Full Waveform Inversion -** V. Krampe[1]*, P. Edme[1], H. Maurer[1] [1]ETH Zürich	**Possible Fluid Detection in Equivalent TI Media -** F.P. Adamus[1]* [1]Memorial University Of Newfoundland
	Efficient Analytic PSF Estimation and Robust Image-Domain LSRTM - P. Xu[1]*, H. Wang[1], S. Guo[1], C. Wu[1] [1]Tongji University	**Modelling of Air Flows in Pneumatic Seismic Sources -** B. Kuvshinov[1]*, S. Chelminski[2], S. Ronen[2] [1]Shell Global Solution International B.V.; [2]Low Impact Seismic Sources	**Broadband Wide Azimuth Unveils the Reservoir-South East Algeria Case Study -** C. Belguermi[1]*, R. Badji[2], S. Bettioui[2], N. Meddour[1], H. Roumane[1], H. Halilali[2], M. Benzaoui[1], A. Hamdani[1], M. Paydayesh[1], T. Barling[1], C. Leone[1] [1]Schlumberger Oilfield Services; [2]Sonatrach
	Rayleigh-Marchenko Redatuming Using Scattered Fields in Highly Complex Media - D. Vargas[1]*, I. Vasconcelos[1] [1]Utrecht University	**Simultaneous Inversion for S-Wave Velocity and Density from the Reflected SV-Wave -** F. Zhang[1]*, X. Li[2], J. Wang[3], H. Chen[3] [1]China University of Petroleum (Beijing); [2]British Geological Survey; [3]BGP, CNPC	**Joint Inversion of Formation Shear-Wave Transverse Isotropy from LWD Multipole Dispersion Data -** Y. Li[1]*, S. Xu[1], C. Jiang[1], Y. Su[1], X. Tang[1] [1]China University of Petroleum
	An Effective True-Amplitude Gaussian Beam Migration via Illumination Compensation - S. Liu[1]*, X. Xie[2], R. Wu[2], Z. Yan[1], H. Gu[1] [1]China University of Geosciences; [2]University of California	**Quantification Method of Environmental Impact of Geophysical Field Operations -** Z. Plank[1]* [1]John Wesley Theological College	**The Estimation of Fast S-Wave Orientation Using Virtual S-Wave Cross-Dipole Data in Onshore Case -** Y. Watanabe[1]*, H. Mikada[1], J. Takekawa[1], S. Prajapati[2] [1]Kyoto University; [2]Universiti Teknologi PETRONAS
	Elastic Gaussian Beam Migration in Tilted Transversely Isotropic (TTI) Media - X. Xu[1]*, K. Zhang[1], Q. Liu[1], P. Jiang[1], J. Xiao[1], Z. Li[1] [1] China University of Petroleum (East China)		**The Apparent Anisotropy of the SEG-EAGE Overthrust Model -** P. Cupillard[1]*, W. Mulder[2,3], P. Anquez[1], A. Mazuyer[1,4], J. Barthélémy[5] [1]University of Lorraine; [2]Shell Global Solutions International B. V.; [3]Delft University of Technology; [4]Stanford University; [5]CEREMA
			New Methodic of Vuggy Zones Forecast for Carbonate Reservoir - A. Kozyaev[1]*, D. Petrov[1], S. Onuchin[2], G. Ivanov[1] [1]KrasnoyarskNIPIneft-RN Co. Ltd; [2]Gazpromneft Science & Technology Centre

Presentations | Wednesday 9 December

GEOLOGY	INTEGRATED SUBSURFACE	NEAR SURFACE	DATA &COMPUTER SCIENCE
Depositional Systems and Regional Geology W. Gordon Canning (Total)	**Integrated Reservoir Characterization** F.M. Miotti (Independent)	**Exploring Mining, Minerals and Geotechnical Properties** E. Bloem (Norwegian Institute of Bioeconomy Research)	
17:00 **Facies Control of Reservoir Distribution in the Lower Devonian Deposits on the North-East of Timan-Pechora Basin -** V. Zhemchugova[1], E. Maslova[1]*, T. Zhemchugova[2] [1]Lomonosov Moscow State University; [2]Special Geophysical Data Systems	**Analysis of Thin Sand Recognition Using Supervised Multiattribute Classification Based on ANNs -** S. Zhang[1]*, Y. Xu[1] [1]Saudi Aramco	**Localization of Water Saturation Zones with ERT and GPR for Geotechnical Purposes -** K. Czaja[1]*, G. Bania[1] [1]AGH - University of Science and Technology	
Innovative Multiple Point Statistics Workflow to Reproduce Facies Variability in Digital Carbonate Build-Ups Models - G. Jimenez Soto[1]*, M. Arshad Beg[1], M.C. Poppelreiter[2], K. Rahmatsyah[3] [1]The Southeast Asia Carbonate Labratory; [2]Shell Kuwait Exploration and Production BV; [3]Baker Hughes	**Application of Spectral Ratio on Reservoir Classification and Evaluation for Full Waveform Acoustic Logging -** Y. Li[1]*, H. Heng[1], J. Shen[1] [1]China University of Petroleum (Beijing)	**Joint Inversion of Airborne Electromagnetic and Total Magnetic Intensity Data Using Gramian Structural Constraints -** M. Jorgensen[1,2]*, L. Cox[1], M. Zhdanov[1,2] [1]Technolmaging; [2]University of Utah	
Geomodel of Outcrop Maastrichtian Chalk at Stevns, Denmark - D. Qu[1]*, P. Frykman[2], K. Mosegaard[1], L. Stemmerik[2], L. Nielsen[1] [1]University Of Copenhagen; [2]Geological Survey of Denmark and Greenland	**A Method for Quantitatively Evaluating Formation Fluid Based on 2D NMR Spectrum -** M. Gu[1]*, R. Xie[1], G. Jin[1], L. Gao[1], B. Wu[1], C. Xu[1], H. Wei[1] [1]China University Of Petroleum, Beijing	**3D TEM and Gravity Modeling over the Lombador Deposit, Neves-Corvo, Portugal -** P. Dias[1], P. Represas[1], H. Thunehed[2], N. Pacheco[3], J. Carvalho[1], E. Ramalho[1], G. Donoso[4], C. Inverno[1], F. Marques[1], A. Malehmir[4]*, V. Araújo[3] [1]Laboratorio Nacional de Energia e Geologia; [2]Geovista; [3]Somincor; [4]University of Uppsala	
Reproducing Sedimentary Processes and Architecture in Turbidite Deposits with Forward Stratigraphic Modeling - S. Courtade[1]*, M. Lejri[1], H. Picorelli Ladeira Dutra[1], D. Tetzlaff[2] [1]Schlumberger; [2]Westchase Software Corporation	**A Method for Predicting Mercury Injection Capillary Pressure Curves Based on NMR Echo Data -** B. Wu[1]*, R. Xie[1], W. Yue[1], M. Gu[1], C. Xu[1], H. Wei[1], X. Wang[1], T. Wang[1] [1]China University of Petroleum,Beijing	**Microseismic Monitoring of Mines in Real Time with Ensemble Kalman Filter: A Canadian Case Study -** A.C. Dip[1]*, B. Giroux[1], E. Gloaguen[1] [1]Institut National De La Recherche Scientifique	
Miri Hill Structure Has Formed by Normal Faulting at the Releasing Bend Geometry of Strike-Slip Faulting - N. M Batmanathan[1]*, A.A. Shah[2], A. Phmy[2] [1]Southeast Asia Disaster Prevention Research Initiative; [2]Universiti of Brunei Darussalam	**Prediction of kNN-Based Gas-Bearing Distribution for Tight Sandstone Reservoir -** Z. Song[1]*, J. Gao[2], J. Gui[2], S. Yuan[1], S. Wang[1] [1]China University Of Petroleum (Beijing); [2]Northwest Branch of Research Institute of Petroleum Exploration and Development	**Skin Rockbursts and Microseismicity in Underground Mining -** A. Dyskin[1]*, E. Pastenak[1], H. Wang[1], P. Dight[1] [1]University Of Western Australia	
Evidence of Strike-Slip Faulting in Brunei Darussalam, NW Borneo - D. Aaisyah[1]*, A.A. Shah[1], K. Garcia[2], N. Manan[1], J. Anyie[2] [1]Universiti Brunei Darussalam; [2]Curtin University Malaysia	**Imaging and Quantifying CO2 Containment Storage Loss Using 3D CSEM -** J.P. Morten[1]*, A. Bjørke[1] [1]EMGS ASA	**Advancing Reflection Seismic Methods for Deep-Targeting Mineral Deposits: A Series of 2D and 3D Surveys -** A. Malehmir[1]*, M. Markovic-Juhlin[1], P. Marsden[2], S. Buske[3], L. Sito[4], E. Bäckström[2] [1]Uppsala University; [2]Nordic Iron Ore AB; [3]TU Bergakademie Freiberg; [4]Geopartner	
	Development of Artificial Neural Networks and Regression Analysis for Estimating of Formation Permeability - F. Hadi[1]*, A. Eckert[1], A. Albehadili[1], F. Kadhim[1], A. Jasim[1] [1]Missouri University of Science and Technology	**Attenuation Compensation of Near Surface Using Down-Hole Survey Data in Hangzhou -** X. Liu[1]*, G. Tian[1] [1]Zhejiang University	
	Using Neural Networks to Estimate Porosity of a Deep Tight Gas Reservoir in Offshore Abu Dhabi - D. Lopez[1]*, O. Colnard[1], J. Tavares[1], P. Roy[1], N. Vargas[1], A. Saad Al Kobaisi[2], M. Da Silva Caeiro[2], K. Jan[2] [1]CGG; [2]ADNOC		

Presentations | Thursday 10 December

GEOPHYSICS 1	GEOPHYSICS 2	GEOPHYSICS 3
Imaging Theory 2 X. Cheng (Schlumberger),	**Seismic Acquisition - Sources & Receivers** M. Branston (Schlumberger), L. Casasanta (Shearwater Geoservices)	**Seismic Interpretation - Attributes** P. Alexeeva (Lukoil-Engineering), M. Kleemeyer (Shell Global Solutions)

14:00	**Efficient Gather Domain Least-Squares Reverse Time Migration for Inaccurate Velocity Models -** M. Wang[1]*, S. Xu[1], H. Zhou[1], B. Tang[1], A. DeNosaquo[1], G. Ionescu[1] [1]Equinor	**Ultra-Long Offset Sparse Node Project in Deep Water GoM for FWI and Imaging -** H. Roende[1]*, D. Bate[1], C. Udengaard[1], R. Malik[1], Y. Huang[1] [1]TGS	**Application of Seismic Wavelet Decomposition Technique to Thin Dolomite Reservoir Characterization -** H. Zhang[1]*, H. Tian[1], Y. Xin[1], M. Gu[1], W. Li[1] [1]PetroChina Hangzhou Research Institute of Geology
	Ambient Noise Reverse Time Migration Based on Normalized Full Wavefield Decomposition - Z. Cai[1,2]*, L. Han[1], J. Sun[2] [1]Jilin University; [2]University of Oslo	**Model Building in Complex Geological Situations Using Low-Frequency Data from an Optimised Airgun Technology Based Source -** J. Brittan[1]*, Y. Cobo[1], P. Farmer[1], C. Wang[1], D. Brookes[1] [1]ION	**A Robust Coherence Calculation Method Based on Cross-Correlation in Orthogonal Directions -** X. Zhao[1]*, C. Xu[2], H. Gao[1], X. Fan[1], S. Yuan[1] [1]China University Of Petroleum (Beijing); [2]PetroChina Huabei Oilfield Company
	Inverting Angle-Dependent Reflectivity Using Regularized Extended Least-Squares Reverse Time Migration - C. Li[1]*, Z. Gao[1], J. Gao[1] [1]Xi'an Jiaotong University	**Field Test Results of a Novel Low-Frequency Marine Source -** S. Chelminski[2], F. Chelminski[2], J. Chelminski[2], F. Lam[3], S. Ronen[2,3], G. Baeten[1], D. Chavan[1]*, B. Kuvshinov[1], F. Ten Kroode[1] [1]Shell International E&P BV; [2]Low Impact Seismic Sources; [3]Stanford University	**Application of Reservoir Prediction Technology in Carbonate Tight Reservoir of FG Area in Northern Guizhou, China -** F. Li[1]*, D. Wang[1], L. Cheng[2], Z. Zhou[1], S. Bao[1] [1]China Geological Survey; [2]SGIT, China University of Geosciences
	Wavefield Injection and Reconstruction in Acoustic and Elastic Reverse Time Migrations - B. Han[1,2]*, X. Xie[2] [1]China University of Geosciences; [2]University of California Santa Cruz	**Improved 3D Seismic Quality Increasing Trace Density Benefits and Results, Golfo San Jorge Basin, Argentina -** N. Cooper[2], Y. Herrera-Cooper[2], L. Vernengo[1]*, E. Trinchero[1] [1]Pan American Energy Group; [2]Mustagh Resources	**Comparative Study of Wavelet-based Recent Spectral Decomposition Algorithms for Seismic Signals -** A. Pant[1]*, D. Ghosal[1], C. Puryear[2] [1]Indian Institute Of Technology; [2]Spectral Geosolutions
	RTM-ADCIGs Using the Combining Local and Global (Clg) Optical Flow Method: Theory for Wavefield Direction Estimation - C. Wu[1]*, H. Wang[1], B. Feng[1], S. Sheng[1], P. Xu[1] [1]Tongji University	**Redefining High Resolution Multi-Azimuth Towed Streamer Acquisition on the Norwegian Continental Shelf -** D. O'Dowd[1], M. Widmaier[1], C. Roalkvam[1]*, M. Ciotoli[1], L. Limonta[1] [1]PGS	**Seismic Time-Frequency Analysis by Using an Optimized Three Parameter Wavelet Extracted by AIDNN -** Y. Tian[1]*, J. Gao[1], N. Liu[1], D. Chen[1] [1]Xi'an Jiaotong University
	RTM-ADCIGs Using the Combining Local and Global (Clg) Optical Flow Method: Application for Robust Angle Gathers - C. Wu[1]*, H. Wang[1], B. Feng[1], F. Luo[1], W. Zhu[1] [1]Tongji University	**3D Seismic in the Barents Sea Using Quadro Point Sources for Zero-Offsets and Accurate AVO Analysis -** P.E. Dhelie[1]*, V. Danielsen[1], J.E. Lie[1], S. Støen[1], A. Dustira[1], M.A. Ackers[2], S. Schjelderup[2], K. Dancer[3], M. Ramsay[4], B. Larssen[4] [1]Lundin Norway AS; [2]Spirit Energy; [3]DownUnder GeoSolutions; [4]Shearwater GeoServices	**The Application Scope of Spectral Methods in Seismic Interpretation -** P. Alexeeva[1]*, I. Kerusov[1], A. Grinevskiy[1] [1]Lukoil-Engineering
	Plane-Wave Least-Square Reverse Time Migration with Seislet Fractional Order Threshold Algorithm Constraint - R. Zhang[1]*, J. Huang[1], Y. Guo[1], N. Qi[1] [1]China University of Petroleum (East China)	**Continuous Wavefields Method - Results from a Shallow Water Field Test -** S. Hegna[1]*, T. Klüver[1], J. Lima[1] [1]PGS	**Fusing Spectral-Decomposition Seismic Attributes with Saliency-Detection and RGB -Blending for Paleogrooves Identification in Ordos Basin, China -** Z. Liu[1]*, J. Liu[2], Q. Bao[1], N. Dong[2], H. Xia[2], L. Liu[2] [1]Chang'an University; [2]SINOPEC Petroleum Exploration and Production Research Institute
		Designing High Density Land Acquisition Surveys in Complex Environments; A Case Study from East Siberia, Russia - J. Naranjo[1]*, N. Gurentsov[2], D. Tverdokhlebov[2], O. Adamovich[1], R. Melnikov[3] [1]BP Exploration; [2]Rosneft Exploration; [3]Rosneft	
14:55	**End of Session Break**		

Presentations | Thursday 10 December

GEOLOGY	RESERVOIR ENGINEERING	INTEGRATED SUBSURFACE	DATA &COMPUTER SCIENCE
Petrophysics, Wireline and LWD 1 B. Khadhraoui (TOTAL SA)		**Geomechanics and Pore Pressure** M. Welch (Technical University of Denmark)	**ML in Seismic Processing** A. Abubakar (Schlumberger), R.F. Hegge (ARAMCO)
14:00 **Petrophysical Challenges While Drilling Ekofisk Horizontal Well in Halfdan Field -** S. Datta[1]*, F.S. Bexkens[1], A. Lejay[1], A. Singh[1] [1]Total E&P Danmark A/S		**Application of Stochastic Method for Geomechanical Parameters Under Uncertainty Quantification to Design Mud Window -** M.A. Ebrahimi[1]*, M.J. Ameri[1], M. Ahmadi[1] [1]Amirkabir University of Technology	**Seismic Processing with Deep Convolutional Neural Networks: Opportunities and Challenges -** S. Hou[1]*, H. Hoeber[1] [1]CGG
An Efficient Self-Adaptive Method for Electromagnetic Logging-While-Drilling Modeling in Complex Scenarios - Z. Wu[1], R. Zhang[2], M. Lu[3], X. Yuan[1], Y. Wu[1], Y. Guo[3], L. Cai[1]*, Y. Fan[1] [1]China University of Petroleum (East China); [2]Duke University; [3]China Petroleum Logging CO.LTD.		**Subsidence, Uplift and Shift Due to Fluid Extraction and Production in a Finite Reservoir -** A. Dyskin[1]*, E. Pasternak[1], S. Shapiro[2] [1]University Of Western Australia; [2]Free University of Berlin	**Deep Learning for Migration Artifacts Attenuation -** E. Klochikhina[1]*, S. Frolov[1], N. Chemingui[1] [1]PGS
Application of Support Vector Machine in Lithology Classification and Permeability Prediction in an Igneous Reservoir - D. Dong[1]*, W. Wu[1], W. Yue[1], X. Fu[1] [1]China University of Petroleum (Beijing)		**Impact of Impurities and Structural Analysis of Salt Rock for Underground Gas Storage -** C. Martin Clave[1]*, A. Ougier-Simonin[2], V. Vandeginste[1] [1]University of Nottingham; [2]British Geological Survey	**Visual Identification of Noisy Seismic Records with Machine Learning -** J. Walpole[1]*, T. Hallett[1], E. Brown[1], J. Brittan[1] [1]ION
A Novel Semi-Analytic Algorithm for Triaxial Electromagnetic Logging in Multilayered Dipping and Triaxial Anisotropic Formation - W. Zhao[1], L. Wang[2], Y. Liu[3], Y. Wang[2], X. Yuan[2], Z. Wu[2], L. Cai[2]* [1]Qingdao University of Technology; [2]China University of Petroleum (East China); [3]Research Institute of Petroleum Exploration & Development		**Structural Restoration of Geological Structures with Viscous Stokes Flow - Principle and First Results -** M. Schuh-senlis[1]*, T. Cedric[2], C. Paul[1], C. Guillaume[1] [1]Université de Lorraine; [2]Utrecht University	**Automatic First Break Picking Method Based on Constrained Markov Decision Processes(CMDPs) -** F. Luo[1]*, B. Feng[1], H. Wang[1] [1]Tongji University
Innovative While-Drilling Dual Imager Provides Detailed near Wellbore Geological Interpretation and Aids Geosteering in Non-Conductive Mud - M. Horstmann[1]*, M. Firinu[2], C. Shrivastava[1], G. Halset[2], K. Sikdar[1], F. Colombo[2] [1]Schlumberger; [2]Vår Energi AS		**Obtaining Fault-Controlled Pore Pressure and Model of Lithology Distribution in Central North Sea -** D. Talinga[1]*, C. Reine[1] [1]Sound QI Solutions Ltd.	**Fully Automatic Picking of Surface Wave Dispersion Curves through Density-Based Spatial Clustering -** D. Rovetta[1]*, A. Kontakis[1], D. Colombo[2] [1]Aramco Overseas Company BV; [2]Saudi Aramco
Anaylsis of Different Azimuthal Electromagnetic LWD Signals in Anisotropic Reservoirs - K. Li[1]*, J. Gao[2], H. Deng[1,3] [1]Chengdu University of Technology; [2]China University of Petroleum, Beijing; [3]State Key Laboratory of Oil and Gas Reservoir Geology and Exploitation		**Boundary Conditions for Geomechanical Simulations -** A. Bottrill[1], J. Herwanger[1]*, P. Popov[1] [1]MP Geomechanics	**Near Surface Velocity Estimation from Phase Velocity-Frequency Panels with Deep Learning -** P. Zwartjes[1]* [1]Aramco Overseas Company
A Novel and Fast Simulation Strategy and Response Characteristics of Array Dielectric Dispersion Tool - L. Cai[1]*, S. Deng[1], Y. Guo[2], M. Lu[2], Y. Guo[1], X. Yuan[1] [1]China University Of Petroleum(East China); [2]China Petroleum Logging Co. Ltd.		**Risk Zonation and Hazard Assessment Base on Reservoir Compaction Designation in a Heterogeneous Carbonate Reservoir -** M. Tadayoni[1], M. Khalilbeyg[2]*, R. Shahalipour[3], R. Bin Junin[1] [1]Universiti Teknologi Malaysia; [2]University of Tehran; [3]Petroiran Development Company	**Convolutional Neural Network for First Break Picking in Land Seismic Surveys -** N. Kalashnikov[1]* [1]Gazprom-neft
A Methodology for Separating Overlapping Monopole Waveform - X. Sun[1]*, C. Ayadiuno[2], W. Li[1], C. Planchart[2] [1]Aramco Asia; [2]Saudi Aramco		**Assessment and Application of Present-Day In-Situ Stress Field Within Deeply Buried Tight Reservoir of Tarim Basin -** K. Xu[1]*, J. Tian[1], H. Yang[1], H. Zhang[1] [1]Tarim Oilfield Company	**Reflectivity-GAN: A Data-Driven Method for Seismic Deconvolution -** D. Chen[1], J. Gao[1], Z. Gao[1], Y. Tian[1], Y. Hou[1]* [1]Xi'an Jiaotong University
14:55 **End of Session Break**			

Presentations | Thursday 10 December

GEOPHYSICS 1	GEOPHYSICS 2	GEOPHYSICS 3
Multiple Imaging & Diffraction Modelling R.G.K. Johnston (BP Exploration Operating Co. Ltd), S. Xu (Kyoto University)	**Simultaneous Source & OBN** S. Grion (Shearwater GeoServices), F.Z. Zhang (China University of Petroleum (Beijing))	**Seismic Interpretation - Horizons & Structures** J.H. Leutscher (Vår Energi AS), E. Shipilova (Total)

	GEOPHYSICS 1	GEOPHYSICS 2	GEOPHYSICS 3
15:00	**Unravelling the Near Surface by Imaging Multiples and Shallow Hazard Analysis in the North Sea -** M. Yanez Sanchez[1]*, P. Smith[1], D. Barlass[1], P. Kristiansen[1], D. Brager[1], R. Milne[2] [1]Schlumberger; [2]AkerBP	**High Density OBN over Giant Arabian Field: Early Results from P & PS-Waves Processing -** J. Brunellière[1]*, L. Bovet[2], S. Sioni[1], A. Dawson[3], K. Martin[3] [1]Total; [2]Total/NOC; [3]WesternGeco	**Turbidite Fan Interpretation in 3D Seismic Data by Point Cloud Segmentation Using Machine Learning -** Q. Corlay[1]*, V. Demyanov[1], D. McCarthy[2], D. Arnold[1] [1]Heriot Watt University; [2]British Geological Survey
	Free-Surface Multiples Least-Squares RTM with Unrecorded Data Compensation Applied to Marine 3D Field Data - A.M. Mäkinen[1]*, J. Rickett[1], C. Kostov[1] [1]Schlumberger	**Processing and Imaging of a Multi-Petabyte OBN Survey in the North Sea -** T. Rayment[1]*, G. Hampson[1], L. Letki[1] [1]DownUnder GeoSolutions	**On Optimal Surface Voting for Automatic Fault Attribute Refinement and Some Strategies for Improvement -** Y. Sripanich[1]*, P. Sawasdee[1], N. Wanpiyarat[1], X. Wu[2] [1]PTT Exploration and Production PLC.; [2]University of Science and Technology of China
	Can We Reduce Significantly the Number of OBN by Using Full Wavefield Migration? - D. Lecerf[1]*, A. Asnaashari[1], A. Lafram[2], R. Salami[2] [1]PGS; [2]Total	**Deblending of Triple Vessel Sparse OBN Data in Deepwater Gulf of Mexico -** M. Salgadoe[1]*, N. Seymour[1], A. Rodriguez Castelan[1], I. Moore[1] [1]WesternGeco	**Post-Stack Data Enhancement and Noise Removal Combining Different Filtering Methods through Statistical Approach -** C. Brazon[1]*, J. Reveron[2], C. Msika[1] [1]Emerson; [2]Repsol
	Combined Pre- and Post-Migration Diffraction Separation - B. Lowney[1,2]*, H. Hoeber[2], E. Kaszycka[2], S. Hou[2] [1]University College Dublin; [2]CGG	**High Density OBN Seismic in Shallow Waters of Arabian Gulf: Acquisition Review and Processing Strategy -** L. Bovet[1,2]*, R. Sanchez[1,2] [1]North Oil Company; [2]Total E&P Golfe	**Method for Adjusting Fault Attributes Based on Seismic Image Entropy -** C. Feng[1]*, J. Pan[1], Q. Yao[1], H. Wang[1] [1]Petrochina, NWGI
	Direct Diffraction Separation by Deep Learning on Pre-Migrated Seismic Data - B. Lowney[1,2]*, I. Lokmer[1,2], G.S. O'Brien[3], C. Bean[4,2] [1]University College Dublin; [2]Irish Centre for Research in Applied Geoscience; [3]Tullow Oil Ltd; [4]Dublin Institute for Advanced Studies	**Deblending via Supervised Transfer Learning - DSA Field Data Example -** R.H. Baardman[1]*, R.F. Hegge[1], P.M. Zwartjes[1] [1]Aramco Overseas Company B.V.	**Carbonate Fault Detection Based on the Disorder of Amplitude Gradient Vector -** W. Xiao[1]*, G. Lei[1], P. Li[1], Y. Xiao[1], Y. Tan[1] [1]China National Petroleum Corporation
	Application of Diffraction Imaging in Identifying Small Scale Dissolved Reservoirs - X. Sun[1]*, X. Li[1], J. Xu[1], X. Zhang[1], Y. Yu[1], L. Li[1], G. Xu[1] [1]PetroChina Exploration & Development Research Inst	**De-Signature of Apparition Blended Seismic Data -** L. Casasanta[1], R. Telling[1], S. Pierini[2], S. Grion[1] [1]Shearwater Geoservices; [2]University of Pisa	**Interpretation of Geohazards Related to Offshore Salt Karst -** A. Laake[1]* [1]Schlumberger
	A Stable Scheme of Joint Migration Inversion in the Pseudo-Time Domain - S. Qu[1]*, Y. Van den Brule[1], D.J. Verschuur[1] [1]Delft University of Technology	**Inversion-Based Deblending Using Iterative Thresholding -** A. Kumar[1]*, G. Hampson[1], N. Vice[1], T. Thompson[1] [1]DownUnder GeoSolutions Pty Ltd	**Detection of Gas Leakage from the Deep-Seated Reservoir Using Multi-Attribute Analysis in Poseidon, NW Shelf, Australia -** A. Dixit[1]*, A. Mandal[1] [1]IIT Kanpur
		What to Do When Up-Down Deconvolution Breaks Down - D. Boiero[1]*, C. Bagaini[1], S. Banerjee[1], R. Bloor[1], C. Kostov[1], P. Caprioli[1], A. Zarkhidze[1] [1]Schlumberger	**Level-by-Level Constraint Prediction Technology for Thin Sand Layer and Its Application -** D. Xu[1]*, J. Pan[1], L. Zhang[2], Y. Qu[1], L. Huang[1], T. Teng[1] [1]Northwest Branch Of China Petroleum Exploration And Development Research Institute; [2]Xinjiang Oilfield Branch of PetroChina
15:55	**End of Session Break**		
16:00	**Forum Session on "Energy Transition: How Fast Really?" -** Iain Stewart (Director, Sustainable Earth Institute, University of Plymouth), Philip Ringrose (Specialist Reservoir Geoscience, Equinor; Adjunct Prof in CO2 Storage at NTNU & former EAGE President), Bob Fryklund (Vice President, Upstream Energy, IHS Markit)"		

Presentations | Thursday 10 December

	GEOLOGY	RESERVOIR ENGINEERING	INTEGRATED SUBSURFACE	DATA &COMPUTER SCIENCE
	Petrophysics, Wireline and LWD 2 P. Naveen (Indian Institute of Technology (ISM))	**Dynamic Reservoir Simulation** T.A. Adedosu (Ladoke Akintola University of Technology),	**Unconventional Hydrocarbons** V. Rocca (Politecnico di Torino)	
15:00	**An Optimized Support Vector Machine Method for Source Rock Classification Based on Conventional Well Logs -** J. Zhao[1]*, X. Ge[1], Y. Fan[1], J. Liu[1], Z. Sha[1], B. Zeng[1], W. Dong[1] [1]China University of Petroleum	**Runtime Optimization of a Massively Parallel Reservoir Simulator Using Guided Timestep Selection -** S. Kayum[1]*, M. Rogowski[1,2] [1]Saudi Aramco; [2]King Abdullah University of Science and Technology	**Ultra-High Resolution 3D of Shales with Nano-CT and Its Control on Gas Transport -** M. Garum[1]*, P. Lorinczi[1], P.W.J. Glover[1], A. Hassanpour[1] [1]University of Leeds	
	A Method for Reservoir Evaluation with High Quality Imaging of Single Borehole Profile - W. Yue[1,2,3]*, J. Chen[1,2,3], J. Zeng[1,2,3] [1]State Key Laboratory of Petroleum Resources and Prospecting; [2]China University of Petroleum-Beijing; [3]Key Laboratory of Earth Prospecting and Information Technology	**Efficient Static Well Assignment in Parallel Reservoir Simulation -** S. Kayum[1]*, M. Rogowski[1,2] [1]Saudi Aramco; [2]King Abdullah University of Science and Technology	**Impact of Stress Regime on Shale's Brittleness: Implications for Determining Suitable Hydraulic Fracturing Intervals -** P.P. Mandal[1]*, R. Rezaee[1], J. Sarout[2] [1]Curtin University; [2]CSIRO Energy	
	Transient Electromagnetic Soundings for Mapping the Spatially Heterogeneous Bazhenov Formation - V. Glinskikh[1], D. Gornostalev[1,2]*, I. Mikhaylov[1], M. Nikitenko[1] [1]IPGG SB RAS; [2]Novosibirsk State University	**Homogenization of Hydro-Mechanical Coupling in Shale Matrix -** X. Yan[1]*, D. Wang[1], W. Fan[1], P. Liu[1], D. Fan[1], J. Yao[1] [1]China University of Petroleum (East China)	**Integrating Core and Well Logs for Unconventional Shale Evaluation in Western Canada -** M.N.F. Che Mat[1]*, I. Altaf[1], B.P. Kantaatmadja[1] [1]Petronas	
	Borehole Stability Characteristics Elucidated by High-Resolution LWD Acoustic Image Logs - M. Bizeray[1], J. Embry[1], S. Morris[1]*, J. Titjen[1], Y. Zheng[1] [1]Baker Hughes	**Geometric and Infill Effects on Flow Patterns and Production Rates in Paleokarst Reservoir Models -** M. Balyesiima[1]*, I. Lecomte[1], Ø. Pettersen[2], J. Tveranger[2] [1]University of Bergen; [2]Norwegian Research Centre AS	**Method and Application of Phase-Controlled Frequency Division Inversion for Unconventional Reservoirs -** W. Liu[1]*, J. Z'hang[1], Y. Li[1], T. Wang[1], P. Ke[1] [1]BGP Inc. of CNPC	
	Advanced Geosteering Technologies to Maximize Well Design while Minimizing Costs and Risks; Marulk Field (Norwegian Sea) - G. Halset[1]*, F. Perazzi[1], M. Horstmann[2], M. Mele[3] [1]Vår Energi; [2]Schlumberger; [3]Eni S.p.A	**Beach-Bar Sandstone Reservoir Prediction: A Case Study from Central Africa -** W. He[1,3]*, B. Chen[1], J. Li[2], L. Xue[1], L. Ma[1], L. Wang[1], J. Shi[1] [1]RIPED PetroChina; [2]CNODC Ltd.; [3]Chengdu University of Technology	**A New Attribute of Identifying Gas Hydrate in Marine Sediments -** D. Tian[1]*, X. Liu[1] [1]China University Of Geosciences Beijing	
	Dispersion of Dipole Sonic Velocity as a Function of Tensile Fracture Depth - K. Kayama[1]*, H. Mikada[1], J. Takekawa[1], S. Kamei[1] [1]Kyoto University	**Topic: Practical Augmented Reality for Real-Time Collaboration in Drilling Scenarios, a Success Story -** P. Boonyasaknanon[1], R. Pols[2], K. Schulze[2], R. Rundle[2]* [1]PTTEP; [2]Craytive Technologies BV	**Research and Application of Prediction Method for Sweet Spots of Shale Gas Using Geophysical Data -** W. Xiujiao[1]*, C. Sheng[1], H. Pei[1], W. Nai[1], Y. Yadi[1], D. Chunmeng[1], H. Zijiao[1], W. Xing[1], L. Xuan[1] [1]RIPED PetroChina	
	Automatic Fracture-Vug Extraction from Imaging Logging Based on Incomplete Path Opening Operation and Cluster of Sinusoid - L. Wang[1], H. Heng[1]*, J. Shen[1], M. Bao[1], X. Li[2] [1]China University Of Petroleum (Beijing); [2]CNPC Logging Co., Ltd.	**Multiphase, Multidimensional and Multiphysics (M3) Modeling and Simulation of Microbial Enhanced Oil Recovery Process -** M.H. Nami[1]*, M. Ahmadi[1] [1]Amirkabir University of Technology	**The Initiation and Propagation of Fractures in 2D Digital Mineral Mechanical Modeling at the Microscale -** V. Nachev[1,2,3]*, A. Kazak[3], S. Turuntaev[2] [1]Moscow Institute of Physics and Technology; [2]Sadovsky Institute of Geospheres Dynamics RAS; [3]Skolkovo Institute of Science and Technology	
	Source Rocks Pyrolysis Parameters Logging Evaluation Based on Support Vector Machine with Bagging Approach - X. Wang[1]*, R. Xie[1], Z. Mao[2], B. Wu[1], C. Xu[1], H. Wei[1], T. Wang[1], M. Ke[1] [1]China University Of Petroleum (Beijing); [2]RIPED PetroChina			
15:55	**End of Session Break**			
16:00	**Forum Session on "Energy Transition: How Fast Really?" -** Iain Stewart (Director, Sustainable Earth Institute, University of Plymouth), Philip Ringrose (Specialist Reservoir Geoscience, Equinor; Adjunct Prof in CO2 Storage at NTNU & former EAGE President), Bob Fryklund (Vice President, Upstream Energy, IHS Markit)"			

GEOPHYSICS 1	GEOPHYSICS 2	GEOPHYSICS 3
Velocity Model Building 1 H. Zhou (Equinor)	**Transforms and ML & Interpolation** W. Huang (China University of Petroleum-Beijing)	**Seismic Interpretation - Rock Physics & Inversion Applications** A.J. van Wijngaarden (Equinor)

17:00	**Automating Velocity Model Building Using Monte Carlo Simulations - A West African Case Study -** T. Martin[1], M. Bell[1]*, T. Massip[1] [1]PGS	**Reconstructing Missing Seismic Data through Deep Learning with Recurrent Inference Machines -** D. Kuijpers[1], I. Vasconcelos[1]*, P. Putzky[2] [1]Utrecht University; [2]University of Amsterdam	**Rock Physics Feasibility Study of the Lower Cretaceous Unit in the Valdemar Field, Danish North Sea -** K. Bredesen[1]*, M. Lorentzen[1], R. Rasmussen[1], L. Nielsen[2], H. Yuan[2] [1]GEUS; [2]University of Copenhagen
	Deep Learning Tomography by Mapping Full Seismic Waveforms to Vertical Velocity Profiles - V. Kazei[1]*, O. Ovcharenko[1], P. Plotnitskii[1], D. Peter[1], X. Zhang[1], T. Alkhalifah[1] [1]KAUST	**Source Deghosting of Coarsely-Sampled Data Using a Machine-Learning Approach -** J. Vrolijk[1]*, G. Blacquière[1] [1]Delft University of Technology	**Study on Adaptive Extraction Method of Dominant Azimuth Seismic Data -** X. Wang[1]*, F. Li[1], Y. Zhang[1], Y. Wang[1], L. Qian[1], L. Yuan[1], J. Li[1], C. Ding[1], D. Han[1], M. Tang[1], X. Wang[1] [1]BGP
	Implementation Aspects and Improvement of Structural-Information Recovery in Joint Migration Inversion Using an Image-Based Regularization - C.A.M. Assis[1]*, J. Schleicher[1,2] [1]University of Campinas; [2]INCT-GP	**Automatic Parameter Selection Using K-Fold Test: Application to Interpolation Algorithm -** N. Allouche[1]*, K. Özdemir[1], L. West[1], B. Veitch[1] [1]Schlumberger	**Time-Lapse Changes in Elastic Anisotropy: Applicability of Anisotropic Rock Physics Models -** M. Asaka[1,2]*, R.M. Holt[1] [1]Norwegian University of Science and Technology; [2]INPEX
	Elastic Full Waveform Inversion for Sub-Basalt Imaging - A. Stopin[1]*, R. Plessix[1], S. Bergler[1] [1]Shell Global Solutions International BV	**Mixed Phase Seismic Wavelet Estimation Using the Bispectrum -** M. Bekara[1]* [1]PGS	**Exact and Approximate Reflection Coefficients for a Vertically Fractured Layer -** S. Jin[1]*, A. Stovas[1] [1]Norwegian University of Science and Technology
	High-Resolution Regularized Elastic Full Waveform Inversion Assisted by Deep Learning - Y. Li[1]*, T. Alkhalifah[1], Z. Zhang[1] [1]King Abdullah University of Science and Technology	**Adaptive Structure Constrained Multi-Trace Deconvolution Based on Shape Regularization -** W. Wang[1]*, X. Wei[1], H. Li[1], W. Wang[1], D. Chen[1], R. He[1] [1]RIPED PetroChina	**Simulation and Analysis for Krauklis Wave in Fluid Filled Fractures Based on FEM -** H. Liu[1]*, P. Ding[1], X. Li[1,2], L. Zeng[1], D. Liu[3], P. Chen[3], J. Yang[3] [1]China University of Petroleum-Beijing; [2]British Geological Survey; [3]BGP, CNPC
	Velocity Model Building Using Elastic Waveform Inversion on Multi-Component OBN Data in the Gulf of Mexico - C. Perez Solano[1], R. Plessix[1]*, K. Bao[1], C. Perkins[1], M. Kiehn[1] [1]Shell	**Multichannel Blind Acoustic Impedance Inversion Based on 2D-TV Regularization -** Z. Wang[1]*, J. Gao[1], H. Chen[1], X. Pan[2], J. Lin[1] [1]Xi'an Jiaotong University; [2]Southern University of Science and Technology	**Prestack AVO Inversion Based on Arctangent Gradient Regularization -** Q. Li[1]*, P. Yang[2], G. Fang[1], H. Sheng[3], H. Zhang[1] [1]East China University Of Technology; [2]Memorial University of Newfoundland; [3]CNOOC Energy Development Co., Ltd.
	Salt Body Flooding Using Activation Functions From Machine Learning - A. Alali[1]*, B. Sun[1], V. Kazei[1], T. Alkhalifah[1] [1]KAUST	**The Discrete Orthonormal S-Transform for Seismic Data Reconstruction Based on Compressive Sensing -** Z. Zhao[1]* [1]China University of Petroleum	**Impedance Inversion Based on Structure-Oriented Regularization -** Y. Zhang[1], H. Zhou[1], M. Zhang[1], L. Wang[1], Y. An[1], B. Yu[1]* [1]China University of Petroleum (Beijing)
	Salt Reshaping with Template-Matching Full-Waveform Inversion - W. Kang[1]*, A. Reisdorf[1], S. Madden[1], V. Robertson[1], D. Chen[1], Z. Chen[1], J. Xu[1], X. Cheng[1], D. Vigh[1] [1]Schlumberger/WesternGeco		**Seismic Rock Physics Characteristics of Ultra-Deep Carbonate Reservoir Rocks in Tarim Basin, NW China -** K. Li[1]*, L. Zhao[1], L. Niu[1], Y. Wang[1], J. Geng[1], H. Zhang[2] [1]Tongji University; [2]Sinopec Petroleum Exploration and Production Research Institute

Presentations | Thursday 10 December

GEOLOGY	RESERVOIR ENGINEERING	INTEGRATED SUBSURFACE	DATA & COMPUTER SCIENCE
Petroleum Systems A. Edwards (Ikon Science Ltd), G. Zeynalov (Khazar University)	**Dynamic Reservoir Characterization & Modelling** P. Samier (Total)	**Geothermal Energy** H.F. Mijnlieff (TNO), W.J.E. van de Graaff (VDG Geologische Diensten)	

17:00

GEOLOGY	RESERVOIR ENGINEERING	INTEGRATED SUBSURFACE	DATA & COMPUTER SCIENCE
North Sea Prospects: Predicting Hydrocarbon Presence through Seabed Samples, DNA Fingerprinting and AI - M. Zijp[1]*, C. Te Stroet[1], J. Zwaan[1] [1]Biodentify	**The Relationship between Matrix Grain Size Distribution and Permeability of Porous Media -** R. Masumura[1]*, H. Mikada[1], J. Takekawa[1] [1]Kyoto University	**Coupled Hydro-Mechanical Modeling to Improve Stimulation Candidate Selection in a Complex Carbonate Reservoir -** H. Talebian[1]*, S. Nikoosokhan[1] [1]Amirkabir University of Technology	
Organic Geochemical Characteristics of Source Rock in Doseo Depression of Central African Rift System - X. Zhang[1]*, K. Xiao[1], J. Wang[2], L. Wang[1], Y. Hu[1] [1]RIPED PetroChina; [2]China National Oil and Gas Exploration and Development Corporation Ltd.	**The Advantage of Studying Pressure Curves Obtained from Laboratory Hydraulic Fracturing Experiments -** E. Novikova[1,2]*, M. Trimonova[1] [1]Sadovsky Institute of Geospheres Dynamics of Russian Academy of Sciences; [2]Moscow Institute of Physics and Technology	**Delineating Geothermal Structure from 3D Joint Inversion of MT and Gravity Data -** W. Soyer[1]*, R. Mackie[1], S. Hallinan[1], F. Miorelli[1], A. Pavesi[1] [1]CGG	
Hydrocarbon Generation Potential of the Albian to Turonian Lower Post-Rift Succession Orange Basin, South Africa - N.A. Yelwa[1,2]*, K.A. Mustapha[1], W.H. Abdullah[1], M.H. Hakimi[1,3], M. Opuwari[4] [1]University of Malaya; [2]Usmanu Danfodiyo University Sokoto; [3]Taiz University; [4]University of the Western Cape	**Type-Curves for Herschel-Bulkley Fluid Model Resembling Lost Circulation in a Fractured Formation -** R. Albattat[1]*, H. Hoteit[1] [1]KAUST	**Upper Rhine Graben Deep Geothermal Reservoir Imaging -** H. Toubiana Lille[1]*, N. Salaun[1], J.B. Mitschler[1], X. Carriere[1], G. Gigou[1], A. Richard[2] [1]CGG; [2]ES-Geothermie	
Hydrocarbon Generation Kinetics of Low Cretaceous Nantun Source Rock in Peripheral Sags of Hailar Basin, China - M. Xie[1]* [1]RIPED PetroChina	**Percolation Model of Two-Phase Flow under the Influence of Microdispersed Water-Gas Mixture in Oil Reservoir -** A. Galechyan[1]*, V. Kadet[2], Y. Zemtsov[3] [1]Institute of Geology and Development of Fossil Fuels; [2]National University of Oil and Gas Gubkin University; [3]Industrial University of Tyumen	**Play-Based Exploration and Development Plan for Geothermal Energy in the Netherlands -** F. Vinci[1]*, J. De Jager[1], J. Schellekens[2], C. Leo[1] [1]Panterra Geoconsultants; [2]Berenschot Groep B.V.	
Saline Environment Source Rocks Evaluation of Continental Rift Basin: A Case Study in LZW Depression, China - H.Z. Cui[1]*, C.M. Niu[1], H.Y. Li[1], L.F. Sun[1], P. Xu[1] [1]CNOOC Ltd.	**Gas-Condensate PVT Fluid Modeling Methodology Based on Limited Data -** O. Burachok[1]*, D. Pershyn[2], C. Spyrou[1], G. Turkarslan[1], M.L. Nistor[1], D. Grytsai[2], S. Matkivskyi[2], Y. Bikman[2], O. Kondrat[3] [1]Schlumberger; [2]UkrNDIGaz, PSC Ukrgazvydobuvannya; [3]Ivano-Frankivsk National Technical University of Oil and Gas		
Origin of Talara Basin's Hydrocarbons - An Integrated Study - A. Lemgruber Traby[1]*, C. Souque[1], N. Espurt[2], Y. Calderon[3], P. Baby[4] [1]IFP Energies nouvelles; [2]Aix Marseille Université; [3]PeruPetro; [4]Université de Toulouse	**The Effect of Temperature on Gas Flow in Tight Reservoir -** H. Qu[1]*, F. Zhou[1], J. Hu[1] [1]China University of Petroleum (Beijing)		
Geochemical and Petrographic Attributes of Coals from Ib Valley Basin, India for Oil and Gas Generation - A. Sahoo[1]*, A.K. Varma[1] [1]IIT (ISM)	**Near-Wellbore Characterization Using Stochastic History Matching of Temperature Transient Data -** S. Erkal[1], I.M. Gok[1,3], M. Salehian[1,2]* [1]Istanbul Technical University; [2]Heriot-Watt University; [3]National Energy Services (NESR)		
	Material Balance Equation of Foamy Extra-Heavy Oil Reservoirs - Z. Yang[1]* [1]RIPED PetroChina		

Presentations | Friday 11 December

GEOPHYSICS 1	GEOPHYSICS 2	GEOPHYSICS 3
Velocity Model Building 2 M. Bell (PGS), V. Kazei (KAUST)	**Multiples Removal** P. Hugonnet (CGG), H. Jakubowicz (Independent)	**Seismic interpretation - Stochastic Inversion** C. Hanitzsch (Wintershall Dea), H. Klemm (Total)

14:00	**Seismic Attributes of the Acoustic Basement in the Central Arctic Region -** S. Tabyrtsa[1]*, V. Poselov[1], V. Butsenko[1], O. Smirnov[1], V. Polovkov[2] [1]FSBI VNIIOkeangeologia; [2]St Petersburg University	**Wavefield Decomposition of Shallow Water OBN Seismic Data from East China Sea -** X. Liu[1]*, J. Cheng[1], T. Wang[1] [1]Tongji University	**Upscaling Lithotypes for Seismic Amplitudes Inversion and Bayesian Interpretation -** K. Epov[1]* [1]Ruspetro JSC
	Stereotomography in Triangulated Grids with Slowness Defined at the Vertices - X. Shen[1], K. Yang[1]* [1]Tongji University	**3D Surface-Related Multiple Estimation for Shallow Water Aided by Full Wavefield Migration -** D. Zhang[1]*, E. Verschuur[1] [1]Delft University of Technology	**Reflectivity Impedance Combination (RIC): A Solution to Improve the ODiSI Result -** H. Pham Huu[1]* [1]BP
	Rayleigh Wave Phase-Slope Tomography - Z. Zhang[1]*, T. Alkhalifah[1], E. Saygin[2], L. He[2] [1]King Abdullah University of Science & Technology; [2]University of Western Australia	**Multiple-Wave Attenuation in the Riphean Section for East Siberian Data -** A. Meretskiy[1]* [1]Rn-krasnoyarsknipineft	**Deterministic and Statistical Workflows for Multigeophysical Reservoir Characterization -** F.M. Miotti[3], F. Golfre Andreasi[1]*, C. Brambilla[1], S. Re[1], T. Wiik[2], K. Hokstad[2] [1]Schlumberger; [2]Equinor; [3]Independent
	A Modified Inversion Method by Quantitative Migration in High-Frequency Approximation - Z. Yu[1]*, Y. Liu[1], Y. Lin[2] [1]China University of Petroleum (Beijing); [2]China University of Petroleum (East China)	**An Adaptive Demultiple Method Based on Inversion of Two-Dimensional Nonstationary Filter -** P. Zhao[2], H. Zhao[1]*, H. Li[1], S. He[2], G. Li[1] [1]China University Of Petroleum; [2]Dagang Oil Field, Petrochina	**Single Loop Litho-Petro-Elastic Modelling and Inversion: An Example of Prospect Characterization in the Norwegian Sea -** J. Siupik[1], A. Murineddu[2]*, C. Leone[2], E.K.S. Austrheim[2] [1]PGNiG Upstream Norway AS; [2]WesternGeco
	Robust AVO-Preserving Joint Migration Inversion of Seismic Reflections Using a Data Mismatch Based on Local Orthogonalization - S. Qu[1]*, D.J. Verschuur[1], Y. Chen[2] [1]Delft University of Technology; [2]Zhejiang University	**Effective Media Theory Consistent Multiple Elimination with the Marchenko Equation Based Methods -** C. Reinicke[1]*, M. Dukalski[2] [1]Delft University Of Technology; [2]Aramco Overseas Company B.V.	**Stochastic Seismic-Wavelet Inversion toward Carbonate Quantitative Interpretation -** A. Shahin[1]*, P. Stoffa[2], M. Myers[3] [1]University of Isfahan; [2]University of Texas at Austin; [3]University of Houston Downtown
	1D Laplace-Fourier Acoustic FWI for Near-Surface Characterization and Initial Velocity Model Building - A. Kontakis[1]*, D. Rovetta[1], D. Colombo[2], E. Sandoval-Curiel[2], P.V. Petrov[3], G.A. Newman[3] [1]Aramco Overseas Company; [2]EXPEC Advanced Research Center; [3]Lawrence Berkeley National Laboratory	**Down/Down Deconvolution -** G. Hampson[1]*, G. Szumski[1] [1]DownUnder GeoSolutions	**Characterization of Thin Dolomite Reservoir in Southwest Area of Sichuan Basin by Waveform Indication Inversion Method -** H. Zhang[1]*, H. Tian[1], Y. Xin[1], M. Gu[1], W. Li[1] [1]PetroChina Hangzhou Research Institute of Geology
	Efficient 1D Laplace-Fourier FWI of Land Seismic Data - E. Sandoval Curiel[1]*, D. Colombo[1], A. Kontakis[2], D. Rovetta[2] [1]Saudi Aramco; [2]Aramco Overseas Company	**Enhancing Internal Multiple Prediction for Field Data Application by Using the Inverse Scattering Series -** J. Wu[1]*, F. Xavier de Melo[1], C. Lapilli[1], C. Kostov[1], Z. Wu[1] [1]Schlumberger	**Stability-Improved Prestack Seismic Inversion Based on Orthogonal Learning Hybrid Particle Swarm Optimisation -** Q. Guo[1]*, K. Jin[2], C. Luo[3] [1]China Jiliang University; [2]Changjiang River Scientific Research Institute; [3]Hohai University
	On Absorbing Boundary Conditions and Boundary Layers for the Acoustic Wave Equations on Unbounded Domains - S. Barros[1], F. Silva[1]*, P. Araújo[1], P.S. Peixoto[1] [1]University of São Paulo	**Internal Multiple Attenuation Using Inverse Scattering Series and Multi-Dimensional Curvelets: Case Study from the Red Sea -** R. Yassein[1], F. Xavier de Melo[1]*, J. Wu[1], Z. James Wu[1], C. Kostov[1], C. Lapilli[1], Z. Yan[1] [1]Schlumberger	
14:55	**End of Session Break**		

Presentations | Friday 11 December

GEOLOGY	RESERVOIR ENGINEERING	INTEGRATED SUBSURFACE	DATA &COMPUTER SCIENCE
	Production & Management EOR/IOR 1 P. Samier (Total)	**Naturally Fractured Reservoirs** O.P. Wennberg (Equinor)	**ML: Applications in Various Fields** C.E. Birnie (Equinor), A. St-Cyr (Shell India Markets Private Limited)
14:00	**Waterflood Analysis in Damaged Formations Using a Multi-Objective Capacitance Resistance Model -** M. Salehian[1]*, R. Soleimani[2], S. Norouzi[1], M. Vasheghani Farahani[1] [1]Heriot-Watt University; [2]University of Calgary	**A Workflow for Dynamic Screening Assisted, Automated Fractured Reservoir Modelling -** B. Steffens[1]*, V. Demyanov[1], D. Arnold[1], H. Lewis[1] [1]Heriot-Watt University	**Time-Lapse Cross-Equalization by Deep Learning -** A. Alali[1]*, V. Kazei[1], B. Altaf[1], X. Zhang[1], T. Alkhalifah[1] [1]KAUST
	Hot Ion-Modified Water Flooding, a Key Method for Development of Tight Carbonate Reservoirs with Heavy Oils - M. Rezaei Koochi[1]*, M. Varfolomeev[1] [1]Kazan Federal University	**Challenging Appraisal of Tight Palaeozoic Reservoirs in Algeria; Fault and Fracture Network Analyses and Modeling -** J.P. Van Dijk[1]*, A.T. Ajayi[1], B. Mohamed Lamine[1], D.V. Luca[1], H. Ellen[1], H. Guney[1], P. Holloway[1], M. Khdhaouria[1], I.S. McLeod[1] [1]Dragon Oil	**Enhanced Microseismic Event Detection Using Deep Neural Networks -** C.E. Birnie[1]*, H. Jarraya[2], F. Hansteen[1], F. Schuchert[1] [1]Equinor; [2]Jarraya Consultancy Ltd.
	Experimental Investigation on Low Salinity Effect Using Dynamic Interfacial Properties During Tertiary Water Flooding - H. Farhadi[1]*, M. Rakhodaei[1], M. Naserian[1], S. Ayatollahi[1], M. Fatemi[1] [1]Sharif University of Technology	**Application of Geomechanically-Based Fracture Models to a Fractured Chalk Field, Offshore Denmark -** M. Welch[1]*, M. Luthje[1], K. Petersen[2] [1]Technical University of Denmark; [2]Aarhus Universitet	**Winning with Simple Learning Models: Detecting Earthquakes in Groningen, The Netherlands -** U.B. Waheed[1]*, A. Afify[1], M. Fehler[2], B. Fulcher[3] [1]King Fahd University of Petroleum and Minerals; [2]Massachusetts Institute of Technology; [3]The University of Sydney
	Optimisation of Waterflooding under Geological Uncertainties Using an Adaptive Data-Driven Surrogate: Case Study - P. Ogbeiwi[1]*, K. Stephen[1], A. Akinroola[2] [1]Heriot-Watt University; [2]Ladoke Akintola University of Technology	**Fracture Characterization and DFN Modelling of the EL Gueria Carbonate Reservoir in Zarat Field -** D. Bouthaina[1]*, M. Saoussen[1], K. Samir[3], B. Noureddine[2] [1]Entreprise Tunisienne D'Activités Pétrolières; [2]Faculté des Sciences de Tunis; [3]Consultant	**Eikonal Solution Using Physics-Informed Neural Networks -** U.B. Waheed[1]*, E. Haghighat[2], T. Alkhalifah[3], C. Song[3], Q. Hao[1] [1]King Fahd University of Petroleum and Minerals; [2]Massachusetts Institute of Technology; [3]King Abdullah University of Science and Technology
	A Novel Analytical Technique for ICD Design in a Waterflood Project: Iran Case Study - F. Mostakhdeminhosseini[1]*, H. Rezvani[1], Y. Rafiei[1] [1]Amirkabir University of Technology	**Numerical Modeling of Hydraulic Fracture Propagation in Naturally Fractured Rock Mass - A Continuous Description Perspective -** N. Dubinya[1,3], M. Trimonova[2], V. Nachev[1,2]* [1]Moscow Institute of Physics and Technology; [2]Sadovsky Institute of Geospheres Dynamics RAS; [3]Schmidt Institute of Physics of the Earth	**P-S Separation from Multi-Component Seismic Data Using Deep Convolutional Neural Networks -** Y. Xiong[1], T. Wang[1]*, W. Xu[1], J. Cheng[1] [1]Tongji University
	The Effect of Lithology on EOR and CO2 Geo-Storage Potentials of Carbonated Water Flooding - P. Bakhshi[1,2], M. Zallaghi[2] [1]Heriot-Watt University; [2]Petroleum University of Technology; [3]Montanuniversität Leoben	**The DMX Protocol; Ringing in a New Era in Discrete 3D Fault and Fracture Modeling -** J.P. Van Dijk[1]* [1]Dragon Oil	**A Deep Prior Convolutional Autoencoder for Seismic Data Interpolation -** F. Kong[2], V. Lipari[1], F. Picetti[1]*, P. Bestagini[1], S. Tubaro[1] [1]Politecnico di Milano; [2]China University of Petroleum
	Investigation of Performed Particle Gels on Improvement of Water EOR Performance; Using Glass Micromodel and UTCHEM Simulator - A.A. Salehipour Bavarsad[1]*, P. Mehrabianfar[1], P. Malmir[1] [1]Petroleum University Of Technology	**Towards a Nonlinear Transfer Function in Dual Porosity Models -** N. Andrianov[1]*, H.M. Nick[1] [1]Technical University of Denmark	**Prediction of Source Rock Maturity Using Semi Supervised Machine Learning Algorithms -** S. AlSinan[1]*, P. Nivlet[1], Y. Altowairqi[1], I. Leyva Poveda[1] [1]Saudi Aramco
14:55	**End of Session Break**		

GEOPHYSICS 1	GEOPHYSICS 2	GEOPHYSICS 3
Wave Field Modelling 1 F. Gamar-Sadat (CGG), R. Soubaras (Lundin Norway)	**Noise Attenuation Methods** M. Bekara (PGS), O. Gramstad (Schlumberger)	**Borehole Seismic Methods** A.V. Goertz (Octio)

	GEOPHYSICS 1	GEOPHYSICS 2	GEOPHYSICS 3
15:00	**Wavefield Solutions from Machine Learned Functions that Approximately Satisfy the Wave Equation -** T. Alkhalifah[1]*, C. Song[1], U. Bin Waheed[2], Q. Hao[2] [1]KAUST; [2]KFUPM	**Random Noise Attenuation Method Based on Inversion with Structure Constraint -** W. Wang[1]*, X. Wei[1], H. Li[1], W. Wang[1], D. Chen[1], R. He[1] [1]RIPED PetroChina	**Shear-Wave Sonic Imaging of Complex Structure -** B. Hornby[1]*, K. Green[1], S. Mohamed[1], S. El Dien MF[2] [1]Halliburton; [2]Kuwait Oil Company
	Fast Elastic Wavefield Reconstruction in a Local Region by Modifying Any Modelling Code - L.E. Jaimes-Osorio[1]*, A. Malcolm[1], P. Zheglova[1] [1]Memorial University Of Newfoundland	**Random Noise Attenuation for Desert Seismic Data Using the Complex Diffusion Coupled with Deep Learning -** Y. Zhang[1]*, H. Lin[1], Y. Li[1] [1]Jilin University	**Mitigation of Zigzag Noise on DAS VSP Records Acquired in Vertical Wells -** M. Willis[1]*, W. Palacios[1], A. Ellmauthaler[1], X. Zhao[1] [1]Halliburton
	A Consistent Implementation of Point-Sources on Finite-Difference Grids - E. Koene[1]*, J. Robertsson[1], F. Andersson[1] [1]ETH Zürich	**Seismic Denoise Using Side Window Filter -** D. Chang[1,2]*, G. Zhang[1], Y. Wang[2], J. Zhang[1] [1]China University of Petroleum (East China); [2]RIPED PetroChina	**hDVS/DAS VSP Recorded While Logging Formation Tester in Vertical Well, Offshore Norway -** R. Guerra[1]*, T. Cuny[1], T. Kimura[1], R. Rufino[1], J. Danielsen[2], W. Kamp[2] [1]Schlumberger; [2]OKEA ASA
	Optimized Acoustic Approximation and Simulation of P-Wave in Transversely Isotropic Media - B. Li[1,2]*, A. Stovas[1] [1]Norwegian University of Science and Technology; [2]Jilin University	**A Multidimensional Burst Noise Attenuation Algorithm for Seismic Data -** A. Özdemir[1]* [1]Schlumberger	**On the Impact of the Gauge Length Value on Distributed Acoustic Sensing Data Quality -** C. Jestin[1]*, G. Calbris[1], V. Lanticq[1], M. Røed[2], C. Ringstad[2] [1]FEBUS OPTICS; [2]SINTEF
	On the Comparison of MUMPS and STRUMPACK for 3D Frequency-Domain Elastic Wave Modeling - Y. Li[1]*, R. Brossier[1], L. Métivier[2] [1]Univ. Grenoble Alpes, ISTerre; [2]CNRS, Univ. Grenoble Alpes, LJK	**Noise Attenuation with an Apex Shifted Hyperbolic Radon Transform Using Migration Operators for Vertical Velocity Variations -** T. Seher[1]*, G. Kazanin[2], X. Du[1] [1]TGS; [2]University of Leeds	**Application of Reverse Time Migration with Random Space Shift to Vertical Seismic Profiling (VSP) Data -** J. Yang[1], J. Zong[1]*, Y.E. Li[1], A. Cheng[1] [1]National University of Singapore
	Full Wavefield Modeling with Vector Reflectivity - N.D. Whitmore[1]*, J. Ramos-Martinez[1], Y. Yang[1], A. Valenciano[1] [1]Petroleum Geo-Services	**Application of Convolutional Neural Network in Automated Swell Noise Attenuation -** B. Farmani[1]*, M.W. Pedersen[1] [1]PGS	**Vertical Seismic Profiling While Drilling Using Passive Monitoring Data -** A. Goertz[1]*, E. Bergfjord[1], A. Libak[1], S. Bussat[2] [1]Octio; [2]Equinor ASA
	Iterative Frequency-Domain Seismic Wave Solvers Based on Multi-Level Domain-Decomposition Preconditioners - V. Dolean[1,5]*, P. Jolivet[2], P. Tournier[3], S. Operto[4] [1]UCA-LJAD; [2]CNRS - IRIT; [3]Sorbonne University - UPMC - LJLL; [4]UCA - CNRS - Geoazur; [5]University of Strathclyde		**Low Frequency DAS Data Study with Integrated Data Analysis for Monitoring Hydraulic Fracture -** M. Ichikawa[1]*, M. Kato[1], S. Uchida[1], K. Tamura[1], A. Kato[1], Y. Ito[1], M.D. Groot[2] [1]Japan Oil, Gas and Metals National Corporation; [2]Encana Corporation
15:55	**End of Session Break**		
16:00	**Forum Session on "New Era for Geoscience" -** Andrew Davies (Principle Geoscience Advisor, Halliburton Landmark), Ellie Ardakani (CEO/ Cofounder, Meta Innovation Technologies), Patrick Corbett (Professor of Petroleum Geoengineering, Heriot-Watt University), Philippe Montagnier (VP Geoscience Discipline, Total), Andrea Lovatini (Digital Subsurface Solutions – Geosolutions Global Manager, Schlumberger)		

Presentations | Friday 11 December

GEOLOGY	RESERVOIR ENGINEERING	INTEGRATED SUBSURFACE	DATA &COMPUTER SCIENCE
	Production & Management EOR/IOR 2 A.M. AlSofi (Saudi Aramco)	**CCS and Utilization: Lab and Pore Scale** S. Kord (Petroleum University Of Technology), M. Nooraiepour (University Of Oslo)	**ML and AI Driven Interpretation** B. Giroux (Institut National de la Recherche Scientifique), E. Zabihi Naeini (Earth Science Analytics)

15:00

GEOLOGY	RESERVOIR ENGINEERING	INTEGRATED SUBSURFACE	DATA &COMPUTER SCIENCE
	Synergistic Oil Displacement Effects of Dimeric Surfactant-Polymer-Silica Stabilized Nanoemulsions over Conventional EOR Fluids - N. Pal[1]*, N. Kumar[1], A. Mandal[1] [1]Indian Institute of Technology (ISM)	**Plugging of Rock by Salt Precipitation During CO2-Injection** - A. Omekeh[1]*, I. Fjelde[1,2] [1]NORCE Norwegian Research Centre AS; [2]University of Stavanger	**Toward a Semisupervised Machine Learning Application to Seismic Facies Classification** - M. Dunham[1]*, A. Malcolm[1], J.K. Welford[1] [1]Memorial University Of Newfoundland
	Enhanced Oil Recovery Performance of Silica Nanofluid in Sandpack Model - D. Joshi[1]*, N. Kumar[1], A. Mandal[1] [1]IIT (ISM)	**Modeling Mineral Reaction at Close to Equilibrium Condition During CO2 Injection for Storage in Carbonate Reservoir** - F. Jaafar Azuddin[1]*, I. Davis[2], M. Singleton[1], S. Geiger[2], E. Mackay[2] [1]PETRONAS Research Sdn Bhd; [2]Heriot-Watt University	**Applying Artificial Intelligence for Reservoir Characterization** - W. Ahonsi[1]* [1]Baker Hughes
	Mining-Assisted Heavy Oil Production (MAHOP) - S. Canbolat[1]*, H. Ozturk[1], S. Akin[1] [1]Metu	**Can Deformation Bands Act as Mini Structural Traps for Secure Geological Storage of CO2?** - A. Pourmalek[1]*, A.J. Newell[2], A.S. Butcher[2], S.M. Shariatipour[1], A.E. Milodowski[2], A.M. Wood[1], M. Bagheri[1] [1]Coventry University; [2]British Geological Survey	**3D Fault Detection Based on GCS-Net** - C. Yuan[1]*, M. Cai[2], F. Lu[2], H. Li[1], G. Li[1] [1]China University of Petroleum (Beijing); [2]Dagang Oil Field PetroChina
	Polymeric Surfactant Stabilized Nanoemulsion Characterization for Enhanced Oil Recovery - N. Kumar[1]*, N. Pal[1], A. Mandal[1] [1]Indian Institute of Technology	**Three-Axis Borehole Gravity Feasibility Method and Its Application to CO2 Storage Monitoring** - Z. Du[1]*, R. Krahenbuhl[2], A. Topham[1], J. Lofts[1], Y. Li[2], A. Seshia[1,3], T. Espie[4] [1]Silicon Microgravity Ltd; [2]Colorado School of Mines; [3]University of Cambridge; [4]BP International Ltd	**Enhanced Automatic Segmentation of Salt Bodies from Seismic Images Using Wavelet Convolutional Neural Networks** - X. Zhou[1]*, M. Tyagi[1], J. Sharma[1] [1]Louisiana State University
	Investigating the Impact of Microwave Technology on the Interaction between Asphaltene and Reservoir Rock Surface - J. Taheri-Shakib[1], S. Hosseini[1]*, M. Rajabi-Kochi[2], A. Shekarifard[3] [1]Research Institute of Petroleum Industry; [2]Amirkabir University of Technology; [3]University of Tehran	**The Use of Imaging Techniques to Understand CO2-Water-Rock Interaction in Depleted Carbonate Field, Offshore Sarawak Malaysia** - W.P. Yong[1]*, S.S. Md Shah[1], W.M.L. Sazali[1] [1]PETRONAS Research Sdn Bhd	**Evaluation of Neural Network Architectures for First Break Picking** - P. Zwartjes[1]*, M. Fernhout[2], J. Yoo[1] [1]Aramco Overseas Company; [2]Delft University of Technology
	Effects of Additional Fine Particles on Physical Properties of Heavy Crude Oil at Elevated Temperature - V. Mom[1]*, K. Sasaki[1], R. Nguele[1], Y. Sugai[1] [1]Kyushu University	**Acoustic Emission Testing of Shales for Evaluation of Microseismic Monitoring of North Sea CO2 Storage Sites** - L. Grande[1]*, L. Griffith[1], J. Park[1], J.C. Choi[1], T. Bjørnarå[1], G. Sauvin[1], N. Mondol[1,2] [1]Norwegian Geotechnical Institute; [2]University of Oslo	**Seismic Attribute-Guided Automatic Fault Prediction by Deep Learning** - F. Jiang[1]*, P. Norlund[1] [1]Halliburton Landmark
	A Comprehensive Study for Evaluation of Imidazolium Based Ionic Liquid for Application in Enhanced Oil Recovery - P. Pillai[1]*, A. Mandal[1] [1]Indian Institute of Technology (ISM)	**Pore-Scale Simulations of Residual Trapping in Homogeneous and Heterogeneous Porous Media** - R.A.E. Nhunduru[1], K.L. Wlodarczyk[1], A. Jahanbakhsh[1], O. Shahrokhi[1], S. Garcia[1], M.M. Maroto-Valer[1] [1]Heriot-Watt University	**Reflectivity Inversion of Nonstationary Seismic Data with Deep Learning Based Data Correction** - Z. Gao[1]*, S. Hu[1], C. Li, H. Chen[1], J. Gao[1], Z. Xu[1] [1]Xi'an Jiaotong University
	Effect of Asphaltene Deposition on the Wettability Alteration of Sandstone Reservoir Rock - J. Taheri-Shakib[1], M. Rajabi-Kochi[2], S.A. Hosseini[1]* [1]Research Institute of Petroleum Industry; [2]Amirkabir University of Technology		**Application of Fuzzy System with Deep Learning in Seismic Facies Analysis** - S. Zhan[1], R. Guo[1]*, C. Tao[1], L. Li[1], D. Zhu[1] [1]GP, CNPC

15:55 | **End of Session Break**

16:00 | **Forum Session on "New Era for Geoscience"** - Andrew Davies (Principle Geoscience Advisor, Halliburton Landmark), Ellie Ardakani (CEO/ Cofounder, Meta Innovation Technologies), Patrick Corbett (Professor of Petroleum Geoengineering, Heriot-Watt University), Philippe Montagnier (VP Geoscience Discipline, Total), Andrea Lovatini (Digital Subsurface Solutions – Geosolutions Global Manager, Schlumberger)

Presentations | Friday 11 December

GEOPHYSICS 1	GEOPHYSICS 2	GEOPHYSICS 3
Wave Field Modelling 2 L. Zhang (Delft University of Technology)	**Seismic Attenuation and Seismic Processing** S.A. Ouadfeul (University of khemis Miliana), F. Xavier de Melo (Schlumberger)	**High Resolution for Shallow Subsurface** A. Ourabah (STRYDE)

17:00

GEOPHYSICS 1	GEOPHYSICS 2	GEOPHYSICS 3
Efficient Modelling of Extended-Duration Moving Seismic Sources - J. Dellinger[1]*, E. Díaz[1] [1]BP America Inc.	**Comparative Analysis of Attenuation Compensation Based on Time-Frequency Transform -** S. Wang[1], G. Pang[1]*, W. Cheng[1], C. Zhou[1] [1]China University of Petroleum (Beijing)	**On Top of Seismic Sampling - Benefits of High Resolution Source-Over-Streamer Acquisition -** G. Poole[1], K. Cichy[1]*, E. Kaszycka[1], V. Vinje[1], N. Salaun[1] [1]CGG
Seismic Elastic Wave Modeling with an Adaptive Staggered Grid in Tilted Transversely Isotropic Media - F. Jiang[1]* [1]Halliburton	**Anisotropic Attenuation of Stratified Viscoelastic Media -** J. Zeng[1,2]*, A. Stovas[1] [1]Norwegian University of Science and Technology; [2]China University of Petroleum - Beijing	**Obtaining Sub-Metre Vertical and Spatial Resolution from Seismic Data - the Clair Experience -** D. Davies[1]*, C. Allinson[1], M. Higson[2] [1]BP Exploration Operating Co. Ltd.; [2]Independent
Novel Approach for Modeling Curved Topography Using Overset Grids and Grid-Characteristic Method - I. Mitskovets[1]*, V. Stetsyuk[1], N. Khokhlov[1] [1]Moscow Institute of Physics and Technology	**Frequency-Dependent Analysis of Q Factor Determination in Laboratory -** X. Wang[1]*, Y. An[1], Y. Zhang[1], X. Cheng[1], Z. Ni[1] [1]China University of Petroleum	**Structurally Constrained Anisotropic Multi-Wave-Inversion Utilizing Machine Learning and Big Data on a Middle East OBC Project -** V. Prieux[1]*, T. Bardainne[1], A. Meffre[1], H. Prigent[1], F.J. Van Kleef[2], M. Waqas[2], L. Hou[2] [1]CGG; [2]ADNOC Offshore
Generalised Algorithm and Implementation of Topography Within Finite Difference Wave Solvers - E. Caunt[1]*, R. Nelson[1], F. Luporini[1], G. Gorman[1] [1]Imperial College	**Tomographic Q Inversion Based on the Adjoint-State Method -** Y. He[1]*, S. Han[1], Y. Luo[2] [1]Aramco Asia; [2]Saudi Aramco	**Mitigating Drilling Risk through High-Resolution Processing and Full-Waveform Inversion, A Case Study, Mediterranean Sea, Offshore Egypt -** M. Salheen[1]*, M. Ouda[1], I. Mihaljevic[1], A. Ibrahim[1], M. ElAttar[1], A. Kanrar[1] [1]Schlumberger
Target-Oriented Wave Propagator Using the Patched Green Function Method - W. Almeida[1], E. Fagua Duarte[1]*, A. Moura[1], M. Ferreira[2], J. Medeiros de Araujo[1] [1]Universidade Federal Do Rio Grande Do Norte; [2]Trinity College Dublin	**An Improved Robust Principle Component Analysis for The Denoising of Desert Seismic Data -** X. Dong[1]*, Y. Li[1], T. Zhong[2], Q. Feng[1] [1]Jilin University; [2]Northeast Electric Power University	**Exploiting Exploration Measurements for Drilling Hazard Identification: A Case Study from the West of Shetlands -** C. Tyagi[1]*, M. Matta[1], M. Rosewell[1], P. Tillotson[2], D. Davies[2] [1]WesternGeco; [2]BP Exploration
Estimation of Signal Propagation and Velocities for Media with Power-Law Attenuation - V. Rok[1,2]* [1]VNIGNI; [2]Dubna State University	**Complex Domain Fast Wavelet Decomposition and Reconstruction Technique and Its Application in Reservoir Prediction -** C. Xu[1]*, W. Xiong[1], C. Tao[1], J. Cui[1], Z. Wan[1], P. Chen[1], Y. Luo[1] [1]BGP	**Enhancing the Resolution of Seismic Imaging by Deconvolving Point Spread Function -** C. Liu[1]*, N. Dai[2], M. Sun[1], W. Wu[2], H. Fu[1] [1]Tsinghua University; [2]BGP International, Inc.
Comparison of Formulations for Representing the Fluid-Solid Coupling Using the Spectral Element Method - J. Cao[1]*, R. Brossier[1], L. Métivier[1,2] [1]Univ. Grenoble Alpes, ISTerre; [2]CNRS, Univ. Grenoble Alpes, LJK	**A Revitalized Broadband Processing Workflow for Over-Under Data: A Case Study from Offshore South Africa -** S. Joyce[1], A. Anantan[1], B. Msezane[2], P. Dekker[2], M. Mmema[2] [1]Schlumberger; [2]PetroSA	**Application of Near-Surface Multiple-Time Windows Q Compensation Technology in Tight Sand Gas Exploration in Sichuan Basin -** H. Liu[1]*, Q. Su[1], H. Zeng[1], X. Zhang[1], Y. Yong[1], S. Qie[1] [1]RIPED PetroChina
Three-Dimensional Mixed-Grid Finite-Difference Scheme for Scalar Wave Equation Numerical Modelling - W. Liu[1]*, Z. Hu[1], L. Han[1], C. Jiang[1], Y. Tian[1], Z. Xu[1] [1]RIPED PetroChina		**Shallow Water Hi-Resolution Combined Streamer and Ocean Bottom Hybrid Seismic Acquisition in the Middle East -** J. Wallace[1]*, M. Adnan[2], D. Sturko[2], P. Fontana[1] [1]Polarcus; [2]Dubai Petroleum Establishment

Presentations | Friday 11 December

GEOLOGY	RESERVOIR ENGINEERING	INTEGRATED SUBSURFACE	DATA &COMPUTER SCIENCE
Carbonate Reservoirs M. Mutti (University of Potsdam)	**Production & Management EOR/IOR 3** E. Delamaide (IFP Technologies (Canada) Inc.)	**CCS and Utilization: Reservoir Scale** P. Hadian (Curtin University), M. Yutkin (King Abdullah University of Science and Technology)	

17:00	**Precipitation of Siderite in Hydrocarbon Environment -** M. Abdulkarim[1]*, A. Muxworthy[1], A. Fraser[1], M. Neumaier[1] [1]Imperial College	**Subsurface Temperature Measurement Using Electromagnetic Waves and Machine Learning for Enhanced Oil Recovery -** M. Robinson[1], C. Stove[1], G. Stove[1] [1]Adrok Ltd	**Practical Quantitative Monitoring Strategy Assessment for Conformance Verification of CO2 Storage Projects -** O. Leeuwenburgh[1,2], E. Barros[2]*, B. Boullenger[1] [1]TNO; [2]Delft University of Technology	
	Permeability Evaluation of Carbonate Reservoir Using Hydraulic Unit Analyse: Case Study from Middle East Region - H. Al-Ibadi[1]*, S.N. Al-Jawad[2] [1]Heriot-Watt University; [2]Iraqi Ministry of Oil	**Enhancing Alumina Nanoparticles Desorption by Low Salinity Chase Water Approach -** I. Ngo[1]*, K. Sasaki[1], Y. Sugai[1], R. Nguele[1] [1]Kyushu University	**Investigating the Impact of Temperature on Relative Permeability Curves Curing Geological CO2 Storage -** M. Abbaszadeh[1]*, S. Shariatipour[1], A. Ifelebuegu[1] [1]Coventry University	
	Pore System Structure Assessment Using BSE-SEM Data - A. Bonin[1]*, G. Roger[1], A. Hussain[2], A.R. Khan[2] [1]CGG; [2]Mari Petroleum Company Limited	**Using Ultrasonic Waves as an Advanced Technology to Remove Potassium Chloride Scale -** S. Hosseini[1]*, J. Taheri-Shakib[1], E. Kazemzadeh[1], M. Rajabi-Kochi[2] [1]Research Institute of Petroleum Industry; [2]Amirkabir University of Technology	**A New Correlation for Prediction of CO2 Viscosity: Application to Carbon Capture and Storage (CCS) Processes -** M. Ghasemi[1]*, M. Sharifi[1] [1]Amirkabir University of Technology	
	A Novel Identification Method of Carbonate Reservoirs Utilizing the Elastic Theory of Porous and Fractured Media - H. Li[1]*, S. Deng[1], Y. Guo[1] [1]China University of Petroleum	**Nanoscale Assessment of Sandstone Wettability During Redox Treatment by Atomic Force Microscopy (AFM) -** S. Yesufu-Rufai[1]*, A. Georgiadis[2], S. Berg[2], F. Marcelis[2], M. Rucker[1], J. Van Wunnik[2], P. Luckham[1] [1]Imperial College London; [2]Shell Global Solutions International B.V.	**Onset of Convective Instability in a Porous Medium with a Low-Permeability Layer -** E. Luther[1]*, M. Dallaston[2], S. Shariatipour[1], H. Hassanzadeh[3], N. Sabet[3], R. Holtzman[1] [1]Coventry University; [2]Queensland University of Technology; [3]University of Calgary	
	Numerical Simulation of NMR Response in Micro-Fractured Carbonate Rocks Based on Pore Network Model - C. Xu[1]*, R. Xie[1], L. Gao[1], B. Wu[1], M. Gu[1], H. Wei[1], M. K[1] [1]China University of Petroleum (Beijing)	**Pore-Scale Direct Numerical Simulation of Simultaneous Marangoni-Driven Convection and Mass Diffusion in a Chemical Flooding Process -** J. Abbasi[1]*, S. Palizdan[1], M. Malayeri[2], M. Riazi[2] [1]IOR/EOR Research Institute; [2]School of Chemical and Petroleum Engineering	**Viscosity and Density of CO2 Aqueous Solutions at High Temperature and High Pressure. Experimental and Modelling -** M.F. Zaidin[1]*, A. Chapoy[2], R. Burgass[2] [1]PETRONAS Research Sdn Bhd; [2]Heriot Watt University	
	Determination of Flow Units by Integrating Petrophysical Properties of a Giant Middle East Carbonate Reservoir - H. Al-Ibadi[1]*, S.N. Al-Jawad[2] [1]Heriot-Watt University; [2]Iraqi Ministry of Oil	**Effect of Magnetic Field on Physiochemical Properties of Carbonate Reservoirs -** F. Amrouche[1]*, S. Rezaei Gomari[1], M. Islam[1], D. Xu[1] [1]Teesside University	**A Straightforward Portfolio Method to Assess the CO2 Storage Potential of Natural Gas Reservoirs -** T. Huijskes[1]*, W. Eikelenboom[1], R. Godderij[1] [1]EBN B.V.	
	Polymer Augmented Low Salinity Brine for Mixing Control in Low Salinity Waterflooding - A. Darvish Sarvestani[1]*, B. Rostami[1], H. Mahani[2] [1]University Of Tehran; [2]Sharif University of Technology	**The Performance of Viscoelastic Surfactant-Polymer Flood in Heavy-Oil Carbonate Reservoir – Simulation Study -** R. Gharbi[2], M. Al-Foudari[2], K. Zeidani[2], S. Al-Otaibi[2], A. Al-Ghadhouri[2], G. Omonte Rossi[1]*, J. Bouillot[1], A. Zaitoun[1] [1]Poweltec; [2]Kuwait Oil Company	**Petroleum Industry: An Enabler or Pariah of Net Zero? -** A. Hastings[1]*, P. Smith[1] [1]University of Aberdeen	
	Feasibility Study of Small Scale Core Flooding Considering Low Salinity Injection in Danish North Sea Reservoirs - S. Mohammadkhani[1]* [1]Technical University of Denmark		**Development of Guideline for Monitoring, Measurement and Verification (MMV) of CO2 Storage in Malaysia -** S. Mohd Amin[1]* [1]Petronas	
	Modified Salinity Waterflood Compositions Based on Multi-Component Ion-Exchange - M. Yutkin[1]*, C. Radke[2], T. Patzek[1] [1]King Abdullah University of Science and Technology; [2]University of California			

14 - 17 June 2021
82nd Annual Conference & Exhibition
Amsterdam, The Netherlands

29 August - 2 September 2021
Near Surface Geosciece Conference & Exhibition
Bordeaux, France

EAGE

**EUROPEAN
ASSOCIATION OF
GEOSCIENTISTS &
ENGINEERS**

Head Office
PO Box 59, 3990 DB Houten, The Netherlands
Tel.: +31 88 995 5055
E-mail: eage@eage.org
Website: www.eage.org

Europe Office
Tel.: +31 88 995 5055
E-mail: eage@eage.org
Website: www.eage.org

Russia & CIS Office
Tel.: +7 495 640 2008
E-mail: moscow@eage.org
Website: www.eage.ru

Middle East & Africa Office
Tel.: +971 4 369 3897
E-mail: middle_east@eage.org
Website: www.eage.org

Asia Pacific Office
Tel.: +60 3 272 201 40
E-mail: asiapacific@eage.org
Website: www.eage.org

Latin America Office
Tel: +57 1 4232948
E-mail: americas@eage.org
Website: www.eage.org