

Under the Patronage of His Royal Highness **Prince Mohammed bin Salman bin Abdulaziz Al-Saud**
Crown Prince, Deputy Prime Minister, and Minister of Defense of the Kingdom of Saudi Arabia

exclusive host



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fuelling global
recovery through
sustainable energy

Event Preview

sponsoring societies



Kingdom of Saudi Arabia

2022
reconnect

21-23 February | Riyadh, KSA

WELCOME LETTER FROM IPTC 2022 EXECUTIVE COMMITTEE CHAIR



Dear Colleagues,

We are once again honoured to welcome the global energy industry to Riyadh, Saudi Arabia for the next International Petroleum Technology Conference (IPTC), to be held 21-23 February 2022 at the Riyadh International Convention and Exhibition Centre.

Building on the outstanding success of IPTC 2020 – the first edition to be held in Saudi Arabia – this flagship conference returns to the Kingdom offering a much-anticipated chance for us to collaborate and reconnect in person. IPTC is a collaborative effort among the American Association of Petroleum Geologists (AAPG), the European Association of Geoscientists and Engineers (EAGE), the Society of Exploration Geophysicists (SEG), and the Society of Petroleum Engineers (SPE), and has become one of the most insightful and influential oil and gas conferences in the Eastern Hemisphere.

With the theme of **“Fuelling Global Recovery through Sustainable Energy,”** IPTC 2022 will showcase upstream sector resilience, technological advancement, and ecosystem evolution during these critical times. Over 18,000 participants from around the world are expected to benefit from a world-class conference program, field trips, and state-of-art exhibitions exploring emerging technologies

and applications. In addition to the many experts in attendance, IPTC provides numerous learning opportunities for students and strongly encourages the participation and development of our talented young professionals.

On behalf of the IPTC Board of Directors and Executive Committee, our host organisation Saudi Aramco, and our organising committees, it is my pleasure to invite you to join us as we bring together global thought leaders, technologists, and strategists to share their views on how innovation and collaboration will shape our role in a circular carbon economy, and pave the way for sustainability, economic growth, and prosperity for generations to come.

We greatly look forward to welcoming you to Riyadh in February 2022!

Sincerely,

Nasir K. Al-Naimi

IPTC 2022 Executive Committee Chair
Senior Vice President, Upstream, Saudi Aramco

IPTC 2022 COMMITTEES CHAIRS AND CO-CHAIRS

Executive Committee Chair

Nasir K. Al-Naimi

Saudi Aramco

Co-Chairs

Ashraf AlTahini

Saudi Aramco

Suhaileen Shahar

PETRONAS

Zeid Ghareeb

Saudi Aramco

Host Committee Chair

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Beth Rees, CGG

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Adel Alqahtani, Saudi Aramco

Nabil Al Bulushi, PDO

Industry 4.0 Subcommittee Co-Chairs

Umar Alnahdi, Saudi Aramco

Saleem R. Bitar, The Sailors AI

Midstream Operations Subcommittee Co-Chairs

Mohammed AlAbdulqader, Saudi Aramco

Nayef Alsadhan, Saudi Aramco

Sustainability Subcommittee Co-Chairs

Aesha Al Keebali, ADNOC

Adam Hawkes, Imperial College London

Ali Al-Yousif, Saudi Aramco

Unconventional Resources Subcommittee Co-Chairs

Hassan Al Marzooqi, ADNOC

Ahmed Alhakami, Saudi Aramco

Young Member Activities Committee Chair

Hind Al-Rayes, Saudi Aramco

Award Committee Chair

Mahmoud Abdulbaqi

Diversity and Inclusion Programme
Committee Co-Chairs

Najwa Azaim, Saudi Aramco

Mohamed Al Marzouqi, ADNOC

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2022
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21–23 February | Riyadh, KSA

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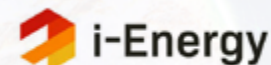
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Associate Sponsor



Floor Graphics Sponsor



PRELIMINARY CONFERENCE PROGRAMME SCHEDULE



SUNDAY, 20 FEBRUARY 2022

TIMINGS	EVENT	LOCATION
0800–1600	Diversity and Inclusion Workshop: Beyond Diversity: Focusing on Inclusion	Hilton Riyadh Hotel & Residences
0800–1600	Seminar 1: Geological History of CO ₂ : Carbon Cycle and Natural Sequestration of CO ₂	Hilton Riyadh Hotel & Residences
0800–1600	Seminar 2: Petroleum Systems Risk Assessment: Providing Quantitative Insights Through the Combination of Modelling and Machine Learning Techniques	Hilton Riyadh Hotel & Residences
0800–1600	Seminar 3: Practical Machine Learning Methods in the Geosciences	Hilton Riyadh Hotel & Residences
0800–1600	Seminar 4: Technology Advances and Energy Transition for Sustainability	Hilton Riyadh Hotel & Residences

KEY

Panel Sessions	E&P Geosciences	Reservoir Engineering	Integrated Reservoir Engineering and Geoscience	Drilling and Completions	Sustainability	Midstream Gas	IOR/EOR	Production Engineering	Unconventional	Overarching Themes	IR 4.0



PRELIMINARY CONFERENCE PROGRAMME SCHEDULE

MONDAY, 21 FEBRUARY 2022													*LOCATION: RICEC
Timings	Event												
0900–0945	Exhibition Opening Ceremony and VIP Tour of Exhibition												
0945–1000	IPTC Excellence in Project Integration Award Presentation												
1000–1100	CEO Plenary Session: Leading the Global Recovery for a Sustainable Future												
1100–1130	Coffee Break												
1130–1300	Panel Session 1 Energy Transition: Towards a Profitable and Sustainable Future (Auditorium)	Session 1 Advanced Reservoir Simulation	Session 2 Carbon Capture, Utilisation, and Storage (CCUS)1	Session 3 Sustainability Polices, Strategies, and Governance	Session 4 Drilling and Well Completions for Unconventional Resources	Session 5 Environment and Safety Management Systems	Session 6 3D Static Modelling	Session 7 Drilling and Completion Fluids	Session 8 Wellbore integrity	Session 9 Advances in Operational Efficiency in Oil and Gas Processing	Session 10 IR 4.0 Emerging Technologies 1	Session 11 Flow Assurance and Water Management	
1300–1400	Delegate Luncheon												
1400–1530		Session 12 Field Development and Optimisation	Session 13 Chemical EOR and Case Studies	Session 14 New and Advanced Technologies in Integrated Reservoir Engineering and Geoscience	Session 15 Geomechanics of Unconventional Plays	Session 16 Advanced Borehole Imaging and Distributed Acoustic Sensing (DAS)	Session 17 Geoscience Case Studies	Session 18 Performance Drilling and Optimisation 1	Session 19 Robotics	Session 20 Concept Engineering, Construction, and Commissioning in Midstream Operations	Session 21 AI/Machine Learning: Drilling 1	Session 22 Advances in Artificial Lift 1	
1530–1600	Coffee Break and ePoster Sessions												
1600–1730		Session 23 Integrated Reservoir and Production Modelling	Session 24 Sustainable/ Green Energy: Hydrogen Technologies	Session 25 Carbon Footprint Reduction Solutions/ Processes 1	Session 26 Hydraulic Fracture Fluids and Proppants	Session 27 Asset Integrity	Session 28 Innovation in Geoscience	Session 29 Advances in Well Construction Process	Session 30 Drilling and Completions in Challenging Environments 1	Session 31 Circular Economy and Environmental Applications in Oil and Gas	Session 32 Big Data, Big Data/AI, Big Data/Data Analytics	Session 33 Production Optimisation Applications 1	
1800	End of day 1												

*All sessions are scheduled at RICEC.



PRELIMINARY CONFERENCE PROGRAMME SCHEDULE

TUESDAY, 22 FEBRUARY 2022												LOCATION: RICEC
TIMINGS	EVENT											
0800–1800	Emerging Leaders Forum											
0900–1030	Executive Special Session: Navigating Through a Dynamic Market											
1030–1100	Coffee Break and ePoster Sessions											
1100–1230	Panel Session 2 Circular Carbon Economy and Policies: Achieving Win-Win (Auditorium)	IPTC Excellence in Project Integration Award Showcase Session	Session 34 Gas-Based EOR Applications	Session 35 Reservoir Formation Evaluation 1	Session 36 Hydraulic Fracturing and Diagnostics for Unconventionals	Session 37 Advances in Seismic Data Processing 1	Session 38 Innovative Geophysical Solutions and Applications	Session 39 Drilling and Completions in Challenging Environments 2	Session 40 Digital Twin	Session 41 Corrosion Management Applications	Session 42 AI/Machine Learning: Drilling 2	Session 43 Well Integrity, Intervention, and Surveillance
1230–1400	ePoster Sessions											
1230–1500	Delegate Luncheon											
1400–1530	Panel Session 3 IR 4.0 Technology (Auditorium)	Ask the Experts Session 1: Enabling Biodiversity to Thrive through Effective Circular Carbon Economy	Session 44 Carbon Capture, Utilisation, and Storage (CCUS) 2	Session 45 Geosteering, Well Placement and Optimisation	Session 46 Integrated Case Studies and Evaluations of Shale and Tight Reservoirs	Session 47 Human Elements	Session 48 Near Surface Geophysics	Session 49 Performance Drilling and Optimisation 2	Session 50 Cementing Technologies and Applications	Session 51 Midstream Operations Asset Life Cycle Optimisation	Session 52 Oil and Gas Recovery Solutions 1	Session 53 Fracturing and Stimulation 1
1530–1600	Coffee Break and ePoster Sessions											
1600–1730		Session 54 Reservoir Development and Management	Session 55 Carbon Footprint Reduction Solutions/Processes 2	Session 56 Reservoir Geomechanics	Session 57 Reservoir Characterisation of Emerging Unconventional Plays 1	Session 58 Crisis Management	Session 59 Quantitative Interpretation	Session 60 Drilling Systems Automation	Session 61 Advanced Completions	Session 62 Water Treatment and Management	Session 63 AI/Machine Learning: Production	Session 64 Advances in Artificial Lift 2
1730	End of day 2											

KEY

Panel Sessions	E&P Geosciences	Reservoir Engineering	Integrated Reservoir Engineering and Geoscience	Drilling and Completions	Sustainability	Midstream Gas	IOR / EOR	Production Engineering	Unconventional	Overarching Themes	IR 4.0



PRELIMINARY CONFERENCE PROGRAMME SCHEDULE

WEDNESDAY, 23 FEBRUARY 2022												LOCATION: RICEC
TIMINGS	EVENT											
0900–1030		Ask the Experts Session 2: Reskilling for the 2025 Market	Session 65 Zero Flaring and Emissions Detection	Session 66 Reservoir Formation Evaluation 2	Session 67 Reservoir Characterisation of Emerging Unconventional Plays 2	Session 68 Exploration Frontiers: From Source to Trap	Session 69 Regional Depositional Systems and Basin Evolution	Session 70 Drilling and Completions in Challenging Environments 3	Session 71 New Technologies in Drilling and Completions 1	Session 72 Project Management, Quality and Commissioning in Midstream Operations	Session 73 AI/Machine Learning: Reservoir Engineering	Session 74 Well Integrity, Intervention, and Surveillance 2
1030–1100	Coffee Break and ePoster Sessions											
1100–1230	Panel Session 4 Agility and Resilience in the Midst of Change (Auditorium)	Session 75 Reservoir Engineering and Modelling	Session 76 Carbon Capture, Utilisation, and Storage (CCUS) 3	Session 77 Novel and Emerging EOR Technologies	Session 78 Reservoir Production in Unconventional Resources	Session 79 Advances in Seismic Data Processing 2	Session 80 Structural and Stratigraphic Influences on Reservoirs	Session 81 Complex Well Planning and Execution	Session 82 AI/Machine Learning: Petrophysics	Session 83 Novel Technologies in Oil and Gas Processing	Session 84 IR 4.0 Adoption and Scalability	Session 85 Production Optimisation Applications 2
1230–1500	Delegate Luncheon											
1230–1400	ePoster Sessions											
1400–1530	IPTC Society Presidents Panel Session (Auditorium)	Session 86 Reservoir Monitoring and Surveillance	Session 87 Sustainable/ Green Energy: Renewables, Geothermal and Gas Storage	Session 88 Sustainable Water Management	Session 89 Unconventional Operational Efficiency– Innovative Solutions and Technology Implementation	Session 90 Managing Business Risk	Session 91 Velocity Modelling and Full Waveform Inversion	Session 92 Hydraulic Fracturing Best Practices	Session 93 Drilling and Completions Case Studies	Session 94 Operational Excellence in Midstream Facilities	Session 95 AI/Machine Learning: Geoscience	Session 96 Advancements in Coiled Tubing Intervention
1530–1600	Coffee Break and ePoster Sessions											
1600–1730		Session 97 Reservoir Simulation Approaches	Session 98 Sustainable Solutions and Energy-Efficient Designs/ Systems	Session 99 Reservoir Case Studies	Session 100 Unconventional Midstream Operations and Facilities Management	Session 101 Geophysical Data Acquisition	Session 102 Oil and Gas Recovery Solutions 2	Session 103 New Technologies in Drilling and Completions 2	Session 104 Fracturing and Stimulation 2	Session 105 Digital Transformation in Midstream Operations	Session 106 IR 4.0 Emerging Technologies 2	Session 107 Real-Time Operations and Monitoring
1730–1800	Closing Session											



CEO PLENARY SESSION: Leading the Global Recovery for a Sustainable Future

MONDAY, 21 FEBRUARY 2022 | 1000–1100

AUDITORIUM

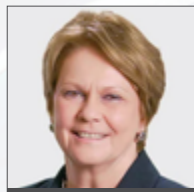
Panelists



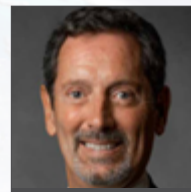
Amin Nasser
President and CEO
Saudi Aramco



Tengku Muhammad Taufik
President and CEO
PETRONAS



Vicki Hollub
President and CEO
**Occidental
Petroleum**



Olivier Le Peuch
CEO
Schlumberger



Scott Sheffield
CEO
**Pioneer Natural
Resources**

EXECUTIVE SPECIAL SESSION: Navigating Through a Dynamic Market

TUESDAY, 22 FEBRUARY 2022 | 0900–1030

AUDITORIUM

Panelists



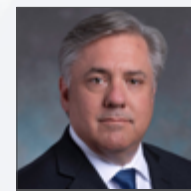
Nasir K. Al-Naimi
Senior Vice President
Upstream
Saudi Aramco



Adif Zulkifli
Executive Vice President
and CEO Upstream
PETRONAS



Eric Duchesne
Senior Vice President
Technical Lines
TotalEnergies



Clay Neff
President
**Chevron Middle East, Africa,
South America Exploration
and Production Company**



Lorenzo Simonelli
Chairman and CEO
Baker Hughes

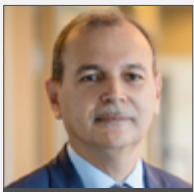
PANEL SESSION 1: Towards a Profitable and Sustainable Future



MONDAY, 21 FEBRUARY 2022 | 1130–1300

AUDITORIUM

Moderator



Kamel Ben-Naceur
CEO
Nomadia Energy

Panelists



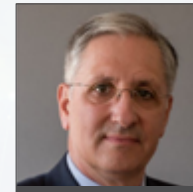
Ashraf Al-Ghazzawi
Executive Director
Strategy and Market
Analysis
Saudi Aramco



Issam Abousleiman
MENA Director
World Bank



Sherif Foda
Chairman and CEO
NESR



Iván Martén
Senior Partner
**Emeritus
BCG**

PANEL SESSION 2: Circular Carbon Economy and Policies: Achieving Win-Win

TUESDAY, 22 FEBRUARY 2022 | 1100–1230

AUDITORIUM

Panelists



Ahmad Al Khowaiter
Chief Technology
Officer
Saudi Aramco



Julio Freidmann
Senior Research
Scholar
**Columbia Center
on Global Energy
Policy**



Mazuin Ismail
SVP Corporate
Strategy
PETRONAS



Demosthenis Pafitis
Chief Technology
Officer
Schlumberger



Pierce Riemer
Director General
**World Petroleum
Council**



PANEL SESSION 3: IR 4.0 Technology

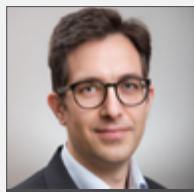
TUESDAY, 22 FEBRUARY 2022 | 1400–1530

AUDITORIUM

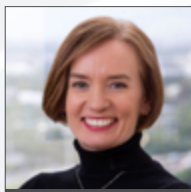
Panelists



Nabil Al-Nuaim
Digital
Transformation
Executive Director
Saudi Aramco



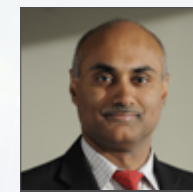
Patrick Bangert
VP Artificial
Intelligence
Samsung



Eimear Bonner
Vice President
Chevron



Allan Rentcome
CEO
Sensia Global



Nagaraj Srinivasan
Senior Vice
President
Halliburton

PANEL SESSION 4: Agility and Resilience in the Midst of Change

WEDNESDAY, 23 FEBRUARY 2022 | 1100–1230

AUDITORIUM

Moderator



Kate Dourian
Contributing Editor
MEES

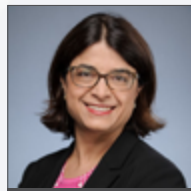
Panelists



Abdul Hameed Al
Rushaid
VP Drilling and
Workover
Saudi Aramco



Eric Boudier
Managing Director
and Senior Partner
(O&G Expert)
BCG



Hinda Gharbi
EVP Services and
Equipment
Schlumberger



Rachid Majiti
Senior Partner
**Mckinsey &
Company**



Girish K. Saligram
President and CEO
**Weatherford
International**

IPTC SOCIETY PRESIDENTS PANEL SESSION

WEDNESDAY, 23 FEBRUARY 2022 | 1400-1530 HOURS

AUDITORIUM

Moderator



Mike Gunningham
Chief Production
Technologist
SGS Subsurface
Consultancy
IPTC Board

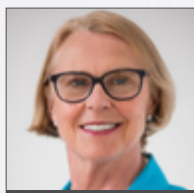
Panelists



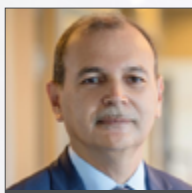
Gretchen Gillis
Senior Geological
Consultant
Aramco Americas
AAPG



Dirk John Orlowsky
Geophysicist in
Charge
DMT
EAGE



Anna Shaughnessy
Senior Consultant
Interpretation3**
SEG



Kamel Ben-Naceur
CEO
Nomadia Energy
SPE

POPULAR FEATURES OF IPTC 2022



Ask the Experts

SESSION 1

Enabling Biodiversity to Thrive through Effective Circular
Carbon Economy

Tuesday, 22 February

1400-1530

SESSION 2

Reskilling for the 2025 Market

Wednesday, 23 February

0900-1030

#IPTC2022

POPULAR FEATURES OF IPTC 2022



*TOP RATED PAPERS

IPTC 2022 features 100+ technical sessions with over 700 presentations on geoscience, drilling and completions, reservoir, production, engineering, over-arching industry issues, midstream operations, IOR/EOR, unconventional, IR 4.0, sustainability, integrated geoscience and reservoir engineering.

This year, the technical programme will also feature 8 top rated papers from the Annual Meetings of the IPTC sponsoring societies—AAPG, EAGE, SEG, and SPE. These papers will be presented as pre-event webinars, which will be accessible for all to view.

**Monday, 21 February to
Wednesday, 23 February**
See Programme Schedule For timings

Knowledge Sharing ePoster Sessions

These presentations are a platform for enhanced discussion and interaction between authors and delegates, facilitating a greater exchange of ideas and networking opportunities.

Wednesday, 23 February 2022
Auditorium

Closing Session

The Closing Session will briefly highlight the conference programme and the major topics that have been presented and discussed. Awards will be presented to the winners of the Student Projects. In addition, the Closing Session will include the introduction of the next IPTC in Bangkok, Thailand.

IPTC “EXCELLENCE IN PROJECT INTEGRATION” AWARD

THE FINALISTS AND WINNER WILL BE RECOGNISED AT THE OPENING SESSION

Monday, 21 February 2022 | Auditorium

As the upstream oil and gas industry moves towards increasingly complex and capital intensive projects, conventional practices must be challenged. It is critical that lessons are shared from successfully integrated project that embody excellence.

The IPTC Excellence in Project Integration Award recognises completed projects of USD 500 million or more, that add value to the industry by exemplifying the characteristics below:

- **Strong teamwork**
- **Solid geoscience knowledge**
- **Reservoir and production engineering acumen**
- **Determined and watchful construction**
- **Outstanding facilities engineering practices**
- **Pervasive culture of HSE**
- **Positive impact on the country, the region and the world**

The finalists and winner will be recognised at the Opening Session on Monday, 21 February 2022. Each finalist will also present the details of their project and answer audience questions in a special 90-minute special showcase session during the conference.



IPTC “EXCELLENCE IN PROJECT INTEGRATION” AWARD

SHOWCASE SESSION

Tuesday, 22 February 2022 | 1100–1230

The selected finalist projects, in alphabetical order, are:

- **Mero by Petrobras**
- **Wheatstone by Chevron Pty Ltd**
- **Zohr by Eni**

The award winning project will be announced and recognised at the Opening Session.

During this dedicated session, the three finalists will present their projects giving delegates the opportunity to learn and understand the methodologies and technology behind each project.



SEMINARS

SEMINAR

Geological History of CO₂: Carbon Cycle and Natural Sequestration of CO₂

Date: 20 February 2022 | **Venue:** Hilton Riyadh Hotel & Residences, Riyadh, Kingdom Saudi Arabia

With respect to the current genuine public concern regarding the anthropogenic increase of Green-House gases, intensive research and technology development focus on the capture and underground storage of industrial quantities of CO₂ concentrated in emissions from combustion sources. At the global scale, the withdrawal of the CO₂ diluted in the atmosphere relies essentially on natural biogeological processes. As a complement to the study of the involved factors in the modern terrestrial eco-system, the geological perspective provides the opportunity to investigate these processes and their consequences at different time scales.

During Earth's history the atmospheric CO₂ has been subjected to extensive changes in term of absolute quantity and relative concentration. From a geological perspective, the current anthropogenic-driven alteration of the Earth's atmosphere actually occurs during a period of low atmospheric CO₂ (Ice-House). A large part of the remaining time intervals of the

Phanerozoic were apparently dominated by Green-House conditions. The latter situation resulting from the high concentration of atmospheric CO₂, due to volcanic and metamorphic degassing associated with the long term tectonic activity of Phanerozoic megacycles. The subsequent decrease of atmospheric CO₂ at the end of the megacycles is interpreted by a negative feedback involving the CO₂ driven silicate weathering which consumes CO₂.

Based on the CO₂ sourcing (tectonic degassing) and CO₂ sinking (sedimentation of carbonates and organic matter), the most popular model depicting the change of atmospheric CO₂ during the Phanerozoic are based on the Berner's GEOCARBSULF approach. The resulting curve which exhibits the long-term change is, to some extent, comforted by the comparison with the estimates of past PCCO₂ values provided by different indicative proxies.

However, some available data depart from the model and high-resolution series of proxies suggest that high amplitude and high-frequency changes

in atmospheric CO₂ were occurring at a much lower time scale. Implications include the possibility to better explain short term climatic events such as the Late Ordovician continental-wide glaciation, to reconsider the significance of brutal events of injection of CO₂ in the atmosphere as a result of intra-plate volcanism and their environmental responses and geochemical record in oceanic sediments (e.g. the Permo-Trias Siberian traps), to revisit the so-called climatic optima such as the Late Palaeocene and Early Eocene, and the necessity to improve our assessment of the kinetics of the retroaction loops controlling the level of CO₂ in the atmosphere.

INSTRUCTOR ALAIN-YVES HUC

Alain-Yves Huc gained a PhD at Strasbourg University, France (1978) and a postdoctorate at Woods Hole Oceanographic Institution, USA (1978-1979). Working first as a Research Associate at the Applied Geology Department, Orleans University (1979-1981) then at IFP New Energies, he became Head of the Geochemistry Department, IFP New Energies, France (1990-2000), Director of the Exploration Department at IFP School (2000-2004), Director of the Exploration Department at IFP School (2000-2004), Expert Director at IFP New Energies (2004-2013) and finally Research Director Emeritus at UPMC (2013-).



SEMINARS

SEMINAR

Petroleum Systems Risk Assessment: Providing Quantitative Insights Through the Combination of Modelling and Machine Learning Techniques

Date: 20 February 2022 | **Venue:** Hilton Riyadh Hotel & Residences, Riyadh, Kingdom Saudi Arabia

This course will cover key aspects of a quantitative and (more) objective petroleum risk assessment – a cornerstone for robust decision-making.

The course begins with an overview of petroleum systems and traditional qualitative risk assessment methodologies (table-based, Italian flags...). Then, after describing some limitations of such traditional techniques, it presents a novel approach embedding petroleum systems modelling, to integrate the current state of geological knowledge, and machine learning techniques, to build quantitative and objective risk assessments.

Fundamentals of petroleum system modelling will be presented as well as techniques to identify and quantify remaining geological uncertainties. A session is dedicated to the presentation of the machine learning strategy followed to perform the analysis robustly and in an operational timeframe. The last part of the course concentrates on the presentation of an application case-study in the Levant Basin, Eastern Mediterranean.

No other course covers the future of petroleum systems risk assessment and offers insights on the combination of machine learning techniques with modelling to enhance risk assessment for petroleum exploration.

INSTRUCTORS MATHIEU DUCROS

Mathieu Ducros is R&D director in Kognitus, a company which develops innovative tools in geoscience, using machine learning techniques among others, consulting and research projects. Before joining Kognitus, he worked during two years as an independent consultant in Brazil working in research and teaching projects and building strategic partnerships between universities and petroleum companies and services providers. Previously he acquired a high experience as a geoscientist, working more than 7 years as a member of a research team for E&P solutions in IFPEN, and more than 3 years as a consultant in Beicip-Franlab. He developed expertise in risk analysis, machine learning, data mining, geology, organic geochemistry exploration, basin analysis, petroleum systems modelling.

FÉLIX GONÇALVES

Félix Gonçalves is petroleum geoscientist with 30+ years of experience. He is co-founder and COO at Kognitus, a company that leverages a wide range of analytics and AI techniques to help E&P teams gain actionable insights from their subsurface data. Before joining Kognitus, he worked for several oil, service and consulting companies and research institutions (Petrobras, Ecopetrol, PGT, UFRJ, Vale and Solintec). Félix coordinated numerous basin analysis and petroleum systems modeling projects in practically all sedimentary basins of Brazil, several subandean basins of Colombia, Venezuela and Ecuador and offshore basins in W Africa. He also holds an MSc and a PhD in geosciences at the University of Rio de Janeiro and delivered about 15 articles in peer reviewed publications, 150 abstracts in scientific conferences and 250+ technical reports.



SEMINARS

SEMINAR

Practical Machine Learning Methods in the Geosciences

Date: 20 February 2022 | **Venue:** Hilton Riyadh Hotel & Residences
Riyadh, Kingdom Saudi Arabia

A selective overview of important ML topics is provided and their practical understanding comes from MATLAB exercises. Machine learning examples are taken from the fields of astronomy, medicine, geosciences, and material sciences.

Learn the high-level principles of five important topics in machine learning: neural networks; convolutional neural

networks; support vector machines; principal component analysis; clustering methods. Practical examples in geosciences will be used to show the applications of each method. Practice the execution of these methods on MATLAB and Keras codes. The teaching format will be 50-minute lectures and 1-hour labs to reinforce the principles of each method.

INSTRUCTOR GERARD SCHUSTER

Gerard Schuster is currently a Professor of Geophysics at King Abdullah University Science and Technology (KAUST) and an adjunct Professor of Geophysics at University of Utah. He was the founder and director of the Utah Tomography and Modeling/Migration consortium from 1987 to 2009, and is now the co-director and founder of the Center for Fluid Modeling and Seismic Imaging at KAUST.

Dr. Schuster helped pioneer seismic interferometry and its practical applications in applied geophysics, through his active research program and through his extensive publications, including his book "Seismic Interferometry" (Cambridge Press, 2009). He also has extensive experience in developing innovative migration and inversion methods for both exploration and earthquake seismology.

SEMINAR

Technology Advances and Energy Transition for Sustainability

Date: 20 February 2022 | **Venue:** Hilton Riyadh Hotel & Residences
Riyadh, Kingdom Saudi Arabia

This seminar is designed to give participants an overview about different initiatives relating to the sustainability aspects such as leveraging carbon capture, utilization and storage to enable sustainable energy supply. Energy efficiency from asset operations and advanced technologies will play a key role in lowering carbon footprint, and

form key pillars of the value chain to achieve the Net Zero, help to bring resilience for a sustainable future. The seminar will provide insights and case examples, focusing on CCUS opportunities identification, integration and management; hydrogen/blue ammonia projects consideration, and deployment for effective end-to-end value creation.

INSTRUCTOR KAMEL BEN-NACEUR

Dr. Kamel Ben-Naceur is CEO of Nomadia Energy Consulting, where he advises on sustainable energy policies and global and regional energy economics and outlooks. He has worked as the chief economist for a major oil and gas company and for an oilfield services company.

Ben-Naceur has also worked as a director of the International Energy Agency and as the industry, energy, and mines minister for the Tunisian government.

He has chaired several SPE global committees, including Business

Management and Leadership, the International Forum Series, and CO₂ Capture, Utilization, and Storage. He has also taught several SPE courses on global energy and strategic thinking and planning. He was technical director for the Management and Information discipline on the SPE International Board of Directors from 2008 to 2011. Ben-Naceur was also an SPE Distinguished Lecturer during the 2009–2010 season and received an SPE Distinguished Member Award and SPE Distinguished Service Award in 2014, the AIME Charles F. Rand Memorial Gold Award in 2019, and the 2020 Sustainability and Stewardship in the Oil and Gas Industry Award.

YOUNG MEMBER ACTIVITIES

2022 IPTC Young Member Activities Overview

The oil and gas industry continues to invest in initiatives aimed at engaging young people in the energy sector in order to ensure the world's ever-growing energy demands will be met. IPTC supports this effort through its educational activities held in conjunction with each event. The Young Member Activities (YMA) consists of a variety of programmes for high school students and/or teachers, university students, and young professionals.



EMERGING LEADERS FORUM – International Young Professionals (YPs)

Calling all future leaders looking to enhance their professional and management skills! The IPTC Emerging Leaders Forum will offer the opportunity for YPs to get together for a day of inspiration, education, and collaboration.

This interactive one-day programme aims to bring together high performing individuals, who are at the earlier stages of the career. The Forum will appeal to YPs looking to advance into management and hone their professional skills by learning from key executives in the industry. Additionally, this event will give emerging leaders the chance to engage with their peers to discuss the industry, and how the new era of engineers will contribute to its future development. YPs will also have the chance to engage with industry and management professionals from around the globe, providing attendees with the chance to debate critical issues, fine tune soft skills, and address key challenges. Activities may include panel and speaker sessions, round table discussions, interactive breakout sessions and more.



EDUCATION WEEK – International Undergraduate University Students

Each IPTC event, final-year undergraduate science, geoscience and engineering students from around the world are invited to participate in IPTC's Education Week. This programme aims to give students a clear insight into the industry they are about to join and to provide an opportunity for students to form new friendships and work together on a joint activity. IPTC Education Week also provides students with the opportunity to interact with a number of major industry employers who are looking to recruit the best talent from institutions around the world.

SCIENCE TEACHERS WORKSHOP – High School Programme

The Science Teachers Workshop will highlight how energy works in our everyday lives, and promote information about career opportunities in petroleum engineering and the upstream professions. This programme values the role teachers and energy professionals play in educating young people about the importance of energy. The information provided will be factual and non-biased and can easily be used in classrooms around the globe. There will be hands-on activities to provide educators with interactive, age-appropriate experiments, using basic household items that illustrate energy concepts. Teachers may also be provided with a technology tour at the IPTC Exhibition.



EDUCATION WEEK

One of the key youth programmes and most comprehensive, is the exclusive university student IPTC Education Week. This programme offers a unique experience that aims to assist selected students with their transition from student to young professional. IPTC Education Week will typically hosts up to 100 of the best senior undergraduate science, geoscience, and engineering students from national and international institutions around the world.

During this five-day programme, students will experience a multitude of activities that aim to prepare them for life beyond university. These activities may include: developing their professional skills by learning from experienced and young professionals, working together on joint projects, networking with their peers and executives in the oil and gas industry, attending IPTC technical and panel sessions and participating dynamic field trips.

Team Assignment

Each IPTC Education Week, students are grouped together in teams and given a joint project or assignment to work on at IPTC Education Week and sometimes prior to arriving as well. The team assignment will typically be judged or assessed so that the top three teams will be awarded at IPTC.



THE EDUCATION WEEK PROGRAMME

Below is a provisional outline of the 5-day Education Week Programme. Agenda is subject to change.

Day 1

Welcome Reception and Dinner with IPTC Executives

Students will be welcomed on their first evening with a Welcome Dinner Reception. They will have the chance to meet one another for the first time, as well as network and interact with industry executives and committee members.

Day 2

Field Trips around Riyadh, Kingdom of Saudi Arabia.

Students will be taken on one or more field trips with either an industry or cultural focus.

Day 3

Education Week Sessions

This day will be packed with a number of activities that will be tailored specifically to the Education Week students. These may include panel speaker sessions, interactive networking sessions or games, presentations by industry executives, round-table discussions and more.

Day 4

International Petroleum Technology Conference (IPTC)

Students will have the chance to explore IPTC for the whole day. They will have access to a number of delegate activities including, technical sessions, panel sessions, and the exhibition floor.

Day 5

IPTC and Education Week Closing

Student teams will have the opportunity complete their team assignment. All assignments will be assessed or judged in order to select the top three teams, who will then be announced and awarded at the IPTC Closing Ceremony.

For more information, please email jhoffmann@iptcnet.org or visit the website 2022.iptcnet.org/young-member-activities

IPTC 2022 EXHIBITORS

Interact and network with industry experts from leading NOCs, IOCs, and oil and gas solution providers at the IPTC exhibition.

A

Abdel Hadi Abdullah Al Qahtani & Sons (AHQ)
Abdul Rahman Al-Otaishan & Sons Group Co. LLC. (AOSCO)
Abu Dhabi National Oil Company (ADNOC)
Acceleration Company Limited (ACCELL)
ADES Saudi
Advanced Upstream
AFKAR Ventures
Al-Jazira Equipment (AUTOWORLD)
AlMansoori Specialized Engineering
Air Products Qudra
Al Saadoun Transport
Al-Abdulkarim Holding (AKH)
Alkhafji Joint Operations
Alkhorayef Petroleum Company
AlMajdouie Logistics Company
American Association of Petroleum Geologists (AAPG)
Aramex Saudi
ARO DRILLING
ASH Group
Association for Talent Development MENA (ATD)

B

Babcock & Wilcox
Baker Hughes
BAPCO/TATWEER
Bin Quraya

C

CGG
ChampionX
Crucial Solutions & Services (CSS)/
Seeq Corporation

D

Dayim Equipment Rentals
DeGOLYER and MacNAUGHTON
Delta Corporation
Dhahran Geoscience Society (DGS)
Diversified Lines Petroleum Services (DLPS)
Draeger Arabia

E

Endegs Mobile Emission Treatment Company
ENPRO Oil & Gas
EROG - Earth Reservoir For Oil And Gas
European Association of Geoscientists & Engineers (EAGE)
Expertise Contracting Company
EXPRO
Exterran

F

Fathom Solutions
Front End

G

Gas and Oil Technologies (Gotech)
GAS EQUIPMENT & TRADING
GEOLOG International

H

Halliburton
Helmerich & Payne

I

I ENERGY (Khalifa Abdulrahman)
Algosaibi Investment Company (CJSC)
IFS
Immensa Additive Manufacturing
Industrial Projection contracting
Industrialization and Energy Service Company (TAQA)
Innovar Solutions Saudi Company
Intertek
Interwell

J

Japan Oil, Gas and Metals National Corporation (JOGMEC)
Jazeera Factory For Paints Company
Juffali Industrial Product Company (JIPCO)

K

Kanoo Industrial & Energy
KAUST: King Abdullah University of Science and Technology
Khair Inorganic Chemical Industries Co (InoChem)
King Salman Energy Park (SPARK)

M

Manifa Petroleum Services
METSCCO Heavy Steel Industries
Microsoft
Midad

N

Namthaja
National Energy Services Reunited Corp. (NESR)
NOV
NOVAsat Company

O

Oil Industry Supplies & Services
Oilserv Oilfield Services (BVI)
Olayan Pavilion (OSHC)
OMS Oilfield Services Arabia

EXHIBIT SPONSOR ADVERTISE ATTEND

IPTC 2022 is a world-class platform to showcase your technological advancements and achievements to a highly qualified and multidisciplinary business and technical delegation.

The sponsorship packages have been designed to offer maximum exposure and visibility for organisations in the oil and gas industry. And exhibiting at IPTC 2022 offers an excellent opportunity to raise your company's profile and create greater awareness of your brand. Showcase your latest products and services to key professionals in the industry.

For more information, contact: Sylvia Ansara, Senior Manager, Sales and Exhibits | sansara@iptcnet.org | +971.4.457.5815 | +971.50.458.5323

IPTC 2022 EXHIBITORS

Interact and network with industry experts from leading NOCs, IOCs, and oil and gas solution providers at the IPTC exhibition.

P

Petrojet Company
PIETRO FIORENTINI

Q

Qemat Najd Oil Wells Services
Company

R

REDA Hazard Control
Rock Flow Dynamic
Rogii

S

SAFIA Measurements Company
Saja Energy
Salama Engineering Industry
SASIB
Saudi Arabian Drilling Academy
(SADA)
Saudi Aramco
Saudi Aramco Nabors Drilling –
SANAD
Saudi Multichem
Saudi NAPESCO
Saudi Perfect Pumps for Trading &
Manufacturing
Saudi Petroleum Services Polytechnic
(SPSP)
Sawafi Borets

Schlumberger Middle East
Schoeller – Bleckmann Oilfield
Equipment
Shaheen Arabia Company for
Industry (TIMIS GROUP)

SINOPEC
Sintex International
Society of Exploration
Geophysicists (SEG)
Society of Petroleum Engineer (SPE)
Society of Petroleum Engineers –
Kingdom of Saudi Arabia
Solutions by STC
SparkCognition
Subsea7

T

Tamimi Company for Commercial
and Maintenance
TAMIMI ENERGY
TCO
Technical Solutions Company for
Maintenance
TerraNova
TRIPLEFAST MIDDLE EAST

W

Walworth\ValveTech
Weatherford
WELLBORE INTEGRITY SOLUTIONS SAUDI
ARABIA

Welltec A/S
Whitson
Wild Well Control
Wuhan Linmei Head Plate (GLM)
WWT International

Y

Yokogawa Middle East and Africa

Z

Zamil Offshore Services Company
Zerlux Hungary



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| [+971.50.458.5323](tel:+971504585323)

**21–23 February
2022**

Riyadh International Convention and Exhibition Centre

Riyadh, Kingdom of Saudi Arabia
2022.iptcnet.org



Opening Hours

Date	Conference
Monday, 21 February	0830–1730 hours
Tuesday, 22 February	0800–1730 hours
Wednesday, 23 February	0900–1800 hours

Travel and Accommodation

MCI Saudi Arabia is IPTC's Official Travel Partner and has secured preferential rates at various hotels in Riyadh for IPTC attendees. MCI Saudi Arabia can also arrange bespoke transportation, city tours and provide visa assistance.

Contact:

Name: Zia ur Rahman
Email: ziaur.rehman@mci-group.com
Number: **+966 (0) 508001275**

Shuttle Service

A complimentary shuttle service will be available to/from selected hotels, beginning Monday, 21 February to Wednesday, 23 February 2022.

Media

IPTC sessions are protected by US copyright laws. Photography and video/audio recording of any kind are strictly prohibited.

Get Involved **#IPTC2022**



2022.iptcnet.org



[iptcnet.org](https://www.iptcnet.org)



[@iptc_net_org](https://twitter.com/iptc_net_org)



International
Petroleum Technology
Conference (IPTC)



IPTC TV

Kingdom of Saudi Arabia

2022 reconnect

21–23 February | Riyadh, KSA

Registration

IMPORTANT NOTICE: Due to Health and Safety restrictions, **NO ONSITE REGISTRATION AND TICKET SALES** will be taking place. Admission to the conference is strictly by advance registration which can be completed online. Following credit cards are accepted: Visa, Master and Diners.



Advance Registration

Advance registrations can be made online at 2022.iptcnet.org/register

Payment Information

Cash will not be accepted onsite due to COVID safety guidelines.

All payments and invoices will be issued in USD only and subject to 15% Value Added Tax (VAT).

The following credit cards are accepted: Mastercard, Visa and Diners Club.

Exchange rate USD = SAR 3.750 as per Saudi Arabian Monetary Authority.

If you wish to receive an invoice to process payment via wire transfer, please send a request to the registration team via email iptcreg@iptcnet.org.

Cancellation Policy

- Cancellation received by **20 January 2022** will be refunded less processing fee.
- Cancellation after **20 January 2022** is not eligible for a refund.
- Substitutions/replacements names will be accepted until **20 January 2022**.
- No refund if delegate fails to attend.

Send your cancellation notice and refund request by email: iptcreg@iptcnet.org

Full Conference (3-Day Registration)

Advance registrations can be made online at 2022.iptcnet.org/register

Full Conference (3-Day Registration)

Delegate Nonmember	USD 1,425.00
Delegate (AAPG, EAGE, SEG, SPE Member)	USD 1,315.50
Author/Presenter/Committee/Session Chair/Panellist/Academia Nonmember	USD 1,100.00
Author/Presenter/Committee/Session Chair/Panellist/Academia (AAPG, EAGE, SEG, SPE Member)	USD 1,100.00

*Full Conference registrations includes plenary, panels, special and technical sessions, ePosters, exhibition, coffee breaks, (3 Days) daily delegate luncheons, and one (1) copy of the digital proceedings.

Student

University students must upload a valid Student ID to register. Student registration includes access to the plenary, and panels, special sessions, technical sessions, ePosters and exhibition.

Student	
	Fee
Student	Complimentary

Registration

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Become a member and Save Money

IPTC is brought to you by membership organisations that cover all aspects of the energy industry.

As a member of one or more societies, you will gain technical knowledge and build relationships that will benefit you throughout your career. Members also receive discounted registration to IPTC.

Find the organisation that's right for you.

1-Day Registration

One Day registration includes plenary, panels, special and technical sessions, ePosters, exhibition, coffee breaks, and daily delegate luncheon for the day you have selected, if applicable to the day you attend.

1-Day Registration*	
One Day Delegate Nonmember – (Monday/Tuesday/Wednesday)	USD 770.00
One Day Delegate (AAPG, EAGE, SEG, SPE Member) – (Monday/Tuesday/Wednesday)	USD 660.00

Visitor Registration*	
	Fee
Visitor (Exhibition Only) Nonmember (All days)	Complimentary
Visitor (Exhibition Only) (AAPG, EAGE, SEG, SPE Member) – (All days)	Complimentary

Additional Conference Tickets	
Category	Standard Fee
Daily Delegate Luncheon – Monday, 21 February 2022	USD 61.00
Daily Delegate Luncheon – Tuesday, 22 February 2022	USD 61.00
Daily Delegate Luncheon – Wednesday, 23 February 2022 – Luncheon for the day	USD 61.00
Digital Proceedings Nonmember	USD 300.00
Digital Proceedings (AAPG, EAGE, SEG, SPE Member) – Copy of conference proceedings voucher	USD 200.00

CONTACT DETAILS

For more information, please contact iptc@iptcnet.org or call +971.4.457.5800.

Registration

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Find the organisation that's right for you.

Additional Conference Tickets

1- Day Seminars Nonmember	USD 985.00
1- Day Seminars (AAPG, EAGE, SEG, SPE Member) Seminar sessions, Materials, daily Coffee Breaks and Luncheons, and Certificate of Continuing Education Units (CEU)	USD 875.00
1- Day Workshop Nonmember	USD 540.00
1- Day Workshop (AAPG, EAGE, SEG, SPE Member) Workshop sessions, Materials, daily Coffee Breaks and Luncheons, and Certificate of Continuing Education Units (CEU).	USD 540.00



CONTACT DETAILS

For more information, please contact iptc@iptcnet.org or call +971.4.457.5800.

The International Petroleum Technology Conference (IPTC) is an international oil and gas conference and exhibition. The event is to rotate in various venues in the Eastern Hemisphere. The scope of the conference programme and associated industry activities will address technology and relevant industry issues that challenge industry specialists and management around the world, particularly in the gas business and certain overarching issues such as HSE, Security, HR and training. IPTC is a collaborative event between the following societies:



The American Association of Petroleum Geologists (AAPG), founded in 1917, has been a pillar of the world-wide scientific community. The original purpose of AAPG, to foster scientific research, to advance the science of geology, to promote technology, and to inspire high professional conduct, still guides the Association today. Currently the world's largest professional geological society with approximately 40,000 members in 129 countries, AAPG provides publications, conferences, and educational opportunities to geoscientists and disseminates the most current geological information available to the general public. For more information, visit: www.aapg.org.



The Society of Exploration Geophysicists (SEG) is a not-for-profit organization committed to connecting the world of applied geophysics. With more than 20,000 members in 128 countries, SEG provides educational and technical resources to the global geosciences community through publications, books, events, forums, professional development courses, young professional programs, and more. Founded in 1930, SEG fosters the expert and ethical practice of geophysics in the exploration and development of natural resources, characterisation of near surface, and mitigation of earth hazards. For more information visit: www.seg.org.

EAGE

EUROPEAN
ASSOCIATION OF
GEOSCIENTISTS &
ENGINEERS

The European Association of Geoscientists & Engineers (EAGE) is a professional association for geoscientists and engineers. Founded in 1951, it is an organization with a worldwide membership, providing a global network of commercial and academic professionals. The association is truly multi-disciplinary and international in form and pursuits. EAGE operates two divisions: the Oil & Gas Geoscience Division and the Near Surface Geoscience Division. EAGE has around 19,000 members worldwide representing over 100 countries. All members of EAGE are professionally involved in (or studying) geophysics, petroleum exploration, geology, reservoir engineering, mining and civil engineering. For more information, visit: www.eage.org.



Society of Petroleum Engineers

The Society of Petroleum Engineers (SPE) is a not-for-profit professional association whose more than 140,600 members in 144 countries are engaged in oil and gas exploration and production. SPE is a key resource for technical knowledge providing opportunities to exchange information at in-person and online events and training courses, publications, and other resources. For more information, visit: www.spe.org.



General Enquiries

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