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Vision to Prosperity: A New Energy Era Emerges



Call for Papers

Submission Deadline Extended to 31 March 2019

13–15 January 2020

Dhahran EXPO Kingdom of Saudi Arabia go.iptcnet.org/submit

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LETTER FROM IPTC 2020 CONFERENCE PROGRAMME CHAIR



Dear Colleagues,

The International Petroleum Technology Conference (IPTC) will be coming for the first time to Saudi Arabia, an oasis of opportunities and a land of a great energy vision. It will take place at the Dhahran EXPO in Dhahran, from 13–15 January 2020, with Saudi Aramco serving as the Exclusive Host of the 12th edition of the event.

A reflection of the 2030 Saudi Prosperity Vision, the IPTC 2020 theme, **Vision to Prosperity: A New Energy Era Emerges**, highlights the continuous effort in the oil and gas industry to make the new global, and Saudi energy vision a reality. The word 'vision' is tied to the new era of energy that relies on conventional resources as well as unconventional resources, clean energy, and the 4th industrial revolution.

On behalf of the IPTC Conference Programme Committee, it is our pleasure to invite you to submit your abstract for consideration in the IPTC 2020 technical programme. The submission deadline has been extended to **31 March 2019**. Abstract submission is available online through the IPTC website at go.iptcnet.org/20IPTCSubmit. Submissions can be made for any of the 50 technical categories, most of them diverse and multidisciplinary in nature which we believe are representative of the issues and challenges facing the industry today.

As a distinguished speaker at IPTC, you will have the chance to present new technologies and best practices to peers from around the world, provide your organisation with a world-class platform to showcase new and emerging technologies, and share your professional expertise to a diverse technical group of industry professionals and operations management. Furthermore, we will be offering several technical and non-technical panel discussions that cover a wide range of topics and challenges related to the oil and gas industry.

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). IPTC is widely regarded by industry professionals as a unique opportunity for technology dissemination and knowledge sharing on a global scale in a truly integrated manner.

We look forward to your contribution and knowledge-sharing in making IPTC 2020 a remarkable event and to welcoming you to the Kingdom of Saudi Arabia in January 2020.

Ali M. Al-Shahri

IPTC 2020 Conference Programme Chair Manager, Northern Area Reservoir Management Saudi Aramco

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IPTC 2020 COMMITTEE CHAIRS AND CO-CHAIRS

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Industry 4.0 Subcommittee Co-Chairs Ivo Nuic, Baker Hughes, a GE Company Khalid Zamil, Saudi Aramco

Education Activities Co-Chairs Najwa Azaimi, Saudi Aramco Karima Hamdan, Saudi Aramco



6 REASONS WHY YOU SHOULD SUBMIT A PAPER PROPOSAL TO IPTC 2020

- The opportunity to be a part of the first international multidisciplinary, intersociety oil and gas conference and exhibition to be held in Saudi Arabia.
- Contribute to technical knowledge transfer on a global platform.
- Share new technologies and best practices with industry professionals from around the world.
- Boost your company's profile at a renowned industry event.
- Highlight your technical knowledge and experience with likeminded peers.
- Have your paper published in the multisociety library, OnePetro.

Submission Deadline Extended to 31 March 2019

IPTC 2020 will be the first international multi-disciplinary, inter-society oil and gas conference and exhibition to be held in Saudi Arabia

WHAT'S PLANNED FOR 2020



ABOUT THE INTERNATIONAL PETROLEUM TECHNOLOGY CONFERENCE (IPTC)

Founded in 2005, the IPTC is the flagship multidisciplinary technical event in the Eastern Hemisphere and 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).

The mission of IPTC is to promote, aid and encourage technology dissemination and collaboration amongst the multiple disciplines of the petroleum industry.



TECHNICAL CATEGORIES | Submission Deadline Extended to 31 March 2019



GEOSCIENCE		
1. Petroleum Geology	 Depositional Systems and Diagenesis Outcrops, Analogues, and Structural Geology Basin Evolution and Modelling The Petroleum System: Source to Trap Regional Geology and New Exploration Frontiers Stratigraphic Forward Modelling Case Studies 	
2. Geophysical Data Acquisition and Processing	 Seismic Data Acquisition Technologies Near-Surface Geophysics Multi-Physical Data Integration Multi-Component Seismic Passive Seismic Non-Seismic Methods Seismic Data Processing Case Studies 	
3. Geophysical Imaging and Inversion	Borehole Geophysics Seismic Anisotropy Advanced Seismic Depth Imaging Full Waveform Inversion Velocity And Geophysical Modelling Seismic Inversion Applications in Machine Learning and Data Analytics Earth Model Building Case Studies	
4. Geoscience Reservoir Characterisation	Faults and Fractures Characterisation Quantitative Seismic Interpretation Facies Prediction and Mapping Sequence Stratigraphy and Reservoir Characterisation Sedimentology, Facies Prediction, and Mapping Bore Hole Geology Case Studies	
5. Geoscience Static Reservoir Modelling	 Advances in 3D Numerical Reservoir Modelling Geostatistical Reservoir Modelling Reservoir Geomechanics Upscaling Petrophysical Modelling Uncertainty Analysis in Reservoir Modelling Case Studies 	
6. Advanced Concepts in Geoscience	 Innovative Workflows Applications of Engineering Geophysics 4D Seismic Technological Deployments Application for Big Data and High Performance Computing 	
RESERVOIR ENGINEERIN	IG	
7. Reservoir Development and Management	Carbonate and Fractured Reservoirs Development Integrated Reservoir and Production Modelling Field Development and Optimisation Reservoir Monitoring and Surveillance Digital Fields and Advanced Technologies Reservoir Data Integration and Assessment	
8. Reservoir Simulation	Carbonates Reservoir Simulation Reservoir Model Resolution and Upscaling History Matching and Predication Next Generation Simulators PVT/SCAL/CORE Studies Integration and Saturation Modelling Streamline Simulation Geomodelling	
INTEGRATED RESERVOI	R ENGINEERING AND GEOSCIENCE	
9. Integrated Reservoir Development and Management	Reservoir Heterogeneity Rock Facies, Rock Types, and Flow Units Reservoir Quality and Prediction Geosteering and Well Placement and Optimisation Integrated Reservoir and Production Modelling Case Studies	

10. Reservoir Description and Dynamics	Well Testing Advancement Advanced Pressure Transient Modelling; Complex Wells, Completions, Fluids iField Well Testing Modelling of Faults and Fractures Upscaling Petrophysical Properties and Models Reservoir Simulation Uncertainty Assessment Field Development and Optimisation Complex Well Modelling and Optimisation Tight/Shale Reservoir Modelling Case Studies
11. Formation Evaluation	 Logging Conveyance; Open-Hole and Cased-Hole Advancements in Logging; Open-Hole (Wireline and LWD), Cased-Hole Well Integrity Evaluation Surface Data Logging Impact of Drilling and Drilling Fluid on Logging Coring Formation Evaluation Core Analysis, Physical Measurements, and Digital Analysis Rock Petrology and Mineralogy Fluid Geochemistry Tracer Studies Integrated Formation Evaluation Reservoir Saturation Monitoring and Surveillance Petrophysical Advancements; Carbonate and Clastic Reservoirs Low Resistivity Low Contrast Reservoir Evaluation Rock Typing, Permeability, and Saturation Height Function Modelling Case Studies
12. Rock and Geo-Mechanics	Rock Mechanics Borehole Stability Prediction and Assessment Sanding Prediction and Assessment Fracturing Natural Fracture Characterisation Geomechanics Modelling Case Studies
DRILLING AND COMPLE	TIONS
DRILLING AND COMPLE 13. Optimisation of Well Planning and Execution	TIONS • Complex Well Planning • Extended-Reach Drilling • Geomechanical Considerations • Modelling and Simulation • Performance Drilling, Optimisation • Well Intervention and Optimisation • Well Intervention and Optimisation • Well Bore Quality Considerations • Stuck Pipe Prevention • Innovative Well Planning Models • Data Analytics in Drilling • Real-Time Operations
DRILLING AND COMPLE 13. Optimisation of Well Planning and Execution 14. Challenges in Well Construction and Completion	TIONS • Complex Well Planning • Extended-Reach Drilling • Geomechanical Considerations • Modelling and Simulation • Performance Drilling, Optimisation • Well Intervention and Optimisation • Innovative Well Planning Models • Data Analytics in Drilling • Innovative Well Planning Models • Data Analytics in Drilling • Real-Time Operations • Deep Wells • Drilling With Casing • High Pressure/High Temperature Drilling • Managed Pressure Drilling • Multistage Fractured Horizontal Wells • Naturally Fractured Reservoirs • Plug and Abandonment • Sand Control/Unconsolidated Reservoir • Severe Loss Circulation • Sour/Corrosive Environment • Well Integrity • Deepwater • Underbalanced Drilling

TECHNICAL CATEGORIES | Submission Deadline Extended to 31 March 2019



FACILITIES		DEVELOPMENT AND PI	
16. Project	Contract Strategy	28. Asset Life Cycle.	Asset Management and Maintenance
Management,	Contracting and Procurement	Production	Computerised Maintenance
Contracting, and	Interface Management	Maintenance.	Management Systems
Quality	Integrity Management	Integrity	Corrective Maintenance and Intervention
	Joint Development Areas (JDA)	5,	Corrosion Management
	Project Management Systems—Integrated Planning		Fracturing and Stimulation
	Risk Management and Management of Change		Integrity Strategy
	Standards and Quality Management		Operating Envelopes
	Value Engineering		Pipeline Maintenance (Including Pigging)
			Preventative Maintenance
17. Concept	Complex Facilities		Shutdowns and Turnarounds
Engineering,	Concept Selection—Scoping and Feasibility		Well Integrity and Intervention
Construction, and	Cost Management Systems—Cost Reporting and Control		Flow Assurance
Commissioning	Design—Front-End Engineering Design		Artificial Lift
(The S CS)	Handover and Project Closure		Bacteria Management
	Integrated Planning		Chemical Management
			Corrosion Inhibition
	Operations Readiness		Equipment Strategies and Sparing Philosophy
	Power Generation		Flow Assurance
	Procedures Development for Commissioning		Hydrate Inhibition
	Reliability Availability Management		Mixing Fluid Streams
	Steam, Air, Heating, Cooling, Plant Instrument Air, Drain		Produced Water Management and Disposal
	Systems		Production Chemistry
	Transient Modelling		Sand Control and Sand Management Scale Management
	Engineering		Scale Management
			Smart Chemicals
18. Facilities	Civil and Structural Engineering		
Discipline	Instrument, Control, Electrical		End of Life/Abandonment
Engineering	Integrated Facilities		Monitoring
	Machinery and Rotating Equipment		Recycling
	Materials and Corrosion		Kemediation and Reinstatement Structural Eacilities Removal
	Pipelines		• Well Abandonment
	Process Engineering		- Weir Abditdonment
	Process Safety	29. Data Analytics	Big Data and Data Management
	Subsea and Offshore	and Collaboration	Collaboration Centres and Communication Tools
	Disposal Systems	Tools in Field	Control Systems
		Development	• Field of the Future, Digital Oilfield, Smart Fields,
MIDSTREAM GAS			Smart Wells
19. Gas Processing	• Gas Sweetening		Intelligent Operators and Real-Time Operations and
20 LNC (Linux ford	Dehvdration		Monitoring
20. LING (Liquefied	Sulphur Recovery		Multi-Skilling/People Redeployment
	NGL Recovery		Remote Operations
21. GTL (Gas to	Water Treatment		Use of Social Media/Applications in Asset Management
Liquids)	Digitisation in Gas Processing		• MODIIILY
22. GHG Management	Technology Development in Gas Processing		Data Analytics Internet of Things (IoT) Industry Internet of Things (IIoT)
23. Flow Assurance	Operational Efficiency		
24. Chemical	Flare Gas Recovery and GHG Emission	30 Development	• Advanced Drilling and Intelligent Completions
Inventory	• Geo-Political	Case Studies	Concept Selection and Front-End Engineering Design
Management	Operational Excellence Operational Advisor on Post Depatience	cuse studies	Deepwater
25 Industrial Energy	Operation and Maintenance Best Practices		Infrastructure
Efficiency in Gas	Protection Programmes and best Practices Protecting Equipment Life Cycle Optimisation		Integrated Projects
Processing	Role of Gas and C2+NGL in Future Energy Mix		Major Projects
26 Technology and	and Petrochemicals		Minor Projects
20. recimology and	Storage and Transportation		Onshore and Offshore
Midstream			Production Optimisation
mustream			
		31. Well, Reservoir	Data and Data Management
		and Facility	Exception Based Surveillance
27. IOR/EOR	Advanced EOR Technologies	Management	Integrated Production System Modelling
	Chemical Flooding		Integrated Reviews
	Conformance Technologies		Metering and Allocation
	EOR Case Study		Monitoring and Learning
	• EOR Modelling		Opportunity Identification and Opportunity Maturation
	• Gas Injection (CO ₂ , N2, Foam, etc.)		Process
	Low Salinity Water Flooding		Scheduling and Execution
	Microbial Flooding		Tracers Injection and Application
	Nano lechnologies		Well and Reservoir Surveillance
	Inermal lechnologies FOR (IOR Simulation		WFRM Strategy
	• EUK/IUK Simulation		Advanced Completion
	Lab Analysis COR for Linconventional		Laser-Based Technology
	• EUK for Unconventional		
	• EOK Monitoring and Surveillance		
	FOR Wall Design		

TECHNICAL CATEGORIES | Submission Deadline Extended to 31 March 2019



32. CO ₂ , IOR, and EOR in Operations and Production 33. Conventional Gas	Chemicals CO ₂ Generation, Transport, and Storage Disposal and Reuse Options Gas Cycling Gas/Nitrogen Injection Produced Water Irrigation Produced Water Management Water and Gas Injection Water Injection Well Design Water Treatment and Water Quality Smart Water Enhanced Gas Recovery
and Integrated Gas	 Gas Deliquification GTL (Gas to Liquids) LNG and Floating LNG Produced Water Management and Disposal Production Chemistry and Flow Assurance Production Monitoring and Control
UNCONVENTIONAL	
34. Unconventional Resources Evaluation and Characterisation	 Shale and Tight Reservoirs Emerging Plays Evaluation Shale and Tight Reservoir Characterisation Shale and Tight Static Reservoir Modelling Unconventional Laboratories Testing and Analysis Geophysics for Shale and Tight Reservoirs Geomechanics for Shale and Tight Reservoirs Petrophysics for Shale and Tight Reservoirs Geochemistry for Shale and Tight Reservoirs
35. Unconventional Drilling and Completion	Multi-Pad Drilling Unconventional Well Construction Best Practices Efficiency and Cost Reduction Drill Well Completion
36. Unconventional Stimulation	 Multistage Hydraulic Fracture Stimulation Best Practices Multi-Well Pad Simultaneous Stimulation Operations Completion Technologies for Stimulation (MSF, PnP, CT Fracturing, and Diversion) Water Management for Hydraulic Fracturing Re-Fracturing Fracture Diagnostics and Monitoring Fracture Modelling Fracturing Fluids and Proppant
37. Unconventional Production and Economics	 Reservoirs Production Performance Prediction Unconventional Reservoir Simulation Decline Curve Analyses and Well Testing Unconventional Resources and EUR Estimation Well Interference and Optimal Spacing Filed Development Scenarios Unconventional Economics Artificial Lift for Unconventional Fluid Characterisation for Unconventional Produced Water Management
OVERARCHING THEMES	
38. Health and Safety	 Asset Integrity Crisis Management H&S Management Systems Management of Contractors Safety Leadership, Culture, and Human Factors
39. Environment	Water Management Waste Management Carbon Management Emissions By-Product Solutions
40. Security	Cyber Security and Data Security Data Management/Security of Data Software Piracy Site Security and Mitigation Terrorism, Hijacking, and Kidnapping

41. Human Resources	Government/Regulatory Policies and Incentives Knowledge Transfer and Management Labor Welfare Promoting the Energy Industry to the Youth Promoting Women in the Energy Industry Strategic Resource Planning and Management in a Cyclical Industry Talent Management Workforce Diversity and Inclusion		
42. Social Responsibility	Corporate Social Responsibility/Community Development Projects Education and Capability Building Local Skills Development		
43. Lessons Learnt and Knowledge Management	Building Organisational Capability Business Continuity Centres of Excellence (COE) and Virtual Teams Data and Knowledge Sharing Data Management and Data Architecture Lessons Learnt Culture Use of Social Visual Media		
44. Commercial and Risk Management	Commercial Structures (Tax Royalty, Production Sharing Agreements, Joint Ventures, etc.) Cross Border Development and Production Economical, Commercial Risk, and Political Financing In Oil and Gas Government/Regulatory Framework and Incentives		
45. Molecule Management from Wellhead to Product Delivery	 Flexibility of Refining Operations and Bottoms Upgrades in Meeting Demands Big Data and IoT in Crude Management and Refining Refining Automation Adding Value to Molecules Through Downstream Opportunity 		
46. Emerging Technologies	• Examples and Case Studies		
IR 4.0			
47. Cloud Computing	Cloud Infrastructure/Platforms/Services Cloud Computing Security Private/Public/Hybrid Clouds Applications High Performance Computing (HPC)		
48. Big Data/Artificial Intelligence	Big Data Analytics Artificial Intelligence/Machine Learning/Deep Learning Applications for the Oil and Gas Industry and Other Industries Data Engineering and Anonymisation		
49. Robotics and the Internet of Things (IOT)	Drones and Robotics Applications in Oil and Gas Automation and Mechanisation Edge Computing and Remote Sensing IoT Applications in Oil and Gas Digital Twins Mobility		
50. Emerging Topics	Cross Domain/Process Integration Digital Transformation Blockchain Quantum Computing Immersive Technology (Augmented/Virtual/Mixed Reality) Advanced Materials Additive Manufacturing (3D Printing) Agile Prototyping		

GUIDELINE FOR ABSTRACT SUBMISSION | Submission Deadline Extended to 31 March 2019



Oral Presentations/ePoster Presentations for the Conference will be selected from abstracts submitted to the Conference Programme Committee. The Programme Committee will consider all abstracts submitted by the extended submission deadline, **31 March 2019**. Early submission is particularly important to ensure that the committee members have ample time to review the abstracts. Authors are strongly encouraged to submit their abstracts electronically at the IPTC website, **go.iptcnet.org/20IPTCSubmit**

ABSTRACT CONTENT

A proper review of your abstract requires that it contain adequate information on which to make a judgement. Written in English and **containing a maximum of 450 words**, abstracts should be summarised into four (4) specific paragraphs:

1.OBJECTIVE/SCOPE

Please list the objective and/or scope of the proposed paper. (25-75 words)

2. METHODS, PROCEDURES, PROCESS

Briefly explain your overall approach, including your methods, procedures and process. (75-100 words)

3. RESULTS, OBSERVATIONS, CONCLUSIONS

Please describe the results, observations and conclusions of the proposed paper. (100-200 words)

4. NOVEL/ADDITIVE INFORMATION

Please explain how this paper will present novel (new) or additive information to the existing body of literature that can be of benefit to and/or add to the state of knowledge in the petroleum industry. (25-75 words)

Do not include title or author names in the body of the abstract. Title and author information will be requested separately through the submission system.

TECHNICAL CATEGORIES

Please refer to the list of technical categories to indicate the category that best describes your abstract. A primary choice is required; however, a secondary choice is optional. Abstracts are evaluated on the basis of the information supplied on the abstract form in accordance with the following criteria:

- The proposed paper or ePoster must contribute to petroleum technology or be of immediate interest to the oil and gas industry, and should contain significant new knowledge or experience in the oil and gas industry.
- 2. Data in the abstract must be technically correct.
- The proposed paper or ePoster may present information about equipment and tools to be used in exploration and production. Such abstracts must show the definite applications and limitations of such equipment and should avoid undue commercialism and extensive use of trade names.
- 4. The substance of the proposed paper or ePoster must not have been published previously in trade journals or in other professional or technical journals.
- 5. Prior to abstract submission, clearance must be obtained. Any problems concerning clearance should be outlined when the abstract is submitted.

ABSTRACT SUBMISSION ENQUIRIES Please contact: iptc@iptcnet.org

SUBMISSION DEADLINE EXTENDED TO 31 March 2019

A wide range of sponsorship and exhibition opportunities are available, contact Senior Manager, Sales and Exhibits, Sylvia Ansara at **sansara@iptcnet.org** for more details. 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 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.



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.



The Society of Petroleum Engineers (SPE) is a not-for-profit professional association whose more than 156,000 members in 154 countries are engaged in oil and gas exploration and production. SPE is a key resource for technical knowledge providing publications, events, training courses, and online resources

For more information, visit: www.spe.org.

Contact Details

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13–15 January 2020 Dhahran EXPO Kingdom of Saudi Arabia

