In the current low oil price environment, there has been an increasing need from all parts of the upstream oil and gas industry to do more with less. Everyone in the industry is being asked to reduce the cost of doing business and still deliver the same quality of engineering work, demonstrate annual, quarterly and even weekly cost savings while continuing to execute projects and produce at sustained or increased levels.

As a result, engineers have turned to both new and also previously lower priority technology to achieve these goals of maximising offshore operations. There has been a shift of moving complex, mundane and labour intensive work to machines, in order to enable a simpler way of working for engineers and managers. Buzz words such as data analytics, digitisation, automation, integration, collaborative and remote work environments, high quality surveillance and optimised intervention have gone from a distant goal to a reality with an increasing number of success stories in various parts of the offshore oil and gas value chain.

The switch to a highly automated and modern way of managing offshore assets, especially ageing assets comes with its fair share of challenges. Whilst we now have highly accurate software to automate and digitise our business, we are challenged to implement this new found machine-brain power into existing facilities, many of which are ageing and struggling with asset integrity issues and a lack of reliable data from the field.

**Session Highlights**

Interactive sessions will cover critical and diverse topics such as:

- Robotics and human substitutes
- Crossover technology
- Fibre optic technology advancement
- Chemical optimisation
- Production system simplification
- Remote operation / Industrial Internet of Oilfield Things (IIOT)
- Advancements in process monitoring
- Advanced well surveillance technology
- Condition monitoring for offshore equipment
- Real time production optimisation

**Who Should Attend**

Oil and gas professionals involved in offshore design and operations including:

- Digital Innovation
- Maintenance
- Planning and Surveillance
- Production
- Production Technology
- Project Management
- Technical Consultancy

**Technical Programme Committee**

**CHAIRPERSONS**

Mia Idorman Ismail | Vice President
NEU Dimension Sdn. Bhd.

Asun Entaban | Team Leader Flow Assurance Systems
Shell

**COMMITTEE MEMBERS**

Keith Palmer
President Asia Region
Expro

Steve Jacobs
Senior Manager Integrated Asset Management
Halliburton

Mansub Dai
Senior General Manager, Development and Operation
JX Nippon Oil & Gas Exploration (Malaysia) Ltd.

Virendra Saraf
Senior Principal Instrumentation Engineer
McDermott Asia Pacific Sdn. Bhd.

Li Yong
Deputy Principal Engineer and Chief Research Institute of Petroleum Exploration and Development, PetroChina

Hana Mastindia Md Idru
Head, Integrated Activity Planning, Operations Assurance, Malaysia Assets
PETRONAS Carigali Sdn. Bhd.

Keat-Choon Goh
Principal Technology Expert – PACO Modelling and Optimisation
Shell Global Solutions (Malaysia) Sdn. Bhd.

Maria Papadopoulou
Integrity Management Team Lead, Subsea Services Life of Field
TechnipFMC

Ryan Varyan
Senior Engineer – Life of Field
TechnipFMC

Ugasciny Anrugarn
Region Production Line Champion
Weatherford

Nor Azahir Abdul Razak
Director – Business Development and Strategic Planning
Wood Group
Workshop Objectives

The workshop aims to provide an avenue to share experiences where new automation, monitoring and surveillance techniques have been done or are planned for. Participants will be able to discuss their success stories, challenges and solutions on the use of technology to achieve a leaner, cost effective solution. This will help in keeping up with industry demands of lower cost for equivalent products and services while striving to optimise hydrocarbon production.

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Preliminary Workshop Schedule

TUESDAY, 3 OCTOBER 2017

0700 - 0825 Arrival of Delegates and Registration

0825 - 0830 Safety Announcement by Hotel

0830 - 0945 Welcome, Introduction and Keynote Address
- Session Managers: Asun Entaban, Shell; Mia Ismail, NEU Dimension Sdn. Bhd.

0945 - 1015 Group Photo / Coffee and Tea Break

1015 - 1200 Session 1: Robotics and Human Substitutes
- Session Managers: Maria Papadopoulou, TechnipFMC; Ugasciny Arumugam, Weatherford

The oil and gas industry is actively moving towards the use of automated technologies, with more intelligent methods to explore and extract hydrocarbons, whilst managing the integrity of assets throughout the life of the field. This session brings into light non-traditional equipment and associated technologies available in the market, and success stories, used to effectively reduce cost, enhance efficiency and increase the level of safety by removing the need for direct handling. The session will also identify the challenges and areas that need innovation and new technologies in offshore operations.

1200 - 1300 Networking Luncheon

1300 - 1430 Session 2: Crossover Technology
- Session Managers: Mia Ismail, NEU Dimension Sdn. Bhd.; Ugasciny Arumugam, Weatherford

This session shall explore various technologies from other industries that can or have been applied to the oil and gas offshore operations, as well as technology from other segments within the offshore ecosystem. It will seek to establish and understand how the industry can learn from one another by adopting and applying various innovative ideas, externally and internally, to benefit the offshore industry amidst the challenging business environment faced today.

1430 - 1445 Coffee and Tea Break

1445 - 1615 Session 3: Fiber Optic Technology Advancement
- Session Managers: Keith Palmer, Expres; Maria Papadopoulou, TechnipFMC

This session will address the advancements of fibre optic technology applications in various aspects of offshore operations. Since the first fibre optic cable was installed in a well over 20 years ago, the use of fibre optics in oil and gas applications has expanded to include measuring various downhole and surface parameters. The focus will be on topics and success stories that include wellbore, surface, and subsea applications. The session will also strive to identify challenges and opportunities to continue to utilise this technology in many other applications within our industry.

1615 - 1745 Session 4: Chemical Optimisation
- Session Managers: Asun Entaban, Shell; Li Yong, PetroChina

When offshore production facilities are in operation, the use of chemicals on both research and field experience are welcomed. Posters, including unconfirmed / partial results, are to be presented at an assigned time and are open for discussion. Posters will be on display for the entire Workshop period.

When preparing your poster:

- Avoid commercialism. No mention of trademarks / product name
- Poster size should be approximately 0.8m x 1.2m (W x H) or size A0 in portrait layout
- Identify topic by title, affiliation, address, and phone number
- Include a brief abstract that summarises the technology to be addressed
- Make the display as self-explanatory as possible
- Place the information in sequence: beginning with the main idea or problem, method used, results, etc. (Draw a plan keeping the size and number of illustrations in mind)
- Keep illustrations simple by using charts, graphs, drawings, and pictures to create interest and visually explain a point
- Use contrasting colours
- Use large print for narrative materials. (We suggest a minimum of 24 points or 3” high letters for the title)

POSTER SOLICITATION & INFORMATION

All participants are encouraged to prepare a poster for the Workshop. Presentations on both research and field experience are welcomed. Posters, including unconfirmed / partial results, are to be presented at an assigned time and are open for discussion. Posters will be on display for the entire Workshop period.

When preparing your poster:

- Avoid commercialism. No mention of trademarks / product name
- Poster size should be approximately 0.8m x 1.2m (W x H) or size A0 in portrait layout
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- Use contrasting colours
- Use large print for narrative materials. (We suggest a minimum of 24 points or 3” high letters for the title)

*Note that the Workshop Programme Committee will review all poster abstracts / materials prior to display, and reserves the right to refuse permission to display any poster considered to be commercial in nature. If you are interested to participate, please email your proposed topic with a short abstract (between 200-300 words) to Jenny Chong, SPE Senior Event Manager at jchong@spe.org by 21 August 2017.
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0945 - 1015 Group Photo / Coffee and Tea Break

Asun Entaban,

0700 - 0825 Arrival of Delegates and Registration

1045 - 1215 Coffee and Tea Break

1030 - 1045 Coffee and Tea Break

1045 - 1215 Session 7: Advancements in Process Monitoring

Session Managers: Ryan Varyan, TechnipFMC; Manabu Doi, JX Nippon Oil & Gas Exploration (Malaysia) Ltd.

Field monitoring systems in the oil and gas industry provide essential information for effective and efficient production operations. Its system and programme shall be carefully arranged in accordance with the life stage of individual fields and adopted based on the maturity of the technology. Session topics will focus on advanced monitoring system for offshore application including the new technology/apparatus, novel approach for data mining and interpretation, and many other advanced online monitoring systems which are currently in the state of matured technology readiness level (TRL).

1215 - 1305 Networking Lunch Break

1315 - 1445 Session 8: Maximising Recovery through Advanced Well Surveillance Technology

Session Managers: Steven Jacobs, Halliburton; Mia Idorman Ismail, NEU Dimension Sdn. Bhd.

On average, it is estimated that the world’s oil fields recovery is only about 35%, leaving more locked-in reserves untargeted. Advanced technologies are used maximise the extraction of hydrocarbons through efficient production. To maximise recovery, it is important to improve the understanding of how reservoir behaves based on real and measured data which are then used to assist in making effective decisions. This session will focus on how the advancement of downhole technology contribute to increased efficiency, reduced cost and maximised recovery.

1445 - 1500 Coffee and Tea Break

1500 - 1630 Session 9: Condition Monitoring for Offshore Equipment

Session Managers: Virendra Saraf, McDermott; Nor Azahar Abdul Razak, Wood Group

This session will focus on condition-based preventive and predictive maintenance by monitoring equipment health, detecting failure early enough to plan and execute maintenance activities, providing input for performance monitoring and performing a Reliability, Availability and Maintainability (RAM) analysis. This session will address various mechanical, electrical and instrument equipment’s condition, including performance monitoring and formation of an integrated system for the entire facility. Session topics will include asset wide system architecture, data integration and case studies.

1630 - 1800 Session 10: Real Time Production Optimisation

Session Managers: Keith Palmer, Expro; Keat-Choon Goh, Shell

The current low oil and gas prices continue to challenge the economies of aging and brownfield assets production. Real Time Production Optimisation systems control completely or partially the production process. This session will address and current practices that allow improvements in productions through implementation of process controls, data validation, and model updating. Examples highlighted will be related to process, maintenance planning, gas lift optimisation and water injection.

1800 Session 11 : Workshop Summary and Closing Remarks

Session Managers: Asun Entaban, Shell; Mia Idorman Ismail, NEU Dimension Sdn. Bhd.
SPE WORKSHOP:
Maximising Value in Offshore Operations – Automation, Monitoring, Surveillance and Control
3 - 4 October 2017 | Kuala Lumpur, Malaysia

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Would you be willing to give a brief (10-15 minutes) presentation? □ Yes □ No
If yes, please attach the topic with a short abstract of your proposed presentation.
One of the Programme Committee members will contact you to discuss your presentation.

*IMPORTANT: REGISTRANTS FOR SPE WORKSHOPS ARE ACCEPTED ON THE BASIS OF INFORMATION SUBMITTED BY EACH REGISTRANT.

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☐ Reservoir Description and Dynamics
☐ Projects, Facilities and Construction

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☐ Drilling □ Economics
☐ Operation □ Production
☐ Geology □ Geophysics
☐ Reservoir □ Surveillance
☐ Management □ Other

Listing background and experience. (Use additional paper if required)

List your expectation for the Workshop, so that the committee can tailor a portion of the Workshop to answering attendees’ concerns.
(Use additional paper if required)

Registration Fees (Please tick appropriate box)

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CANCELLATION POLICY

• A processing fee of USD150.00 will be charged for cancellation received thirty (30) days prior to the first day of the workshop.
• 25% refund will be made for cancellation received between twenty nine (29) - fifteen (15) days prior to the first day of the workshop.
• No refund on cancellation received fourteen (14) days prior to the first day of the workshop.
• No refund will be issued if a registrant fails to show up on-site.

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