

**DIGITALIZATION – A GAME CHANGER IN THE OFFSHORE AND  
MARITIME INDUSTRY  
OMAE-SNAME-MTS WORKSHOP**

AT OMAE 2020 , FT LAUDERDALE, FLORIDA  
Tuesday June 30<sup>th</sup> and Wednesday July 1<sup>st</sup>

## Main Workshop WHAT IS INTERESTING?

- **WORKSHOP IS CONTAINED WITHIN OMAE CONFERENCE**
  - We Have Had Workshops Within Before (e.g. Brazil etc).
  - Difference is Programming Paper Sessions AROUND the Workshop
- **SUPPORTING “SPONSOR SOCIETIES”:**
  - OMAE / ASME
  - SNAME
  - MTS ..... All contributed to planning and content.
- **IMPORTANT TOPICAL THEME:**
  - The Various Concepts around “Digitalization” AI, “BIG DATA”, Dealing with “Climate Change” etc is changing our Industry ----- we NEED TO PROVIDE A FORUM
- **STRUCTURE OF WORKSHOP**
  - 2-DAYS, Tuesday through Wednesday
  - “EXTERNAL INDUSTRY LEADERS/CO-CHAIR” TO OPEN AND SUMMARIZE EACH SESSION
  - Co-ordinated, complimentary topics covering full scope of Industry from Design to Operate

## Main Workshop Sessions

### A. OPENING KEYNOTES

- expectations of senior thought leaders in Offshore, Marine and Shipping.

### B. DELIVERY OF MAJOR OFFSHORE PROJECTS:

- From Design, Fabrication, Installation and Operations.

### C. UNMANNED, AUTONOMOUS, ASSETS:

- Subsea, Unmanned Facilities, Autonomous Vehicles and Associated Support

### D. DIGITAL TWINS

- Making Digital Twins from Design through Fabrication.
- Major Drilling and Operating Company Use of “Big Data” in Fleet Management

### E. SUMMARY PANEL

## Keynote Session A

| A. OPENING PANEL:<br>STRATEGIC VIEW OF THE<br>FUTURE | DAY 1 morning session I |  | LEADER'S VIEW OF THE FUTURE AND THE POTENTIAL FOR<br>'DIGITALIZATION': |   |   |
|--|-------------------------|--|--|---|---|
|  |                         |  | 1) OFFSHORE  | The Need for Commercial and Environmental Breakthroughs from Design through Operate | Shell VP of Digitalization: Sada Iyer (Sada to confirm)   |
|  |                         |  | 2) SHIPPING  | Continuing the Significant Chances on the High Seas                                 | Dr.Xiaozhi (Christina) Wang, VP Digital Solutions, ABS    |
|  |                         |  | 3) MARINE  | Knowing What to Plan and Build Infrastructure For                                   | Thomas Chance, Founder of C&C Technologies and ASV Global |

## Major Project Delivery Session B

|                 |   |   |   |
|-----------------|---|---|---|
| DAY1 morning II |   | BRIEF OPENING REMARKS FROM CHAIR SETTING EXPECTATIONS for the SESSION   | INDUSTRY LEADER<br>John O'Brien<br>Chevron                                    |
|                 | 1) MAJOR CONSTRUCTION DELIVERY AND VALUE ADDED APPLICATION              | PRACTITIONERS: Practical Applications of "Digitization" to add value in Construction and Commissioning from a Practitioners Point of View                                       | Kelly Bowen Shell   |
|                 | 2) THE CHANGING DELIVERY IN MAJOR SHIPYARDS                             | MAJOR SHIPYARDS: Advances in standardization, automation, Vendor tracking, 4D, 5D and Commissioning in Major Shipyards ---  | Sirock Yoon, SHI  |
|                 | 3) TURNKEY DELIVERY IN THE FPSO WORLD                                   | TURNKEY PROVIDERS: How the FPSO turn-key providers are accomplishing the promise of "digitalization" from concept thru de-commissioning   | Erica DiMaioCecchi ,<br>SBM   |
| LUNCH           |   |   |   |
| DAY1 pm I       | 4) INDUSTRIALIZATION IN THE OFFSHORE WIND INDUSTRY                      | BUILDING 100s of IDENTICAL FLOATING UNITS: How Digitalization will be key in the effort to industrialize project constructions taking the example of the offshore wind industry | Geir-Olav Berg<br>Aker Solutions  |
|                 | 5) Linkage of Operating Units   | Digitalization in FPSOs by connecting 9 FPSOs (8 in Brazil, 1 in WoA) with 10,000+ sensors in each to a Microsoft cloud platform. Data and generating AI models.                | Soichi Ide, VP Operation, LATAM and Ghana; Chief Digital Officer, Modec Group |
|                 | SESSION SUMMARY & OPPORTUNITIES and CHALLENGES LEAD BY CHAIR (NO PANEL) |   | Industry Leader-<br>External CHAIR<br>John O'Brien                            |

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**INTRODUCING THE CONCEPT OF INVITED INDUSTRY LEADER TO BE "EXTERNAL CHAIR" WITH SPECIAL ROLES TO CHALLENGE THE CONTENT & SUMMARIZE THE SESSION**

## UNMANNED, AUTONOMOUS ..SESSION C

|            |  | BRIEF OPENING REMARKS FROM CHAIR SETTING EXPECTATIONS for the SESSION  | INDUSTRY LEADER<br>Kjetil Skaugset                            |
|------------|--|--|---|
| DAY1 pm II | 1) The Final Frontier in Remotely Operated Subsea              | SUBSEA : "Intelligent Subsea" initiative   | John Macleod, Aker, Chief Technology Officer/ Senior VP, Oslo |
|            | 2) Unmanned Facilities in the North Sea                        | SHELL's Successes in Unmanned Fixed Platforms in the North Sea : Paving the way for Deepwater Floaters   | Ian Cook, N.Sea Operations, Shell                             |
|            | 3) Digitalization Breakthroughs in Interventions / Maintenance | benefits of Kongsberg's Digital Twin to enable unmanned offshore facilities<br><a href="https://www.kongsberg.com/digital/solutions/dynamic-digital-twin/equinor-feasibility-study/">https://www.kongsberg.com/digital/solutions/dynamic-digital-twin/equinor-feasibility-study/</a> | Olivier Cadet<br>President of KM (USA)                        |
| end DAY 1  |  |  |   |
| DAY2 am I  | 4) Automated Wind Facilities                                   | DELIVERING REMOTELY OPERATED FACILITIES: Offshore Wind as Leaders in Delivery of Unmanned Floaters; Using digitalization to remotely control units, maximize energy production; Remote monitoring and inspection management.   | Alexia Aubault - Ocergy                                       |
|            | 5) Breakthroughs in Autonomous Vehicles                        | SUPPORT TECHNOLOGIES: Breakthroughs in Robotics; Monitoring; Inspection; Repairs and Underwater Autonomous Vehicles  | Prof. David Lane<br>Heriot-Watt, UK                           |
|            |  | SESSION SUMMARY & OPPORTUNITIES by Ext CHAIR Kjetil Skaugset   |   |

## DIGITAL TWINS & OPERATIONS ..SESSION D

|              |   | BRIEF OPENING REMARKS FROM INVITED CHAIR SETTING EXPECTATIONS for the SESSION   | INDUSTRY LEADER<br>Jose Esteve, Bureau Veritas Project Director. |
|--------------|---|---|--|
| DAY2 am II   | 1) Building and Using Digital Twins                                     | Digital twins should be built in a collaboratively between the SMEs, users, and data engineers.   | Brad Raabis, VP, Pipeline Enterprise                             |
|              | 2) Digital Twins and Class and Regulatory Compliance                    | Digital twins are tools for advancing the use of functional or goal-based standards for Class and IMO (Flag State) compliance in design and operation..           | Don Cronin , ABS   |
| LUNCH BREAK  |   |   |  |
| DAY2 pm I    | 3) Digital Twins—Use in the Real World, Pt. I Operations                | A digital twin can change the ways of working for an operator. It does not change the amount of work onboard — it changes what is done and the selection process. | Mark Walker, MD Proceanic  |
|              | 4) Digital Twins—Use in the Real World Pt. II, Design and Construction. | Shipyards and OEMs are increasingly asked to provide more organized and structured data and information at delivery.  | Torkel Soma, Propel Sayfr  |
|              | 5) <u>FLEET OPERATION—Use in the Real World.</u>                        | <u>Use of Digitalization/Digital Twins in support of a Global Operational Drilling Organization</u>   | <u>TRANSOCEAN AND CHEVRON</u>                                    |
| coffee break |   |   |  |
|              |   | <b>OVERALL TAKE-AWAYS FROM STRATEGIC, PROJECT DELIVERY AND OPERATIONS</b>   |  |

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