Welcome to the 3rd OSRC

The 3rd Offshore Structural Reliability Conference
OSRC2016
14–16 September, Stavanger, Norway
The 3rd Offshore Structural Reliability Conference (OSRC) takes place in Stavanger on September 14-16 2016. The venue is Statoil Business Centre, Stavanger, Norway. This event is organized under the auspices of International Association for Oil and Gas Producers (IOGP); with a strong link to the International Organization for Standardization (ISO) in connection with the development of standards for offshore structures. The event will hence gather major stakeholders from the offshore oil and gas industry to discuss safety issues of importance to the industry and society for a safe and sustainable exploitation of hydrocarbons. Three keynote lectures and about 30 other invited lectures will be delivered as a basis for exchange of opinions on important issues such as service experiences, target safety level, extension of service life of existing platforms, floating platforms, the need for safe yet cost efficient technological solutions and standards.

We would like to welcome you to three interesting and rewarding days in Stavanger.

Time and place

When:  
14–16 September 2016

Where:  
Statoil Business Centre, Stavanger, Norway  
Address: Forusbeen 50, 4035 Stavanger

Organising Committee

Alf Reidar Johansen, IOGP  
Suzanne Lacasse, NGI  
Henrik O. Madsen, DNVGL  
Torgeir Moan, NTNU (chair)  
Simen Moxnes, Statoil
# Conference program – overview

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<td>1000-1110</td>
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<td>Metocean Conditions</td>
<td>P. Tromans; O. T. Gudmestad</td>
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<td>1110-1130</td>
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<td>Wave Environment and Loads</td>
<td>C. Swan; S. Haver</td>
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<td>Reliability of Jackets in Severe Wave Conditions</td>
<td>M. Birades; J. Waegter</td>
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<td>Reliability based Calibration of ULS Code Criteria</td>
<td>H. O. Madsen; A. Mangiavacchi</td>
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<td>Keynote No. 2</td>
<td>Should Global Standards Specify Reliability Values for Design and Assessment?</td>
<td>S. Moxnes; T. Moan</td>
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<td>0940-1030</td>
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<td>Reassessment of Jacket Platforms in Operation</td>
<td>F. Nadim; J-L. Colliat-Dangus</td>
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<td>Inspection Planning with respect to Crack Control</td>
<td>H. O. Madsen; P. Frieze</td>
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<td>Stability of Floating Platforms in a Reliability Perspective</td>
<td>J. Stear; T. Moan</td>
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<td>Reliability of Ship type Production Units</td>
<td>T. Sildnes; C. Wang</td>
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<td>Reliability of Station-keeping Systems</td>
<td>P. Smedley; E. Hovland</td>
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<td>16.09.2016</td>
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<td>Keynote No. 3</td>
<td>API 2GEN – Overarching Document for Developers of the API Series 2 Standards</td>
<td>S. Lacasse; T. Moan</td>
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<td>0940-1030</td>
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<td>Floating Arctic Structures</td>
<td>P. Liferov; M. Maes</td>
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<td>ISO 19900 – Presentations &amp; Discussions</td>
<td>M. Maes; H.O. Madsen</td>
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<td>Closing</td>
<td>Closing Remarks</td>
<td>T. Moan</td>
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Keynote Lectures

Keynote No. 1:
What Characterizes a Reliable Structure?
Simen Moxnes, Statoil, Norway

Keynote No. 2:
Should Global Standards Specify Reliability Values for Design and Assessment?
Philip Smedley, BP, UK

Keynote No. 3:
API 2GEN – Overarching Document for Developers of the API Series 2 Standards
Dave Wisch, Chevron, USA
Sessions

❖ Session 1: Metocean Conditions
Co-chairs: P. Tromans and O.T. Gudmestad

Waves and Associated Current – Experiences from a Five Year Measurement Campaign in the northern North Sea
Kjersti Bruserud, Statoil and Sverre Haver, UIS/NTNU, Norway

Airgap and Safety: Metocean Induced Uncertainties Affecting Airgap Assessments
Sverre Haver, UiS/NTNU, Norway

Wave Kinematics and Hydrodynamic Loads on the Tyra Jacket Inferred from Systematic Model Testing and Field Measurements
Jesper Tychsen, Maersk Oil, Denmark

❖ Session 2: Wave Environment and Loads
Co-chairs: C. Swan; S. Haver

Demonstrating Draugen ALS/ULS Compliance despite Significant Wave/Ringing Load Increases since Original Design
Guido Kuiper, Norske Shell, Norway

Slamming Loads from Steep and Breaking Waves
Gunnar Lian and Tone Vestbøstad, Statoil, Norway

❖ Session 3: Reliability of Jackets in Severe Wave Conditions
Co-chairs: M. Birades; J. Waegter

Summary of the Impact on Reliability by the Tyra Field Extreme Wave Study 2013-15
Jesper Tychsen, Maersk Oil et al., Denmark

The Loads JIP: The Loading and Reliability of Fixed Steel Structures in Extreme Seas
Chris Swan, Imperial College

❖ Session 4: Reliability Based Calibration of ULS Code Criteria
Co-chairs: H.O. Madsen; A. Mangiavacchi

Risk-Based Codification of Structural Design and Assessment: Benefits and Challenges
Marc Maes, University of Calgary, Canada

Uncertainty Assessment of Geotechnical Design and Calibration of Resistance Factors for Offshore Piles
Farrokh Nadim, NGI, Norway
Session 5: Accidental Collapse Limit State
Co-chairs: Y.S. Choo; T. Sildnes

Standards – Targets and not Risk Management
Dave Wisch et al., Chevron, USA

Assessment of Ship Collision Risk in the North Sea: Recent Guidelines
Gerhard Ersdal, PSA, Norway, et al.

Non linear, Dynamic Analysis of Long term Blast Loading on a Topsides Compression Skid
Himanshu Singh, Shell Global Solutions, the Netherlands

Session 6: Reliability of Concrete Platforms
Co-chairs: J. Moksnes; C. O’Brien

Reliability of a Concrete Floating Barge – the NKP Case
Pascal Collet, Total, France

Experiences with the Safety and Durability of Concrete Offshore Platforms
Kolbjørn Heyland, Olav Olsen AS, Norway

ALARP in Decommissioning Brent D
Frank Lange, Shell Global Solutions

Session 7: Reassessment of Jacket Platforms in Operation
Co-chairs: F. Nadim; J-L. Colliat-Dangus

Risk-based Structural Integrity Management for Jacket Structures
Francis Guede, Bureau Véritas, France

Reassessment of Offshore Structures: the Geotechnical Issues
Thomas Langford, NGI, Norway, et al.

Session 8: Inspection Planning with Respect to Crack Control
Co-chairs: H.O. Madsen; P. Frieze

Lessons Learned from Predicted Versus Observed Fatigue of Offshore Steel Structures [Jackets, Semis] in the North Sea
Ole Tom Vårdal, Axess AS and T. Moan, NTNU, Norway

Guidelines for Probabilistic Inspection Planning of Offshore Steel Structures
Gudfinnur Sigurðsson, DNVGL, Norway

Fatigue Analysis, Lifetime Extension and Inspection Plans
Michel Birades, Total and Laurent Verney, Bureau Véritas, France

Session 9: Reliability of Mobile Units
Co-chairs: O. Dalane, C. Wang

Operational Experiences and Design Codes for MODU
Tore Sildnes, DNVGL, Norway

Reliability of Jack-up Platforms
Mike Hoyle, DNVGL
Session 10: Stability of Floating Platforms in a Reliability Perspective
Co-chairs: J. Stear; T. Moan
Assessment of Intact and Damage Stability Regulations for Offshore Floating Structures – in a Reliability and Risk Perspective
Christina Wang, ABS
Reliability of Floating Platforms with respect to Stability
Dag Erling Engberg, DNV GL, Norway

Session 11: Reliability of Floating Platforms
Co-chairs: A. van der Stap; T. Vestbøstad
Industry Standards for Integrity Management of Floating Systems
Jim Stear, Chevron, USA
ALS Design in Practice – Floating Platform Application
Rolf Løken, Aker Solutions, Norway

Session 12: Reliability of Ship type Production Units
Co-chairs: T. Sildnes; C. Wang
FPSOs in Harsh Environment. Status and Main Learnings after 30 years’ Experience with One of Our Most Robust, Reliable and Flexible Concepts
Erlend Hovland, Statoil, Norway
Design Basis of World’s First FLNG to Achieve Good Reliability
Andre van der Stap, Shell Global Solutions, the Netherlands

Session 13: Reliability of Station-keeping Systems
Co-chairs: P. Smedley; E. Hovland
NorMoor JIP – Mooring Design Code Calibration
Sirił Okkenhaug, DNV GL, Norway
Reliability of DP Systems
Haibo Chen, Lloyds Register, China

Session 14: Floating Arctic Structures
Co-chairs: P. Liferov; M. Maes
Sea Ice Management and Reliability of Floating Structures
Richard McKenna, McKenna & Associates, and Brian Wright, Canada
Applying the Limit State Definition in Ice Class Rules for Ships to Offshore Structures
Kaj Riska and R. Bridges, Total, France
Session 15 - on ISO 19900 WG1 ongoing work
Co-chairs: M. Maes and H.O. Madsen


The session consists of presentations and discussion of the preliminary results of the work of technical panels on:

- Limit States & System Effects
  (T. Moan -lead), (ALS/ULS Clarification, Accidental vs. Abnormal Actions, Damaged Members, Robustness and System Effects, Non-structural Robustness, Representative vs. Characteristic Actions and Resistances)
- Risk, Consequence, and Reliability Classes/Targets
  (P. Smedley -lead)(Exposure Levels, Consequence Classes, Quality Control, Reliability Targets)
- Uncertainty Assessment
  (P. Frieze-lead) (Actions, Action Effects, Resistances – also Geotechnical – and Impact on ULS and FLS Requirements)
- Lifetime Extension
  (S. Moxnes –lead)