



FIRST CONFERENCE OF COMPUTATIONAL METHODS IN OFFSHORE TECHNOLOGY (COTech 2017)

COTech 2017 Conference Program

November 30 – December 1, 2017

University of Stavanger, Norway

Program at glance

Date	Time	Events
Day 0:	International & national participants arrive	
<i>Nov. 29</i>	15:00 – 18:00	Registration (Optional)
Day 1:	08:00 – 08:30	Registration
<i>Nov. 30,</i>	08:30 – 09:00	Welcome and Opening Ceremony
	09:00 – 09:45	Keynote 1 Professor Ove T. Gudmestad
	09:45 – 10:30	Keynote 2 Professor Torgeir Moan
	10:30 – 11:00	Coffee break
	11:00 – 12:30	TWO parallel sessions
	12:30 – 13:30	Lunch break
	13:30 – 14:15	Keynote 3 Professor Johan Ölvander
	14:15 – 15:00	Keynote 4 Professor Demosthenes Polyzos
	15:00 – 15:45	Keynote 5 Professor Trond Kvamsdal
	15:45 – 16:00	Coffee break
	16:00 – 17:30	TWO parallel sessions
	17:30 – 19:30	Visiting Stavanger Oil Museum
	19:30 – 21:30	Conference Dinner
Day 2:	08:00 – 08:30	Registration
<i>Dec. 1</i>	08:30 – 09:15	Keynote 6 Professor Hrvoje Jasak
	09:15 – 10:00	Keynote 7 Professor Bjørn H. Hjertager
	10:00 – 10:45	Keynote 8 Olivier Flamand (Research Head)
	10:45 – 11:15	Coffee break
	11:15 – 12:45	THREE parallel sessions
	12:45 – 13:45	Lunch break
	13:45 – 14:00	Closing

Time allocation: Keynote: max. 45 min; each article: 15 min including Q & A

* For multiple co-authors, only the presenting author's affiliation is given. Names of presenting authors are underlined.



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Main Conference Program, Day 1, Part 1 (Nov. 30, 2017)	
08:00 -08:30	Registration <i>Location</i> <i>In front of Auditorium E-102</i>
08:30 – 09:00	Welcome and Opening Ceremony Opening music (Igor Elseev) Øystein Lund Bø, Dean of Faculty of Science and Technology Professor Emeritus Ivar Langen, University of Stavanger
09:00 – 10:30	Keynote Speeches <i>Chair:</i> Professor Emeritus Ivar Langen, University of Stavanger <i>Location</i> <i>Auditorium KE E-102</i>
09:00 – 09:45	Limitations Related to Marine Operations in the Barents Sea <i>Prof. Ove Tobias Gudmestad; University of Stavanger</i>
09:45 – 10:30	Integrity Management of Marine Structures <i>Prof. Torgeir Moan; Norwegian Univ. of Science and Technology, NTNU</i>
10:30 – 11:00	Coffee break
11:00 – 12:30	Two parallel sessions
Session 1:	Marine Operation for Cold Climate
<i>Session chair</i>	Professor Ove Tobias Gudmestad , University of Stavanger
<i>Location</i>	<i>E-164</i>
11:00 – 11:15	Implications Caused by SARex on the Implementation of the IMO Polar Code on Survival at Sea. <u>Knut Espen Solberg</u> , GMC Maritime AS
11:15 – 11:30	On Weather Limitations for Safe Marine Operations in the Barents Sea. <u>Adekunle P. Orimolade</u> , <u>Ove T. Gudmestad</u> ; University of Stavanger
11:30 – 11:45	A Practical Guideline for Human Error Assessment: A causal model, <u>Yonas Z. Ayele</u> , <u>Abbas Barabadi</u> ; Østfold University College
11:45 – 12:00	Limit Cycle Oscillations at Resonances: For systems subjected to nonlinear damping or external forces <u>Karina Hellevik</u> , <u>Ove T. Gudmestad</u> , University of Stavanger
Session 2:	Structural Integrity and Health Monitoring
<i>Session chair</i>	Assoc. Professor Sudath C. Siriwardane , University of Stavanger
<i>Location</i>	<i>E-166</i>
11:00 – 11:15	Analytical and Numerical Investigation of Bolted Steel Ring Flange Connection for Offshore Wind Monopile Foundations. <u>Christian A. Madsen</u> , <u>Jens-Christian Kragh-Poulsen</u> , <u>Karina J. Thage</u> and <u>Michael J. Andreassen</u> ; DTU, Denmark
11:15 – 11:30	Fracture Mechanics Analysis for a Mooring System Subjected to Tension and Out-of-plane Bending. <u>Xutian Xue</u> , <u>Nian-Zhong Chen</u> ; Newcastle University, UK
11:30 – 11:45	An Accurate Fatigue Damage Model for Welded Joints Subjected to Variable Amplitude Loading. <u>Ashish Aeran</u> , <u>Sudath C. Siriwardane</u> , <u>Ove Mikkelsen</u> , and <u>Ivar Langen</u> , University of Stavanger
11:45 – 12:00	Fatigue Strength Degradation of Metals in Corrosive Environments, <u>Nirosha D. Adasooriya</u> , <u>Tor Hemmingsen</u> and <u>Dimitrios Pavlou</u> ; University of Stavanger
12:00 – 12:15	Natural Frequency and Vibration Analysis of Jacket Type Foundation for Offshore Wind Power. <u>Yi-Chen Hung</u> , <u>Yuan-Yi Chang</u> and <u>Sih-Yin Chen</u> ; Ship and Ocean Industries R&D Center, New Taipei City, Taiwan
12:15 – 12:30	Effect of Corrosion on the Buckling Capacity of Tubular Members. <u>Fridtjof H. Øyaseter</u> , <u>Ashish Aeran</u> , <u>Sudath C. Siriwardane</u> and <u>Ove Mikkelsen</u> , University of Stavanger
12:30 – 13:30	Lunch break

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FIRST CONFERENCE OF COMPUTATIONAL METHODS IN OFFSHORE TECHNOLOGY (COTech 2017)

Main Conference Program, Day 1, Part 2 (Nov. 30, 2017)

13:30 – 15:00 Chair: Location	Keynote Speeches <i>Professor Ove T. Gudmestad</i> KE E-102
13:30 – 14:15	Challenges and Possibilities of Industrial Multi-Disciplinary Optimization in the Era of Digitalization <i>Professor Johan Ölvander, Linköping University, Sweden</i>
14:15 – 15:00	Boundary Element Method (BEM) Solution for Large Scale Cathodic Protection Problems, (<i>D. Rodopoulos, T. Gortsas, S.V. Tsinopoulos and D. Polyzos</i>) <i>Professor Demosthenes Polyzos, University of Patras, Greece</i>
15:00 – 15:45	Isogeometric Methods for Offshore Applications <i>Professor Trond Kvamsdal, Norwegian Univ. of Science and Technology, NTNU</i>
15:45 – 16:00	Coffee break
16:00 – 17:30	Two parallel sessions
Session 3: Session chair Location	FEM, BEM & FVM and Design Optimization 1 Prof. Dimitrios Pavlou , University of Stavanger E-102
16:00 – 16:15	Finite Element Simulation of Long Wave Impact on Floating Breakwaters with Variable Stiffness. <i>Theodosios K. Papathanasiou, Angeliki Karperaki, Kostas A. Belibassakis, Brunel University London, UK</i>
16:15 – 16:30	Evaluating Stress Analysis and Failure Criteria for Offshore Structures for Pechora Sea Conditions. <i>Slavko Nestic, Yury Donskoy and Anatoly Zolotukhin, Gubkin Russian State University and Northern Arctic University, Russia</i>
16:30 – 16:45	Numerical Assessment of Wind Turbine Blade Damage Due to Contact/Impact with Tower during Installation. <i>A. S. Verma, N. P. Vedvik and Z. Gao; NTNU</i>
16:45 – 17:00	A Review of Fatigue Crack Propagation Modelling Techniques Using FEM and XFEM. <i>Kristen Rege and Hirpa G. Lemu; University of Stavanger</i>
17:00 – 17:15	An Efficient Structural Finite Element for Inextensible Flexible Risers. <i>Theodosios K. Papathanasiou, Stylianos Markolefas, Payam Khazaeinejad and Hamid Baha; Brunel University London; UK</i>
17:015– 17:30	Application of Foam-extend on Turbulent Fluid-Structure Interaction. <i>Kristen Rege and Bjørn H. Hjertager; University of Stavanger</i>
Session 4: Session chair Location	Wind Engineering 1 Professor Jonas T. Snærbjörnsson , Reykjavik University & Univ. of Stavanger E-164
16:00 – 16:15	Super-long Bridges with Floating Towers: The Role of Multi-box Decks and Hardware-In-the-Loop Technology for Wind Tunnel Tests. <i>Alberto Zasso, T. Argentini, I. Bayati, M. Belloli, and D. Rocchi; Politecnico di Milano, Italy</i>
16:15 – 16:30	Aerelastic Response from Indicial Functions with a Finite Element Model of a Suspension Bridge. <i>Ove Mikkelsen, and Jasna B. Jakobsen; University of Stavanger</i>
16:30 – 16:45	Implementation and Application of the Actuator Line Model by OpenFOAM for Vertical Axis Wind Turbine. <i>Lorenzo Riva, Knut-Erik Giljarhus, Bjørn Hjertager, Siri M. Kalvig; University of Stavanger</i>
17:30 – 19:30	Visit to Stavanger Oil Museum, Bus arrives at 17:20, Western Entrance
19:30 – 21:30	Conference dinner, Stavanger Concert House

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Main Conference Program, Day 2 (Dec. 1, 2017)

08:00 – 08:30	Registration
08:30 – 10:45 <i>Chair:</i> <i>Location</i>	Keynote Speeches Professor Bjørn H. Hjertager , University of Stavanger <i>KE E-102</i>
08:30 – 09:15	CFD Analysis in Subsea and Marine Technology <i>Prof. dr. sc. Hrvoje Jasak, Univ. of Zagreb, Croatia</i>
09:15 – 10:00	Multi-fluid CFD Analysis in Process Engineering <i>Prof. Bjørn Hjertager, University of Stavanger</i>
10:00 – 10:45	Challenges in Wind Tunnel Modelling of Wind Engineering Problems <i>Olivier Flamand; Research Head, Centre Scientifique et Technique du Bâtiment, Nantes, France.</i>
10:45 – 11:15	Coffee break
11:15 – 12:30	Three parallel sessions
Session 5: <i>Session chair</i> <i>Location</i>	Advanced Computational Methods and Applications in Marine Technology Professor Muk Chen Ong , University of Stavanger <i>E-101</i>
11:15 – 11:30	Accurate Green Water Loads Calculation using Naval Hydro Pack. <i>Hrvoje Jasak, Inno Gatin, Vuko Vukčević; University of Zagreb, Croatia</i>
11:30 – 11:45	Study of Lifting Operation of a Tripod Foundation for Offshore Wind Turbine. <i>Hhi Zhu, Lin Li, Muk C. Ong; University of Stavanger</i>
11:45 – 12:00	Vortex-Induced Vibration (VIV) Effects of a Drilling Riser Due to Vessel Motion <i>Rohan S. Joseph, Jungao Wang, Muk C. Ong, Jasna B. Jakobsen; Univ. of Stavanger</i>
12:00 – 12:15	Large Eddy Simulation of Tidal Power Plant using Actuator Line Method. <i>Sam Fredriksson, Göran Broström, Marcus Jansson, Håkon Nilsson, and Björn Bergqvist; University of Göteborg, Sweden</i>
12:15 – 12:30	Fluid Flow in Steady and Oscillating lid-driven Square Cavities. <i>Jianxun Zhu, Lars E. Holmedal, Hong Wang, and Dag Myrhaug; NTNU</i>
12:30 – 13:45	Conference Lunch
Session 6: <i>Session chair</i> <i>Location</i>	FEM, BEM & FVM and Design Optimization 2 Professor Arnfinn Nergaard , University of Stavanger <i>E-102</i>
11:15 – 11:30	Recursive Thoughts on the Simulation of the Flexible Multibody Dynamics of Slender Offshore Structures. <i>Jurnan Schilder, Marcel Ellenbroek, and André de Boer; University of Twente, The Netherlands</i>
11:30 – 11:45	A Nonlinear Dynamic Corotational Finite Element Model for Submerged Pipes. <i>Frans H. de Vries, H.J.M. Geijselaers, A.H. van den Boogaard, A. Huisman; University of Twente, The Netherlands</i>
11:45 – 12:00	A Case Study on Topology Optimized Design for Additive Manufacturing. <i>Aboma W. Gebisa, Hirpa G. Lemu; University of Stavanger</i>
12:00 – 12:15	Influence of Extreme Low Temperature Conditions on the Dynamic Mechanical Properties of Carbon Fiber Reinforced Polymers. <i>Stefanos P. Zaoutos and M.C. Zilidou; Technological Educational Institute of Thessaly, Greece</i>
12:15 – 12:30	Experimental and Numerical Study of Bondura® 6.6 PIN Joints. <i>Imad Berkani, Øyvind Karlsen, Hirpa G. Lemu; Bondura Technologies, Norway</i>
12:30 – 13:45	Conference Lunch

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Session 7:	Wind Engineering 2
Session chair	<i>Professor Jasna B. Jakobsen, University of Stavanger</i>
Location	<i>E-166</i>
11:15 – 11:30	3D WindScanner Measurements of Wind and Turbulence around Wind Turbines, Buildings and Bridges. <i><u>Torben Mikkelsen</u>, Mikael Sjöholm, Nikolas Angelou, Jakob Mann; DTU, Denmark</i>
11:30 – 11:45	Full-scale Monitoring of Wind and Wind-induced Vibrations at Lysefjord Bridge. <i><u>Jonas T. Snæbjörnsson</u>, Jasna B. Jakobsen, Etienne Cheynet, and J. Wang, Reykjavik University, Iceland</i>
11:45 – 12:00	Wind Effects on Long-span Bridges. <i><u>Kristoffer Hoffmann</u>, Robin G. Srouji and Svend O. Hansen; Svend Ole Hansen ApS, Denmark</i>
12:00 – 12:15	A High Fidelity Weather Time Series Generator using the Markov Chain Process on a Piecewise Level. <i><u>Kjetil Hersvik</u>, and Ole-Erik V. Endrerud; Shoreline AS</i>
12:15 – 12:30	
12:30 – 13:45	Conference Lunch
13:45 – 14:00	Conference Closing

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