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Safety & Reliability of Ships, Offshore & Subsea Structures

International Conference
Thistle Hotel, Cambridge Street,
Glasgow - G2 3HN,
Scotland, UK
18th-20th August 2014

PROGRAMME

Sponsors

www.maritime-conferences.com/ASRANet/
Monday 18th August 2014

08:00 -08:50 Registrations - Coffee
08:50 -09:00 Welcome Address
09:00 - 09:45 Opening Lecture: “Innovation for the Global Maritime Industry”, Dr Abdul Rahim, ClassNK Japan
09:45 - 10:30 Keynote Lecture: “Safety of Offshore Structures”, Prof Torgier Moan, Professor of Centre for Ships and Ocean Structures, NTNU - Trondheim, Norway
10:30-11:00 Break

Session 1  Co-Chairs: Dr Paul A. Frieze

11:00-11:30 “Goal-Based Standards and Risk-Based Design – Impact on Classification”, Joerg Peschmann, Rainer Hamann, DNV-GL, Germany
11:30-12:00 “Hull girder ultimate strength under combined shear, torsion and bending moment”, Maria Syrigou, Simon Benson, Robert S Dow, University of Newcastle, UK
12:00-12:30 “Evaluation of a safety level of structural strength by means of whole ship finite element analysis from wave loads to structural strength at real sea state”, Teppei Shiraishi, and Yoshitaka OGAWA, National Maritime Research Institute, Japan
12:30-14:00 Lunch

Session 2  Co-Chairs: Prof W.C Cui & Dr Simon Benson

14:00-14:30 “A Probabilistic Approach to Fatigue Analysis”, Richard Gibson and Buba Kebadze, Upstream Engineering Centre, BP, Sunbury, UK
14:30-15:00 “Reliability of steel chains under working conditions- an experimental study”, Amin Lotfollahi Yaghin, and Robert E. Melchers, Centre for infrastructure performance and reliability, The University of Newcastle, Australia
15:00-15:30 “Investigation of the Failure Behavior of Large Ship Windows”, Wolfgang Fricke, Bjarne Gerlach, and Matthias Guiard, Hamburg University of Technology (TUHH), Hamburg, Germany
15:30-16:00 Break
Session 3  
Co-chairs: Dr Abdul Rahim & Dr Yoshitaka Ogawa  
16:00-16:30 “Reliability Analysis of the Damage Strength of Steel Grillages”, A J Sobey, J I R Blake, R A Shenoi, Fluid Structure Interactions Group, University of Southampton, UK and J M Underwood, BMT Defence Services Ltd, UK  
16:30-17:00 “Reliability and risk research of Hulls of river-sea navigation tankers of <<VOLGONEFT>> Type”, Gennady EGOROV, and Alexander EGOROV, Marine Engineering Bureau, Ukraine, Odessa  
17:00-17:30 “Probabilistic considerations in the deformation mechanics of ship collisions”, Abayomi Obisesan, Srinivas Sriramula and John Harrigan, Lloyd’s Register Foundation (LRF) Centre for Safety and Reliability Engineering, School of Engineering, University of Aberdeen, Aberdeen, UK  

Session 4 (Parallel Session)  
Co-chairs: Dr R.V.Ahilan & Prof Debabrata Sen  
14:00-14:30 “The Application of Advanced Structural Analysis for Integrity Assessment of Offshore Structures”, Mohammad Nabavian, Woodgroup PSN, UK  
14:30-15:00 “Statistical analysis of manufacturing defects on fatigue life of wind turbine main shaft” Hesam Mirzaei Rafsanjan, John Dalsgaard Sørensen, Department of Civil engineering, Aalborg University, Krishnendu Mukherjee, Søren Fæster, Department of Wind energy, Technical University of Denmark, Copenhagen, Aalborg, Denmark.  
15:00 – 15:30 “Derivation of Probability Distribution of Extreme offshore structural Response due to combined wave and current Loading from the Probability Distribution of Extreme Surface Elevations” H. Mallahzadeh, Y. Wang, G. Najafian, School of Engineering, University of Liverpool, United Kingdom and M.K. Abu Husain, N.I. Mohd Zaki, Universiti Teknologi Malaysia, International Campus, Jalan Semarak, Kuala Lumpur, Malaysia  
15:30 – 16:00 Break  

Session 5 (Parallel Session)  
Co-chairs: Dr Mohammad Nabavian & Dr Tanmay Sarkar  
16:00-16:30 “Documentation of fire resistance of offshore structures”, Jørgen Amdahl, Centre for Autonomous Marine Operations and Systems (AMOS), Dept. of Marine Technology, NTNU and Tore Holmås, Aker Solutions MMO, Bergen
16:30-17:00 “Hazard Curves and Action Curves for Offshore Structures”, Paul A Frieze, PAFA Consulting Engineers, UK

17:00-17:30 “Study of Deepwater Field Development with Floating Drilling Production Storage & Offloading Vessel”, Sanoob Balakrishnan, and Erlend Seim, Cochin Shipyard Ltd., Cochin, India and Aker Solutions, Bergen, Norway

18:30: CIVIC RECEPTION, Glasgow City Chambers.

Tuesday 19nd August 2014

09:00-09:45 Keynote Lecture: “Application of Structural Reliability in the development of ISO 19901-9 Structural Integrity Management for Offshore Structures”, Dr Ramsey Fraser, Technical Director - Offshore structures, Oil & Gas, AtkinsGlobal, UK

09:45 -10:30 Keynote Lecture: “Design Loads on Ship Structures from First Principle Analysis”, Dr Olav Rognebakke, Head of Hydrodynamics & Stability, DNV-GL, Germany

10:30-11:00 Break

Session 6 Co-Chairs: Prof Masahiko Fujikubo & Prof Gennadiy Egorov

11:00-11:30 “Sensitivity to correlation in the RBDO using different Gaussian and non-Gaussian copulas”, Vedran Zanic, Luka Grubisic, Karlo Piric, Faculty of Mech. Eng. and Naval Architecture, and Faculty of Mathematics, University of Zagreb, Croatia

11:30-12:00 “Risk and Reliability-Based Design, Inspection and Maintenance Planning”, Nabile Hifi, and Nigel Barltrop, Department of Naval Architecture and Marine Engineering, University of Strathclyde, Glasgow, UK

12:00-12:30 “Numerical Assessment on Ship Structural Components under Lateral Impact Load for Experimental Program”, Jin Pan, Min Zhang, and Ling Zhu, Green Ship and Marine Engineering Equipment Technology Research Centre, School of Transportation, Wuhan University of Technology, PR China.

12:30-14:00 Lunch
Session 7  Co-chairs: Dr Fai Cheng & Dr Jonnathan Downes

14:00 - 14:30  “Collapse behaviour of a ship’s hull girder under impact load: a comparison between scaled model test and direct numerical simulation”, Kazuhiro Iijima, Yuko Suzuki and Masahiko Fujikubo, Department of Naval Architecture and Ocean Engineering, Osaka University, Suita, Osaka, Japan

14:30 - 15:00  “Motion/collapse analysis of a ship’s hull girder in waves using Idealized Structural Unit Method”, Masahiko Fujikubo, Kazuhiro Iijima, Makoto Goto, Department of Naval Architecture and Ocean Engineering, Osaka University, Suita Japan, Zhiyong Pei, School of Transportation, Wuhan University of Technology, Wuhan, P.R. of China, Tetsuya Yao, Design Department, Tsuneishi Shipbuilding Co., LTD, Fukuyama, Hiroshima, Japan

15:00 - 15:30  “Wave-Induced Loads on a Catamaran Hull with forward Speed”, Debabrata Sen and Amresh Negi, Department of Ocean Engineering and Naval Architecture, Indian Institute of Technology Kharagpur, and Indian Register of Shipping, Mumbai, India

15:30 - 16:00  Break

Session 8  Co-chairs: Prof Jorgen Amdahl

16:00 - 16:30  “Designing for Extreme Conditions: Going beyond Design Basis Accidents”, Nawal K Prinja, Technical Director, AMEC Clean Energy

16:30 - 17:00  “ICE impact Analysis of metallic and composite underwater structure dedicated to the intervention and remediation of trapped pollutant in Tanker Wrecks”, D. Mazarakos, Ath. Kotzakolios, and V. Kostopoulos, Applied Mechanics Laboratory, Mechanical Engineering & Aeronautics Department, University of Patras, Greece

17:00 - 17:30  “Identification of Slam Events Experienced by a High-Speed Craft”, Teresa Magoga, Seref Aksu, Roberto Ojeda, Stuart Cannon, and Giles Thomas, Defence Science and Technology Organisation, and Australian Maritime College, The University of Tasmania, Australia

Session 9 (Parallel Session)

Co-chairs: Dr Joerg Peschmann & Mr Richard Bamford

14:00 - 14:30  “Design of Semisubmersibles” Omar Khattab, Independent Consultant (Naval Architect & Hydrodynamics), UK

14:30 - 15:00  “In search of rational design codes for floating offshore structures”, Richard Bamford, Floating Systems Engineer, Upstream Engineering Centre, BP Exploration Operating Company Limited, UK
15:00-15:30  “Relative Reliability of Offshore Wind Turbine and Oil and Gas Substructures”  
Trevor Hodgson, Rushikesh Sapdhare and Jorge Para Rodriguez, AtkinsGlobal, UK

15:30-16:00  Break

Session 10 (Parallel Session)

Co-chairs:  Prof V. Kostopoulos & Dr Srinivas Sriramula

16:00-16:30  “Damage identification in composite offshore structures using Lamb waves”, V. Mparas, T.H. Loutas, A. Kozakolios, V. Kostopoulos, Applied Mechanics Laboratory, Mechanical Engineering & Aeronautics Department, University of Patras, Achaia, Greece

16:30-17:00  “Modelling of Repeated Impacts on Ships and Offshore Platforms”  
Ling ZHU, Green Ship and Marine Engineering Equipment Technology Research Centre, School of Transportation, Wuhan University of Technology, PR China

17:00-17:30  “A Risk Based Underwater Inspection Approach for Structural Integrity Management of Fixed Offshore Structures in PETRONAS’ Malaysian Operations”  
Nigel Wayne Nichols, Riaz Khan, Biramata Isnadi, Hafis M Harif, Petronas, Malaysia

19:00-21:30  Conference Dinner: Thistle Hotel, Glasgow.

Wednesday 20\textsuperscript{nd} August 2014

09:00-09:45  Keynote Lecture:  “Integrated structural design & project contracting: Keys to lowering the cost of offshore wind energy”  
Dr Tim Camp, Head of Wind Turbine Engineering, DNV-GL, UK

09:45-10:30  Keynote Lecture:  “Moving Towards Reliability Based Design of Subsea Structures”  
Dr T Sriskandarajah, Engineering Director Technical Authority - Pipeline Systems, Subsea7, UK

10:30-11:00  Break

Session 11  
Co-Chairs:  Prof Robert Dow & Mr Binbin Pan

11:00-11:30  “Investigation into Effectiveness of Corrective and Design-out Maintenance Philosophies Applied to Aluminium Hull Structure”, Ronald F Mead and Seref Aksu, Defence Science and Technology Organisation, Australia

11:30-12:00  “A Risk Based Framework for the Analysis of Intact and Damaged Ships”, S.Kelangath, Woodgroup PSN, Aberdeen and P.K.Das, ASRANet Ltd, Glasgow, UK
12:00-12:30  “The reliability analysis of repairable k-out-of-n systems with component lifetimes and repair time subjected to phase-type distribution”, Wei WANG and Tong CHEN, Department of Management Engineering, Naval University of Engineering, Wuhan, China

12:30-14:00  Lunch

Session 12  Co-chairs: Prof Ling Zhu & Ms Teresa Magoga

14:00-14:30  “A Study on Combined Back Propagation with Self Organization Map for Marine Fuel Consumption Prediction Model”, Chongmin Kim, Kae-myoung Park, Dae-heon Kim and TaeBum HA, Korean Register of Shipping, Seoul, Korea

14:30-15:00  “Elastic large deflection analysis of steel plates with random initial distortion subject to compressive loading”, Riddhideep Mandal and Yasumi Kawamura, Department of System Design for Ocean-Space, Yokohama National University, Japan

15:30 – 16:00  Break

Session 13  Co-chairs: Mr Nigel Nichols & Mr Richard Gibson

16:00-16:30  “On the Development of Reliability Based Multidisciplinary Design Optimization (RBMD0) approach for deep manned submersibles”, Binbin Pan, Hadal Science and Technology Research Centre, Shanghai Ocean University, China, and Weicheng Cui, Hadal Science and Technology Research Centre, Shanghai Ocean University, and an adjunct Professor King Abdulaziz University, Kingdom of Saudi Arabia

16:30-17:00  “Comparison of closed-form and numerical strength responses for the reliability analysis of stiffened plates”, Pretheesh Paul C, Wood Group PSN, Aberdeen and P K. Das, ASRANet Ltd, Glasgow, UK

17:00-17:30  “Fatigue life Evaluation of an Oil Tanker Employing Direct Hydro-Structure Computations - A Comparison with the CSR-H Approach”, Y. Quémener, K.C. Chen, C.F. Lee and C.H. Huang, China Corporation Register of Shipping (CR), Taipei, Taiwan.

Session 14 (Parallel Session):

Co-chairs:  Prof Sang Rai Cho

11:00-11:30  “Scale Effects on Responses of Marine Structures Subjected to Impact Loadings”, Sang-Rai Cho, Sung-II Choi, Seung-Kyung Son and Jeong- Yul Park, University of Ulsan, Korea

12:00-12:30  “Probability of Failure of Damaged Ship Structure”, U. O. Akpan, T. S. Koko, B. Yuen, F. Lin, Lloyds Register, Halifax, Canada

Session 15 (Parallel Session):

Co-chairs:  Dr Omar Khattab

14:00-14:30  “Marine Warranty Experience of A Typical Wind Farm Cable Lay Project”, Plamen Dimkin & Tanmay Sarkar, Noble Denton Marine Assurance & Advisory, DNV GL – Oil and Gas

14:30-15:00  “Reliability of Submarine Structures”, B.K. Yuen, T.S. Koko, U.O. Akpan Lloyd’s Register Martec Ltd, Canada

15:00-15:30  “Risk Analysis of Mooring System Based on Fuzzy Fault Tree”, S.K Bhattacharyya, A.S Cheliyan, Department of Ocean Engineering, Indian Institute of Technology Madras, India

15:30-16:00  Break

Session 16 (Parallel Session)

Co-chairs:  Prof Nawal Prinja & Prof Purnendu Das

16:00-16:30  “Damage detection in a wind turbine blade based on autoregressive coefficients” Simon Hoell, and Piotr Omenzetter, LRF Centre for Safety and Reliability Engineering, University of Aberdeen, UK

16:30-17:00  “Research on Scouring Identification of Jack-ups based on the Structural Stress field” Chunmei Li, Renjun Yan, Lin Xu, Fen Li, Yingjiang Zhao, School of Transportation, Wuhan University of Technology, Wuhan, Hubei, China

17:00-17:30  “Methodology for Structural Reliability of Composite Pipelines for Riser Applications” P K Das, ASRANet Ltd, Glasgow and George Nicky Alex A V, DNV-GL, London UK
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Prof. R. Dow, University of Newcastle, UK [Co-Chair]

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International Conference on Safety & Reliability of Ships, Offshore & Subsea Structures
18th-20th August 2014, Glasgow

Registration Details:

The cost of the conference will be
- £400 (pounds sterling) + VAT (only for UK)
- £250 + VAT (only for UK) for the Students

This includes registration fee, conference CD-ROM, papers and conference dinner for authors and delegates.

The final date for the registration without late fee will be 30th May 2014

Late Fee:

The registration cost of the conference after 30th May 2014 will be
- £475 (pounds sterling) + VAT (only for UK)
- £300 + VAT (only for UK) for the Students

The final date for the registration with late fee will be 15th July 2014

Accommodation
Details of accommodation in Glasgow will be sent at a later date.

Venue
Thistle Hotel,
Cambridge Street,
Glasgow G2 3HN.
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