MARSTRUCT 2007

Advancements in Marine Structures

1st International Conference on Marine Structures

PROGRAMME

12 -14 March 2007

Glasgow

08 30   Registration

09 00   MARSTRUCT NoE General Assembly (for Consortium Representatives)

10 15   Opening session
<div align="center">

WELCOME SPEECH
By
Sir Muir Russell KCB FRSE
Principal, University of Glasgow, United Kingdom.

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Session 1   Methods & Tools for Loads & Load effects (Room No.1)
Session Chairs: J.J. Jensen & K.S.Varyani

10 30   Uncertainty of average wave steepness prediction from global wave databases, *E.M. Bitner-Gregersen   & C. Guedes Soares*
11 00   Ship weather routing based on sea keeping performance, *M.B. Pacheco & C. Guedes Soares*
11 30   On Extreme Ship Response in Severe Short-Term Sea State, *T. Fukasawa, H. Kawabe & T. Moan*
12 00   Extreme response estimation of marine structures based on design contours and response surface methods, *B.J. Leira*

12 30 Lunch

Session 2   Methods & Tools for Loads & Load effects
Session Chairs: A. Incecik & P. Temarel

14 00   Extreme value predictions and critical wave episodes for marine structures by FORM, *J. Juncher Jensen*
14 30   Effect of ship length on the vertical bending moments induced by abnormal waves, *N. Fonseca, C. Guedes Soares & R. Pascoal*
15 00   The 2D numerical modelling of slamming on a wedge and bow shape using the finite volume method, *A. Ioan & L. Domnisoru*
15 30   Derivation of slamming loads using the optimal state estimation method, *J.T Tuitman & W. Trouwborst*

16 00 – 16 30 Coffee/Tea Break

16 30   Wave Induced Global Loads for a Damaged Vessel, *L. Folso, E. Rizzuto & E. Pino*
17 00   Investigation of the variation of loads experienced by a damaged ship in waves, *T.W.P. Smith, K.R. Drake & S. Rusling*
17 30   Time domain simulation of ship global loads due to progressive flooding, *T.A. Santos & C. Guedes Soares*
18 00   Effective breakwaters for high speed container vessels, *K. S. Varyani & X.P. Pham*

18 30   End of Sessions

19 00   *CIVIC RECEPTION*

Session 3   Methods & Tools for Strength Assessment
Session Chairs: P.Varsta & P. Hess

10 30   Effects of changes in curvature on the natural characteristics of curved structures, *B. Hu, J. T. Xing, R. A. Shenoi & J. Smith*
11 00   Numerical analysis of eigen vibration modes for an orthotropic ship structural panel, *I. Chirica & L. Domnisoru*
11 30   Hydroelastic Analysis of Cantilever Plate in Time Domain, *F. Kara & D. Vassalos*
12 00   The Dynamic Behaviour of an Integrated Liquid-LNG Tank Ship-Water Interaction System, *Y.P. Xiong, J.T. Xing & W.G. Price*

12 30   Lunch

Session 4   Methods & Tools for Strength Assessment
Session Chairs: M. Samuelides , C.Wang

14 00   Non-linear hydroelastic response analysis in head waves, for a large bulk carrier ship hull, *L. Domnisoru & A. Ioan*
14 30   The natural vibration characteristics of a Water – Shell Tank interaction system, *J.T. Xing, Y.P. Xiong & M. Tan*
15 00   Broadband excitation induced by propellers and ships comfort evaluation, *F. Besnier, N. Buannic, L. Jian & A. Blanchet, S.Branchereau*
15 30   On the influence of boundary conditions on the vibrations of ship propulsion systems, *L. Murawski*

16 00 – 16 30   Coffee/Tea Break

16 30   First-Principles Collision Analysis for Design, *G. Mermiris, D. Vassalos & D. Konovessis*
17 00   A Method for Progressive Structural Crashworthiness Analysis under Collisions and Grounding, *J.K. Paik & J.K. Seo*
17 30   Studies on the Behaviour of Double Bottoms during Grounding, *M. Samuelides, J. Amdahl & B. Dow*

18 00   End of Sessions

19 00   *CIVIC RECEPTION*

Session 5   Methods & Tools for Structural Design & Optimisation
Session Chairs: Y.Sumi & N. Besnard

09 00   Benchmark on ship structural optimisation, *N. Besnard, M. Codda, A. Ungaro, C. Toderan, A. Klanac & F. Pécot*
09 30   Optimisation of a container ship hull structure, *T. Jastrzebski, Z. Sekulski, P. Gutowski, M. Taczala & A. Jazukiewicz*
10 00   A concept of omni-optimization for ship structural design, *A. Klanac & Jelovica* (21)
10 30   Least cost optimization of a large passenger vessels, *T. Richir, N. Losseau, E. Pircalabu, C. Toderan & P. Rigo*

11 00 – 11 30   Coffee/Tea Break

11 30   Structural optimization in fatigue-life assessment concerning a DDG of *Ammiragli* Class of the Italian Navy, *G. Vacca, M. Galliussi & S. Simone*
12 00   Decision support problem formulation for structural concept design of ship structures, *V. Zanic, P. Prebegn & S. Kitarovic*

12 30   Lunch

Session 6   Experimental Analysis of Structure (Room No. 1)
Session Chairs: S.Gielen & R. A. Shenoi

14 00   A plea for large-scale testing, *B. Boon*
14 30   Experimental evaluation of the behavior of a mild steel box girder under bending moment, *J.M. Gordo & C. Guedes Soares*
15 00   An experimental and numerical study on GFRP box girder under pure bending, *C. Guedes Soares, N.Z. Chen, F.M. Santos & C. Santos*

15 30 – 16 00   Coffee/Tea Break

16 00   Structural loads and response analysis for a Canadian frigate, *D. C. Stredulinsky, N. G. Pegg, C. P. Gardiner*
16 30   Numerical Study of the absorbed energy in clamped beams with different lengths under transverse impact, *D.M Dimas, C. Guedes Soares*
17 00   Measuring damping properties of viscoelastic materials for marine applications, *A. Ferrari & E. Rizzuto*

17 30   End of Sessions

19 00   CONFERENCE DINNER

<u>Tuesday 13th March, 2007</u> (Room 2)

Session 7   Methods & Tools for Strength Assessment
Session Chairs: J.K. Paik & J.M. Gordo

09 00   The racking analysis in the early stages of structural design, *V. Amatulli, M. Biot & L. Schiffrer*
09 30   Residual strength and survivability of ships under combined vertical and horizontal bending, *I.A. Khan & P.K. Das*
10 00   Methods for Ultimate Limit State Assessment of Marine Structures: A Benchmark Study, *J.K. Paik, J.K. Seo, B.J. Kim, Y.S. Suh & B.S. Jang*
10 30   Formulation for Ultimate Shear Strength of Ship Structure, *S. Zhang & P. Kumar*

11 00 – 11 30   Coffee/Tea Break

11 30   Collapse strength of longitudinal plate assemblies with dimple imperfections, *R.M. Luís, C. Guedes Soares & P.I. Nikolov*
12 00   Bending response of laser-welded web-core sandwich plates, *J. Romanoff & P. Varsta*

12 30   Lunch

Session 8   Methods & Tools for Strength Assessment
Session Chairs: B. Dow & N. Barltrop

14 00   Round Robin study on structural hot-spot and effective notch stress analysis, *W. Fricke, A. Bollero, I. Chirica, Y. Garbatov, F. Jancart, A. Kahl, H. Remes, C.M. Rizzo, H. von Selle, A. Urban & L. Wei*
14 30   Development of a numerical simulation method for fatigue crack propagation in structures under variable amplitude loading, *T. Okawa & Y. Sumi*
15 00   Analysis of sharp corners in structural details, *L. Xu & N. Barltrop*

15 30 - 16 00   Coffee/Tea Break

16 00   A numerical approach for fatigue crack propagation in ship structures under wave loading – A review of the development of CP-System, *Y. Sumi & T. Okawa*
16 30   Fatigue strength assessment of floating production storage and unloading vessels, *Y. Garbatov, S. Tomasevic & C. Guedes Soares*
17 00   Global strength analysis in head waves, for a tanker with longitudinal uniform structure, *L. Stoicescu & L. Domnisoru*

17 30   End of Sessions

Session 9   Structural Reliability, Safety and Environmental Protection
Session Chairs: Y. Garbatov & B. Leira

09 00   Structural system reliability using FEM and reliability processor, *M. Shahid & P.K. Das*
09 30   Practical reliability assessment method of ship's hull girder in longitudinal bending, *K. Iijima, Y.Fujii & T. Yao*
10 00   Structural Reliability Levels in Ice Class Rules, *X. Wang, H. Sun & R. Basu*
10 30   Impact of the new common structural rules on the reliability of a bulk carrier, *A.W. Hussein, A.P. Teixeira & C. Guedes Soares*

11 00 – 11 30 Coffee/Tea Break

11 30   Inland water going ship risk assessment, *G.V. Egorov*
12 00   Factors affecting the non-destructive inspection of marine structures, *A. Zayed, Y. Garbatov & C. Guedes Soares*
12 30   Holistic analysis of ship's sustainability, *O. Cabezas-Basurko, E. Mesbahi & S. R. Moloney*

13 00   Lunch

Wednesday 14th March, 2007 (Room 2)

Session 10   Material and Fabrication of Structures
Session Chairs: B. Hayman & T. Jastrzebski

09 00   Buckling strength of square composite plates with geometrical imperfections – preliminary results, *C. Berggreen, C. Jensen & B. Hayman*
09 30   Vibration charactersitics of smart sandwich beams embedded with magnetorheological elastomer cores, *W.J. Choi, Y.P. Xiong & R.A. Shenoi*
10 00   Improving the strength of adhesive butt joints for pultruded composites, *S.A. Hashim, O. Fozzard & P.K. Das*
10 30   A review of the causes of production defects in marine composite structures and their influence on performance, *B. Hayman, C.Berggreen & N.G. Tsouvalis*

11 00 – 11 30   Coffee/Tea Break

Session 11   Experimental Analysis of Structure (Room 2)
Session Chairs: J. T. Xing & N Pegg

11 30   A benchmark study on ductile failure criteria for shell elements in multi-axial stress state, *K. Tabri, H. Alsos, J. Broekhuijsen & S. Ehlers*
12 00   Comparison of experimental and numerical impact loads on ship-like sections, *I. Alexandru, S. Brizzolara, M. Viviani, N. Couty, R. Donner, O. Hermundstad, T. Kukkanen*

12 30   End of Sessions

13 00   End of Conference

Wednesday 14th March, 2007 (Room 1 and Room 2)
Available for MARSTRUCT/ Other meetings (14 00 onwards)

Conference Chairs

C. Guedes Soares, IST, Technical University of Lisbon, Portugal
P.K. Das, Universities of Glasgow & Strathclyde, UK

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