

INTERNATIONAL CONFERENCE ON COMPUTER APPLICATIONS IN SHIPBUILDING 2007



18 – 20 September 2007, Portsmouth, UK

**SHIPBUILDING
ICCAS
Portsmouth • 2007**

DAY 1 – Tuesday 18 th September 2007			
Time	Track A	Track B	Track C
08.30 – 09.30	Registration		
	Welcome from RINA / Organisers. Plenary Session Chair: Kaj Johansson, Aveva, Sweden.		
09.30 -10.00	Iya Solodilova-Whitely – View From A Space Ship		
10.00 -10.30	Doug Pattison and Boris Rankov – Computing the Trireme.		
10.30 -11.00	Cdr Dickie Burstn – NATO Submarine Rescue System.		
11.00 -11.30	Coffee Break		
	INFORMATION MANAGEMENT Chair: Richard Lee Storch, University of Washington USA	PRODUCT DATA Chair: TBC	DESIGN ANALYSIS Chair: John Duncan Ministry of Defence UK
11.30 – 12.05	Integrated web-based information management system for DSME offshore project. HT Cho, GS Kang, HW Suh and SU So, Daewoo Shipbuilding & Marine Engineering Co Ltd, Korea	Knowledge Based Quality Checking of Ship Product Data - To be presented by Andreas Geitmann. R. Bronsart, University of Rostock, S. D. Bade, Germanischer Lloyd, W. Geitmann, Aker Yards Germany, H. Hinrichs, FR. Lürssen Werft, Th. Koch, Atlantec-es, and H. Matthesen, SMK Ingenieurbüro, Germany	Providing An Optimised, Sustainable Future Software Platform To Support Integrated Computer Aided Assessment Against Lloyds Register Rules. P.A Roberts and T. Sonmez, Lloyd's Register, London, UK
12.05 -12.40	It Worked For Fridges ! - Why Shipbuilding Needs An Industry-Specific PLM Solution Martin Gwyther, AVEVA Solutions Ltd, UK	Experienced Marine Design and Data Use Y L Duparcmeur and J Butler, Intergraph Corporation, USA R Patience, Engineering Knowledge Models Pty Ltd., Australia	Computer Aided Approval – From Vision To Reality U. Eberwien, S. D. Bade, W. Grafe and R. Stute, Germanischer Lloyd, Germany. P.-O. Nilsson , Aveva, Sweden.
12.40 – 12.45	Presentation by Intergraph – Lunch Sponsor		
12.45 -13.40	Lunch – Kindly sponsored by Intergraph.		

	PROCESS MODELLING Chair: TBC	DESIGN Chair: Hiroyuki Yamato University of Tokyo Japan	KNOWLEDGE MANAGEMENT Chair: TBC
13.40 - 14.15	Process Innovation Along The Steel Supply Chain Between Global Shipbuilder And Steel Company With The Extended ERP System Inil-Kim, HeeChung-Park, Sangkuk-Han and Seonghwan-Han , Daewoo Shipbuilding & Marine Eng., Korea Taewook-Kim, Heeyeol-Lee, POSCO, Korea	Integrated 3D Design Environment For Early Design Stage Naoki Ueda and Shingen Takeda, Mitsubishi Heavy Industries, Ltd., Japan	Reporting Strategies For A Competence-Oriented Management Information System C Nedess, A Friedewald, U Kaniess and M Kurzewitz, Hamburg University of Technology, Germany
14.15 - 14.50	Optimizing Product Configuration Decision Times In Shipbuilding Richard L. Storch, Industrial Engineering, University of Washington, USA Roberto F. Lu, The Boeing Company and Industrial Engineering, University of Washington, USA Thomas D. Petersen, Aalborg Industries, Denmark	Choosing Cad Tools For The 21st Century B Dunseath and C Sear, Submarine Solutions, BAE Systems, UK D Murray and J McLauchlan, Surface Fleet Solutions, BAE Systems, UK	E-Learning Infrastructure For Naval Architecture And Ocean Engineering Education R. Bronsart, M.-C. Wanner and P. Muesebeck, University of Rostock, Germany W. Fricke and T. Rung, Hamburg University of Technology, Germany M. Abdel-Maksoud, University of Duisburg-Essen, Germany G. F. Clauss, Technical University of Berlin, Germany U. Glowalla, University of Giessen, Germany
14.50 – 15.20	Coffee Break		
	TECHNOLOGY MANAGEMENT Chair: Joachim Brodda Balance Technology Consulting Germany	DESIGN Chair: David Andrews University College London UK	HYDRODYNAMICS Philip Wilson University of Southampton UK
15.20 – 15.55	Technology Enablers for Computer-Aided Fleet Operation CAFO A Vision Jens Viggers, Odense Steel Shipyard LTD, Denmark.	Using Design Of Experiments To Set Submarine Concept Design Requirements M. Arvidson and D. Nagy, Naval Sea Systems Command, USA	Automatic subdivision of ship hull surfaces for block structured mesh generation R Bronsart and G Knieling, University of Rostock, Germany
15.55 – 16.30	Withdrawn (No paper or presentation available). Managing Technology with TeMAP W. L. Mitchelmore, BMT Defense Services Ltd, UK	Enhanced Ship Design Computer Tools To Improve Passenger Comfort And Crew Performance J.M. Ross, Alion Science and Technology, USA.	
16.30	Close		
16.30 – 18.00	Intergraph Demonstration Session – LT3 – Richmond Building.		
19.15	Drinks Reception at the Mary Rose Museum		
20.30	Conference Dinner – Kindly sponsored by AVEVA		

DAY 2 – Wednesday 19th September 2007

Time	Track A	Track B	Track C
	KNOWLEDGE MANAGEMENT Chair: TBC	DESIGN Chair: Joachim Brodda Balance Technology Consulting Germany	Process Optimisation Chair: Sung Geun Lee DSME Korea
09.00 – 09.35	An Innovative Approach For Improved Availability of Company Knowledge M Lehne and S Wurst, BALance Technology Consulting GmbH, Germany	Integrating Rules and Practices with Early Design Process I. Kuutti, Napa Ltd, Finland.	An approach to scheduling problems of shipbuilding lines based on discrete-event system theory H. Kajiwara, Kyushu University, Japan Y. Nakao, Oshima Shipbuilding Co., Ltd., Japan
09.35 – 10.10	Processes – A Basis for Capturing Knowledge J Martin and A Oddie, BAE Systems Submarine Solutions, UK	Research into The Use of Computer Aided Graphics In Preliminary Ship Design D. Andrews and R. Pawling, University College London, UK	Shipbuilding Scheduling Problems Solved By Algorithms As A Weighted Constraint Satisfaction Problem M Matsuda and Y Makino, Sumitomo Heavy Industries Marine & Engineering Co. Ltd, Japan. Y Nakama and T Nishimura, Sumitomo Heavy Industries Ltd, Japan
10.10 – 10.45	A Knowledge Management and Process Framework Supporting Engineering Projects O C Astrup and B Kallák, Det Norske Veritas Software, Norway	An Innovative Integrated Tool For HVAC Design R. de Góngora, SENER, Ingenieria y Sistemas S.A., Spain	A Contribution To Increase Productivity In Ship Detailed Design. R. Bronsart and A. Geitmann, University of Rostock, Germany
10.45 – 11.15	Coffee Break		
	KNOWLEDGE MANAGEMENT Chair: Hiroyuki Yamato University of Tokyo Japan	DESIGN ANALYSIS Chair: TBC	PRODUCT DATA Chair: John Duncan Ministry of Defence UK
11.15 – 11.50	A Knowledge Management Framework for Marine Propeller Design K Hiekata, H Yamato and W Oishi, The University of Tokyo, Japan. Y Sasaki and K Sato, Mitsubishi Heavy Industries Ltd., Japan	Efficient Generation of CFD-Based Loads For The FEM-Analysis Of Ship Structures H Eisen and C Cabos, Germanischer Lloyd AG, Germany	SPARS-Enabling the Shipbuilding Virtual Enterprise R.W. Bolton, Director of the SPARS Consortium, USA
11.50 – 12.25	Use of IT For Knowledge Management In Japanese Shipyard Y Sasaki and M Sonda, Mitsubishi Heavy Industries Ltd., Japan	A RANS Code For Flow Simulation Of Marine Propellers M.T. Rahmati, University College London, UK	Product Information System To Drive The Management Of Naval Programs T. Le Gal, Y. Le Peutrec, S. Heno, A. Bourdaudhui and C. Saliou, DCNS, France.
12.25 – 13.00	Rule-Based Ship Design K Cochran, Intergraph Corporation, USA	A Hybrid Scheme For The Propeller Blade Strength Analysis On The Basis Of The Finite Element Method G. Deliporaniades, School of Applied Sciences Thessaloniki, Greece	
13.00 – 14.00	Lunch		

	DESIGN Chair: David Andrews University College London UK	PRODUCTION Chair: Masahiro Sonda Mitsubishi Heavy Industries Japan	HYDRODYNAMICS Philip Wilson University of Southampton UK
14.00 – 14.35	Drafting Tools “MAGIC SKETCH” Implemented On Tribon M3 Hyeong-cheol Kim, Young-tae Choi, Dong-rim Gu and Joo-hwan Park, Daewoo Shipbuilding & Marine Engineering Ltd (DSME), South Korea.	Development of an Automated Line Heating information extract System for Fabrication of Curved Hull Plates Jungseo Park, Seoul National University, KOREA. Jonggye Shin, Research Institute of Marine Systems Engineering, KOREA. Kwanghee Ko, Gwangju Institute of Science and Technology, KOREA. Chungmin Hyun and Youngchil Doh, Samsung Heavy Industries co., Ltd, KOREA.	The Inclined Keel Hull Concept and its Efficient Application Using Bow Form Optimisation K C Seo, M Atlar and E Mesbahi, Newcastle University, UK. H-J Kim and H-H Chun, Pusan National University, KOREA. B. Danisman and O Goren, Istanbul Technical University, TURKEY
14.35 – 15.10	The Role of A Schematic Model For Shipbuilding System Design Coordination H. Hultin, P-O Nilsson and P-O Åkesson, AVEVA AB Sweden.	Improving robotic welding in the shipbuilding industry G Lambert, D Sanders and G Tewkesbury, University of Portsmouth, UK	Use of CFD In The Optimisation of A Naval Support Ship S Hunt, BAE Systems Surface Fleet Solutions, UK. G J D Zondervan, MARIN, The Netherlands
15.10 – 15.45	Space Management In Ship Early Design M A Carballeira and J Quiroga, Navantia SA, Spain.	Development Of Sub-Assembly Welding Robot System In Shipbuilding Ho-Joong Youn, Sung-Won Kang, Dong-Ho Kim, Kang-Uk Kim, Soo-Ho Kim, Daewoo Shipbuilding & Marine Engineering Co, Ltd. (DSME), Korea	
15.45 – 16.15	Coffee Break		
	DESIGN ANALYSIS Chair: John Duncan Ministry of Defence UK	MODELLING & SIMULATION Chair: John Martin BAE Systems UK	PRODUCTION Chair: TBC
16.15 – 16.50	Trial Application of FE simulation on ships collision within the risk assessment on oil spills from oil tankers T Nakai, Y Uraguchi, T Arima, S Harada and M A Rahim, Nippon Kaiji Kyokai (ClassNK), Japan	Crew Performance Modelling Method for Evaluating New Concepts and Designs of Ship Bridge Operation R Kakuta and H Yamato, University of Tokyo, Japan H Ando, MTI (Monohakobi Technology Institute), Japan	Simulation of Welding Deformation for dimensional Accuracy control M. Onoe, K. Uno and K. Mizutani, Universal Shipbuilding Corporation, Japan
16.50 – 17.25	From design to analysis – integrated design and strength assessment A C Damhaug, J Stang and M Schult, Det Norske Veritas Software, Norway	Validation of Simulated Dynamic Interface Testing As A Tool In The Forecasting of Air Vehicle Deck Limits And Deck Landing Aids In Initial Ship Design B Ferrier, BMT Syntek Technologies, Aircraft-Ship Dynamic Interface Program, USA J Duncan, MOD, DE&S HQ, Sea Systems Directorate, UK R B Lumsden, MOD, DSTL (Bedford), UK	The measurement and prediction of welding distortion using ann and photogrammetry M P Lightfoot and G J Bruce, Newcastle University, UK
17.25 – 18.00	ShipRight SDA – An Integrated Finite Element Solution for the Common Structural Rules Sai Wong, Lei Yu, Morgan Le Callet and Naiguang Gong, Ship Design Systems Department, Lloyd’s Register, UK.	Development of an Integrated Simulation Framework and Its Application to Shipbuilding Process Planning Ju-Hwan Cha, Seung-Ho Ham and Kyu-Yeul Lee, Seoul National University, Korea. Kwang Phil Park and Heung Won Suh, Daewoo Shipbuilding & Marine Engineering Co, Ltd. (DSME), Korea. Myung-Il Roh, University of Ulsan, Korea	Latest Developments In Weld Process Modelling R Lawrence, R Dennis and N Leggatt, Frazer-Nash Consultancy, UK
18.00 – 18.05	Presentation by Lloyd’s Register – Drinks Reception Sponsor		
18.05	Close		
18.00 – 19.30	Drinks Reception – Kindly Sponsored by Lloyd’s Register		

DAY 3 – Thursday 20th September 2007

Time	Track A	Track B	Track C
	INFRASTRUCTURES Chair: John Duncan Ministry of Defence UK	DESIGN Chair: David Andrews University College London UK	ESTIMATION & PLANNING Chair: Hiroyuki Yamato University of Tokyo Japan
09.00 – 09.35	Replicated Databases. The Answer To Collaborative Design F. Alonso, C. González and L. Pastor, SENER Ingeniería y Sistemas S.A, Spain	Cost Assessment at Concept Stage Design using Parametrically Generated Production Product Models M. Bole, Graphics Research Corporation Ltd, UK.	Management System For Procurement Of Paint Based On The Ship Product Model K. Aoyama, School of Engineering, The University of Tokyo, Japan. M. Matsuo and S. Nakao, Namura Shipbuilding Co., LTD., Japan
09.35 – 10.10	Integrated Product Development using Global Workshare M A Polini, Intergraph Corporation, USA C Schmidt, Odense Steel Shipyard, Ltd., Denmark.	A Ship Design Tool Using Genetic Algorithms S Vasudevan and S C Rusling, University College London, UK	Efficient Design And Coordination Of Outfitting Materials C.M. Ridgewell, Napa Ltd, Finland
10.10 – 10.45	Photogrammetry, A Picture Of The Future D Milne, Devonport Royal Dockyard Ltd, UK G Pailing, Offset Services Ltd, UK	*Author's unable to present A Semantic Feature Model For Conceptual Design Of Warships R. ter Haar, Delft University of Technology and TNO Defence, The Netherlands. W.F. Bronsvoot, Delft University of Technology, The Netherlands. K.J. de Kraker, TNO Defence, The Netherlands.	Safe And Cost-Minimum Planning System For Disassembling Process Of Ship-Hull Considering Environmental Impact M Matsubara, T Koga and K Aoyama, The University of Tokyo, Japan
10.45 – 11.15	Coffee Break		
	PRODUCTION Chair: Masahiro Sonda Mitsubishi Heavy Industries Japan	COLLABORATIVE ENVIRONMENTS Chair: TBC	INSPECTION & MAINTENANCE Chair: Sung Geun Lee DSME Korea
11.15 – 11.50	An Object-Oriented Approach To Programming Welding Robots In The Ship Building Industry. G Lambert, G Tewkesbury and D Sanders, University of Portsmouth, UK	Collaborative Design, Visualisation and Manufacturing Environments for Shipbuilding Partnerships Marc Donoghue and Steve Blakeway, PTC, UK Philippe Barbarin, PTC, France	Improvements in Hull Integrity By The Use Of 3 rd Generation Maintenance Management Software D M Ribeiro, Federal University of Rio de Janeiro / Phdsoft, Brazil
11.50 – 12.25	*Author's unable to present Development of an Integrated Market Forecasting Model for Shipping, and Shipbuilding Parameters R Sharma and O P Sha, Indian Institute of Technology, India	Marine Enterprise Solutions T Szoka, Intergraph Corporation, USA – To be presented by M. Polini.	
12.25 – 13.30	Lunch		

	PROCESS MANAGEMENT Chair: Richard Lee Storch University of Washington USA	DESIGN Chair: John Duncan Ministry of Defence UK	INFORMATION SYSTEMS Chair: John Martin BAE Systems UK
13.30 – 14.05	Guiding the Life Cycle of Ships H. Gsell and N. Homburg, Bremen Institute of Industrial Technology and Applied Work Science BIBA, Germany H. Kohn, Bremen Institute of Applied Beam Technology BIAS, Germany	Presentation TBC. Approaches Developed to Support the Use of Tribon Initial Design SOFTWARE in the Teaching of Ship Design at Newcastle University P. N. H. Wright, Newcastle University, UK K. W. Hutchinson, Babcock Design & Technology (Armstrong Technology), UK G. D. J. White, Independent Consultant Naval Architect, UK	The Cost Of Customisation M.Evans; Incremental Ltd., UK - To be presented by G.J.Bruce.
14.05 – 14.40	Engineering Process Management System for Commercial Ship Design Kwang Phil Park, Heung Won Suh, Sung Geun Lee, Daewoo Shipbuilding & Marine Engineering Co, Ltd, Korea. Ole Christian Astrup and Tord Tonstad Andersen, Det Norske Veritas Veritasveien, Norway	Distributed Design with Large Product Data Models P. Cahill, D. Larkins, J. Paquin and M. Barber, ShipConstructor Software, USA	Withdrawn (No paper or presentation available). Schedule Optimisation and Visualisation Using ARGOS Richard Jones, Optimization Technology Systems (OTS) Inc
14.40 – 15.15	Section Building Model Embedded in a Total Process Simulation Environment J Kaarsemaker, Merwede Shipyard / Delft University of Technology, the Netherlands U Nienhuis, Delft University of Technology, the Netherlands		
15.15	Close		
17.15	Boat Trip – Tour of Portsmouth Harbour (Tickets will need to be collected in advance from the boat trip registration desk in Portland Building).		

DAY 4 – Friday 21st September 2007

All delegates who wish to attend the VT Shipyard visit will need to have registered for the visit before the 14th September, due to Security Clearance – as noted in pre-conference material. For those delegates who have booked in advance, an approximate schedule is shown below. Please bring a formal means of identification (Passport, Driving licence, etc) and suitable footwear (No high heeled shoes or open toed sandals), and wear your delegate badge.

10.00 – 11.00	Delegates at Portsmouth University (Portland Lecture Theatre) for presentation by Sim Taylor, Export Sales Director.
11.00 – 11.15	Questions and Answers
11.15 -	Delegates to gather at designated point for coach to VT Shipbuilding. (Coats, Bags, etc, can be locked in a secure room within the University)
11.30 -	Arrival of Delegates at VTS
11.35 -	Delegates split into 5 groups for tour of facilities.
12.15 -	Delegates gather on coach for return to University
12.30	Arrival at University, delegates depart