



The Royal Institution of Naval Architects

Smart Ship Technology

24-25 January 2017, London, UK

Tuesday 24 th January	
08.30-08.55	Coffee and Registration.
08.55-09.00	Welcome address
09.00-09.35	TOWARDS SHIPPING 4.0 Ørnulf Jan Rødseth, SINTEF Ocean AS, Norway
09.35-10.10	WILL THE SMART SHIP ALSO BE THE LIABLE SHIP?: AN ANALYSIS OF THE APPLICATION OF LIABILITY TO THE SHIP ITSELF Hannah Stones, Institute of Maritime Law, University of Southampton, UK
10.10-10.45	EMBRACING A SMARTER FUTURE – HOW NAVIES COULD GAIN ADVANTAGE FROM SMARTER AND MORE AUTONOMOUS SHIPS SYSTEMS Justin Paul, QinetiQ, UK
10.45-11.15	Coffee
11.15-11.50	CAD TOOLS FOR DESIGNING SMART SHIPS IN THE WORLD OF THE INTERNET OF THINGS (IOT) Jesus A Muñoz and Rodrigo Perez, SENER Ingeniería y Sistemas, S.A., SPAIN
11.50-12.25	INFLUENCE OF LOSS OF SYNCHRONIZATION BETWEEN SIGNALS FROM VARIOUS MARINE SYSTEMS ON ROBUSTNESS OF PREDICTIVE MODELS ALGORITHMS Anna Swider, Rolls-Royce Marine AS, Norwegian University of Science and Technology, Norway, E Pedersen, Norwegian University of Science and Technology, Norway
12.25-13.00	A SMART SHIP ENABLEMENT PLATFORM Stelios Koroneos, Peter Bennett, Soldecom, Greece
13.00-14.00	Lunch
14.00-14.35	REQUIRED FLOODING SENSOR ARRANGEMENT FOR RELIABLE AUTOMATIC DAMAGE DETECTION Esa Takkinen, Pekka Ruponen, Petri Pennanen, Napa Ltd, Finland
14.35-15.10	THE UNGOVERNED SPACE OF MARINE FIRE SAFETY ENGINEERING Carl Stephen Patrick Hunter, Coltraco Ultrasonics, UK
15.10-15.40	Coffee
15.40-16.15	RESPONSE TIME ANALYSIS CHALLENGES ON A SMART SHIP - AN INITIAL CASE STUDY Demetres Armanes, American Bureau of Shipping, Greece
16.15-16.50	HANDLING BIG DATA IN SHIP PERFORMANCE & NAVIGATION MONITORING Lokukaluge Prasad Perera, SINTEF Ocean AS, Norway
16.50-	General Discussion & Evening Drinks Reception

Session 1

Session 2



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Wednesday 25 th January	
08.30-09.00	Coffee and Registration.
09.00-09.35	ACOUSTIC EMISSION TECHNIQUES MONITORING CRITICAL VESSEL EQUIPMENT: THE ALTERNATOR BEARING MONITORING SYSTEM Cristiano Garau, Neil Randall, Parker Kittiwake
09.35-10.10	SHIP MACHINERY CONDITION MONITORING USING PERFORMANCE DATA THROUGH SUPERVISED LEARNING Christos Gkerekos, University of Strathclyde, Glasgow, UK, Iraklis Lazakis, University of Strathclyde, Glasgow, UK, Gerasimos Theotokatos, University of Strathclyde, Glasgow, UK
10.10-10.45	FAULT TREE ANALYSIS AND ARTIFICIAL NEURAL NETWORK MODELLING FOR ESTABLISHING A PREDICTIVE SHIP MACHINERY MAINTENANCE METHODOLOGY Yiannis Raptodimos & Iraklis Lazakis, University of Strathclyde, Glasgow, U.K
10.45-11.15	Coffee
11.15-11.50	SHIPBOARD POWER SYSTEMS RECONFIGURATION: A COMPARED ANALYSIS OF STATE-OF-THE-ART APPROACHES Luca Agnello, M Cossentino, G De Simone and L Sabatucci, National Research Council of Italy ICAR Institute, Palermo, Italy
11.50-12.25	DIGITIZATION: INFORMATION TECHNOLOGY (IT) AND OPERATIONAL TECHNOLOGY (OT) J Beel and K Jones, Cisco Systems, Inc., USA
12.25-13.25	Lunch
13.25-14.00	SHIP'S CENTRAL COOLING SYSTEM LIVE PERFORMANCE OPTIMISATION AND MODELING Alessandro Boveri, Federico Silvestro and Alessandro Panzera, DITEN University of Genoa, Italy, Irene Crociccia and Romano Lodde, ABB Marine & Ports - Process Automation Division, Italy
14.00-14.35	NETWORK-CONNECTED LIGHTING IN THE MARITIME ENVIRONMENT K Jones and J Beel, Cisco Systems, Inc., USA
14.35-15.10	ENERGY SAVINGS FOR A SHIP IN IRREGULAR WAVES USING REAL-TIME OPTIMAL CONTROL OF PROPELLER PITCH AND ELECTRIC PROPULSION H Makino, Y Hirano, and N Umeda, Osaka University, JAPAN, T Ohtsuka, Kyoto University, JAPAN, K Tanizawa and H Sekiguchi, National Maritime Research Institute, JAPAN, H Susaki, Furuno Electric Co. Ltd., JAPAN, J Suzuki and M Fukazawa, Kamome Propeller Co. Ltd., JAPAN
15.10-15.40	Coffee
15.40-16.15	UNLOCKING THE HIDDEN VALUE OF DYNAMIC POSITIONING SYSTEMS FOR SMART SHIPS Mark. Carter, Sonardyne International Limited, UK
16.15-16.50	A SIMULTANEOUS OPTIMIZATION METHOD OF THE DIRECTION AND SPEED FOR SHIP ROUTE PLANNING K S Kim, M I Roh and S M Lee, Seoul National University, Republic of Korea H R Jung, J J Park, D Y Lee and B K Kim, Samsung Heavy Industries, Republic of Korea
16.50-	General Discussion

Session 3

Session 4