# **International Maritime Conference (Pacific 2017)**

Sydney, Australia 3-5 October 2017

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The Royal Institution of Naval Architects 8-9 Northumberland Street London, WC2N 5DA United Kingdom

Phone: 020 7235 4622 Fax: 020 7259 5912

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Correct as 29 September 2017

### **TUESDAY 3 OCTOBER 2017 DAY 1**

0945 - 1000	Opening Ceremony PYRMONT THEATRE		
1000 - 1100	Keynotes Chair: John Jeremy, AM		
1000 - 1030	<b>Opening Address</b> <b>Capability Acquistion Reform</b> <i>Rear Admiral Jonathan Mead, AM, RAN,</i> Head Navy Capability, Australia		
1030 - 1100	Keynote Address: Australia's Naval Shipbuilding Project - An Update Rear Admiral Tony Dalton General Manager Ships Capability Acquisition and Sustainment Group, Australia		
1100 - 1130	Morning Tea		
	Conference Room C2.1	Conference Room C2.2	Conference Room C2.3
1130 - 1300	Session 1 - Ship Design Chair: <i>Martin Renilson</i>	Session 2 - Structural Integrity Chair: Tauhid Rahman	Session 20 - Autonomous Vessels Chair: Brett Morris
1130 - 1200	A Ship Performance Modelling and Simulation Framework to Support Requirements Setting (Refereed) Dylan Dwyer Defence Science and Technology, Australia	Maintaining Technical Integrity of the Royal Australian Navy's Survey Motor Boats Jon Emonson and Peter Webb BAE Systems, Australia	Framing Considerations of Autonomous Naval Ships for the Royal Australian Navy (Refereed) Gabrielle Anastasio, Joseph Cole and Warren Smith UNSW Canberra and Department of Defence, Australia
1200 - 1230	Design of Icebreaking Supply & Research Vessels <i>Ken Goh</i> Knud E Hansen, Australia	Effects of Structural Ageing on Blast Analyses of a Naval Vessel: A Technical Review (Refereed) Daniel Clayton Australian Maritime College, University of Tasmania, Australia	Integrating Unmanned Surface Vessels into the Australian Defence and Border Protection Forces Derek Rogers SAAB, Australia
1230 - 1300	Damen Naval Auxiliary Vessels: a Compromise or a Solution? Piet van Rooij Damen Shipyards, The Netherlands	Lessons from Life of Type Extension (LOTE) for Naval Fleet and New Build Olaf Doerk and Georgios Spiliotis DNV-GL, Germany and Australia	Application of the Lloyd's Register Unmanned Marine System Code to a Small Remotely Controlled Survey Vessel Jim Gorton Lloyd's Register, United Kingdom

\* (Refereed) = Conference paper has been peer-reviewed.

### TUESDAY 3 OCTOBER 2017 DAY 1

#### 1300 - 1400 Lunch

1400 - 1600	Session 3 - Ship Building Chair: Adrian Broadbent	Session 4 - Ship S Human Factors Chair: Rob Gehling	Safety/	Session 21 - Combat Systems Chair: Andrew Tynan
1400 - 1430	Awaiting the Next Revolution in Naval Affairs Simon Reay Atkinson University of Sydney, Australia	Smart Escape Suppo Passenger Ship: Activ & Real-time Escape I James Choi Corners Inc., Republic	ve Dynamic Signage Routing	Knowledge-based Naval Mission & Combat Systems Alain Carof Naval Group, France
1430 - 1500	First and Second Order Technical Implications of an Off-The-Shelf Approach to Naval Ship Acquisition Joseph Cole Department of Defence, Australia	Commercial Ship Ma Risk Management is David Parmeter Teekay Shipping, Aust	Good Business	The Genesis of Australia's Future Naval Enterprise Combat System Capability David Hanley and Rod Equid Raytheon, Australia
1500 - 1530	Australian Innovation Transforming Modern Naval Shipbuilding Tim Speer Austal, Australia	Human Impact Expo High-Speed Boats: A Johan Ullman High Speed Boat Oper Sweden	Multi Agency Study	The Aegis Weapons System - Providing Proven and Extendable Maritime Capabilities in Meeting Defence White Paper Objectives Brad Hicks Lockheed Martin, USA
1530 - 1600	Shipbuilding Lessons Learnt on the Air Warfare Destroyers Mark Lamarre ASC Shipbuilding, Australia	The International Ma Guidelines on Fatigu Management: A Stat Michelle Grech Australian Maritime Saf	e Mitigation and us Quo	
1600 - 1800	Session 5 - Ship Propulsion Chair: <i>Chris Hodge</i>		<b>Session 6 - Ship S</b> Chair: Dr Warren Smith	
1600 - 1630	<b>Optimising High Speed Craft for Hybrid Pro</b> <i>Robert Hayes</i> Frazer-Nash Consultancy, Australia	pulsion	Structural Integrity of Bruce Cartwright The University of Newo	
1630 - 1700	Power and Propulsion System Options for Future Frigate Programmes - Hybrid as an Enabler for Increased Mission Capability Edward Wright Rolls Royce PLC, United Kingdom		Comparative Structural Requirements for High Speed Naval Craft: The 'ROURKE Class' Corvette John Lord Independent, Member of RINA, Australia	
1700 - 1730	Mission-centric Design of Hybrid Propulsion Systems for Multi-purpose Naval Vessels Pierpaolo Da Fieno MAN Diesel & Turbo SE, Germany		Application of Structural Integrity Management Principles Demonstrated in Other Domains to Improve Seaworthiness and Cost of Ownership Outcomes Michael Houston and Stuart Cannon QinetiQ and Defence Science and Technology, Australia	
1730 - 1800	Offshore Supply Vessels: A Comparison of Propulsion System Architectures Cameron Sobie Siemens Industry Software, Belgium		Trials and Tribulations: Load and Structural Response Measurements of a Naval Semi-planing Craft (Refereed) Teresa Magoga Defence Science and Technology, Australia	

## WEDNESDAY 4 OCTOBER 2017 DAY 2

	Conference Room C2.5 & C2.6	Conference Room C2.1
0830 - 1100	<b>Session 7 - Ship Repair</b> Chair: <i>Alan Taylor</i>	Session 8 - Submarine Operations Chair: Tauhid Rahman
0830 - 0900	<b>Keynote Address:</b> Science and Technology Support for Naval Shipbuilding Dr David Kershaw Chief of Maritime Division Defence Science and Technology, Australia	
0900 - 0930	<b>Challenges in Naval Ship Maintenance</b> <i>Arshad Kunjumon</i> Abu Dhabi Shipbuilding, United Arab Emirates	Submarine Sovereignty – ASC's Collins Experience <i>Martin Edwards</i> ASC Pty Ltd, Australia
0930 - 1000	<b>3D Laser Scanning Applications for Shipbuilding and Throughlife Support</b> <i>Chris Deegan</i> Gibbs & Cox, USA	Integrated Performance Modelling of Submarines to Support Strategic Decision Making for the Future Submarine Program (Refereed) Hamid Diab and Karl Slater Defence Science and Technology, Australia
1000 - 1030	Low Distortion Welding Processes for Naval Shipbuilding Stephen van Duin University of Wollongong, Australia	The Operational Benefits of Covertly Refuelling a Conventional Submarine whilst at Sea (Refereed) Simon Harrison Defence Science and Technology, Australia
1030 - 1100	High Entropy Brasses & Bronzes - New Marine Alloys Kevin Laws University of New South Wales, Australia	Enhancement of Safety and Operational Reliability of Modern Submarines Through the Involvement of a Classification Society Christian von Olderhausen DNV-GL, Germany
1100 - 1130	Morning Tea	
1130 - 1300	Session 9 - Panel Discussion Chair: John Jeremy, AM	Session 10 - Submarine Hydrodynamics Chair: Helen Dorsett
1130 - 1200	Off-the-Shelf Naval Ship Design through Requirements Engineering Mr Joe Cole Naval Technical Bureau, Australia	The Influence of Appendages and their Stall on Submarine Hydrodynamic Loads (Refereed) Gregory Seil Defence Science and Technology, Australia
1200 - 1230	CMDR Lindsay Gordon, RAN Navy Strategic Command, Australia CMDR Dan Crocker, RAN Navy Strategic Command, Australia	The Effects of Hull Form on the Optimum L/D Ratio for Minimum Resistance for Submerged Bodies (Refereed) Zhi Quan Leong Australian Maritime College, University of Tasmania, Australia
1230 - 1300	Dr Warren Smith UNSW Canberra, Australia Mr Graeme Dunk Shoal, Australia	Sensitivity of a Submarine Manoeuvring Model to Parameter Uncertainty (Refereed) Siobhan Giles BMT Design & Technology, Australia
1300 - 1400	Lunch	

### WEDNESDAY 4 OCTOBER 2017 DAY 2

1400 - 1600	Session 11 - Survivability Chair: Professor Jonathan Binns	Session 12 - Ship Hydrodynamics Chair: <i>Phil Helmore</i>
1400 - 1430	Integrated Survivability Analysis of Naval Platforms in High Threat Environments Anthony Woolley Defence Science and Technology, Australia	Experiments Investigating the Mass Moment of Inertia of Fluids in Roll (Refereed) Darris Fortescue, Martin Grimm and Warren Smith Department of Defence and UNSW Canberra, Australia
1430 - 1500	Medium Scale Experiments for the Validation of Naval Platform Vulnerability Simulations George Yiannakopoulos Defence Science and Technology, Australia	The Influence of Roll Radius of Gyration Including the Effect of Inertia of Fluids in Motion Predictions (Refereed) Martin Grimm, Warren Smith and Darris Fortescue UNSW Canberra and Department of Defence, Australia
1500 - 1530	Rapid System Vulnerability Assessment Using Fault Trees with System Location Attribution Serap Aksu Defence Science and Technology, Australia	Estimation of Added Mass Moment of Inertia in Roll Motion Through Numerical Simulation (Refereed) S.S. <i>Kianejad</i> Australian Maritime College, University of Tasmania, Australia
1530 - 1600	Rapid Vulnerability Assessment of Naval Structures subjected to Localised Blast Luiz Bortolan Neto Australian Nuclear Science and Technology Organisation (ANSTO), Australia	Ship Roll Reduction Using Water-flow Induced Coriolis Effect Mario Walker Tokyo Institute of Technology, Japan
1600 - 1730	Session 13 - Hydrodynamics	Session 14 - Structural Integrity
	Chair: Craig Boulton	Chair: Trevor Dove
1600 - 1630	· ·	Chair: Trevor Dove Prediction of Ultimate Strength of Locally Corroded Plates Using ANFIS Model (Refereed) Nagi Abdussamie Australian Maritime College, University of Tasmania, Australia
1600 - 1630 1630 - 1700	Chair: Craig Boulton The Whipping Response of a Submerged Free-free Cylinder Due to Underwater Explosions (Refereed) Steven De Candia	Prediction of Ultimate Strength of Locally Corroded Plates Using ANFIS Model (Refereed) Nagi Abdussamie
	Chair: Craig Boulton The Whipping Response of a Submerged Free-free Cylinder Due to Underwater Explosions (Refereed) Steven De Candia Australian Maritime College, University of Tasmania, Australia Slow Speed Depth Control of a Submarine Under Waves Paul Crossland	Prediction of Ultimate Strength of Locally Corroded Plates Using ANFIS Model (Refereed) Nagi Abdussamie Australian Maritime College, University of Tasmania, Australia Effect of Pitting Corrosion on the Ultimate Strength and Buckling Behaviour of Stiffened Aluminium Panels (Refereed) Lenore Pedrina
1630 - 1700	Chair: Craig Boulton         The Whipping Response of a Submerged Free-free         Cylinder Due to Underwater Explosions (Refereed)         Steven De Candia         Australian Maritime College, University of Tasmania, Australia         Slow Speed Depth Control of a Submarine Under Waves         Paul Crossland         QinetiQ, United Kingdom         Innovative Experiments for Investigating Maritime         Hydrodynamic Problems         Gregor Macfarlane	Prediction of Ultimate Strength of Locally Corroded Plates Using ANFIS Model (Refereed) Nagi Abdussamie Australian Maritime College, University of Tasmania, Australia Effect of Pitting Corrosion on the Ultimate Strength and Buckling Behaviour of Stiffened Aluminium Panels (Refereed) Lenore Pedrina Defence Science and Technology, Australia The Ungoverned Space: Call for Improved Test & Maintenance to Comply with Regulations & Go Beyond Clare Hunter

Terrace Room, Australian National Maritime Museum

### International Maritime Conference Cocktail Reception

An invitation is extended to all delegates to attend the Pacific 2017 International Maritime Conference Cocktail Reception which will be held in the Terrace Room, Australian National Maritime Museum.



DATE:	Wednesday 4 October 2017	
TIME:	1800 - 1930	
VENUE:	Terrace Room, Australian National Maritime Museum	
DRESS:	Smart Casual	

### THURSDAY 5 OCTOBER 2017 DAY 3

	Conference Room C2.5 & C2.6	Conference Room C2.1
0830 - 1100	Session 15 - Autonomous Underwater Vehicles Chair: Dr. Stuart Cannon	Session 16 - Ship Operations Chair: Ken Greig
0830 - 0900	Keynote Address: How Innovation can Change a Submarine Business Performance Paradigm Dr Margaret Law Strategy & Capability Manager ASC Pty Ltd, Australia	
0900 - 0930	A Paradigm Shift in AUV Capabilities - Boeing's Echo Voyager XLUUV Dan Tubbs Boeing, USA	Lessons Learned from HMNZS CANTERBURYs Service in the Royal New Zealand Navy CDR Phil Bradshaw, RNZN New Zealand Defence Force, New Zealand
0930 - 1000	Achieving Integrated Command and Control of Unmanned Systems - the Unmanned Warrior Experience Robin Campbell QinetiQ, United Kingdom	Large Displacement Frigate: Total Ownership Cost Model <i>Malcolm Waugh</i> WAMA Alliance Management Office, Australia
1000 - 1030	A Practical Demonstration of ASW Using Unmanned and Autonomous Vehicles Robin Campbell QinetiQ, United Kingdom	Advanced Coating Solutions for the Marine Industry (Refereed) Scott Wade Swinburne University of Technology, Australia
1030 - 1100	Northrop Grumman Demonstrates High Area Clearance Rate with Unmanned Mine Hunting System at Unmanned Warrior Dave Allan Northrop Grumman Undersea Systems, USA	Waste Heat Recovery of Marine Diesel Engines (Refereed) Noam Olshina The University of Melbourne, Australia
1100 - 1130	Morning Tea	
1130 - 1300	Session 17 - Autonomous Surface Vehicles Chair: Trevor Blakeley	Session 18 - Submarine Batteries and Diesels Chair: Roger Turner
1130 - 1200	Recent Advances in Utilizing Autonomous Underwater, Surface and Aerial Vehicles for Operational Field Logistics Neil Trenaman Ocean Aero, USA	The Design & Safety Challenges of a Lithium-ion Main Storage Battery for Conventional Submarines Aidan Depetro BMT Design & Technology, Australia
1200 - 1230	Persistent Autonomous Unmanned Surface Vessels Powered by the Ocean Robert Dane OCIUS, Australia	<b>Design and Qualification of Submarine Engines</b> <i>Arndt von Drathen</i> MTU Friedrichshafen GmbH, Germany
1230 - 1300		Submarine Main Propulsion using Lithium-ion Batteries Choong Yeon Chong Kokam Co. Ltd, Republic of Korea
1300 - 1400	Lunch	
1400 - 1530	Session 19 - SEA 5000 Future Frigate Chair: Karl Slater	
1400 - 1430	<b>Type 26 Global Combat Ship: The Next Generation</b> <b>Warship</b> <i>Chris Muskett</i> BAE Systems, United Kingdom	
1430 - 1500	Fincantieri SEA 5000 Presentation	
1500 - 1530	Navantia SEA5000 Presentation	
1530	Closing Ceremony	