



## Seawork 2017 Conference Programme

Tuesday 13<sup>th</sup> June 2017

### Lower Deck Conference Room



|               | <b>Training &amp; Qualifications</b>   |
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| 10:00 – 10:45 | <p><b>Safety, Savings, and Performance: the Benefits of Blended Learning</b><br/><i>Murray Goldberg, CEO Marine Learning Systems</i></p> <p>Twenty years of research and experience has now unequivocally proven that eLearning, when applied intelligently, significantly improves training outcomes and enables efficiencies and continuous improvement in training operations. Add to that the fact that improved training has been clearly demonstrated to reduce accidents and increase performance levels. Why, then, is the maritime industry one of the last to the table in adopting modern training technologies? There are, in fact, good reasons.</p> <p>This presentation looks at the evidence supporting eLearning and discusses the results of successful implementations in the maritime industry. It also presents the challenges created by the maritime training and operational contexts in terms of implementing eLearning, and what new technologies have done to address these challenges.</p>   |
| 10:45 – 11:30 | <p><b>How to equalise the pressure: better education for seafarers balanced with improved time and cost effectiveness</b><br/><i>Adam Corney, Business Development Director, MLA College</i></p> <p>It is obvious that as technology on vessels becomes ever more complex, the skills of the staff operating them will need to be constantly improving too. The author will describe the challenges to the future of the maritime industry due to the competing demands of the need to have a properly trained workforce with the commercial need for ships and those who staff them to be as efficient as possible. Vessel operations are increasingly being constrained by the constantly evolving requirements of education for all ranks of seafarer and the difficulties for managers and ship operating companies in facilitating this.</p> <p>The paper will describe the opportunity that our industry has now been given with the evolution of learning technologies that allows access to a full range of training and education courses to be completed in part-time whilst still working full time in a pressurised sea-going or shore-based role. The Institute of Marine Engineering, Science and Technology and its subsidiary MLA College are in the vanguard of this process and real-life case studies will be used to illustrate the opportunity.</p> |

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| 11:30 – 12:15 | <p><b>MIT Talks: Hybrid/Electric propulsion is fast becoming a viable and cost effective solution for commercial marine and workboat operators looking to reduce their carbon footprint, reduce operational cost, and improve operator wellbeing.</b></p> <p>MIT Talks comes to Seawork and will showcase the Transfluid HM560 hybrid/electric propulsion system and present how it can deliver significant cost savings along with reducing an operator's carbon footprint.</p> <p>MIT Talks, delivered in conjunction with National Maritime is a series of technical talks intended to give marine professionals the opportunity to gain insight into sector technical developments, discuss current issues and network with fellow propulsion system designers, ship owners and operators, boat builders, engine manufacturers, naval architects, boat owners, marinas and military fleet operators/chiefs.</p> <p>Visit our mini MIT Talks session at Seawork 2017 to ensure the future of your business. Visit MIT on stand PO5, Pacific Orange hall.</p> |
| 12:15 – 13:00 | <p><b>Modular UPS to reduce total cost of ownership (TCO)</b><br/><i>Ingar Sørensen, Global Director of marine and offshore, Eltek.</i></p> <p>Ingar Sørensen will talk about the principle of modular UPS to reduce the total cost of ownership for owners and operators. He will explain the advantages of modularity for in power systems generally and then make a specific comparison between monoblock UPS and modular UPS.</p>   |

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|               | <p><b>Funding &amp; Support for businesses in the Maritime Industry</b></p>  |
| 13:15 – 14:00 | <p><b>How2 inject £165K of free cash into your business in 1 month</b><br/><i>Annie Hunter, How2</i></p> <p>This informative talk gives actionable advice on three of the UK's largest incentive funding mechanisms for business and the most generous globally. For most marine industry companies, start up or established, sourcing business funding to drive expansion &amp; growth, fund NPD, or realize the next stage in a business's development can be time consuming, frustrating &amp; expensive. Yet 80% of eligible businesses miss-out their entitlement to tens of thousands of pounds of government funding per annum because of limited scheme awareness or erroneously do not believe they qualify.</p> <p>Learn how R&amp;D Tax Credits and The Patent Box &amp; Capital Allowances can add a significant cash injection to your business and find out about alternative business funding &amp; financing mechanisms. Understand the breadth &amp; depth of development projects that qualify for government funding, by how much &amp; how to maximize your benefit. Many companies we work with have historically claimed c. 200% less funding than they were entitled to.</p> <p>Case studies on marine industry clients who have benefitted from the schemes will also be given, enabling attendees to understand how these schemes can directly benefit their company.</p> |
| 14:00 – 14:30 | <p><b>Funding opportunities – Growth hubs across England and how to access them</b><br/><i>Denise Barlow, Head of Projects &amp; Solent Growth Hub</i></p> <p>With 39 Growth Hubs operating across England there is a wealth of support available for businesses looking to grow, but do you know who your local growth hub is?</p> <p>Growth Hubs are local public and private sector partnerships led by the Local Enterprise Partnership (LEP). They bring together the best of public and private sector partners to promote, co-ordinate and deliver business support based on local needs, working in partnership with the Department for Business, Energy and Industrial Strategy (BEIS).</p>   |

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|               | <p>They also provide a mechanism for integrating national and local business support so it is easier for businesses to access the help and advice they need to thrive and grow.</p> <p>Hear more about the growth hubs, how they operate and how they can help your business grow.</p>   |
| 14:30 – 15:00 | <p><b>Using design to drive innovation: apply for business funding</b><br/> <i>Ross Burton, Innovate UK</i></p>  |
| 15:00 – 15:30 | <p><b>The development of fleet monitoring system “BareFLEET” – an Innovate UK case study</b><br/> <i>Chris Huxley-Reynard, Reygar Ltd</i></p> <p>Chris Huxley-Reynard MD of Reygar talks about development of their latest product BareFLEET, a collaborative R&amp;D project supported by Innovate UK. BareFLEET is an innovative fleet intelligence tool with utility from boat through to the boardroom. It reports on the operational effectiveness and health of a customer’s fleet, providing evidence that they are meeting their contractual obligations and looking after personnel onboard.</p> <p>Reygar had identified a market need for a reporting tool that presented complex operational and efficiency data in a simple way. The “Marine Energy II” Innovate UK funding call aligned perfectly with this market need. It provided Reygar the necessary springboard to develop the product, leveraging their existing marine control and monitoring expertise.</p> <p>Chris will talk about the three year journey from initial product idea, through finding strategic partners, applying for funding, executing the development and sea trials of the system, and ending with commercial product launch.</p> |
| 15:30 – 16:00 | <p><b>NOC supporting SMEs through MARSIC</b><br/> <i>National Oceanographic Centre, Kevin Forshaw</i></p> <p>The National Oceanography Centre (NOC) in the UK has led pioneering developments in Marine Autonomous Systems (MAS) for deployment in the most hostile conditions within the world's oceans. Over the last few years, this knowledge and expertise has been increasingly transferred to companies looking to develop commercial Marine Autonomous platforms for emerging oil &amp; gas, renewables and other offshore applications.</p> <p>Our support for innovative SMEs working in this sector, was taken to a new level when the NOC opened its Marine Robotics Innovation Centre (MARSIC) late in 2015. Currently in excess of £10m of R&amp;D is taking place within this centre, driving news developments using EC and UK grant funding where possible to development of the Marine Autonomous Systems of tomorrow.</p> <p>This presentation will cover the pioneering NOC Marine Autonomy developments to date, before giving an overview of the Innovation Centre and the funding streams that are being used by the companies involved to leverage the support from the NOC.</p>                       |

## Upper Deck Conference Room

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|               | <p><b>Implications of Brexit</b></p>   |
| 10:00 – 10:45 | <p><b>Implications of Leaving the EU</b><br/> <i>Helen McCormick, Associate Director, CTRL Marine Solutions</i></p> <ul style="list-style-type: none"> <li>• Our current position in the EU</li> <li>• The timetable for Brexit</li> <li>• Implications for the maritime industry</li> </ul> |

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|               | <ul style="list-style-type: none"> <li>• Can I still operate in the EU?</li> <li>• Will my employees need visas to work in the EU?</li> <li>• What if one of them needs healthcare while in the EU?</li> <li>• Will I be able to recruit EU nationals?</li> <li>• What if I need to obtain spare parts or repair my ship in the EU?</li> <li>• How will environmental regulations change?</li> <li>• How will port services change?</li> <li>• Do I still have to pay Tonnage Tax?</li> <li>• Implications for cross border legal disputes</li> <li>• Predictions</li> <li>• Questions</li> </ul>   |
| 10:45 – 11:15 | <p><b>The Synchronized Shipyard: Leveraging Engineering Data</b><br/> <i>Mark Waldie (SSI Canada), Denis Morais (CTO, SSI, Canada), Darren Larkins (CEO, SSI Canada), Nick Danese (Director, NDAR, France)</i></p> <p>Every department in a shipyard requires timely and accurate information from Engineering. To be efficient, engineering data should smoothly drive other departments, tools and processes. However, if departments have difficulty accessing and utilizing that information, or if there are errors or inconsistencies, there can be delays, errors and cost overruns.</p> <p>This presentation shows a clever integration solution developed by SSI called the <b>EnterprisePlatform</b>. Inspired by best practices and own research in software solutions, SSI has created the first technology of its type for shipbuilding. It empowers organisations to effectively leverage their data and seamlessly make changes to their programs and processes.</p> <p>Real-world success stories include integrating ShipConstructor Product Model data with Aras PLM at Huntington Ingalls, integrating ShipConstructor data with ERP and Computer Aided Robotic Welding Machines at Gunderson Marine and implementing advanced ShipConstructor design solutions at design bureaux and shipyard worldwide.</p>  |
| 11:30 – 12:15 | <p><b>The EU- Directive on Whole Body Vibration is Counterproductive.</b><br/> <b>UK can now focus on injury risks, instead of on irrelevant rules.</b><br/> <i>Johan Ullman M.D. Assoc. RINA, HSBO Pro - High Speed Boat Operation Professionals</i></p> <p>Slamming events on board high-speed craft cause severe injuries and legislators needed a standard to limit impact exposure. As no relevant standard existed, a non-relevant standard was adopted. The ISO 2631:5 is the basis for the EU-directive on Whole Body Vibration. This is based on mean values of vibration, NOT on dangerous impact exposure. No support is found in the scientific literature, for the use of mean values of vibration, to assess risks of impact induced injuries - regardless of which new algorithms are used.</p> <ul style="list-style-type: none"> <li>- Nor any support to justify filtering out all frequencies above 20 or 30 Hz</li> <li>- Nor any support to disregard rise times, - or energy content</li> </ul> <p>Acute injuries are caused by severe impact induced forces - NOT by vibration.</p> <p>When compression-, bending-, torsion-, or shear forces exceed the structural integrity of anatomical structures, these structures will fail. These forces depend on the energy content in the impacts and on the pace of their onset (Rise time or Jerk factor)</p> <p><b>The EU-Directive does NOT protect seafarers from injury.</b></p> <p>To protect people from impact-induced injuries, a new exposure unit is suggested.</p> <p>To correlate to risks of injury = structural failure, this unit must be based on the impact properties, which determine the forces acting on anatomical structures.<br/> These include: Peak g-value, rise time, duration, energy content and, of course, direction.</p> |

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| <p>12:15-13:00</p>   | <p><b>Shock Mitigation, International Vibration Directives and the Implications of Brexit</b><br/> <i>John Haynes, AFNI, Assoc RINA. Managing Director, Shock Mitigation</i></p> <p>As the UK marine industry considers the implications of Brexit this session looks at how high speed craft requirements and expectations are changing for the professional and commercial sectors in Europe and the US. A challenge for the builders of fast workboats and military vessels on both sides of the Atlantic is delivering platforms that balance high performance with the physical demands on crew and passengers. The consistent objective is that passengers arrive safely at their destination ready to perform a task.</p> <p>Technical shock mitigation solutions currently include more efficient hull forms, appendages to improve trim and ride quality plus suspension seating and cushion decking materials. But shock mitigation is not just about reducing injury - organisations can increase sea time for assets, cover greater distances at higher speeds, improve crew performance and extend operational effectiveness.</p> <p>A high incidence of injuries to personnel can affect the overall performance of any maritime organisation, but there is no 'one off' solution to the demands of fast boats at sea. Recent activity has been driven by the need to comply with Vibration Directives, which will still apply with or without Brexit. The objective of this session is to bring together a panel of industry experts to identify genuine innovations and answer the hard questions.</p> <p>Panellists include:</p> <ul style="list-style-type: none"> <li>• SHOXS</li> <li>• Scot Seats</li> <li>• Shockwave</li> <li>• KPM Marine</li> <li>• SKYDEX</li> </ul> |
| <p>13:00 – 13:45</p> | <p><b>Living with EU Directives: the challenges of reducing whole-body vibration in the marine environment</b><br/> <i>Tim Rees, SHOXS Seats</i></p> <p>The move to Brexit casts a shadow of uncertainty over trade and international relations in Europe, especially in the marine sector. In the years to come, EU directives will no longer be adopted into UK laws, and differences in the implementation and enforcement of safety requirements in the UK and the EU will emerge.</p> <p>When it comes to the reduction of whole-body vibration (WBV), however, the UK has already transposed EU directive 2002/44/EC into law, and significant steps have been taken to enhance workplace safety.</p> <p>In 2015, the Ministry of Defense (MOD) conducted a seat evaluation competition and used the results to equip their new PAC24 Mk IV fleet.</p> <p>Surprisingly, their analysis showed that one-quarter of the tested seats actually amplified impacts on average. As the move towards standardised testing continues, a better understanding of the degree of protection that suspension seats can offer will develop, and certain long-standing myths within the industry will be debunked.</p> <p>In this talk we discuss some of the laboratory testing methods that have been adopted and how they are being applied in both Europe and the United States. We will also discuss how small differences in performance can make significant differences to end-users, and how optimization techniques can be applied to yield enhanced performance in different applications.</p>  |

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|                      | <p><b>Renewables (Wave &amp; Tidal) and vessel operations / Small unmanned Surface vessels</b></p>  |
| <p>13:45 – 14:30</p> | <p><b>Tidal Advisor: A new method for tidal surge prediction</b><br/> <i>Dr S E Taylor, MD Geomatix Ltd</i></p> <p>Accurate tidal prediction can bring beneficial cost savings to the shipping industry, improving port throughput and decreasing vessel waiting times. In some locations, the tide can be remarkably fickle, defying UKHO predictions especially when bad weather prevails. In such conditions, a vessel approaching a dock may have to be turned away, rather than risking it grounding on a lock gate sill in a last-minute manoeuvre. Furthermore, during approaching neap tides a vessel may become trapped becoming "neaped in" a dock as each high tide becomes successively lower.</p> <p>This paper describes a novel algorithm which predicts the time and height of high water by monitoring the shape of the rising tidal curve. The advisory predictions help the harbour-master to decide whether a vessel can safely approach and dock, or whether it must be turned away. The system may also be of use in providing automated advanced warning of meteorologically induced tidal flooding.</p> <p>The Tidal Advisor is currently being trialled and tested in the UK. The results of these trials will be also presented.</p>  |
| <p>14:30 – 15:15</p> | <p><b>Safe access to Offshore Vessels</b><br/> <i>Julie Carlton, Maritime &amp; Coastguard Agency</i></p> <p>Maritime health and safety issues in the Renewables sector: A discussion of health and safety issues arising for vessels serving the renewables industry, and what is being done to address them.</p>  |
| <p>15:30 – 17:00</p> | <p><b>Can I Reduce My Vessel Operating Costs? A Workshop to Explore Saving Fuel, Reducing Emissions and Vessel Optimisation - Now and Into the Future.</b><br/> <i>MOVE and HEVIMA Projects</i></p> <p>Operating costs are a major factor for commercial work boats whether it be a single vessel or a fleet. To maximise savings, craft performance must be optimised for the required duty cycle, but often detailed data about how a vessel operates is not available. Operators may be deterred from monitoring vessel propulsion performance as currently the equipment needed is time consuming and costly to install.</p> <p>The MOVE (Monitoring for Operational Vessel Efficiency) Project has enabled significant technological advance and associated cost reduction in monitoring craft performance.</p> <p>HEVIMA (Hybrid Electrical Vessel propulsion with Integrated Motor Assist) is another Innovate UK supported project led by REAP systems. Its objective is to develop an innovative modular hybrid marine power system offering significant savings in fuel consumption, engine power rating, weight, emissions, noise and vibrations. It is particularly relevant to the small commercial vessel market for craft which generally have low average loads, but also require extended periods of high power.</p> |

Wednesday 14<sup>th</sup> June 2017

## Lower Deck Conference Room

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| 10:00 – 10:30 | <b>Shipwrights' Apprenticeship Scheme – All you need to know about the changes to Apprenticeship Training and Funding</b><br><i>Paul Harris, Shipwrights' Apprenticeship Scheme</i> <ul style="list-style-type: none"><li>• Apprenticeships Working for Businesses Large and Small: Case Studies on Companies</li><li>• Apprenticeship Trail Blazer Courses; New Standards for Up to Date Apprenticeship Training</li><li>• The Levy &amp; Digital Accounts; The New Way to Pay for Apprenticeship Training</li><li>• Worshipful Company of Shipwrights' Funding to Help SME's to Engage with Apprenticeships</li></ul> |
| 11:00 – 13:00 | <b>MOD Procurement Programme 2017</b><br><i>MOD Bass Team</i>   |
| 13:30 – 16:30 | <b>Workboats and Surveyors</b><br><i>Small Craft Surveyors Forum</i>  |
| 16:30 – 18:00 | <b>Solent Branch of Nautical Institute AGM &amp; Collecting Maritime Evidence Book</b><br><i>Nautical Institute, IIMS</i>   |

## Upper Deck Conference Room

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| 10:30 – 12:30 | <b>Anaptyxis of the Small Ships Group</b><br><i>IMarEST Small Ships Group</i> <p>The Institute of Marine Engineering, Science and Technology has established a Small Ships Group (IMarEST SSG) which supports all members working with design, build, maintenance, operation, survey and other activities for ships up to 100m in length.</p> <p>The IMarEST SSG was regenerated last June during Seawork 2016, at which a variety of issues and activities were presented and discussed. Since then, significant progress has been made on a wide range of subjects that will be announced and discussed at this year's annual meeting.</p> <p>The IMarEST SSG annual meeting will be held at Seawork 2017, on Wednesday 14 June at 10:30 - 12:30. The topics for discussion are being developed and will include an update on the SSG development/growth – "Anáptyxis" and progress on small vessels' standards, operations and manning/qualifications that the members have been involved and contributed with the MCA and other organisations.</p> <p>It will be open to all visitors of the Seawork Exhibition and all members of the IMarEST with an interest on small ships. We very much hope that you will join us and we encourage you with your attendance to bring new ideas for discussion."</p> |
| 13:00 – 14:00 | <b>New Compliance Areas</b><br><i>Lloyds Register</i> <p>Windfarm vessels certificated under the new Offshore Service Vessel Code and the involvement in new MCA 500GT workboat code development.</p>   |



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| 14:00 – 16:00 | <p><b>Wind Farm Vessel Performance workshop</b><br/><i>Carbon Trust</i></p> <p>The Offshore Wind Accelerator (OWA) has undertaken a significant amount of research into understanding and benchmarking offshore wind vessel performance.</p> <p>The work has been supported by the wind farm developers and feedback has been received from the key industry stakeholders in the supply chain. This workshop will give an overview of the research completed to date and explain how the vessel performance plots (P-Plots) are intended to be implemented into the industry.</p> |
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**Thursday 15<sup>th</sup> June 2017**

### Lower Deck Conference Room

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| 11:00 – 13:00 | <p><b>MOD Procurement Programme 2017</b><br/><i>MOD Bass Team</i></p>  |
| 13:30 – 14:15 | <p><b>Incorporating SAR technologies into maritime business applications</b><br/><i>Justine Heeley, Marine Business Line Director, McMurdo &amp; Kannad</i></p> <p>How maritime industries can incorporate various Search and Rescue technologies into their applications, processes and workflows is critical to saving more lives at sea. Maritime businesses need to understand the latest industry developments:</p> <ul style="list-style-type: none"> <li>• What SAR technologies are available today and what innovations are coming in the future?</li> <li>• The impact of MEOSAR on Marine Safety</li> <li>• What legislation is emerging that will facilitate the adoption of SAR technologies in the maritime and workboat industries?</li> <li>• How AIS is converging with traditional 406MHz distress beacon technology to save even more lives?</li> </ul> |

### Upper Deck Conference Room

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| 10:00 – 10:30 | <p><b>Man overboard devices and Personal Locator Beacons (PLBs)</b><br/><i>Steve Austin, Maritime &amp; Coastguard Agency</i></p> <p>Things to consider in their selection, ownership and use'</p>  |
| 10:30 – 13:15 | <p><b>Towage, Reducing the risks – Raising the standards</b><br/><i>National Workboat Association</i></p> <p>With input from the MAIB and Shipowners P&amp;I Club specialists, this talk will look at some of the more high profile tug incidents in recent years. It will then look at some of the recent initiatives from the NWA to raise the standard of safety in towage within the sector. These will include:</p> <ul style="list-style-type: none"> <li>• Basic Tug Training - run by NWA Member and Towage Assessor - Chris King</li> <li>• Progress of the MCA Voluntary Towage endorsement Scheme - Mark Ranson</li> <li>• NWA Towage good Practice Guide - still evolving - Mark Meade</li> <li>• Open to NWA members and non-members - All are welcome.</li> </ul> |



13:30 – 14:15

**Update on the two Good Practice Guidelines**

*Kate Harvey, General Manager – G+ Global Offshore Wind Health & Safety Organisation*

The G+ Global Offshore Wind Health & Safety Organisation (G+) has taken on a prominent position in the offshore wind industry, and has been recognised by the wider stakeholder community as providing a vital leadership role to ensure the number of incidents are reduced, thereby resulting in fewer injuries to personnel and increased Health and Safety performance (and the associated benefits to companies linked to this).

The G+ will be providing an update on progress of their 2017 work programme, which includes a review on guidelines to reduce/eliminate dropped objects, best practice for manual handling and ergonomics and the Safe by Design programme. The existing G+ Good Practice Guidelines: Working at height in the offshore wind industry and the safe management of small service vessels used in the offshore wind industry will also be discussed.