

### OLIVER SHORT MENG, AMRINA NAVAL ARCHITECT

University of Southampton, Master of Engineering (Hons) Ship Science 2015  
Associate Member of Royal Institution of Naval Architects 2015

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Oliver is a Naval Architect at Solis Marine Engineering Ltd, the engineering division of Solis Marine group providing engineering, design and analysis services to the offshore, shipping and renewables industries.

Since graduating from Ship Science (Yacht and Small Craft) at Southampton University Oliver joined Frazer-Nash Consultancy and worked on a range of tasks from pre-concept assessments to vessel trials, conversion, refit and ship life extension projects. Oliver's focus has been high-speed craft design where he has worked as a High-Speed Naval Architect at the Naval Design Partnering (NDP). Through his time at the NDP he developed in house tools for rapid design and costing alongside pre-concept designs to inform tender assessment and requirement generation. Oliver has also worked on-site with the Tide-class tanker team undertaking the UK customisation at A&P Falmouth and has worked as a requirement engineer for the T31 Arrowhead 140 build specification.

With Solis Marine Engineering Oliver's role includes hydrodynamics, power and propulsion, stability concept design, engineering design, and project management. Oliver's currently working on several projects across the maritime and renewables sector developing novel concepts and pushing the industry forward.

### SOLIS MARINE ENGINEERING

- **KEYNVOR MORLIFT**  
Multiple Engineering scopes including, met mast recovery, floating wind turbine mooring maintenance, project mooring design, crane operations, stability calculations, sea fastening, tow calculations.
- **INYANGA**  
Cable & Riser protection system modelling in OrcaFlex to optimise stiffness for a range of site/applications.
- **ARMADA**  
Multiple Engineering scopes including, resistance and propulsion analysis for towing operations, deck plans, power topology, crane options, payloads and sea fastening design.
- **RIM DRIVEN PROPELLER DESIGN**  
Development of 2D and 3D analysis for two size variants of a rim driven propellers for RAD Propulsion, including the development of duct shape and propeller blades to optimise flow and efficiency while minimising drag.
- **TUGDOCK**  
Tugdock is a modular floating dry dock concept that can be scaled across a range of vessel sizes. This task developed their modular drydock to its successful demonstration in Falmouth during November 2019. This involved stability calculations and design support. Hydrostatics were performed in GHS and docking simulation in OrcaFlex.
- **WITT**  
A WITT device converts six degrees of freedom movements to electricity and can be applied to any situations where motions are present. This task developed two main applications for WITT devices, wave energy devices (WED), and vortex-induced vibration (VIV). OracWave and OrcaFlex were used to model the system, allowing large numbers of iterations to tune the systems excitation frequencies of the WITT device.
- **STL**  
Develop seakeeping time histories for a range of vessels from Offshore Support Vessels to Autonomous Survey Vessels. RAO's were developed using OrcaWave and run through a range of sea states using three-hour JONSWAP spectra at varying headings. Time histories drove the Six degrees of freedom Motion Platform to test STLs Motion-compensated personnel-access system and Ship-Based Robotic Arm for Autonomous Operations
- **FUEL BARGE REPLACEMENT**

Preliminary concepts looked at future fuel regulations and the capacity to support leisure and commercial clients in Falmouth harbour. Concepts allowed a review of possible upgrades to the existing barges and replacement options.

- TIDAL ENERGY DEVICE

Development of underwater kite concept to understand potential power take-off loads.

### FRAZER-NASH CONSULTANCY

- T31 BUILD SPECIFICATION

Requirements engineer for the Arrowhead 140 build specification as part of the T31 competitive design phase.

- HIGH-SPEED CRAFT REMOVABLE BOW

Feasibility study on a removable bow alongside BMT Nigel G investigating loading pressure, structural loads and failure analysis.

- HIGH-SPEED CRAFT COST MODELLING

Development of a high-speed craft cost model to integrate with rapid design tools allowing assessment of additional requirement costs at the concept stage.

- FAST PATROL CRAFT (FPC) PRE-CONCEPT ASSESSMENT

The FPC project aimed to understand the implications of interoperability constraints on objective and threshold requirements. The use of concept designs allowed the requirements to be tested, and results were presented back to the end-user. This enabled an informed decision into the procurement opportunities moving forward.

- NDP HIGH SPEED CRAFT DESIGN TOOL (HISCAT)

HiSCAT was developed in 2012 to generate concept designs rapidly. This task developed HiSCAT's capability, focusing on the addition of a vessel forward acceleration prediction, based on engine torque and propeller cavitation limits. Alongside these more general improvements were implemented to improve user-friendliness and changes to user feedback.

- UKCCATS PROJECT MANAGER

Project manager for UK Customisation and Assessment Trials (UKCCATS) for Tide-class tankers focusing on MoD tasking and liaising with A&P to ensure timely project completion.

- T23 HAZARD LOG RATIONALISATION

Hazard log review and rationalisation for T23 Frigate alongside platform desk officers. Updated format focussed on enhanced understanding of mitigations and safeguards.

- T23 STABILITY REVIEW

Review of growth margins of T23 to investigate prediction methods for life extension. Part of a more extensive SALUS task to improve the safety of the Royal Navy.

### NAVAL ARCHITECT, OLESINSKI SUPERYACHT DESIGN

- SEA TRIAL DATA  
Analysis of sea trial data to understand how new build yachts compared to theoretical performance predictions.
- SURFACE MODELLING  
3D appendage modelling for CFD analysis.

### NAVAL ARCHITECT, SEA SPEED MARINE CONSULTANTS

- DYNAMIC POSITIONING SYSTEM  
Early stage design for a forward-thinking dynamic positioning system to be used on wind farm support vessels. Developed within Matlab®, inputs established required thrust from external influences including surface drift, tidal flow, wind speed and direction.
- TANK TESTING  
Calm water resistance tests at the QinetiQ Haslar Tank to optimise trim and power.

### EMPLOYMENT HISTORY

2019 to Present	Solis Marine Engineering Ltd Naval Architect
2017 to 2019	Frazer-Nash Consultancy Senior Engineer
2015 to 2017	Frazer-Nash Consultancy Engineer
June - July 2014	Olesinski Superyacht Design Naval Architect
July – Aug 2014	Sea Speed Marine Consultants Naval Architect