



CURRICULUM VITAE
ALLAN MATHESON STUART

B.Eng.(Hons)

Contact Details

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Date of Birth 06.11.1976

Professional Qualifications

B.Eng Class II, Div I (Hons) Degree in Naval Architecture and Small Craft Engineering, graduated in 1998 from the University of Strathclyde, Glasgow.

Graduate Member of the Royal Institute of Naval Architects.

Background

2004 – Present

Naval Architect with TMC (Marine Consultants) Ltd., London.

Current and previous work includes carrying out Naval Architectural consultancy work in connection with a wide range of marine casualties such as:-

Stranding/Grounding

Marine Salvage

Total Loss

Unsafe Berth

Collisions/Speed and Angle of Blow

Flooding/Stability/Damage Stability

Structural Failure/Longitudinal Strength

Opinion Work

I am responsible for creating and running computer models of ships using TMC's in-house software program SEAMASTER, ship types include bulk carriers, tankers, container ships, car carriers, ferries, dredgers and fishing vessels. This software is used for carrying out intact and damage stability calculations, flooding calculations, grounding forces, longitudinal strength and hull stress calculations.

Using the RHINOCEROUS 3d CAD software with associated animation software I also create 3d rendered images and animations of ships, ship parts, collisions, berthing and seabed profiles.



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2003 – 2004 Stability Technician with the Maritime & Coastguard Agency (MCA), Greenock

Working within the MCA Stability Unit my remit was to examine and approve stability information for all ship types operating under the UK flag. I was responsible for managing projects up to the final approval of documents, while providing an efficient and high quality service to ship owners. Required to liaise with different offices of the MCA around the UK and be in close contact with the policy division at all times.

All aspects of intact and damage static stability were covered including probabilistic methods for passenger and cargo ships using Seasafe Marine Software for all necessary Naval Architecture calculations. Attendance at inclining tests and lightship surveys was required when necessary. A detailed knowledge of the regulations relating to specific ship types was essential for this work.

1999 – 2004 Naval Architect with Safety at Sea Ltd, Glasgow

Focused on the stability, design and safe operation of ships and marine vehicles, I was responsible for the management of projects from job initiation through to final completion including liaising with clients and regulatory bodies. Main tasks included intact and damage stability analysis, dynamic motion analysis, model testing and accident investigation using advanced tools. Common ship types worked on ranged from fishing vessels to Ro-Ro vessels.

Responsible for providing calculations and proposing solutions for upgrading Ro-Ro vessels to meet SOLAS 90 and Stockholm Agreement regulations. I was responsible for upgrading and model testing the following vessels: P&O Provence, P&O Dover, P&O Calais, SeaFrance Nord Pas De Calais, Viking Line Mariella, Viking Line Isabella. The main software used in facilitating this work was the naval architecture package NAPA.

Accident investigations I was involved in included the sinking of fishing vessels Solway Harvester and Aurelia. For each of these intact and damage stability calculations were carried out along with dynamic motion and flooding analysis. In house developed software called PROTEUS was used. This is a six degree of freedom time domain simulation which can analyse progressive and transient flooding in a defined seaway and includes non-linear effects.

For two years I was responsible for the successful management and completion of a Teaching Company Scheme Programme. The project involved the development of a new dynamic motion and performance analysis tool for the accurate prediction of sailing yacht performance in a realistic environment by making a time domain simulation of its motion. This required an organised and structured approach to carrying out a large number of pre-planned objectives. Technical expertise required during this project involved ship stability and non-linear dynamics, Computational Fluid Dynamics (CFD) and control theory.



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1998 – 1999 Research Assistant with the University of Strathclyde

Responsibilities included stability and damaged survivability analysis of Ro-Ro vessels. Working closely with clients, I was responsible for analysing several vessels and providing upgrade solutions to meet SOLAS 90 and Stockholm Agreement regulations. Vessels worked on include P&O Canterbury, SeaFrance Cezanne, SeaFrance Renoir, SeaFrance Manet. Other tasks included investigating the results from model tests of offshore semi-submersible fish cages and comparing them with results from numerical simulation software, specifically designed to predict the motions of such structures for validation purposes.

The creation of a 3d Virtual Reality model of the Kronprins Harald, a Ro-Ro passenger cruise ferry owned by Color Line, was an additional project. It required the use of solid modelling techniques in AutoCAD, Virtual Reality Modelling Language (VRML), and rendering software.

PUBLICATIONS:

‘VPP vs PPP: Challenges in the Time Domain Prediction of Sailing Yacht Performance’
co-authored with S. Day and L. Letizia, presented at the RINA High Performance Yacht Design Conference, Auckland, New Zealand, 2002