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THE ROYAL INSTITUTION
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NEW SOUTH WALES SECTION

IMAREST
The Institute of Marine Engineering, Science and Technology
Sydney Branch

RINA/IMarEST Technical Presentation

Research and Development of Marine Design Rules for Curved Composites Subject to Out-of-Plane Loads

Speaker: David Lyons, UNSW Australia

Date Wednesday 3 August 2016

Venue: Harricks Auditorium
Engineers Australia
8 Thomas St
Chatswood

Refreshments: 6:00 pm

Presentation: 6:30 pm

Ballast keel attachments on sailing yachts built from composite materials are subject to concentrated out-of-plane loads in way of the through-bolted connection at the keel/hull interface.

The current research aims to address the role and importance of inter-laminar stresses—tensile, compressive and shear—particularly as a result of out-of-plane loading, in the strength of curved composites, and to provide a justification for targeted research in this area.

The work will make an important contribution, namely the formulation of marine design codes which address the requirement for intact and reserve (post-damage) strength of curved composite structures subject to through-thickness loading, to be assessed at the design, construction and in-service stages.

The presentation will further explain the problem and describe current and planned future work.