

# RINA WESTERN BULLETIN

## Technical Meeting Notice

Topic:

### **Response Based Design and Classification Society Rules: Evolution Towards Common Basis**

When: Wednesday, 26<sup>th</sup> August, 18:00 start

Where: RINA Zoom

Cost: Free

Registration: [eventbrite.com.au/e/116189697513](https://eventbrite.com.au/e/116189697513)

### WA Section RINA Committee

Chairperson: Piotr Sujkowski  
Vice Chair: Kenneth Goh  
Secretary: Syed Zaidi  
Treasurer: Cheslav Balash  
Members: Tim Gourlay  
Matthew White  
Sammar Abbas  
Andy Phillips  
Gino Parisella  
Ian Milne  
Nathan Chappell  
Division  
Representative: Yuriy Drobyshevski

## **Response Based Design and Classification Society Rules: Evolution Towards Common Basis**

**Y. Drobyshevski**  
NavTec Pty Ltd

**M. Morris-Thomas**  
Intecsea Pty Ltd, Worley

### **Abstract**

This talk is an extended version of a material presented at RINA Offshore Marine Technology stream of Australasian Oil and Gas exhibition and Conference (AOG 2020). It reviews developments in response-based design of floating structures against recent trends in design codes, and rules of Classification Societies in particular. As floating systems are increasingly used for offshore developments, the response-based design becomes a preferred approach. This is especially relevant to Australia's industry, where new facilities were installed in cyclone-affected areas in recent years. Backed by developments in metocean science, availability of long-term metocean data and growing computer power, response-based methods have been utilised increasingly over the last 20 years. The offshore design codes, on the other hand, have also been developing: several Classification Societies updated their rules in recent years and the revision process of ISO standards is ongoing. In their latest revisions, Class rules provide an interface between the response-based analysis and structural design of offshore units, which would meet class requirements. This presentation compares examples of vessel responses in different locations, their interpretation through the class rules and calibration of safety factors, environmental and dynamic combination factors. As the evolution of response-based methods and design codes continues, they are on the trend towards adoption of a structural reliability framework, as a general basis for design of offshore systems.

### **About the Presenters**

**Yuriy Drobyshevski**, PhD, CEng MRINA is a naval architect with more than 30-year experience in design and analysis of floating structures, construction vessels and marine operations. Prior to starting as an independent consultant, he worked for Kvaerner, ICON Engineering and Intecsea – Worley for a number of years in various engineering roles. He has also worked in the areas of hydrodynamic research, technical management of ships and maritime salvage; he is holding an Adjunct Professorship at Australian Maritime College, University of Tasmania.

**Michael Morris-Thomas**, PhD, MIEAust MRINA CEng has eighteen years of experience in engineering design, consultancy and applied research in the fields of offshore/ocean engineering and hydrodynamics. Prior to joining Worley, he worked as an academic and consulted to industry on wave-structure interaction problems. His areas of expertise are the naval architecture of fixed and floating structures, response-based analysis, ocean waves, mooring analysis, wave impact loads, scientific computing and physical model testing of waves and offshore structures.

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## **RINA NEWS & Events**

### Committee Updates

The WA Committee has undergone some changes after the recent AGM. We would also like to congratulate and welcome Piotr Sujkowski for being elected as our new Chairman while Vice-Chair (Kenneth) and Treasure (Cheslav) on their re-election to their respective positions.

The committee would like to thank outgoing Chairman, Sammar Abbas for his significant efforts in the role and outgoing Secretary, Matthew White, for his contributions to the Section.

Whilst the committee is now at capacity, we still encourage feedback and are more than happy to speak with anyone who would like to know more information about the Committee activities. The Committee can be contacted on: [WA@rina.org.uk](mailto:WA@rina.org.uk)

### Australian Naval Architect

Sadly, ANA news was a little slow this past quarter, please start thinking and composing your news so we can again have a strong representation from the WA Section.

### WA Naval Architects Recognitions

#### Nathan Chappell – Fellowship Awarded

We are proud to inform that our committee member, Nathan Chappell has been elected a Fellow of RINA. His interest in naval architecture began during his upbringing in the Middle East where a large proportion of his time was spent in or on the water and taking a keen interest on how boats worked. He began his career as a naval architect in 1992 after graduating in Naval Architecture and Ocean Engineering at University College London. His career spanning over 25 years and working in countries including, the United Kingdom, Singapore and Australia has forged his name within the industry worldwide. During more recent times he has become very interested in the welfare of professional engineers, with obvious attention to naval architects, in Australia with focus on keeping Australian engineering design projects in Australia.

We would like to recognise and feature our sections naval architect's achievements in our western bulletin, if you have any memberships status change, accreditation, etc to include, please send them to [wa@rina.org.uk](mailto:wa@rina.org.uk).



LinkedIn

Join for event updates and discussion.

[Royal Institution of Naval Architects \(RINA\) – WA Section](#)



YouTube

RINA now has a YouTube channel where presentations from around the world will be made available, click the following link to check out what has already been uploaded:

[https://www.youtube.com/channel/UChb1sfHbWfQmG-iwpp\\_QGJg](https://www.youtube.com/channel/UChb1sfHbWfQmG-iwpp_QGJg)

### RINA WA Section Library

The library is now located at Bentley Systems. Access to the library can be arranged by contacting:

Daniel Veen: [Daniel.Veen@bentley.com](mailto:Daniel.Veen@bentley.com)

James Clarkson: [James.Clarkson@bentley.com](mailto:James.Clarkson@bentley.com)

Catalogue in Excel format is available at <https://www.rina.org.uk/walibrary>

### Continuing Professional Development (CPD) Record

This is a reminder that all Fellows, Members and Associate-Members who are in or seeking active work must maintain and develop their competence and knowledge. This requirement is obligatory. The Institution reserves the right to monitor a member's CPD achievement through inspection of the CPD Record. More information on the CPD and recommendations on the format of the Record can be found on the website:

[https://www.rina.org.uk/continuing\\_professional\\_development.html](https://www.rina.org.uk/continuing_professional_development.html)

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## **RINA NEWS & Events**

### Upcoming Technical Presentations

RINA WA is always looking for interesting technical presentations and people to present them. If you have a topic or know of someone who does, please feel free to contact the WA section and we can look at getting it added to our event calendar.

The current event program can be found below:

<b>Date</b>	<b>Topic #1 / Author</b>	<b>Topic #2 / Author</b>	<b>Venue</b>
2020 Oct	Some recent developments in dynamic mooring analysis for ships - Tim Gourlay	TBC	Engineers Australia, West Perth
2020 Dec	TBC	TBC	Engineers Australia, West Perth