

**Secretary**

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**ISLE OF MAN JOINT BRANCH**

**6.00 p.m. Monday 11<sup>th</sup> December 2023**  
**The Legion Hall, Market Hill, Douglas**  
**Maritime Autonomy a Vision or Reality?**

by  
Bernhard Twomey

There are several claims related to the benefits of using autonomous functions within the maritime sector. These range from a reduction in human contribution to system hazards, enhancing safety, improving efficiency through optimisation of the ship design and a reduction of operating costs associated with a reduction of crew. Unfortunately, there is very little evidence to support these claims.

The presentation will therefore look at the progress being made in the development of an assurance framework that will provide **'a compelling body of evidence that without bias makes a claim for both the 'safe and unsafe' characteristics of an autonomous system when used for a defined use case in a given environment'**.

**Bernard Joseph Twomey BEng(Hons), CEng, FIET, FIMarEST, MIMechE**

- 12 years in the Merchant Navy
- BEng (Hons) Electro-mechanical Power Engineering - Loughborough University of Technology.
- **Visiting Fellow** at the Institute of International Shipping and Trade Law, Swansea University.
- **Visiting Professor** at the University of Strathclyde in the Department of Electrical and Electronic Engineering.
- **Visiting Fellow** at Cranfield University – Systems and Safety Engineering – Gas Turbine Performance.
- **Holds a PhD research post** in the Department of Computer Science at the University of York.
- Member of the Lloyd’s Register Foundation-Assuring Autonomy international Program at the University of York.
- In 1993 he joined Lloyd’s Register and was the Global Head of Electrotechnical Systems until he left in 2016.
- In 2017 Bernard joined Rolls-Royce Marine and was responsible for the Regulatory Development activities surrounding the Maritime Autonomous Infrastructure. He now works for Kongsberg Maritime in the same role.
- Active member of several research and Special Interest groups and sits on the Technical Committees and advisory boards of two leading Classification Societies.
- Member of BSI/ISO
- Advisor to the Danish Maritime Association at the IMO.

Activities: Rebreather Technical diving to 100m, mainly on wrecks, Instructor for BSAC. Really bad at gardening.

**Continuing Professional Development**

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