The current use of alternative fuels and renewable energy sources within the shipping industry is still relatively scarce. Growing environmental legislation and concerns are driving the need to develop and apply innovative alternative power and propulsion technology for ships.

Now, industry players are increasingly putting a modern spin on one of the oldest concepts in shipping: harnessing the power of wind for ship propulsion.

RINA and International Windship Association (IWSA) invites papers from designers, class societies, operators, researchers, and builders on all related topics, including:

**Market level assessment**
- Future trends in the wind propulsion market - effects of policy, regulation, price and the market - barriers and drivers.
- Developing world markets - challenges, opportunities and designs for wind propulsion solutions.
- How does wind propulsion perform in the small vessel market, fishing, inter-island ferry, workboats etc.
- Lessons from the past - how does the long history of wind propulsion solutions inform the systems and solutions of today and tomorrow.

**Concept level assessment**
- Meeting the challenge of technical barriers to the deployment of wind propulsion rigs - stability, navigation, air draft etc.
- The use of weather routing software to maximise wind propulsion systems.
- How to optimise a retrofit installation on existing vessels - integrating retrofit wind into existing power management systems.
- Wind propulsion and classification - pathways to a standardised approach.
- Zero emissions/Carbon Neutral pathways - how does wind fit in and how can wind propulsion help facilitate the adoption of other low carbon systems and fuels.
- Assessment of the use of multiple different systems (e.g. sails and kites on the same vessel) and a series of the same rigs.
- Wind propulsion & autonomous shipping.

**Technology level assessment**
- How would maximising wind propulsion benefits impact the way we operate shipping and the ships themselves.
- The human element - perceptions, experiences to date, training and safety.
- Ports & logistics - how compatible are wind vessels with the existing infrastructure. What systems are being developed on board to mitigate this and what needs to happen in ports to adapt.
- Big data + Big wind - synergies, complementary approaches, impact and future developments.
- Materials and manufacturing - new developments/materials/systems for rigs and sails.
- Assessment of the technology transfer from the competitive and leisure sailing world.

If you are interested in submitting an abstract please click on: [https://www.rina.org.uk/Register_Interest_in_Event.html](https://www.rina.org.uk/Register_Interest_in_Event.html)

- I would like to offer a paper and attach a synopsis of no more than 250 words
- Please submit your abstract before 17th June 2019
- I wish to receive details on exhibition space and sponsorship opportunities

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