



RINA AFFAIRS

SEPTEMBER/OCTOBER 2019

The Newsletter of the Royal Institution of Naval Architects

CHIEF EXECUTIVE'S COLUMN



2020 Annual Membership and Registration (where appropriate) Fees Renewal Notices will be forwarded next month by email, with posted copies only to members for whom no email address is held.

The recommended and preferred method of payment for members with access to a UK bank is by Direct Debit. Payment is taken when due on 1 January 2020, and no further action is required. This ensures that payment of membership fees is not overlooked, and avoids the need for me to write to members in June 2020, informing them that they are about to be removed from the Membership Roll and registration with the Engineering Council

for non-payment of fees, their journals having been stopped earlier. Direct Debit Mandate Forms are available from Headquarters. Members in China may pay directly into the Institution's Chinese bank account.

Membership fees may be paid online by all major credit cards. Payment can also be made by bank transfer or personal cheque drawn on a GBP, Euro, A\$, NZ\$, Can\$ or US\$ account, but members should remember that the bank will make a charge for transfer and ensure that the full amount due is transferred. Members experiencing administrative problems are asked to contact accounts@rina.org.uk as soon as possible after receiving the Notice.

All members are entitled to receive the printed and digital issues of *The Naval Architect*, *Warship Technology* and *Offshore Marine Technology* (digital only). Members have the option to receive the digital version only, with a corresponding reduction in membership fee. The financial saving to both member and the Institution apart, many members find this to be the most convenient method of receiving and reading the magazines, whether on a PC or tablet (using the RINA Publications App). Members receiving the digital issue have access to all archived issues. Members are requested to check their MyRINA page on the Institution's website before paying their 2020 Membership Fee, to ensure they are receiving the correct magazine version or to opt to receive the digital version only.

Members are also asked to review their standing order for magazines and the Transactions (the *International Journal of Maritime Engineering*, the *International Journal of Small Craft Technology*. Members should also decide if they wish to subscribe to *Ship & Boat International* and *Shiprepair & Maintenance*. I would urge all members who do not already do so to consider taking these magazines at little more than P&P cost only. They are first-class magazines and are widely acknowledged in the world maritime industry as leaders in their fields. More copies sent to members means larger circulations, which makes the magazines more attractive to advertisers, which increases the Institution's income, which means lower Annual Fees! Details of the magazines are on the website.

I would ask all members to check and update their personal details given on their MyRINA page. At any one time, up to 200 members' current addresses are not known, resulting in correspondence and publications being returned, and back numbers being forwarded when new addresses are notified. The additional administrative, postage and printing costs are not insignificant. A charge is also made for returning publications from outside the UK.

Trevor Blakeley

IN THIS ISSUE

Chief Executive's Column

2020 Annual Membership and Registration (where appropriate) Fees Renewal Notices will be forwarded next month by email, with posted copies only to members for whom no email address is held. Members are requested to check their personal details on their MyRINA page.

Institution News

Nominations for the election of the President and members of Council in 2020 are invited.

Women in the Institution 1919 – 2019

The centenary of the decision to allow women members to join the Institution is commemorated by the publication of an eBook, recounting the experience of women members in 1919 and 2019.

Division, Branch and Section News

A UAE Branch meeting and technical paper presentation was held on 12 March 2019 in Abu Dhabi.

Digital RINA

RINA's wide range of publications – magazines, Transactions, Conference Proceedings, eNewsletters and RINA Affairs are all available in digital format, to read on PC, iPad and Smartphone.

Letters to the Editor

Information about Margaret Hewitt (t) Cameron; HMS Liverpool (1814) and Frederick William Dancker is requested. Can you help?

Members in the News

The achievements of Student Members are recognised by the presentation of RINA Student Naval Architect Awards.

INSTITUTION NEWS

2020 Elections to Council

Following the changes to the By Laws in 2019, the total number of elected Council members will be 40, comprising 30 Corporate members (Fellows and Members) and 10 Non Corporate members (Associate Members, Associates). Members' countries will be grouped into global Regions and the total number of Council members may be varied to ensure that each Region will elect at least one Corporate and one Non Corporate member of Council. The number of members of Council elected in each Class of membership from each Region will be in proportion to the number of Voting Members (All members, excluding Student Members, Junior Members and Corporate Partners) in the Region. The composition of Regions, and the allocation of seats on Council is shown at <https://www.rina.org.uk/res/Regions%20and%20composition%20of%20>

Council%202019.pdf.

Members of Council will be nominated from and elected by members in each Region. The 2020 Council elections will be in accordance with the changed composition. Members will be advised by email of the vacancies in their Region.

Members are invited to nominate Corporate Members and/or Non Corporate Members from their Region where there are vacancies. Nominations should include a Proposer and Seconder who are members of the Institution, and a brief CV of the nominated member. The agreement of the member should be obtained before making the nomination. Nominations should be forwarded by post or email, to arrive at Headquarters by 1700 GMT on 31 November 2019.

Any queries regarding nominations should be forwarded to the Chief Executive at hq@rina.org.uk.

Election of the President

Professor Richard Birmingham's 2-year term of office as President will end in 2020. An election for the next President will therefore be held at the 2020 AGM. Nominations of members for election as President are invited.

Nominations should have a proposer and a seconder, and be accompanied by a brief CV of the member. Members being nominated should not be approached or informed of their nomination, nor should other members be informed that a nomination has been made. Nominations should be made by post or email to the Chief Executive at hq@rina.org.uk and be received at Headquarters by 1700 GMT on 31 October 2019.

Please contact the Chief Executive at hq@rina.org.uk if you have any queries regarding the nomination or election of the President.

Reduction in membership and registration fees

Members who are no longer in gainful employment, who are over 60 years of age and have been a member for 20 years, are eligible for the retired rates of membership and registration fees. Members taking a Career Break for more than 6 months, eg family duties, illness, return to full-time education, may be eligible for a reduced

rate of membership and registration fees.

Members wishing to apply for the retired rate or Career Break reduction in membership and registrations fees should contact the Membership Department. Members applying for the retired rate(s) should confirm that they are no longer in gainful employment. Members applying for the Career Break reduction in fees

should state the reason and confirm that they intend to return to employment.

Members receiving the retired rate should inform the Membership Department if they return to gainful employment. Members receiving the Career Break reduction in membership and registration fees should re-apply annually on receipt of their Annual Fees Notice.

RINA at the Shows

The Institution had a stand at the Pacific 2019 Maritime Exposition in Sydney. Running in parallel with the Show was the 10th bi-annual Pacific 2019 International Maritime Conference, organised by the Australian Division.



The Institution at Pacific 2019

2019 President's Invitation Lecture & Dinner

Thursday 7 November 2019, at One Whitehall Place, London, UK

The annual President's Invitation Lecture will be presented by Simon Schofield, CTO of BAR Technologies.

Simon was the Head of Design and Engineering, in the previous America's Cup campaign with the British team, then Land Rover BAR. Before then he was a partner

in Ker Design and Engineering, which has worked for different America's Cup teams in the editions before last.

He is now the CTO of BAR Technologies, a spin-off company from the America's Cup team, that uses the technology, IP, and knowledge developed by the British team during the America's Cup cycles and

applies them to commercial projects, from motor yachts to sailing yachts, from ships to submersible vehicles.

Details of the President's Invitation Lecture are at: www.rina.org.uk/Presidents_Invitation2019.html

Institution receives Maritime Excellence Award

The Institution's contribution to improving the standards of professional competence of engineers in the global maritime industry was recognised by the award of the International Maritime Club's Maritime Excellence Award for the best professional society.

The Award was received by the Chief Executive at the presentation ceremony in London from the Chairman of the International Maritime Club.

About the IMC

The International Maritime Club (IMC) is a non-profit organisation who have been serving the maritime community for the past 12 years. The club works for the conscious and continuous development of the vast maritime industry by acting as a platform where professionals from various sectors of the maritime industry come together under one roof to exchange knowledge and ideas on the maritime trade and industry.



Top: The Chief Executive receives the Maritime Excellence Award

Bottom: Winners of the 2019 IMC Awards

"Design For The Maritime Environment"

Environmental Considerations in the Design of Marine Vessels and Structures

Society expectation and regulation require that the maritime industry be fully sensitive to the environment through the reduction of gas emissions, contamination of the seas and more efficient use of sustainable resources. The thoughtful design and construction of marine vessels and structures can have significant influence in achieving these.

The Maritime Environment Committee has produced an aide memoire describing those aspects of marine vessels and structures that have an impact on the environment, and how that

impact can be mitigated through design. The Aide is intended to provide a broad overview of environmental design considerations and not a detailed reference to design and associated regulation.

It can be viewed at www.rina.org.uk/Maritime_Environment_Group.html

The Aide has been updated to add how the design aims can be achieved, Members' comments on the Aide to hq@riina.org.uk are welcome.

“Women in the Institution 1919 – 2019”

At the 1919 AGM, it was agreed that women should be eligible to become members of the (then) Institution of Naval Architects on the same terms as men. The first women to be elected were Eily Keary, Rachel Parsons and Blanche Thornycroft.

In 2019, women members of the Institution occupy a wide range of appointments in the maritime industry, academia and organisations world-wide, in both engineering and non-engineering roles. They were invited to describe their experience of being a woman in

the maritime sector, why they chose to embark upon such a career, what they have achieved, what they see for the future of women in the maritime sector and whether they would recommend it as a career for women and girls today.

The professional experience and achievements of the first and today's women members are described in the free commemorative publication “Women in the Institution 1919 – 2019” which may be downloaded as a pdf file or as an ePub file to read as an eBook on either Apple Books or Play Books.

Today, the Institution is fully committed to providing all who are involved with or interested in the maritime industry with equal opportunity to engage fully with all the Institution's activities. It is also committed to encouraging those organisations with which it engages to provide the same equality of opportunity. The decision of the members in 1919, commemorated in this book, was a significant step in achieving such equality.

*Trevor Blakeley
Chief Executive*



EILY KEARY AWARD

The Royal Institution of Naval Architects is committed to ensuring that all individuals, regardless of gender, faith or ethnicity, have equal opportunity to participate fully in all the Institution's activities. The Institution also seeks to encourage such equality of opportunity and involvement throughout the global maritime industry.

The annual **Eily Keary Award** recognises the contribution by an individual, organisation or part of an organisation to increasing equality, diversity and inclusion in their sector of the maritime industry. Such contribution may have been made by a specific activity or over a period of time. Individuals may not nominate themselves for the Award

Nominations are invited for the 2019 Eily Keary Award.

The Award will be announced at the 2020 Annual Dinner.



Nominations may be up to 750 words and should describe the contribution which the individual, company or organisation has made.

Nominations may be forwarded online at www.rina.org.uk/EilyAward

or by email to EilyKearyAward@rina.org.uk

Nominations should arrive at RINA Headquarters by 31 Jan 2020.

Queries about the Award should be forwarded to the Chief Executive at: hq@rina.org.uk

Engineering Census 2019

The following message has been received from the UK Women in Engineering Society.

“The Women’s Engineering Society is passionate about getting more people into engineering and trying to encourage and nurture engineers to reach their true potential and as one of the professional institutions we are sure that you share this passion with us. An important part of this is understanding barriers to progression and challenges faced by engineers. To try and better understand the issues we have created a survey, the results of which will help us to develop tools and support for engineers as they go through their

careers. I would be really grateful if you could pass this out into your institution and across your networks (UK based engineers only), we are seeking feedback from engineers of all backgrounds, genders, and disciplines – the more views and opinions we gather the more likely we are to be able to make a difference. The survey can be taken at: www.engineering-census.com”

From the Chief Executive

Although restricted to members in the UK, I would be interested to learn of similar organisations and initiatives in other countries.

DIVISION, BRANCH AND SECTION NEWS

UAE Branch

The UAE Branch meeting and technical paper presentation was held on 12th March 2019 at Abu Dhabi. The event was held at Al Ain Ball Room, Royal Rose Hotel, Abu Dhabi. Three papers were presented during the event.

Mario Princevac, Head of Emirates Plan Approval Office (EPO), Bureau Veritas S A. Dubai presented paper on the subject *BV methodology for calculating FRP structures*. The paper covered calculation methodology and principles of Bureau Veritas Rules NR546 “Hull Composite Materials and Plywood, Material Approval, Design Principles, Construction and Survey” and associated software “ComposeIT”. Local experience with projects and examples of software application were presented as well.

Mark Harvey, C.Eng., MRINA, Technical Manager, Gulf Marine Services, Mussafah, Abu Dhabi presented the paper *Asset Integrity, Implementation and Case Study* and spoke about implementing the principles of Asset Integrity Management to the GMS fleet, focus areas and presented a case study of effectiveness.

The third paper of the evening was presented by Rafid Qureshi, Ocean Power International LLC, Dubai about *Environmental Leadership in Bearing Systems*. The paper discussed features of Marine Bearing Solutions (Thordon) including Grease Free Rudder Bearings, Grease Free Deck Equipment Bushings, Sea Water Lubricated Propeller Shaft Bearings, System Components, Conversions and Ship Owner Benefits.

The paper presentations were very interesting with excellent interaction with attendees.

The event was attended by more than 40 persons consisting of branch members and invited guests. Rajesh Panicker, Branch Secretary opened up proceedings of the evening and welcomed the attendees. Mr Suman Nookireddi, MRINA introduced speakers and their topics.

Chairman of RINA UAE Branch, Ashik Subahani outlined RINA UAE Branch’s current activities and spoke about membership campaign in Abu Dhabi. Speaker mementos were presented by Mr Subahani. Event proceedings were closed with dinner sponsored by M/s Ocean Power International.

Rajesh Panicker, Hon. Secretary

UAE Branch Technical meeting



Ashik Subahani, Chairman of the UAE Branch



Digital RINA

It is the policy of the Institution to make full and effective use of available IT and digital media to inform and engage with members of the Institution and the wider maritime community. It achieves this through its publications – Technical Magazines, Transactions,

Conference Proceedings, eNewsletters – You Tube, eNewsletters and Social Media.

Transactions

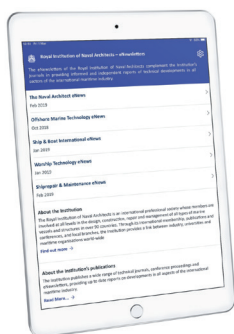
Members have online access to all papers published in the Transactions – IJME and IJSCT.

Technical Magazines

The Technical Magazines – *The Naval Architect*, *Ship & Boat International* etc – are published online and may also be viewed through the RINA Publications App which may be downloaded from Play Store and Apple Store.

Technical eNewsletters

The Technical magazines each have their own eNewsletters – *The Naval Architect* eNews, *Ship & Boat International* eNews, etc – publishing significant articles contained in the current issue and material which did not make it to the magazines. The eNewsletters may be viewed online or through the RINA eNewsletter App, which may be downloaded from the Google Playstore and the Apple Store. Members and subscribers are advised through the eNewsletters and by App notification when a new issue is available for reading.



RINA eNews

RINA eNews is the Institution's regular email newsletter to members, reporting on the activities of members and the Institution. Occasional Special Issues of RINA eNews focus on Publications and Events.

RINA Affairs

Reports on Institution and members' activities are reported in RINA Affairs – the Institution's bi-monthly House Magazine. RINA Affairs may be read as a pdf file or read online, a RINA Affairs App will be available soon.

YouTube

Videos of presentations at conferences, Section and Branch meetings may be viewed on the RINA YouTube Channel: https://www.youtube.com/channel/UCHb1sfHbWfQmG-iwpp_QGJg

Conference Proceedings

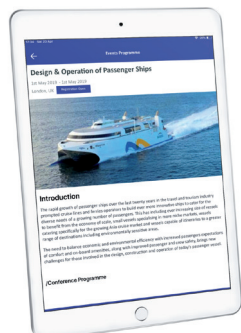
Delegates to RINA conferences may view access the papers presented at the conference online, together with as the associated Powerpoint presentation, through the Institution's Dropbox account. Selected presentations are published on the Institution's You Tube Channel.

Social Media

The Institution's social media accounts on Facebook, Twitter, Instagram and LinkedIn provide the opportunity to update members and others on the Institution's activities, and for members to engage with the Institution and other members of the maritime community.

Events eNewsletter

Full details of the Events programme may be viewed online at www.rina.org.uk/Events, or through the RINA Events App, which may be downloaded from the Apple Store and the Google Playstore.



THOUGHT FOR THE MONTH

If my ship sails from sight, it doesn't mean my journey ends, it simply means the river bends.

Enoch Powell

FROM VANGUARD TO DREADNOUGHT

1883- 2013

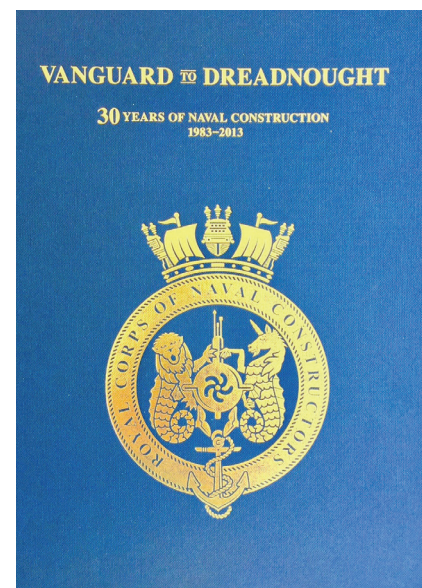
Originally commissioned in 2013 for publication within the Ministry of Defence in 2013 to celebrating the 130th Anniversary of the Royal Corps of Naval Constructors, after relatively minor changes it now has the permission of the Ministry of Defence for open publication.

The book tells the story of the modern history of the RCNC since the Centenary history was published in 1983. It draws upon first-hand accounts and material from the annual RCNC Journal and from unclassified technical papers and official reports. The book charts the design, procurement and support of warships and their systems over the last two decades of the 20th century and the first decade or so of the 21st. It places these developments in the context of how the Ministry of Defence (MoD) organisation and warship acquisition and support have changed and the effect of these changes on the RCNC itself.

Publication Price: £27.50 plus £3 P&P (RCNC Members £22.50 plus £3 P&P)

To order: Tel: +44 (0)20 7235 4622; Fax +44 (0)20 7259 5912

Email: publications@rina.org.uk, or visit: www.rina.org.uk/rina_books



RINA-QINETIQ Maritime Innovation Award

Innovation is key to success in all sectors of the maritime industry and such innovation will stem from the development of research carried out by engineers and scientists in universities and industry, pushing forward the boundaries of design, construction and operation of marine vessels and structures

The Maritime Innovation Award seeks to encourage such innovation by recognising outstanding scientific or technological research in the areas of hydrodynamics, propulsion, structures and material which has the potential to make a significant improvement in the design, construction and operation of marine vessels and structures

The Award is made annually to either an individual or an organisation, in any country. Nominations for the Award may be made by any member of the global maritime community, and are judged by a panel of members of the Institution and QinetiQ. The award will be announced at the Institution's Annual Dinner.

Nominations are now invited for the 2019 Maritime Innovation Award. Individuals may not nominate themselves, although employees may nominate their company or organisation.



QINETIQ

Nominations may be up to 750 words and should describe the research and its potential contribution to improving the design, construction and operation of maritime vessels and structures.

Nominations may be forwarded online at www.rina.org.uk/maritimeinnovationaward

or by email to: maritimeinnovationaward@rina.org.uk

Nominations should arrive at RINA Headquarters by 31st December 2019.

Queries about the award should be forwarded to the Chief Executive at hq@rina.org.uk

NEWS FROM THE UNIVERSITIES

RINA BAE Systems Student Awards

The following Student Members have received the 2019 RINA BAE Systems Students Awards for the best final year projects on their BEng and BSc courses.

Singapore Institute of Technology (SIT) – Newcastle University:

The 2019 RINA BAE Systems Students Award for the best final year project on BEng (Hons) in Marine Engineering course has been awarded to Lam Thao Boon, for his project: *Analysis of steel plate storage methods and material flow for Shipyard production efficiency*.

The 2019 RINA BAE Systems Students Award for the best final year project on the BEng (Hons) in Naval Architecture course has been awarded to Ho Renee, for his project: *Risk-Based Ship Design Approach for LNG Carriers*.

The 2019 RINA BAE Systems Students Award for the best final year project on the BEng (Hons) in Ocean Engineering course has been awarded to Lim Jun An, for his project: *Design of breakwaters to reduce green water loading effects on turret moored FSO*.

In a recent visit to Singapore, the Chief Executive, Mr Trevor Blakeley, met with students and staff at SIT, when he gave a

presentation on the activities of the Institution and the benefits of membership to students.

Plymouth University:

The 2019 RINA BAE Systems Students Award for the best final year project on the BEng (Marine Technology) course has been awarded to Jessie-May Turner, for his project: *“Investigating the Effects of Coastal Wave Patterns on a Stationary Vessel’s Motion”*.

The 2019 RINA BAE Systems Students Award for the best final year project on the BSc (Marine and Composites Technology) course has been awarded to Harry Odling, for his project: *An Investigation into the Use of Nano Materials (Graphene) in Sails to Enhance Performance*.

Southampton Solent University

The 2019 RINA BAE Systems Students Award for the best final year project on the BEng (Hons) Yacht Design & Production course has been awarded to Aaron Paul Kagon, for his project: *Preliminary Design & Production Philosophy of an 86’ Tour Vessel*.

The 2019 RINA BAE Systems Students Award for the best final year project on the BEng (Hons) Yacht & Powercraft Design course has been awarded to Timothée Villain-Amirat, for his project: *“Design of*

a 54ft Offshore Racing Sailing Yacht for an Ocean Race Type Event”.

Southampton University

The 2019 RINA BAE Systems Students Awards for the best final year project on the MEng (Ships Science) course at Southampton University has been awarded to Katarzyna Patryniak for her project: *Maximising Range of the Slocum Underwater Glider through Wing Optimisation*.

Newcastle University

The 2019 RINA BAE Systems Students Award for the best final year project on the BEng (Marine Technology) course has been awarded to Jun Wei Fan for his project: *An Investigation into the resistance characteristics of Multi-Step Hullforms*.

Singapore Institute of Technology

During a recent visit to Singapore, the Chief Executive, Trevor Blakeley, gave a presentation to first year students on the joint Singapore Institute of Technology – Newcastle University BEng course.

The Chief Executive, students and staff at SIT



MEMBERS IN THE NEWS

Election to the Royal Academy of Engineering

Professor Jeom Paik FRINA and Professoee Dracos Vassalos FRINA have been elected as Fellows of the Royal Academy of Eng (FREng)

THOUGHT FOR THE MONTH

For a politician to complain about the press is like a ship's captain complaining about the sea

Enoch Powell

LETTERS TO THE EDITOR

Frederick William Dancker

Sir: I'm an architectural historian from Adelaide, South Australia. Recently I have been undertaking research into local Adelaide architect Frederick William Dancker (1852-1936), whom I believe may have studied either with the Royal School of Naval Architecture and Marine Engineering or at the subsequent Royal Naval College at Greenwich sometime in the 1870s.

Essentially, I'm looking for any historical records pertaining to students of naval architecture studying at Greenwich during the 1870s which may lead to subsequent more specific information.

Kenan Henderson
kenan.henderson@hotmail.com

HMS Liverpool (1814)

Sir: We are involved in a restoration project and trying to find copies of HMS Liverpool's (1814, sailing ship) construction drawings. Could any of your members provide copies or point me in the right direction?

Gary Miller
Miller Marine
gmiller@miller-marine.org

Margaret Hewit(t) Cameron

Sir: I am carrying out a research project for Abertay University which is celebrating its 25th anniversary of having been granted university status.

I am looking into one of its pupils, a Margaret Hewit(t) Cameron (born 1926) who obtained a Higher Certificate in Naval Architecture at the then Dundee Institute of Technology and Arts in 1948

whilst employed at Caledon Shipyard in Dundee. I believe Margaret married a Cyril Granshaw in 1958.

I would be most grateful for any further information you have about her career or advise me who else to contact.

Elisabeth Leslie
lisileslie65@gmail.com

**RINA
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The Institution is not, as a body, responsible for opinions expressed in RINA Affairs unless expressly stated that these are Council's views.

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EVENTS PROGRAMME 2019-20

2019

WIND PROPULSION

15-16 October 2019,
London, UK
www.rina.org.uk/Wind_Propulsion_2019

CONTRACT MANAGEMENT FOR SHIP CONSTRUCTION, REPAIR & DESIGN

23-25 October 2019,
London, UK
www.rina.org.uk/Contract_Management_Oct_2019.html

MARINE INDUSTRY 4.0

5 November 2019,
Rotterdam, Netherlands
www.rina.org.uk/Marine_Industry_4_0

ICSOT INDIA 2019

7-8 November 2019,
Kharagpur, India
www.rina.org.uk/ICSOT_India_2019

ICSOT INDONESIA 2019

25-26 November 2019,
Semarang, Indonesia
www.rina.org.uk/ICSOT_Indonesia_2019

SUSTAINABLE AND SAFE PASSENGER SHIPS

5 March 2020,
Athens, Greece
www.rina.org.uk/Sustainable_and_Safe_Passenger_Ships

DAMAGED SHIP V

11-12 March 2020,
London, UK
www.rina.org.uk/Damaged_Ship_V

AUTONOMOUS SHIPS

1-2 April 2020,
London, UK
www.rina.org.uk/Autonomous_Ships

INFLUENCE OF EEDI ON SHIP DESIGN & OPERATION

22-23 April 2020,
London, UK
www.rina.org.uk/EEDI_2020

BASIC DRY DOCK TRAINING COURSE

2-5 June 2020,
London, UK

WARSHIP 2020

June 2020, UK

2020

MARINE DESIGN 2020

15-16 January 2020, Cadiz, Spain
www.rina.org.uk/Marine_Design_2020

LNG/LPG AND ALTERNATIVE FUEL SHIPS

29-30 January 2020, London, UK
www.rina.org.uk/LNG_ALT2020.html

HUMAN FACTORS

19-20 February 2020,
London, UK
www.rina.org.uk/Human_Factors_2020

SMART SHIP TECHNOLOGY

14-15 October,
London, UK

ICE CLASS VESSELS

4 November,
London, UK

HISTORIC SHIPS

2-3 December,
London, UK