



RINA AFFAIRS

OCTOBER/NOVEMBER 2016

The Newsletter of the Royal Institution of Naval Architects

CHIEF EXECUTIVE'S COLUMN



2017 Annual Membership and Registration (where appropriate) Fees Renewal Notices will be forwarded this 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 2017, 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 2017, 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.

All members are entitled to receive the printed and digital issues of *The Naval Architect* (+ *Warship Technology* + *Offshore Marine Technology*). 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 journals, whether on a PC or tablet. Members receiving the digital issue have access to all archived issues. Members are requested to check their MyRINA page before paying their 2017 Membership Fee, to ensure they are receiving the correct journal version or to opt to receive the digital version only.

Members are also asked to review their standing order for journals and the Transactions (the *International Journal of Maritime Engineering*, the *International Journal of Small Craft Technology* and the *International Journal of Marine Design*). Members should also decide if they wish to subscribe to *Ship & Boat International* and *Ship Repair & Conversion Technology*. I would urge all members who do not already do so to consider taking these journals at P&P cost only. They are first-class journals 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 journals more attractive to advertisers, which increases the Institution's income, which means lower Annual Fees!

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 journals 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 journals from outside the UK.

Trevor Blakeley

IN THIS ISSUE

Technical Committees Structure

The Technical Working Group has made a number of recommendations for changes to the structure and operation of Technical Committees which will make more effective use of resources and greater involvement of members in their work.

Headquarters facilities

The Headquarters meeting facilities are available to members' companies who wish to hold events in London.

Maritime Awards

Nominations for the RINA-Lloyd's Register Maritime Safety Award and the RINA - QinetiQ Maritime Innovation Award are invited.

Members' Services

Discounted rates for accommodation in central London and medical insurance have been arranged for members.

Naval Architecture

The Concise Oxford Dictionary defines Naval Architecture as "Ship Design", but does that properly describe the work of Naval Architects?

Change of address

Members are urged to update their Membership Record with changes of address.

Corporate Partners

Does your company require and assist its engineers to achieve high standards of professional competence? If so, it could become a Corporate Partner of the Institution and enjoy a range of benefits.

Designatory letters

Do you proudly demonstrate your achievement by the letters FRINA, MRINA, AMRINA or AssocRINA after your name on your business card?

Review of Technical Committees

Introduction

Making its collective expertise available for the benefit of the profession and society is an important role and key responsibility of the Institution to which it devotes not inconsiderable resources, principally its members' time. The Institution exercises this responsibility mainly through its Technical Committees using the expertise available within the committees but also able to call upon the wider expertise of the members of the Institution.

The Council recognises the need to ensure that the Institution is making the most effective use of both of its resources and the expertise of the members. It therefore tasked a Technical Committees Working Group with examining the current structure of the Technical Committees – Safety, High Speed vessels, Small Craft and IMO – and recommending changes which would make more effective use of resources and wider use of the expertise of the members. The TCWG has now submitted its Report and recommendations which have been accepted by the Council.

Technical Committees

The output of the committees is a measure of their effectiveness and the TCWG observed that such productive output was generally related to safety related items, mainly to persons but increasingly to the maritime environment. It also recognised the need for the Institution to recognise and respond to evolving technologies. Council has therefore accepted the recommendation that there should be four Technical Committees, covering Maritime Safety, the Maritime Environment, the IMO Committee and Maritime Innovation.

The Maritime Safety Committee will continue the role and responsibilities of the current Safety Committee, addressing matters concerned with personal safety, whilst the Maritime Environment Committee will address issues relating to the protection of the maritime environment, and including marine renewable energy.

The IMO Committee will continue its role of representing the Institution in its capacity as an NGO at the IMO, liaising closely with the Maritime Safety and Maritime Environment Committees.

The Maritime Innovations Committee will act as the Institution's "Think Tank" identifying and assessing the impact of evolving technologies on the membership and profession, and determining how the Institution should address them. The Technical Committees will include expertise in all sectors of the industry and the Chairmen will be ex officio members of Council.

In due course, members will be asked to express their willingness to serve on the new Maritime Environment Committee and Maritime Innovation Committee.

Maritime Groups

The TCWG concluded that it was not feasible for all specialist vessel types and sectors to have their own formally structured committees. However, the TCWG recognised that specialist committees such as the High Speed Vessels Committee and Small Craft Committee provided an opportunity for their members to identify and discuss developments in those and other vessel types. That opportunity will continue and be extended to all members of the Institution through the formation of online special interest Maritime Groups, covering vessel types and sectors of the industry. Each Maritime Group will have an online Forum by which members may raise and discuss matters of interest to the Group. Initially these Groups will cover Small Craft and High Speed Vessels, with other Groups added as interest dictates. Each of the four Technical Committees will also have an associated Maritime Group through which members will be kept up to date with the work of the Committees, and have the opportunity to both comment on that work and to propose items for consideration. Members will be able to register for these Groups and receive notification of new items.

Technical Register

In order for the Technical Committees to make greater and more effective use of members' expertise, an online Technical Register of members' experience and expertise will be created for those members who are willing for their expertise to be called upon by the Technical Committees for specific issues. Chairmen of the Technical Committees will have access to the Technical Register, which members can enter their details through the My Profile page of the website. The Technical Register will be confidential.

Members will be informed when the Technical Register is available.

Working Groups

Whilst the Technical Committees will have a core expertise across all vessel types and sectors, they will mainly carry out their work through ad hoc Working Groups, formed to address a specific issue which may have been raised by a member of the Committee or a member of the Institution through, for example, a Maritime Group. The Working Groups, which will mainly carry out their work online, will comprise members from the Committee and members on the Technical Register who have expressed their willingness to make their expertise available to the Committee.

Considerable work will be required to populate the new Technical Committees and make the necessary changes to the website, and members will be informed as soon as the Technical Register and Maritime Groups are available.

Council considers that these changes to the Technical Committees structure, the introduction of a Technical Register and the Maritime Groups will enable the Institution to more effectively fulfil its role and responsibility of making its collective expertise available for the benefit of the profession and society. I am sure members will wish to give the new structure its full support and use.

*Trevor Blakeley
October 2016*

Naval Architecture?

The Concise Oxford Dictionary defines Naval Architecture as “the design of ships”. Today, given the complexity and the breadth of the naval architect’s work, that would seem to be a somewhat inadequate definition. But what is that discipline of engineering called Naval Architecture? Below are a number of definitions from worthy sources, gleaned over the years.

...A Fairly Complex Subject

Naval Architecture, especially in its engineering sense – which is the harmonious combination of those basic factors that produce seaworthiness, speed, safety, balance, buoyancy, comfort and utility – is a fairly complex subject.

...Attitude

Naval Architects – Shipwrights with Attitude!

Michael Gray

...Conceive of, Design, Test, Build, and Operate...

Naval architecture is that field of engineering which addresses how we can apply our acquired wealth of knowledge to *conceive of, design, test, build, and operate* all types of ships and boats – recreational to naval, small to big, operating on or under the sea, sails to nuclear, etc.

US Naval Academy Annapolis

...Combines Imagination, Artistic Instincts, and Proven Scientific Principles...

Naval Architecture combines imagination, artistic instincts, and proven scientific principles, tempered by basic engineering considerations, in designing the means of ocean transportation of the future. The many types of ships, boats and vehicles needed to operate on, under, or above the ocean’s surface provide the broad field in which

the designer is to work. The challenge to the naval architect is to convert the functional requirements into an effective, workable, and cost-efficient design.

The Department of Naval Architecture, Ocean and Marine Engineering, US Naval Academy

...All Aspects of Learning, Designing, Building And Smooth Running of Vessels...

Naval Architecture is a discipline, associated with other types of engineering needed for vessels to be completely independent units of floating objects in water, under various conditions of interaction of the wave and the wind in all aspects of learning, designing, building and smooth running of vessels; while a naval architect is a person who is fully and professionally educated in this discipline.

Shyama Prosad Ghosh, FRINA

Where to stay in London

Members and their guests visiting London on business or pleasure may take advantage of the Institution’s membership of Club Quarters to stay at its Trafalgar Square Hotel, situated at 8 Northumberland Avenue, less

than one minute’s walk from RINA Headquarters.

The Institution’s membership provides a fixed lowest rate of **£159 per room** which is always available to conference delegates, regardless of the varying

higher rates throughout the year for non members. An even lower rate is available only for Institution members and guests at weekends (Fri, Sat and Sun) and holidays (**£69**). Guests do not need to be accompanied by the member.

Other benefits include access to the Club Living Room with complimentary refreshments, WiFi and unlimited chilled, purified bottled water, and a Rewards Programme offering a “Night on the House” after just one stay.

Members may find details of the facilities offered by Club Quarters Trafalgar Square or book online at <http://clubquarters.com/royal-ins-naval-architects>, using the login “RINA” (without the quotes) on their first visit and selecting Trafalgar Square from the choice of hotels.

Members and their guests who wish to take advantage of the lower rate at weekends, which is not shown online, should contact ClubQuarters at **+44 (0)20 7451 5800**



Corporate Partners

Does your company or organisation, be it large or small:

- help and encourage its naval architects and other engineers involved in the design, construction and maintenance of marine vessels and structures to achieve professional recognition through membership of RINA in the appropriate class of membership.
- assist its naval architects and engineers to achieve the standards of professional development and responsible experience required for Corporate membership of RINA.
- require and assist its naval architects and engineers to continue their professional development.

If so, your company or organisation may be eligible to become a Corporate Partner of the Royal Institution of Naval Architects and enjoy the following benefits:

- The right to show this “corporate professional qualification”, including the RINA Corporate Partner logo, on company literature, thereby providing an internationally recognised demonstration of the professional quality of the company’s employees and its commitment to maintaining that quality.
- Advice on the development on Company Professional Development Schemes and free accreditation of Schemes.
- A discount on RINA international conferences and training courses attended by all employees of the company or organisation, giving them the opportunity to network with other professionals in the global maritime industry.
- Use of the Institution’s headquarters facilities at preferential rates, including the meeting rooms, lecture theatre, conference facilities and library.

- Complementary copies of the Institution’s leading technical journals, and a discount on the purchase of other RINA publications.
- Listing on the Corporate Partners page of the Institution’s website with a link to the company’s website.
- ‘Welcome’ advertisement in journal of choice. Other PR and promotional opportunities through RINA conferences and publications.
- Opportunity to present technical papers at RINA conferences or publish them in technical journals.
- Discount on exhibition stands and sponsorship at RINA conferences.
- Access to national branch meetings, giving opportunity to meet with professionals in the local maritime industry.
- Complementary invitations to the Annual Dinner and President’s Invitation Lecture.

In addition to these benefits, Corporate Partner membership of the Royal Institution of Naval Architects will enhance the reputation and image of a company with its customers and the industry generally. Also, both prospective and existing employees will value more highly an employer who is committed to the high professional standards and personal development demonstrated by Corporate Partner membership, thereby benefiting both recruitment and retention.

Further information on becoming a Corporate Partner may be obtained from the RINA website at www.rina.org.uk/corporatepartners.html, including a list of those companies who have already become Corporate Partners, or from the Chief Executive at hq@rina.org.uk or tel: +44 (0)20 72354622.

EVENTS PROGRAMME 2016 - 2017

PRESIDENT’S INVITATION LECTURE

9 November 2016, London, UK
http://www.rina.org.uk/PIL_2016.html

ENERGY EFFICIENT SHIPS

23–24 November 2016, London, UK
http://www.rina.org.uk/EES_2016

COMPUTATIONAL & EXPERIMENTAL MARINE HYDRODYNAMICS

24–25 November 2016, India
http://www.rina.org.uk/Computational_Experimental_Marine_Hydrodynamics2016.html

HISTORIC SHIPS

7–8 December 2016, London, UK
http://www.rina.org.uk/Historic-Ships_2016

SMART SHIP TECHNOLOGY

24–25 January 2017, London, UK
<http://www.rina.org.uk/Smart-Ships2017.html>

INFLUENCE OF EEDI ON SHIP DESIGN AND OPERATION

22–23 February 2017, London, UK
http://www.rina.org.uk/ShipDesign_EEDI.html

WIND FARM SUPPORT VESSELS

29–30 March 2017, London, UK
http://www.rina.org.uk/WFSV_2017.html

RINA ANNUAL DINNER

27 April 2017, London, UK
http://www.rina.org.uk/Annual_Dinner_2017.html

DESIGN AND CONSTRUCTION OF SUPER & MEGA YACHTS

10–11 May 2017, Genoa, Italy
<http://www.rina.org.uk/superyachts2017>

RINA - Lloyd's Register Maritime Safety Award

The safety of the seafarer and protection of the maritime environment begins with good design, followed by sound construction and efficient operation. Naval architects and engineers involved in the design, construction and operation of maritime vessels and structures can make a significant contribution to safety and the Royal Institution of Naval Architects, with the support of Lloyd's Register, wishes to recognise the achievement of engineers in improving safety at sea and the protection of the maritime environment. Such recognition serves to raise awareness and promote further improvements.

The Maritime Safety Award is presented annually to an individual, company or organisation that in the opinion of the Institution and Lloyd's Register, is judged to have made an outstanding contribution to the improvement of maritime safety or the protection of the maritime environment. Such contribution may have been made by a specific activity or over a period of time. Individuals may not nominate themselves. Nominations are now invited for the 2016 Maritime Safety Award.

Nominations of up to **750 words** should describe the nominee's contribution to:

- safety of life or protection of the marine environment, through novel or improved design, construction or operational procedures of ships or maritime structures
- the advancement of maritime safety through management, regulation, legislation or development of standards, codes of practice or guidance
- research, learned papers or publications in the field of maritime safety
- education, teaching or training in maritime safety issues



The closing date for nominations is
31st December 2016.

The Award will be announced at the Institution's 2017 Annual Dinner.

Nominations may be made by any member of the global maritime community and should be forwarded online at:
www.rina.org.uk/maritivesafetyaward

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

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

NOMINATIONS INVITED FOR ELECTION TO COUNCIL

Corporate Members (Fellows and Members)

Any Corporate Member may nominate a Corporate Member to stand for election to Council.

Each nomination of a Corporate Member must confirm that the nominee is eligible and is willing to stand for election, and contain the signatures of three Corporate Members who support the nomination.

Non Corporate Members (Associate Members and Associates)

Any Voting Member (all except Student Members and Junior Members) may nominate a Non-Corporate Member for election to Council.

Each nomination of a Voting Member must confirm that the nominee is eligible and is willing to stand for election, and contain the signatures of not less than three Voting Members who support the nomination. Members are not permitted to sign more than three nominations for election to Council. Nominations should be made by letter to the Chief Executive, to arrive at the Institution's Headquarters by 31 December 2016.

Maritime Services Directory

Do you or your company provide services or products to the public or the maritime industry? If so, promote yourself or your company by an entry in the online Maritime Services Directory.

Members will be aware that there are many online directories which list companies that provide services to the public or the maritime industry. Most of these directories seek quantity rather than quality of entries, and obtain their revenue through advertising rather than subscription.

Members of the Institution have, through their membership, demonstrated their achievement of internationally recognised standards of professional competence and integrity. Their membership is therefore an advertisement for the quality of the service or product which they offer.

The Institution's Maritime Services Directory restricts entries to companies which employ or are owned by members of the Institution. Entries are listed by category and will show company name, contact details, a brief description of the company, and a link to the company's website. All members are entitled to a free entry in the Directory.

Applications for an entry should be made online at www.rina.org.uk/MaritimeServices.

All queries to Headquarters for members' services will be referred to the Maritime Services Directory.

Chief Executive visits Universities in Singapore and Malaysia

During a recent visit to Singapore and Malaysia the Chief Executive, Mr Trevor Blakeley, gave presentations of the role and activities of the Institution to students at a number of Universities.

Whilst in Singapore for the International Conference on the Education and Professional Development of Engineers in the Maritime Industry, organised by the Institution, the Chief Executive visited at Newcastle University (Singapore Campus) and Ngee Ann Polytechnic.

Visits in Malaysia included the UTM, the Malaysian Institute of Maritime Engineering and Technology, a part of the University of Jakarta, and the Technical University of Petronas.

The Chief Executive meets undergraduate and post graduate students at UTP



The Chief Executive presents the Institution to UTM students



Practical Shipbuilding

by Campbell Holms

Mr D Ellison FRINA, has donated the book Practical Shipbuilding, published 1918 (first edition March 1904) in two volumes to the Institution's Library

The book was presented to his father, also a member, in 1922 when he was a pupil at Wreights School, for achieving outstanding exam results

Designatory Letters

Members may signify their membership of the Institution by the letters FRINA, MRINA, AMRINA or AssocRINA after their names. In doing so, they demonstrate that they have achieved or are working towards achieving the high standards of professional competence demanded by the requirements for membership, and which are recognised as such by the international maritime industry. By doing so, they also demonstrate their commitment to maintaining those standards through their continuing professional development, and their acceptance of the Institution's Code of Conduct. Membership of the Institution does not come easily and is surely an achievement to be proud of.

However, when meeting members, I am surprised how many do not demonstrate their achievement by displaying the appropriate letters on their website, correspondence and business cards. This also serves to promote the Institution. May I therefore invite such members when next having stationary or business cards printed or updating their website to ensure that their membership of the Royal Institution of Naval Architects is proudly displayed.

Chief Executive

PEOPLE IN THE NEWS

Australian Academy of Technology and Engineering

Dr Stuart Cannon FRINA has been elected as a Fellow of the Australian Academy of Technology and Engineering.

Dr Cannon is the Research Leader for the Defence Science and Technology Group. His citation reads "Dr Cannon is a world-leading naval architect transforming naval ship building and safety nationally and internationally. He is the Royal Australian Navy's trusted advisor on warship technology and approaches to improve the performance of warships and submarines, to ensure their safety and cost effectiveness. He has deployed theoretical knowledge and hands-on experience in naval architecture, structural engineering and systems analysis to solve challenging naval architectural problems."

THOUGHT OF THE DAY

I went down with the ship but I kept my mouth shut so I didn't drown like the rest of them.

Unknown

RINA Headquarters

8-9 Northumberland Street, London

The Scott Russell Room

One of the meeting rooms in the Headquarters at 8-9 Northumberland Street is named after John Scott Russell, a founding member of the Institution.

John Scott Russell graduated from Glasgow University in 1825, aged just 17, going on to teach mathematics and natural philosophy at Edinburgh University. In the 1830s he began research into wave-generation and its effects, which resulted in his discovery of the 'solitary wave'.

He moved to London in 1844 and, in collaboration with Isambard Kingdom Brunel, built the pioneering iron steam ship the *Great Eastern* (1856). He also designed HMS *Warrior* (1860), the largest and fastest ship of its day, which revolutionised warship construction.

He was Secretary of the Society of Arts from 1845-1850, and Secretary to the Committee behind the Great Exhibition of 1851. He was one of the founders of the Institution of Naval Architects in 1860.



The Scott Russell Room

The Denny Room

Used for meetings, conferences and housing the Institution's library, the main public room at the Headquarters is the Denny Room, named after Sir Archibald Denny.

Archibald Denny was a member of the Denny family who had been involved in shipbuilding in Dumbarton from the early 19th century. William Denny & Sons of built over 1500 ships at their Dunbarton yard between 1844 and 1963. They built



Conferences in the Denny Room



Board meetings in the Denny Room

all types of ships but were particularly well known as builders of fine cross-channel steamships and ferries. Always innovators they were responsible for a number of firsts, including *Rotomahana* (1878) - the first all-steel merchant ship; *King Edward* (1901) - the first commercial turbine steamer; *Robert the Bruce* (1834) - the first all-welded vessel. Denny's was the first commercial yard to use a Ship Model Experiment Tank. In charge of technical developments at the shipyard, Archibald Denny was closely associated with Denny's international reputation for innovation and high quality ship design.

The Froude Room

One of the meeting rooms in the Headquarters at 8-9 Northumberland Street is named after William Froude - a name familiar to all naval architects.

William Froude's work in identifying the most efficient shape for the hull of ships, as well as predicting ship stability with reference to reduced-scale models, had a significant influence on ship design.

In 1861, he wrote a paper on the design of ship stability in a seaway, published by the Institution of Naval Architects, recognised today as a major advancement in ship design theory. Between 1863 and 1867, through a series of experiments using models to determine the physical laws governing full-scale ships, he discovered



The Froude Room

the laws by which the performance of the model could be extrapolated to the ship when both have the same geometrical shape. The Froude number, expressed as the ratio of a vessel's velocity to the square root of the product of its waterline length and the acceleration of gravity, is still used today by naval architects to predict the behaviour of ships from scale models.

Foyer

Visitors to the Headquarters are greeted by the splendid model of the *Cutty Sark*, on loan to the Institution.



The Foyer

All rooms may be hired by members, at a discounted rate. For details of availability and cost, contact Sally Charity at scharity@rina.org.uk

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 2016 Maritime Innovation Award. Individuals may not nominate themselves, although employees may nominate their company or organisation.



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 2016.

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

CHANGE OF ADDRESS

Each year, the Institution sends out over 170,000 copies of the journals. Unfortunately, a number of those are returned "not known at this address", usually because members have forgotten to inform the Institution of their change of address. In addition to the waste of postage, the Institution is charged for those returned from other than the UK. Additional cost is then incurred when members ask for the missing copies.

Of equal importance is a member's email address, used to send out notification of availability of electronic versions of the journals, Branch activities etc and at this time of year, Annual Membership and Registration Fees.

Members are requested to let the Institution know of a change of postal or email address as soon as possible. Changes to a member's Membership Record can be made directly from the My RINA page of the Institution website at www.rina.org.uk/MyRINA

THOUGHT OF THE DAY

A ship should not ride on a single anchor, nor life on a single hope.

Epictetus

RINA AFFAIRS

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

Editor:

Trevor Blakeley, chief executive

Design/Production Manager:

Sandy Defraigne

Published by The Royal Institution of Naval Architects

8-9 Northumberland Street

London WC2N 5DA, UK

Tel: +44 (0)20 7235 4622

Fax: +44 (0)20 7259 5912

Email: hq@rina.org.uk

© The Royal Institution of Naval Architects