

inec

16th Biennial International Naval Engineering Conference



Conference Call for Papers

Adapting and Innovating to build resilience for Naval operations



8-10 November 2022 / AULA Conference Centre TU Delft, Netherlands

SUMMARY

'Adapt or die' might be a bit strong as a starter, but there is a real sense of urgency building about our need to change and more optimism about our ability to adapt to meet the challenge. As a human species we need to adapt to stall climate change, across the generations we need to up-skill to make use of the digital revolution and Industry 4.0, and as navies we need to reinvent ourselves to remain competitive in the battlespace.

The aim of INEC22 is to provide those who design, build, operate and maintain ships and submarines including students and researchers, with a platform to share ideas, create networks, promote good practise and demonstrate excellence in our global and diverse domain. Delft University of Technology will provide an excellent venue for us to come together to develop our common enterprise.

Can navies that build ships and submarines for 30+ year lifespans stay relevant when system designs improve much more quickly? The conference lays down the challenge to ship and submarine designers, builders and support teams to adapt to integrate emerging technologies such as autonomous systems and artificial intelligence. Not only do we need to adapt, we need to build resilience through assured availability with new approaches to maintenance and repair. Given our theme, it is highly beneficial that INEC will continue to incorporate the International Ship Control Systems Symposium (iSCSS). Our continued partnership provides a breadth of technical view that remains unique in the naval sector. I hope you will be inspired to share your work within our naval engineering community at INEC22.

INEC KEY POINTS

- Continuing inclusion of International Ship Control Systems Symposium
- Excellent facilities at the Delft University of Technology, Netherlands
- Details of hybrid format being explored
- International audience from 56 countries
- CPD-approved by the IMarEST
- Sir Donald Gosling Award – £5,000 for best entry from those 35 years old or younger



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Join the debate on the IMarEST LinkedIn group

For full details including iSCSS visit: www.imarest.org/inec

KEY DATES

Deadline for technical paper synopses
Tuesday 8 February 2022

Notification to successful authors
no later than **Friday 1 April 2022**

Deadline for full paper submission
Friday 1 July 2022

inec 2022 THEMES



POWER & PROPULSION

- Prime mover development
 - Improving efficiency
 - Signature reduction

AUTONOMOUS SYSTEMS & AI

- Navigation systems
- Regulation and certification
 - Test and trials
 - C2 and Comms

ASSET MANAGEMENT, REPAIR & PREDICTIVE MAINTENANCE

- Remote assistance
- Application of AI/ML/DL
- Additive Manufacturing

SHIP & SUBMARINE BUILD

- New build processes
- Quality systems
- Programme management
- Collaboration and technology transfer

ENGINEERS AT THE HEART OF THE SYSTEM

- Stress & fatigue
- Skills for emerging technologies
- Human Factors and AI

COMBAT SYSTEMS

- Swarming technologies
- Communication systems
- Plug-in combat management systems

PLATFORM DESIGN AND TECHNOLOGY

- Modularity
- System integration
- IPR management
- Design ownership

SIMULATIONS & MODELLING

- Digital twins
- Analytical tools for design
- AR and VR based systems
- CBRNDC Management

CLIMATE CHANGE RESPONSE

- Improved efficiency technologies
- Emissions reductions
- Alternative fuels

SUBMISSION PROCESS

The Technical Advisory Committee encourages synopses from all areas of industry, academia and government. Prospective authors are invited to submit titles, keywords and synopses of between 250 and 500 words, with text only to the INEC & iSCSS 2020 Technical Advisory Committee online [here](#). The synopsis should introduce the topic and its relevance, the proposed method or approach to be discussed in the paper and the expected results and conclusions. Successful authors will be asked to develop their abstract and submit a full technical paper of up to 4000 words. All papers will be reviewed based on technical quality, relevance and their potential for generating interest and discussion. Some papers may be included in IMAreEST publications after the conference, subject to the author(s)' permission. All presentations will be in the English language.

SPONSORSHIP AND EXHIBITION

With typically 300 international attendees from a broad sweep of the naval enterprise and over 1000 delegates virtually in 2020, INEC and iSCSS provide a compelling platform to promote your company and products. The exhibition is at the heart of the conference gatherings throughout the 3 days and there is plenty of opportunity to network with potential business contacts. The conference also attracts a wider audience through the website, promotional material and on-line content posted during the event. Further information on packages is available [here](#).

AWARDS

By kind permission of the Sir Donald Gosling Foundation, the INEC22 Technical Advisory Committee is delighted to announce the continuation of the Sir Donald Gosling Award for authors under the age of 35 at the time of the conference. All named authors on the paper, must be under 35 to qualify. To enter, authors must submit proof of date of birth, such as a passport copy, at the time of synopses submission. First prize is worth £5,000, second prize, £2,500, third prize £1,500. Awards will be shared between named joint authors and all will receive a certificate. There is also a special Patron's Award for merit from the broader conference papers and presentations.

Submit your synopsis now:
www.imarest.org/inec