



National  
Oceanography  
Centre



# **MARINE** ||| **9-11 NOV 2021** **AUTONOMY &** **TECHNOLOGY** **SHOWCASE** |||

**CALL FOR ABSTRACTS**

## **INTRODUCTION**

The Marine Autonomy and Technology Showcase has now become established as a key event in the marine science and technology calendar. In 2020 we saw 31 presentations across our five themes that broadly cover the complete end to end life of the use of marine technologies, from an identified end-user requirement through to getting useable information into those users hands and all of the steps in between. This year's event will be taking place 9-11 November at the National Oceanography Centre in Southampton.

We are inviting abstracts for presentations across these five themes:

- 1. USERS & APPLICATIONS**
- 2. GENERATING INFORMATION FROM DATA**
- 3. PLANNING & CONTROL**
- 4. DATA COLLECTION**
- 5. AUTONOMOUS PLATFORMS & SUPPORTING TECHNOLOGY**

Full information on the parameters of these themes and the topics of interest within them can be found within this document and on the MATS website. The quality of abstracts for MATS each year has been of a very high standard and this is reflected in the quality of the conference. We look forward to reading about your latest developments and seeing you at MATS 2021.

### **MR AIDAN THORN**

NOC Marine Robotics Innovation Centre Manager & Chair of the MATS 2021 Delivery Committee

## **MATS 2021 THEMES**

During MATS 2021, our aim is to explore the information needs of users of Marine Autonomous Systems (MAS), review the current technologies available to enable the data gathering for MAS users and explore the methods of taking that data and making it exploitable information for the user need. Presentations may focus on work undertaken or planned to be undertaken in the 12 months since MATS 2020, be a forward look along your organisation's technology roadmap or include information on novel ways of maintaining operations throughout the global challenges of Covid in 2020 /2021.

### **THEME 1 USERS & APPLICATIONS**

Through this theme we are seeking presentations from Scientific, Industry, Government and Defence end-users of marine technologies. Presentations should focus on current and aspirational application of MAS, highlighting what the user requirement is. Presentations that set stretching challenges, outlining those challenges, for aspirational applications will be scored highly. We will seek to take a balanced approach between current and aspirational activities to ensure MATS includes forward looking ideas as well as ground-breaking examples of actual activity.

### **THEME 2 GENERATING INFORMATION FROM DATA**

Generating information that meets end-user needs from the data collected by MAS is the ultimate goal of deploying the system. This theme will explore novel methods of generating information products from MAS gathered data. Presentations should explore (but not be limited to) the utility of Machine Learning and AI, Data Processing, GUIs, augmented realities. Examples of real world information use should be explored

### **THEME 3 PLANNING & CONTROL**

Operation of MAS in the environment is just part of the mission and the work to enable it happens outside of the operational element. This theme is seeking presentations that support the planning and control of MAS, presentations can include but not limited to: Experiences and lessons learned from field trials, the use of Synthetic Environments, Mathematical Modelling, Simulation, Assurance, Safety, Risk and Reliability Management, Command and Control, Remote Operations/Remote Operation Centres, Fleet Management & Maintenance, Collaborative behaviour, Monitoring, Regulation and Legal. Through this theme we're also encouraging presentations around testing and evaluation centres, sites and infrastructure, that provide the proving grounds for technologies.

**DEADLINE FOR SUBMISSIONS**

**14 JULY 2021**

**INDEPENDENT TECHNICAL REVIEW STARTS**

**16 JULY 2021**

**CONFIRMATION OF ACCEPTANCE NOTIFIED**

**3 SEPTEMBER 2021**

**SUBMIT YOUR ABSTRACT NOW AT**

**[NOC-EVENTS.CO.UK/  
MATS-2021-ABSTRACT-  
SUBMISSION](https://noc-events.co.uk/mats-2021-abstract-submission)**

**THEME 4**

**DATA COLLECTION**

Sensing technologies are the eyes, ears, nose and touch of the Marine Autonomous System. This theme will focus on those novel, innovative and emerging technologies that enable MAS to collect data for the end-user, through imagery, physical sampling or chemical and biological detection. Presentations should provide real examples of field collected data as well as look to the future of data collection. We are also seeking presentations that cover interaction with the environment and infrastructure.

**THEME 5**

**AUTONOMOUS PLATFORMS  
& SUPPORTING TECHNOLOGY**

Through this theme, we are seeking presentations that focus on the systems. Through increased intelligence, operations have evolved from single platform to more of a system approach. Operations are no longer limited to one or two vehicles deployed from a ship, but can be run in autonomous fleets and utilising technologies such as digital twins. Presentations are sought that include, but are not limited to end to end systems, navigation, networking, collaboration and cooperation, residency, launch and recovery and novel vehicles including a forward look to future vehicle technologies. We're also encouraging presentations that look at the roles of cyber technologies and digital twins in operations. Presentations should demonstrate how step changes in MAS technology deliver improved performance through real examples of in field operation, be that with a single platform or a fleet of platforms working to achieve the users goals.

# **ABSTRACT PROPOSAL & SUBMITTAL GUIDELINES**

## **GENERAL GUIDANCE**

1. Obtain relevant clearance to submit and present from your organisation. This will include the use of Names and Logos for use on the event website and programme.
2. The abstract must be a minimum of 100 words and no more than 400 words in length and should include a description of the presentation, results or conclusion (or likely conclusions) and the theme(s) most applicable to your abstract.
3. The abstract must be received by close of play 14 July 2021
4. You must be available to present at the event 9-11 November 2021, subject to current Covid restrictions in place at the time of the event this may be face to face or virtually.
5. Presenter(s) and Authors should be included in the submission and agreement for the use of the names to be included should be gained from the individuals prior to submission.
6. Authors whose abstracts are accepted agree to their abstract submission being included in the conference proceedings, promotion and documentation. Authors who do not agree to this by the due date will be withdrawn from the programme and will not be allowed to present at the conference. Information will be required by 9 September 2021.
7. Accepted presentations must be submitted to the conference organising team by close of play 18 October 2021 for inclusion in the event delivery platforms. Failure to meet this deadline will result in the presentation being removed from the programme and you will not be able to present at the conference.

## **CHANGES, CANCELLATIONS AND WITHDRAWALS**

NOC and the MATS Delivery Committee consider an accepted abstract as a commitment to present.

In submitting an abstract you are confirming that you can present 9-11 November 2021 and that you will have your presentation materials submitted by COP 18 October 2021.

If extenuating circumstances prevent the author from making the presentation, it is the author's obligation to find an alternative presenter and notify the MATS Event Manager and the relevant session chairs (if applicable). Withdrawals must be made in writing via email to [NOCevents@noc.ac.uk](mailto:NOCevents@noc.ac.uk) as soon as possible.

Submitted abstract may only be amended or changed with prior permission of the MATS Delivery Committee via the MATS Event Manager.

Cancellations, particularly after an abstract has been accepted, publicised and confirmed as part of the event programme, are viewed by the MATS Delivery Committee as highly unprofessional.

## **MATS 2021 MULTIPLE SUBMISSION POLICY**

Authors are able to submit multiple abstracts for one or more theme; however, a maximum two entries from one organisation can be accepted for the conference programme. The MATS Delivery Committee and Technical Review Panel may request Authors to combine multiple abstracts to create one presentation where they feel this better fits the theme / programme in delivering an engaging event.

## **OVERT SALES PITCHES IN ABSTRACTS / PRESENTATIONS**

MATS 2021 has a policy against the use of blatant sales pitches. MATS is a technical conference, abstracts that are clear sales pitches with limited technical detail will be rejected by our Technical Review Panel.