



AUTOSHIP

Autonomous Shipping Initiative for European Waters



Updates on partners participation in relevant events

The AUTOSHIP project continues! Technical progresses are being successfully achieved across all work packages by the consortium, which is putting a lot of effort in disseminating the results by participating in national and international events.

In the last months, there have been several occasions in which the project has taken part with the aim of boosting the dissemination of its results, increasing its impacts and visibility towards a wide audience.

Let's take a look at the initiatives attended by the partners in the fourth issue of the AUTOSHIP newsletter!

Remember to subscribe to the AUTOSHIP [newsletter](#) and follow the main updates visiting the [project website](#) and the [LinkedIn](#) and [Twitter](#) accounts!

REGIONS CONTRIBUTING TO MOBILITY TRANSITION

KONGSBERG took part in The Scandria®Alliance Autumn Online Seminar which presented corridor-cases on clean fuel deployment, cross-border transport infrastructure development and multimodal transport and digitalization in the Scandria®Corridor - from Finland to Italy. The results shall be directly fed into the work of the Scandria®Alliance and its three working groups on clean fuel deployment, cross-border transport infrastructure development and multimodal transport and digitalization forming a basis for collaboration beyond 2021.

MARINTEC INNOVATION CONFERENCE

The Marintec Innovation Conference took place online on December 3rd, 2020, and it gathered a world-class speaker panel sharing their expertise and insights on the importance in the I4 demand and taking the first step into the fourth industrial revolution at Sea. KONGSBERG gave a presentation on maritime simulation as a testbed for autonomous maritime solutions.

JOINT STAKEHOLDER WORKSHOP - WITH THE SISTER PROJECTS MOSES PROJECT2020 AND AEGIS EU

The EU projects AUTOSHIP, MOSES and AEGIS joined forces and gathered in the [Joint Stakeholder Workshop](#), virtually held on January 28th, 2021, with a focus on innovative vessels, autonomy and automation: Enabling environmentally friendly and competitive short sea transport.

The European funded initiatives gathered to discuss how automation and autonomy will contribute to efficient and sustainable short sea cargo transport in Europe and the challenges and solutions that the projects propose. PNO, the project coordinator, offered a comprehensive [overview](#) on the aims and goals of AUTOSHIP, the results already achieved and the next activities the consortium will perform towards the next generation of autonomous vessels.

REMOTE CONTROLLED AND AUTOMATED SHIPS: ALREADY A REALITY?

The Royal Norwegian Embassy and Isalos.net arranged a 1.5 hour [seminar](#) to discuss remote controlled and automated ships with a number of Greek and Norwegian experts. The webinar entitled "[Remote Controlled and Automated Ships: Already a Reality?](#)" took place on February 9th, 2021 and SINTEF was invited as a speaker to present its opinions on the technological breakthroughs and new regulations of the shipping industry, and the AUTOSHIP project became one of the examples that these developments are actually happening. Many Greek ship owners operate in the deep-sea sector and with types of voyages that are not very suitable for autonomous operations, so there is some skepticism on the subject. However, discussions were interesting and positive interest was raised.

AHWG ON SAFETY AND REGULATION FOR UNMANNED MARITIME SYSTEMS

KONGSBERG gave a presentation of the AUTOSHIP project for governmental representatives and members of the Sarums project.

INSPIRATIONAL TALKS WITH AUTOSHIP, KONGSBERG MARITIME AND SINTEF OCEAN

AUTOSHIP, Kongsberg Maritime and SINTEF Ocean were the sponsor of a business case organized by Njord on 17th March 2021. The event was a 24-hour case which brought together NTNU Students and stakeholders to share their ideas and best solutions to face the challenges of the maritime autonomous navigation.

The business case and the [Inspirational Talks event](#) held on March 18th with the theme “*Challenges in maritime autonomous navigation*”, gathered more than 100 participants from all over the world! In this framework, Kongsberg and SINTEF provided interesting insights about challenges related to maritime autonomous navigation and how collaboration between research, industry, and stakeholders is crucial to realize merchant autonomous ships.

IWT WEBINAR: TOWARDS MORE AUTOMATION AND AUTONOMY IN INLAND NAVIGATION LOGISTICS

On the 20th of April 2021 a webinar was held on how some important European and EU funded initiatives contribute to meet the overall goals of the Transport White paper. The [IWT webinar: Towards more automation and autonomy in inland navigation logistics](#), organized by SINTEF Ocean and moderated by [De Vlaamse Waterweg](#), brought together AUTOSHIP and the EU Projects AEGIS, NOVIMAR and AVATAR to discuss the impacts of automation and autonomy in the inland navigation cargo transport in Europe. The challenges faced and the solutions proposed by each project generated a lively panel discussion on the challenges and opportunities that automated shipping can bring. Discover the main outputs watching the registered session at the following [link](#).

14TH IALA SYMPOSIUM

The 14th IALA Symposium has provided a unique online meeting place for the maritime sector worldwide. With 15 hours of live stream in 5 days, 12 theme sessions, more than 40 international speakers from 16 countries who gave their presentations via live dial-in or pre-recorded video.

USE OF SIMULATION TECHNOLOGY IN AUTONOMOUS SHIPPING

KONGSBERG held a webinar on autonomy, maritime digital twins and maritime digitalization in a larger perspective. The event, virtually held on April 14th, 2021, brought together more than 200 stakeholders among companies, research organizations and industries.

SMART AND AUTONOMOUS SHIPS – THE NEED FOR STANDARDS – ISO TC8 ADVISORY GROUP MEETING

The ISO TC8 Technical Committee on Ships and Maritime Technology held its yearly [Advisory Group \(AG\) meeting](#) in April 2021. Working group WG11 deals with smart shipping and has been responsible for the development of ISO/TS 23860 terminology for autonomous ship systems. SINTEF has been project leader for this work and is also a member of the AG. In that context the terminology was presented for the AG together with further plans for standards in the area. A point that was raised at the meeting and what we also see from the work in AUTOSHIP is that one may want to look into the development of voluntary industry standards for "body of evidence" related to approval of autonomous ships. This will be investigated further.

DIGITALIZATION & AUTONOMY PROJECTS WITH FOCUS ON AUTOSHIP PROJECT

KONGSBERG made a presentation in Forum of Western Countries of [Chambre de Commerce in Philippines – Apr 2021](#).

SHAPING THE FUTURE OF EUROPEAN SHORT SEA SHIPPING: AUTONOMOUS & AUTOMATED TECHNOLOGIES

On April 28th, the "Connecting EU insights" organized the session 'Shaping the future of European Short Sea Shipping: Autonomous & Automated technologies' with the aim to highlight how autonomous and automated technologies can stimulate the modernization of intra-European waterborne transport and increase the modal shift from land-based transportation to Short Sea Shipping. [SINTEF Ocean](#) joined the event and [presented](#) AUTOSHIP technology solutions in front of speakers from EMSA, ports and other ongoing R&D projects.

WORKSHOP ON MACHINE LEARNING ON CONTROL (LEAC)

AUTOSHIP joined the [Workshop on Machine Learning in Control \(LEAC\)](#), held online on May 18th, 2021. The event gathered leading experts to present cutting edge results within the data-driven design of control systems, with a focus on:

- Reinforcement learning for CPS.
- Machine learning techniques for CPS.
- Modelling of human behavior and sociotechnical systems.
- Safety verification and computation.

In this occasion, [University of Strathclyde](#) presented AUTOSHIP with the paper “Automatically generating collision scenarios for testing ship collision avoidance system using sampling techniques”. The research output presents a way for automatically generating ship encounter situations in connection to the testing of collision avoidance system.

STAB&S 2021: THE FIRST INTERNATIONAL CONFERENCE ON THE STABILITY AND SAFETY OF SHIPS AND OCEAN VEHICLES

[University of Strathclyde](#) organized the [Stability and Safety of Ships and Ocean](#) conference, which took place in an online format from 7th to 11th June 2021. During the event, totally over 100 papers on topics of ship safety and stability were presented, demonstrating the innovative approach to safe design of ships. The [University of Strathclyde](#) and [SINTEF](#) had an opportunity to present novel developments related to safety analysis and assurance of autonomous ships with the publications “[Ships traffic encounter scenarios generation using sampling and clustering techniques](#)” and “[Improving safety of interactions between conventional and autonomous ships](#)”. Both papers contain results from the AUTOSHIP project.

NEXT APPOINTMENTS!

AUTOSHIP IS SPONSOR OF NJORD: THE AUTONOMOUS SHIP CHALLENGE

Njord – The Autonomous Ship Challenge is a unique, international competition, where participants are tasked with designing and building an autonomous ship. The aim of the competition, which will be digitally held from 17th to 20th August 2021 by and for the students, is to inspire innovation and smart solutions within marine autonomy, as well as creating a platform for personal development and networking.

AUTOSHIP and KONGSBERG will be main sponsors of this initiative, which will represent the perfect platform to explore new ideas and concepts connected to software development and the autonomous shipping industry. Students will face real life problems currently experienced by the marine industry, giving them genuine experience with teamwork, prototyping, problem solving and innovation. Would you like to contribute with your ideas? Sign up [here](#) for this unique event!

To know more about all the events attended by AUTOSHIP, check the [News & Press](#) page of the project [website](#)!



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