Press Release

Fraunhofer IGP exhibits at SMM 2026 in Hamburg

The Fraunhofer Institute for Large Structures in Production Engineering IGP will exhibit at the SMM trade fair in Hamburg from 1. to 4. September. The institute presents an "AR application of a large-scale robot for maritime production environments and aspects of the digitalized production of large structures."

Rostock. The maritime industry is constantly facing new challenges such as skilled labor shortages, quality requirements, and pressure on costs and schedules. New solutions are needed urgently. As part of the Fraunhofer Transport Alliance, five Fraunhofer institutes will be represented at SMM 2026 with a joint booth as part of the "Waterborne" working group. They will present innovations for the future of the maritime industry. Fraunhofer IGP will showcase an exhibit an AR application of a large-scale robot in a digitally supported maritime production environment as well as aspects of the digitalized production of large structures.

Interactive and right in the middle: hands-on automation solutions

The Fraunhofer IGP will present an augmented reality (AR) application that allows visitors to experience a large-scale robot in a maritime production environment. The robot was developed together with industrial partners, and it features a special kinematic design that enables accuracy in the millimeter range. With a reach of up to 5.5 meters and a payload of up to 4 tons, the system is suitable for machining ship propellers, handling heavy components, and applications in ship recycling. Visitors to SMM 2026 will have the opportunity to digitally explore the large-scale robot.

"Augmented reality is a proven tool for shaping and digitalizing the production of tomorrow. Information can be provided in a process-specific as well as location-specific way. In this case, we are using an AR application to demonstrate automation and digitalization solutions that were developed specifically for the maritime industry and have already been implemented," says Dr.-Ing. Konrad Jagusch, Group Manager "Production Planning and Control".

Working group "Waterbourne"

The "Waterborne" working group focuses on maritime logistics and technologies, ship operations, shipbuilding, propulsion technology, maritime policy, and the environment. Its goal is to support maritime suppliers, shipping companies, ports, shipyards, and logistics service providers, and to find innovative solutions. This year, the Fraunhofer institutes for Large Structures in Production Engineering IGP, for Maritime Logistics and Services CML, for Industrial Mathe-

matics ITWM, for Material and Beam Technology IWS will be represented at the joint booth at SMM.

"With the challenges facing the maritime industry in mind, it is important to bring research and practice together at trade shows such as SMM and to drive innovation forward while also making them marketable," says Prof. Dr.-Ing. Wilko Flügge, Institute Director at Fraunhofer IGP.

Fact box

About the Fraunhofer IGP

What will the innovative production of large structures look like in the future? The Fraunhofer Institute for Large Structures in Production Engineering IGP in Rostock is conducting research into this. The institute develops innovative concepts for product and process innovations. The research focus is on future-oriented industries such as shipbuilding and steel construction, energy and environmental technology, rail and commercial vehicle manufacturing as well as mechanical and plant engineering. The formerly independent research group was made into a Fraunhofer Institute at the beginning of 2020 and is now the first institute of the Fraunhofer Society to be headquartered in Mecklenburg-Western Pomerania.

Address of the Fraunhofer IGP

Albert-Einstein-Straße 30
18059 Rostock

Further Information

- https://www.igp.fraunhofer.de/en/competences/production-planning-and-control/shipyard-4-0.html



Take a look at the large-scale robot with AR glasses.

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