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U-SWATH, the innovative CNR research UMV

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In the framework of the RITMARE Italian Flagship Project, CNR INSEAN and ISSIA developed U-SWATH (Unmanned Small Waterplane Area Twin Hulls), an innovative Unmanned Marine Vehicle for institutional research purposes.
USWATH is 5 m long and 4 m wide with a maximum weight of 1.4 t. The SWATH non-conventional design ensures good seakeeping and good efficiency. Each of the submersible hulls, connected to the bridge via two struts, is composed of modular and interchangeable elements that can be outfitted with different payloads, equipment, propulsive or manoeuvring elements. The propulsion is based on new azimuthal thrusters. Its wide bridge is covered with solar panels supplying power to the batteries.
The vehicle is studied for different purposes: coastal monitoring of waters, seabed, chemical-biological environmental parameters also in protected areas, first emergency monitoring for oil-spill, patrolling, docking of UAV (aircrafts) and UUV (submarines). U-SWATH will be the multi-purpose platform where researchers of CNR and other institutions will be able to perform their experiments: a laboratory for bio-chemical measurements, for testing of new materials, motors, propulsion systems, stabilizing control surfaces, optical and electromagnetic instruments, new sensors or study of hydrodynamic noise.

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