

# AUV POSITIONING SYSTEM BASED ON RECOGNITION OF ARTIFICIAL MARKERS ON ACOUSTIC IMAGES

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The work considers a positioning task, the solution of which is to increase the accuracy of the autonomous underwater vehicle (AUV) position determination by detecting the objects located on the seafloor on the sonar images. Specifically designed markers with predetermined technological characteristics were used as objects of recognition. Algorithms of marker placement in the operational aquatic areas and vehicle motion guarantees the detection of markers by the side-scanning and sector-scanning sonars. The positioning algorithm is integrated into the AUV control system and works in real-time mode.

**Key words:** autonomous underwater vehicle, positioning system, motion control system, recognition of sonar images.

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