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Autonomous Underwater Vehicle Navigation II

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closed (24 March 2022)

Message from the Guest Editor

Dear Colleagues,

Navigation of autonomous underwater vehicles (AUV) is a challenging issue of modern robotic science. Even in the case of well-developed inertial navigation systems (INS), the position estimates obtained by dead reckoning suffer from the integration drift. The sensors utilized for external measurement (e.g., acoustic sonars, acoustic beacons, GPS) either provide bearing-only measurements, which means that an independent position estimate is not possible, or require preliminary path equipping or path adjustment (emersion), which means that they cannot be used on an ongoing basis. Another problem is the dependence of the measurement accuracy on the unknown environment properties such as acoustic speed (which in turn depends on the salinity), currents, and seabed relief. That is why the precise navigation of AUV requires rather delicate data fusion of the measurement provided by various sensors which work on different physical principles, including mechanics, magnetics, acoustics, etc. For more information, please visit: mdpi.com/si/66109

Prof. Dr. Boris Miller
Guest Editor

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Message from the Editor-in-Chief

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