

IEEE ICUS 2021

Invited Session Summary

Title of Session

Deep-sea Unmanned Systems

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Details of Session (including aim and scope)

The ocean, which covers 70.8% of the Earth surface, has a strong impact on the global environment and climate change, and contains a huge amount of natural resources and energy. The deep-sea environment, covered by very thick water, is extremely harsh, remote, and hostile, of high water pressure, strong corrosion, strong electrical conductivity, and serious biological attachment and fouling. Like space, the deep sea is too far away and too different from the environment in which humans live. Therefore, unmanned systems is especially suitable to perform observation tasks in deep sea for humans. This session will focus on the key scientific issues, cutting-edge technology and equipment of deep-sea unmanned systems, as well as the applications in oceanography research, resource development, ocean engineering, and marine disaster prevention and mitigation.

This session will discuss several topics in the field of deep-sea unmanned systems, which include but are not limited to

- intelligent control and decision
- environment sensing and understanding
- multi-agent collaboration
- bionic robots
- soft robots