

# IEEE ICUS 2021

## Invited Session Summary

**Title of Session**

Multi-Modal Perception for Autonomous Unmanned System

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**Details of Session (including aim and scope)**

Perception is a vital module of an autonomous unmanned system and provides essential information for the system to perform subsequent tasks such as motion planning and decision-making. Generally, unmanned systems are equipped with multiple types of sensors. Due to the inherent performance defects of a single sensor, it is difficult to satisfy the system's sensing requirements. Therefore, the information fusion of multiple sensors has become a research hotspot. The essence of this problem is multi-modal fusion. With the development of deep learning and related technologies, many novel and effective solutions have emerged in this direction. The main purpose of this topic is to collect advanced multi-modal sensing system and algorithms in unmanned systems. The research scopes include but are not limited to:

- Multi-modal perception system
- Novel multi-modal sensor design
- Multi-modal perception data set
- Multi-modal data fusion
- Multi-modal fusion neural network
- Multi-modal fusion perception algorithm