



# Maki LAB.

[Light for the Sea, Adventures for the Robots]

Center for Integrated Underwater Observation Technology

Underwater Platform Systems



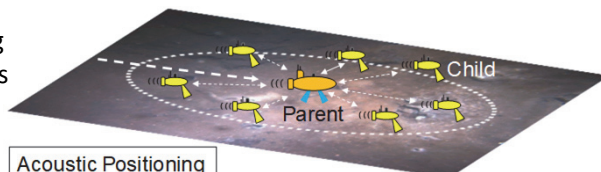
Graduate School of Frontier Sciences

Department of Ocean Technology, Policy and Environment,

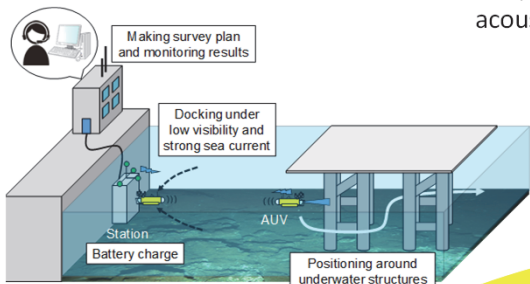
<http://makilab.iis.u-tokyo.ac.jp>

We are developing new systems for underwater observation by means of latest techniques of robotics and informatics. These systems will be able to realize wide-area, high-accuracy, and long-term observation through collaboration of multiple autonomous agents, for example, autonomous underwater vehicles (AUVs).

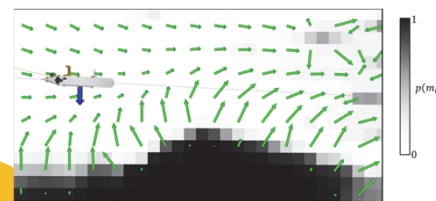
Cooperative survey using acoustic network of AUVs



Acoustic Positioning Cooperation Formation Control



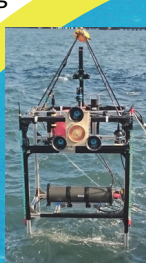
Long-term monitoring of underwater structures using a station and an AUV



Low-altitude tracking of seafloor

## Multi Vehicles

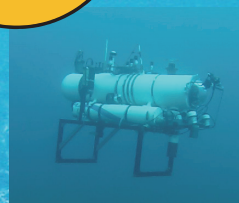
### Resident



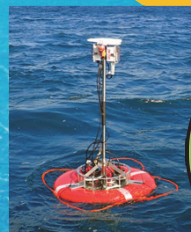
Seafloor Station



Tri-TON 2



Tri-Dog 1



BUTTORI

### Low-cost AUV



MONACA

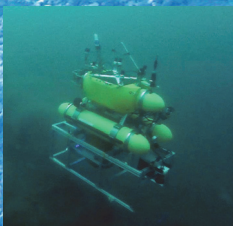


HATTORI 2



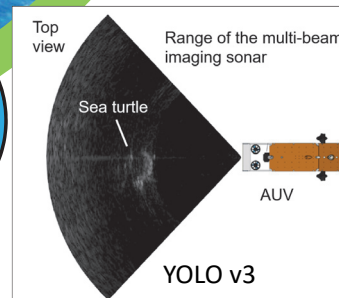
HATTORI

Autonomous tracking of a sea turtle



Tri-TON

### Biological Observation



Under-ice survey  
Antarctica operation is planned in 2022 !

