



ASADA LAB.

[Advanced Acoustic Sensing for Inside Underwater Object and Sub-bottom Object]

Underwater Technology Research Center

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

Underwater Acoustic Systems Engineering

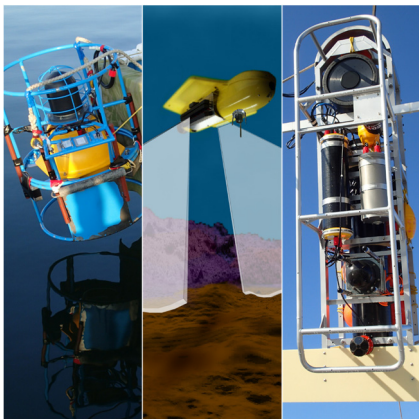
Department of Ocean Technology, Policy, and Environment, Graduate School of Frontier Sciences

Advanced Acoustic Sensing for Inside Underwater Object and Sub-bottom Object

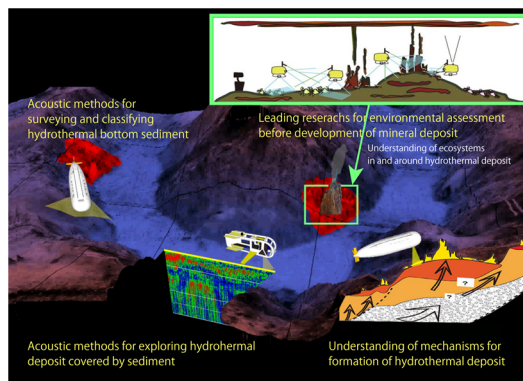
Not only surface, but also inside

Acoustic wave plays active roles in water. Asada Lab. has been developing a variety of advanced methods for measuring and imaging underwater phenomena with acoustics.

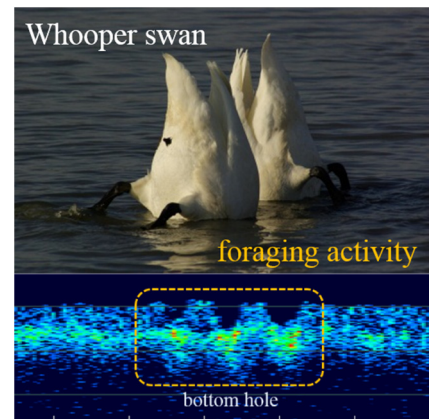
- Sonar systems for seafloor resources
- Shape measurement, classification, internal structure analysis techniques for underwater objects



Left: MT-SSBL Precise positioning system
Mid.: Interferometric SAS for bathymetry survey
Right: Deep sea sub-bottom profiler system



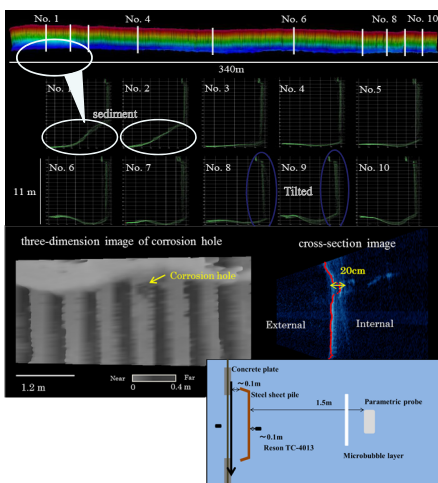
R&D of exploration methods for submarine resources



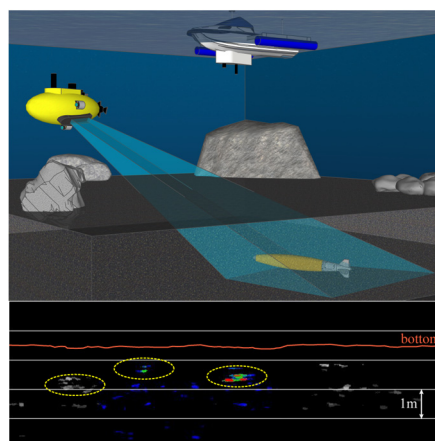
Cooperation for environmental conservation in Izunuma lake

Upper: Swan foraging for lotus root
Lower: Acoustic profile of lake bed covered by soft floating mud

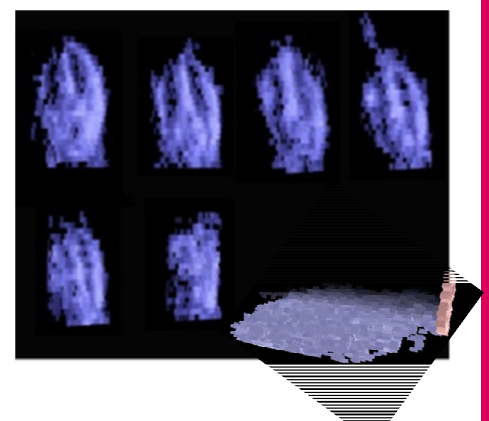
Step toward the practical use of sonar systems for submarine mineral explorations



3D diagnosis methods for underwater structures



Sonar system searching for chemical ammunitions buried in silty soil



Acoustic methods for imaging inside of fish body, discriminating sex and classification