Seeing the ocean in a new light

Not in seeking new landscapes but in having new eyes
~ Marcel Proust

Underwater sensing is the raw material of how we perceive the ocean. We aim to improve how the ocean can be observed by investigating the interactions of photons in underwater environments and combining this with methods for automated information extraction.

- **Spectroscopy** for in situ chemical analysis of the seafloor
- **Computer vision** for scalable mapping of benthic environments
- **Probabilistic modeling** for automated information extraction

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**Plasma emission**
In situ element analysis

**Raman scattering**
In situ analysis of molecules

**Structured light**
Scalable 3D mapping

**Supervised learning**
Classification and regression

**Scintillation**
Monitoring of seafloor radiation

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http://ocean.iis.u-tokyo.ac.jp