Sun Baoshi

E-mail: *123sunbaoshi@tongji.edu.cn*
Country: *China*
Birth date: *Nov.,1990*
Address: *#303 haiyang7 Road, Pudong district, Shanghai. 201314*

EDUCATION:

College of Marine Geosciences, Ocean University of China
B.A., Geology, 2009-2013

School of Ocean and Earth Science, Tongji University China
M.S., Marine Geology,2014-2017

WORK EXPERIENCE:

China National Scientific Seafloor Observatory (CNSSO), Tongji University
Marine Scientific Sensor Engineer, 2017-present

RESEARCH EXPERIENCE:

1. **Underwater tracking and positioning technology for observing network's subsea equipment,2023.03-present.**

Using underwater acoustic communication and positioning technology, as well as satellite technology, research and development of underwater tracking and positioning technology for subsea equipment of the observing network can be conducted.

2. **Underwater acoustic data collection and processing,2018-present**

Collected underwater sound signals using hydrophones and processed the sound data using MATLAB or Python to obtain time-domain sound pressure waveform, frequency spectrum, and power spectral density (PSD) graph for marine ambient noise analysis, underwater target classification, and identification.

3. **Wireless communication system between Buoy and Mooring,2019-present.**

Designed and realized the underwater wireless link by acoustic modem, the link trans data from seafloor observatory to the buoy, and the buoy upload scientific data and observatory location via RF and satellite.

4. **Ocean scientific sensor calibration and application.2019-present.**
Used various sensors in fixed platform and mobile vehicles to collect scientific data, and processed data, such as CTD, Triplet wave, ADCP.
5. **Underwater wireless communication system,2017-2019.**
As a member of CNSSO, designed underwater wireless communication system and verified the system's stability and reliability in East China Sea.
6. **Underwater Video Processing.2016.6-2017.6**
Used particle imaging velocity method to estimate heat flux from seafloor hydrothermal vent. Established an experimental platform to simulate the environment of underwater hydrothermal vents.

SKILLS:

- ✓ Integration of underwater observation systems.
- ✓ Calibration and application of marine sensors.
- ✓ Design, packaging, and debugging of underwater equipment.
- ✓ Design and testing of underwater acoustic communication systems.
- ✓ Processing of underwater acoustic signals.
- ✓ Leadership of marine survey operations, including equipment testing, sea trials, and acceptance.

EXPEDITIONS:

Time	Area	Organizer	My work
2023.03	East China Sea	CNSSO	Establishment of communication link between surface buoy and underwater modem, mooring deployment, and coordination of on-site operations.
2022.11	East China Sea	CNSSO	Underwater ambient noise testing around the buoy.

2022.08	South China Sea	Guangzhou Marine Geological Survey	Deployment and retrieval of underwater equipment, verification of long-range (20km) underwater acoustic communication.
2019.07 2020.07 2021.07 2022.07	East China Sea	Tongji University	Practical teaching of common marine survey methods, including collection of sediment samples, collection of seawater samples, and in-situ observation techniques.
2021.04	East China Sea	CNSSO	Conducting long-term anti-biofouling experiments for a shallow water observatory
2020.10	East China Sea	CNSSO	Conducting long-term anti-biofouling experiments for a shallow water observatory
2019.12	East China Sea	CNSSO	Communication testing between floating buoy and platforms.
2019.04	East China Sea	CNSSO	Underwater rock drilling, Underwater environmental noise measurement, underwater drilling noise measurement,
2016.03-06	South Indian Ocean	COMRA	Baseline measurements of marine chemistry, collection of seawater samples.

INTERESTS:

Sailing, Outdoor Sports, Philosophy