

POGO-SPONSORED TRAINING INITIATIVE Report

1. Name of grant recipient (Proposal Coordinator)

Fan Wang

2. Title of training

Training Course on Subsurface Mooring Observation

3. Dates of training (e.g., 01 Jan 1999)

Start date: 16 Jul 2023

End date: 22 Jul 2023

4. Location of training (e.g. institute, city, country) Please indicate if online/in person/hybrid.

Institute of Oceanology, Chinese Academy of Sciences (IOCAS)
Qingdao, China
In person

5. Number of trainees: 31

6. Other partners/funding sources

Northwestern Pacific Ocean Circulation and Climate Experiment (NPOCE)
Bureau of International Cooperation, Chinese Academy of Sciences

7. Provide an outline of the training course/initiative (objectives, format, topics)

Full programme can be included as an Appendix.

Objectives:

- To introduce the operation of commonly-used ocean in-situ observational instruments
- To impart the knowledge of mooring design, deployment, and retrieval
- To enhance understanding of mooring deployment and retrieval through shipborne practice
- To introduce mooring data processing and interpretation

Format:

Presentation, on-site visit and field operation on vessels

Topics:

- Mooring Design, Deployment, and Retrieval Procedures
- Instruments Operation
- Field Operation on Research Vessels
- Dynamic processes and mechanisms analysis and interpretation based on in-situ observations
- Data Processing
- Application of mooring data in scientific studies

8. Provide a summary of the students' performance and any informal feedback received

Please note that an evaluation questionnaire will be sent to the participants by the Secretariat and therefore we ask that you provide a list of trainees and their e-mail addresses. The questionnaire results will be shared with you in due course.

As they value the opportunity to acquire comprehensive and in-depth knowledge about subsurface mooring systems, they are equipped with high passion, tightly follow the pace of the course and actively participated in all interactive sessions. During the training, they mostly follow the rules and regulations and there were no unexcused absences, late arrival and early departure.

At the closing ceremony of the training, all the participants expressed their satisfaction with the training course, including the organization, teaching content and form of the training. The training materials, including videos and lecture courseware, are systematic and diversified, providing a good basis for training materials, especially from the rare sea observation practice to learn a lot of practical skills and knowledge of submarine observation. The participants hope that the Institute of Oceanography of the Chinese Academy of Sciences can continue to hold such training courses, and will introduce more colleagues to participate in the training.

9. Do you have any plans for future collaboration with the students, the host institute (if applicable) or for future editions of the training course?

1. To apply new training courses in the following year and to call for more engagement in future training course;
2. Explore new marine and climate research directions or fields in the surrounding waters of the countries participated in, tap the growth potential, and achieve diversified, independent and sustainable development;
3. For countries that have established cooperative relations like PNG, Indonesia, further strengthen exchanges and cooperation, clarify the key directions of cooperation, and form a long-term talent cooperation mechanism. For example, IOCAS and the Marine Research Center of the Indonesian Academy of Sciences will continue to conduct joint voyage surveys in Indonesia, and researchers from China and Indonesia will exchange visits regularly to conduct all-round academic exchanges and communication;
4. Actively expand the scope of cooperation objects, channels and forms of cooperation and seek new opportunities for cooperation and collaboration in application of relevant international scientific plans or projects.

10. List of trainees

Please fill in the attached Excel spreadsheet with the list of trainees.

APPENDIX I. Agenda

Time (GMT+8)		Course	Lecturer	Chair	Venue
July 16th	12:00 – 20:00	Registration		Yixin Ma	Lobby, Qingdao Guokang Haiqing Hotel
July 17 th	08:30-09:00	Opening Remark	Speaker: Fan Wang Sophie Seeyave Janet Sprintall Kentaro Ando Jae Hak Lee	Rencheng Yu	Room 503, Complex Building IOCAS
	09:00-10:30	Introduction of CAS Scientific Observing Network in Western Tropical Pacific Ocean (CASSON)	Speaker: Fan Wang		
	10:30-10:50	Group Photo			
	10:50-12:00	Self -introduction and discussion	Assistant: Zhixiang Zhang	Linlin Zhang	
	12:00-14:00	Lunch			
	14:00-16:00	Mooring Design, Deployment, and Recovery Procedures	Speaker: Jianing Wang Assistant: Zhiyong Cao & Da Wu	Yanwei Li	
	16:00-17:20	IOCAS campus tour			
	17:30	Shuttle bus to hotel			
July 18th	08:30-10:30	Role of In-situ observations in Ocean circulation and climate study	Speaker: Shijian Hu	Zhenhua Xu	Room 503, Complex Building IOCAS
	10:30-10:50	Break			
	10:50-12:00	Questions and Discussions	Assistant: Jie Ma		

	12:00-14:00	Lunch			
	14:00-16:00	Mooring data processing and analysis on internal wave	Speaker: Zhenhua Xu	Shijian Hu	
	16:00-16:20	Break			
	16:20-17:20	Questions and Discussions	Assistant: Zhanjiu Hao		
	17:30	Shuttle bus to hotel			
July 19th	08:30-10:30	Data interpretation & application: ocean temperature and salinity	Speaker: Yuanlong Li	Xiangguang Zhang	Room 503, Complex Building IOCAS
	10:30-10:50	Break			
	10:50-12:00	Questions and Discussions	Assistant: Qiuping Ren		
	12:00-14:00	Lunch & 13:20 Shuttle bus to Wharf			
	14:00-17:00	Mooring operation and instrument settings	Speaker: Xiangguang Zhang Assistant: Yuchao Hui	1 st floor, Test Building Western Coast Wharf	
	17:00	Shuttle bus to hotel			
July 20th	08:30-17:00	Field Operation in Research Vessels: mooring deployment & recovery operation	Speaker: Linlin Zhang, Xiangguang Zhang, & Zhongping Kang Assistant: Yuchao Hui, Xin Zhou, & Jiawei Jiang	Research vessel	
July 21th	08:30-09:10	Lecture 1: Long term observation by surface and sub-surface observation in the western tropical Pacific ocean by JAMSTEC	Speaker: Kentaro Ando	Hui Zhou	Room 503, Complex Building IOCAS
	09:10-09:50	Lecture 2: The multi-scale variability of upper-ocean circulation at the entrance of the Indonesian seas	Speaker: Hui Zhou		

	09:50-10:30	Lecture 3: Plankton Observation in the West Pacific Ocean	Speaker: Xiaoxia Sun		
	10:30-10:50	Break			
	10:50-11:30	Lecture 4: Intermediate and deep ocean circulations in the western Pacific	Speaker: Jianing Wang		
	11:30-12:10	Lecture 5: Biogeochemical Cycles in the China Marginal Seas and the west Pacific Ocean	Speaker: Huamao Yuan		
	12:10-13:10	Lunch			
	14:00-14:40	Lecture 6: The use of current time series and satellite altimetry: Circulation in Drake Passage	Speaker: Jae Hak Lee	Junlong Zhang	
	14:40-15:20	Lecture 7: Structure and variability of Pacific low-latitude western boundary currents	Speaker: Linlin Zhang		
	15:20-16:00	Lecture 8: Application of circulation modeling and other environmental data for marine biodiversity study	Speaker: Junlong Zhang		
	16:00-16:20	Break			
	16:20-17:30	Questions and Discussions			
17:30	Shuttle bus to hotel				
July 22th	08:30-09:30	Closing Ceremony		Jianing Wang	Room 503, Complex Building IOCAS
	09:30-10:30	Certificate Award & photo			
	10:30-10:50	Break			
	10:50-12:00	Speech by trainees	All trainees		

	12:00-13:00	Lunch	
	14:00-16:00	free communication & future cooperation	
	16:10	Shuttle bus to hotel	