

The 3rd Marine Robotics Competition in Okinawa Implementation Guidance

1. Purpose of Competition

Japan has vast extent of marine waters, and is rich in various marine resources such as submarine hydrothermal deposit, tidal power, and wave power. Japan also sets the objective of creating new ocean industries in its Basic Plan of Ocean Policy.

Okinawa, one of the prefectures with longest coastline in the nation, is rich in those various marine resources. Okinawa Prefecture regards ocean industry as one of the key industries in its guideline of Okinawa Prefecture, Okinawa 21st Century Vision.

The 3rd Marine Robotics Competition in Okinawa is designed to stimulate research and education in the field of marine robotics, which is the promising new field of ocean industry. This competition serves as a place for a research presentation of higher education institutions and companies, and aim to develop Okinawan's and students' understandings of the possibility of ocean industry of Okinawa and of marine robotics.

2. Types of Competition

- 1) ROV
- 2) AUV
- 3) Free-Style Vehicle

3. Application Qualifications

Groups or individuals from companies, graduate schools, universities, national colleges of technologies, junior colleges, technical schools and clubs.

4. Date and Venue of Competition

2017 November 11 (Sat) Poster Session (Ginowan Marine Support Center)
 Team Practice (Ginowan New Fishing Harbor)

November 12 (Sun) Competition Rounds (Ginowan New Fishing Harbor)
 Awards Ceremony (Ginowan Marine Support Center)

5. Application Method

- | | |
|--|------------------------------|
| 1) Application form submission | September 1st(Fri)~30th(Sat) |
| 2) Materials for guidebook submission | October 2nd(Mon)~13th(Fri) |
| Electronic data of posters for Poster Session submission | October 2nd(Mon)~13th(Fri) |

*Competition Officials may screen teams if there are too many entries.

6. Evaluation Criteria

- 1) Poster Session (originality, concept of robotics etc)
- 2) Competition/ Performance (locomotion performance, technical contents of robotics etc)

7. Evaluation Method

Poster Session and Competition [AUV/ROV] or Performance [Free-Style Vehicle] will be used to evaluate teams.

- Poster Session: Competition officials set up an evaluation committee for scoring.

- Competition [AUV/ROV] or Performance [Free-Style Vehicle]: Judges will be posted in competition areas to evaluate teams.

8. Awards (only students are eligible)

1) Awards

Two awards below will be given in each types of competition.

- Highest Award (for one team or an individual)
- Outstanding Performance Award (for one team or an individual)

2) Awards Ceremony

Awards Ceremony will be held after the competition/ performance

9. Demonstration by Companies

Demonstration by Companies are planned in order to introduce marine robotics and its related technology to people in Okinawa Prefecture and participating students.

10. Public Relations

Executive Committee implements public relations in the following way to gather wide range of participants.

1) Posers and Fliers

Executive Committee produces and distribute posters and fliers to universities and institution concerned

2) Website and SNS

Executive Committee opens a website and SNS pages of Marine Robotics Competition in Okinawa and transmits information.

3) Corporation with Universities and schools

Executive Committee cooperates with education research institutions related to robotics in order to make this competition known to the students.

11. Intellectual Property

- 1) Teams should manage their own particular know-how, matters of secret, intellectual property.
- 2) Evaluation Committee gives teams advice when committee judges that protection of intellectual property is needed.

12. Organizers

1) Executive Committee

The 3rd Marine Robotics Competition in Okinawa

2) Co-hosts

Kyokutou Construction Company, University of the Ryukyus, Okinawa Polytechnic College, National Institute of Technology, Okinawa College

3) Backup

Ginowan City

4) Sponsors

Information Industry Association of Okinawa, Japan Fine Tech Co., Ltd., Yanmar Co., Ltd., Okinawa Foresight Co., Ltd., Nissui Marine Kogyo, Ltd., Matsuyama Industry Co., Ltd

13. Members of Executive Committee of The 3rd Marine Robotics Competition in Okinawa

*Japanese alphabetical order of institution.

Name	Institution, Job title	Notes
Fumiaki Takemura	National Institute of Technology, Okinawa College, Department of Mechanical Systems Engineering, associate professor	
Isao Ishikawa	Okinawa Polytechnic College Department of Production Electronics Information System Technology, professor	Chairperson
Junichi Ueta	Okinawa Polytechnic College, Department of Production Mechanic System Technology, instructor	
Satoru Kondo	Okinawa Polytechnic College, Department of Production Electronics Information System Technology, associate professor	
Hiroaki Sato	Okinawa Polytechnic College, Department of Production Electrical System Technology, associate professor	
Hiroshi Yoshida	Japan Agency for Marine-Earth Science and Technology (JAMSTEC) Marine Technology and Engineering Center manager, Department of Engineering for Geo-Marine Science	
Kazuo Ishii	Kyushu Institute of Technology Graduate School of Life Science and Systems Engineering, professor	
Masayuki Okada	Kyushu Polytechnic College Department of Production Electronics Information System Technology, professor	
Masafumi Shinkai	Kyushu Polytechnic College Department of Production Technology , professor	
Atsushi Ueyama	Kyokutou Construction Company manager, Subsea Development Department	
Ikuo Yamamoto	Nagasaki University Organization for Marine Science and Technology Ocean Energy Use Research Section, professor	
Hiroshi Kinjyo	University of the Ryukyus Faculty of Engineering, Mechanical Engineering Course, professor	
Naoki Oshiro	University of the Ryukyus Faculty of Engineering, Energy Environmental Engineering Course, associate professor	

Processing personnel

*Japanese alphabetical order of institution.

Name	Institution, Job title	Notes
Tsutomu Nakasone	National Institute of Technology, Okinawa College, chief, general affairs department	
Kazuhiro Narisoko	National Institute of Technology, Okinawa College, general affairs department, research collaboration promotion office, processing personnel	
Hideyasu Hiramatsu	Okinawa Polytechnic College, subprincipal	Chairperson
Hideaki Okamura	Okinawa Polytechnic College, chief, support planning department	
Osamu Tamaki	University of the Ryukyus Organization for the Promotion of Industry, University and Government Collaboration, associate professor	

14. Schedule

Month	Week		Notes
June	1		
	2		
	3	Executive Committee in Okinawa meeting	6/3 Okinawa Polytechnic College
	4		
July	1		
	2		
	3	The 1st meeting of Executive Committee Technical seminar	7/22 University of the Ryukyus Implementation guidelines are decided.
	4		
August	1		
	2		
	3		
	4		
September	1	Starts application form submission	
	2		
	3		
	4	Deadline of application form submission	Competition Officials screen teams if there are too many entries.
October	1	Materials for guidebook submission Electronic data of posters for Poster Session submission	
	2	Number of participating teams are fixed	
	3		
	4		
November	1		
	2	The 2nd meeting of Executive Committee Competition Rounds and Awards Ceremony	<ul style="list-style-type: none"> • 11/11(Sat)~12(Sun) Competition • 11/10(Fri) Marine Robotics Workshop in Naha
	3		
	4	Sends thank-you letters to sponsors	
December	1		
	2	Settlement of balance	
	3		
	4		

15. Contact

In charge of General Management

Osamu Tamaki, University of the Ryukyus

Organization for Promotion of Industry, University and Government Collaboration

<tamaki@ii-okinawa.ne.jp>

In charge of Competition Rules

Hideaki Okamura, Okinawa Polytechnic College

<Okamura.Hideaki@jeed.or.jp>