



120 years
1899 - 2019

Russian-Chinese Underwater Robotics Competition

ORGANIZING COMMITTEE



Association of Sino-Russian Technical Universities (ASRTU)



Harbin Institute of Technology, Harbin, P.R. China



Bauman Moscow State Technical University, Moscow, Russia



Far Eastern Federal University, Vladivostok, Russia

GENERAL INFORMATION

China and Russia enjoy progressive cooperation which includes multiple cultural activities and people-to-people exchanges aimed to deepen the understanding and friendship between the two countries. In order to enhance collaboration between our countries, and to promote research and technological innovation and economic modernization, ASRTU decided to organize the **Russian-Chinese Underwater Robotics Competition**. We are looking forward to the active participation of the scientists from both countries in the Competition.

Russian-Chinese Underwater Robotics Competition is being organized with an aim to develop design and engineering thinking, to establish and cultivate a venue for young researchers and engineers, graduate and undergraduate students where they could meet to exchange information and experience, as well as demonstrate their abilities on the whole range of issues related to various aspects of robotic systems.

The competitions will be held in **Vladivostok, Russia on May 22-26, 2019**.

COMPETITION REGULATIONS

Short description

The teams arrive equipped with their own remotely operated underwater vehicles (ROV). On the first day of the competitions, after mini-presentations of the ROVs, the organizers will divide all the teams

into two international groups, and assign them with the tasks. The tasks for the groups will be designed in such a way that they cannot be implemented solely by a single ROV, and would require the competitors to demonstrate synergy and teamwork by using their ROVs. The first day and the first half of the second day are reserved for teams practicing, to be followed by the competitions. Each team will be given 2 attempts to complete the tasks in the pool. In addition, each group will require making a presentation before the jury members, and to report about their teamwork experience and technical solutions. The winner will be determined by the total points awarded for the best attempt to complete the tasks, the joint presentation, and the specification sheet that teams will have to submit to the Organizing Committee 2 weeks before the start of the competition.

All participants of the competition will be awarded certificates of participation, and memorable gifts.

Contestants

We welcome teams consisting of 3-4 young scientists and engineers, graduate, undergraduate and high-school students from the ASRTU member and observer universities who do research in various aspects of robotic systems, to take part in the Russian-Chinese Underwater Robotics Competition.

Working language

English

ROV specifications

Only ROVs which are designed and fabricated by the contestants shall be allowed to take part in the competition.

Power supply: 12-48 V, up to 2 KW

Size: not limited

Weight: not limited

Use of pneumatic, hydraulic or laser devices: unlimited

Competition program

Day One

1. Mini-presentations of the ROVs and team members introduction
2. Organizers divide all teams in two groups
3. Setting of tasks for the teams
4. Preparation of the groups to complete the task

Day Two

1. Preparation of the groups to complete the task
2. Performance of the first group
3. Performance of the second group
4. Service brake for adjustment of ROV settings
5. Performance of the first group
6. Performance of the second group
7. Presentation before the jury members
8. Summing-up the results of the competition
9. Awarding ceremony

Task examples

- Recover small objects from the bottom to the surface. There should be so many objects that a single ROV could not recover them within the allotted time. This will make the teams work together.
- Open the hatch, get inside the facility and recover a certain object from there. One should constantly hold the hatch, otherwise it will close. It is impossible to perform this task by a single ROV.
- Connect two cables under the water. This task is impossible to perform by a single ROV.

IMPORTANT DATES

Please, send a completed registration form (Appendix 4) and a copy of the passport personal data page to the Organizing Committee **by March 20th, 2019**

Please, send a specification sheet of a remotely operated underwater vehicle (ROV) to the Organizing Committee **by May 5th, 2019**

FINANCIAL TERMS FOR THE PARTICIPANTS

The host party will meet all participants at the airport; provide transfer service (airport / train station - hotel - airport / train station), meals, and cover local transportation expenses during the forum.

The forum participants will cover flight and accommodation expenses.

Average cost of the standard hotel room in the FEFU Campus on Russky Island in Vladivostok is 2750 RUB (285 Chinese RMB) per one person per night in a single room, and 2050 RUB (210 Chinese RMB) per one person per night in a double room.

CONTACT INFORMATION OF THE ORGANIZING COMMITTEE

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