ABU ASIA-PACIFIC ROBOT CONTEST
2021 JIMO, CHINA

Scheme for ABU ROBOCON 2021 online

July 14, 2021

1 Contest

1.1 Affected by the epidemic, ABU Robocon 2021 will be held online according to ABU Robocon 2021 Online Rulebook and using Zoom Meeting.

1.2 Date（tentative）: Sunday, December 12th, 2021.

1.3 Each team will play games in two rounds on their own field.

1.4 After the games finish, all teams will be ranked and determined awards on the basis of their average achievements.

1.5 Schedule in Contest Day (according to the 21 teams counted currently， there may be minor adjustment before the contest)

No.	Time(GMT+08:00)	Items	Instructions
1	11:00-11:30	opening ceremony	
2	11:30-11:35	play online game rules animation	
3	11:35-14:02	first round of contest	introduces team for 2 min., plays game for 3 min., and checks to score for 2 min.
4	14:02-15:30	lunch break	
5	15:30-15:35		animation for 3min. and host break for 2min.
6	15:35-17:20	second round of contest	plays game for 3 min., and checks to score for 2 min.
7	17:20-17:50	art performance	
8	17:50-18:20	closing ceremony and awards	
9	18:20-18:35	hand over ceremony	

Note: No real performance contest was considered temporarily.

2 Preparation and deadline

2.1 The Video Production Guidelines for ABU Robocon 2021 Online will be released on Sep. 13, 2021.

2.2 The teams shall complete the registration by Oct. 1, 2021 according to the requirements of the

ABU Robocon Secretariat. Please indicate the abbreviation of the university's English name when registering.

2.3 The Participation Guidelines for ABU Robocon 2021 Online will be released on Oct. 15, 2021.

2.4 The teams shall upload the Robot Check Video, the Team Introduction Video and the Team Documentary Programme to SDTV's FTP server by Oct. 20, 2021. The ABU Robocon 2021 Contest Committee will feedback the improvement comments to some teams, if necessary, after reviewing the Robot Inspection Videos.

2.5 Teams using homemade arrows in the online games should send 3 samples of the arrow to the ABU Robocon 2021 Competition Committee in the period from Oct. 15 to Nov. 20, 2021 (receiving time). The Committee will feedback the improvement comments to some teams, if necessary, after inspecting these samples of scoring object.

2.6 On Nov. 20, 2021, the ABU Robocon 2021 Contest Committee will conduct pre-inspection of online game fields made by participating teams or broadcasters and issue the improvement s for the substandard game fields.

2.7 On Dec. 5, 2021, the ABU Robocon 2021 Organizing Committee will organize all participating teams and broadcasters as well as all event staffs to conduct the first system-wide tests and drills to identify problems affecting the contest and make improvements. The second system-wide test and drill will be conducted on Dec. 10, 2021.

2.8 On Dec. 10, 2021, the ABU Robocon 2021 Organizing Committee and the Competition Committee will hold team leaders video meeting to explain all matters to be noted in the online contest.

2.9 On Dec. 11, 2021, the ABU Robocon 2021 Contest Committee will host five warm-up games to keep all participating teams and event staffs familiar with the online contest procedures.

2.10 If all goes well, the ABU Robocon 2021 online contest to be held on Dec. 12 is ready

3 Game field

3.1 Different from the real contest, the game fields for online contest are made by the participating teams or broadcasters themselves.

3.2 Online game field can be a standard field made as per Appendix 2 in ABU ROBOCON 2021 online Rulebook or a simple low cost field as per Appendix 3.

3.3 The game field has a significant impact on the contest results. For fairness, as mentioned in 2.5, the ABU Robocon 2021 Contest Committee will pre-inspect the game fields made by teams or broadcasters before the contest to ensure the consistency of the game fields used by the teams.

3.4 The size of the game field, the locations of the start zones and the arrow rack, the locations of the four scoring spots, as well as the diameter and height of the pot opening would be attended to

in the pre-inspection.

4 Scoring objects

4.1 Arrows were vital important scoring objects in the game this year.

4.2 While it is strongly recommended that teams use standard commercial arrows in the game, teams are still allowed to use homemade arrows.

4.3 The homemade arrows must satisfy the following two conditions：

a. The arrow's total length, total mass and outer diameter of the arrow body must comply with the regulations in the Rule 2.1 b).

b. It is not allowed to change the material of the arrow head, and the materials of the body and plume wings are not restricted.

4.4 In the light of the important role of the scoring objects on the contest, as mentioned in 2.4, the teams using the homemade arrows should be responsible to send the samples to the ABU Robocon 2021 contest committee and receive inspection.

5 Network support (there may be adjustments and additions before the game, but they will not affect the preparation of the participating teams)

5.1 During the online contest, the Internet connects the participating teams, the event staffs, the broadcasters and the audience together to jointly pay great attention to the progress of the competition.

5.2 In any contest, the participants will interact with the referees frequently. For the online contest, the participants and referees can't communicate face to face. Their interaction will be greatly affected. The network shall ensure that referees can receive clear, continuous and no "cut" and/or edited video information streams from the side of team. In this sense, the participating team and referees should have priority in the ZOOM meeting room. To avoid the information stream getting stuck, the personnel and devices accessing the meeting room should be controlled wherever possible.

5.3 It is strongly recommended that the team access into the ZOOM meeting using the "camera + computer". If without such conditions, it is also an option for the team to access into the vedio meeting through smartphones. If the smartphones are used, then

a. The smartphone should be fixed onto the tripod as much as possible to ensure the stability of the video images.

b. The camera in the smartphone should be switched to the post-camera.

c. Turn on the automatic screen rotation and turn off Bluetooth, NFC, hot spots and other unrelated functions.

5.4 Usually, three video devices should be set for each game field. One of them, called as PV, provides panoramic views of the game field, four scoring spots and two robots, TR and AR, should be shown in the images all along. The other two devices, called as CV-1 and CV-2, provide close views of TR, its start zone and throwing area, as well as close views of AR, its start zone and arrow rack, respectively.

5.5 If necessary, a mobile video device, called as MC, can also be accessed into the video meeting and used to check the number of arrows in each pot after the end of the game. If the zoom function of the device PV can be available to easily zoom in to examine each pot, MC is not be needed then.