

Call for Participation

Partner Robot Challenge (Real Space)

World Robot Summit2020, Oct 8 - Oct 11, 2020 (Aichi, JAPAN)

<http://worldrobotsummit.org/en/>

We are pleased to announce that the registration page for the Partner Robot Challenge (Real Space) at the World Robot Summit 2020 is now open.

The procedure to participate in the Partner Robot Challenge (Real Space) is as follows:

1) Pre-registration (Deadline 31st August, 2019)

- Visit the World Robot Summit 2020 pre-registration website at <http://worldrobotsummit.org/en/wrs2020/challenge/guideline/>
- Read the application guidelines carefully before signing up for pre-registration. Click on the 'Entry'.
- If you agree with the terms and conditions, check the box 'Agree' and click on the 'Go to entry form'.
- Enter the necessary information and click 'Confirm'.
- Confirm your information and click the "Register".
- We will send a registration completion notification to your registered email address.

IMPORTANT: Before applying, make sure that you can prepare Room_1 (as detailed in the Rulebook "3.4 settings") in your lab and that it is available during the final examination (Stage Gate).

http://worldrobotsummit.org/wrs2020/challenge/download/Rules/DetailedRules_Partner_EN.pdf

2) Qualification material submission (Deadline 6th September, 2019)

Submit (in English) the required documents (Entry Form and Team Description Paper and Video to describe your team) in the specified format. Refer to Appendix A for details.

3) Pre-qualification team notification (November 2019)

We will announce about 12 pre-qualified teams.

If a pre-qualified team does not own the adequate robot platform (TOYOTA HSR), the organizers are able to provide a proper version of robot through a contract with TOYOTA.

4) Stage Gate (Spring of 2020)

The final examination (Stage Gate) will be conducted for Pre-qualification teams who have passed the document examination.

The team that passes the final examination (Stage Gate) will qualify for the World Robot Summit 2020.

The final examination (Stage Gate) of the Partner Robot Challenge (Real Space) is as follows:

Task_1 in Room_1 (as described in the Rulebook) will be evaluated at each team's facilities where authorized referees will attend.

Additionally, it is highly recommended that each team submits its performance using the HSR simulator*. In order to select teams, the score by the simulator is also considered.

*The HSR simulation system will be released later.

[Important Dates and Deadlines:]

- 1) Pre-registration (31st August, 2019)
- 2) Qualification material submission (6th September, 2019)
- 3) Pre-qualification team notification (November 2019)
- 4) Stage Gate (Spring of 2020)
- 5) World Robot Summit2020 (Oct 8 - Oct 11, 2020)

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Appendix A

Qualification material submission

Download the templates for Partner Robot Challenge (Real Space) and submit all required information indicated in the documents, including your issued ID number. Furthermore, each team must submit an introduction video where they show their research on robotics and previous experience with mobile robots.

All material submissions must be made via email only.

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Appendix B

Entry Form

ID # _____

Team Name _____

Whether or not Room_1 can be prepared for the Stage-Gate at your own facilities.
(Please check Yes or No.) Yes / No

1. About your team

1) Team members name, position, effort.

members name	position	Effort (%)*
		%
		%
		%
		%
		%
		%
		%

* Provide an estimate of the proportion of your total working-hours that will be dedicated to this project.

2) Please describe your motivation and expectations for World Robot Summit 2020.

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Appendix C

Team Description Paper

You should provide a description paper with the structure indicated in the [Contents] template respecting the sections name and order, in Springer LNCS format, and limiting yourself to 8 pages without altering margins or spacing (including references but excluding the appendixes). You can download a template for the TDP in the following link:

<http://www.springer.com/jp/computer-science/lncs/conference-proceedings-guidelines>

Exceeding the number of pages will automatically void your application.

We request that you complete the following items.

[Contents]

1. Introduction

2. Technical Challenge

How your team works under the following concepts:

2.1 Technical Challenges for 4S

Regarding Service Robots, describe what you understand for each aspect in the 4S philosophy (Speed, Smooth/Smart, Stable and Safe), the state-of-the-art, technical challenges, and your own approaches to the problem:

2.1.1 Speed

2.1.2 Smooth/Smart

2.1.3 Stable

2.1.4 Safe

2.2 System Design for “Keep moving”, “Move carefully” and “Be clever”

Describe your idea of a system framework that allows a robot to “Keep moving”, “Move carefully”, and “Be clever”.

“Keep moving”: Keep moving with accurate recognition of objects, people and environment and reasonable motion planning.

“Move carefully”: Small object avoidance on the floor.

“Be clever”: Appropriate and quick error detection and recovery.

3. Software development policy

3.1 Tools

Such as Git, Jenkins, Docker etc. How do you utilize these tools?

3.2 Open source software used by your team.

3.3 Role assignment policy of each member

4. Additional Innovative technologies

Innovative and unique technology and or scientific contribution other than those mentioned above.

5. Relevant publications

Related publications in the past 5 years, preferably available to download.

6. Energy efficiency and conservation efforts

7. Link to Team Video, Team Website

8,9,... Others sections that you consider worth to include

Conclusions / References

Appendixes