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Call for Applications for Participation

RoboCup 2019 - RoboCup at Work

<https://2019.robocup.org>

Sydney, Australia

Tuesday 2nd through Monday 8th July 2019

RoboCup at Work: Competing for the Factory of the Future

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RoboCup at Work is a league and competition in RoboCup that targets the use of robots in work-related, industrial scenarios.

It aims to foster research and development that enables the use of innovative mobile robots equipped with advanced manipulators for current and future industrial applications, where robots cooperate with human workers for complex tasks ranging from manufacturing, automation, and parts handling up to general logistics.

The RoboCup at Work league is characterized by an industrial appealing environment composed of industrial objects such as screws and nuts, shelves, containers, platforms of various sizes and networked automation devices such as conveyor belts, drilling machines, and others.

The actual competition tasks to be performed in the environment are defined in a set of so-called tests. Each test addresses various mobile manipulation capabilities such as grasping, transportation, precision placement, and visual servoing.

The full rules of RoboCup at Work as well as further technical details are posted on the RoboCup at Work website.

Participation in the Competition

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All teams that intend to participate in the competition have to perform the following steps:

- 1.) Submission of qualification material, including a team description paper and possibly additional material like videos or drawings
- 2.) Final registration (qualified teams only)

## Qualification

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The qualification process serves a dual purpose: It should allow the Technical Committee to assess the safety of the robots a team intends to bring to a competition, and it should allow to rank teams according to a set of evaluation criteria in order to select the most promising teams for a competition, if not all interested teams can be permitted. The TC will select the qualified teams according to the qualification material provided by the teams.

The evaluation criteria will include:

- Team description paper
- Relevant scientific contribution/publications
- Professional quality of robot and software
- Novelty of approach
- Relevance to industry
- Performance in previous competitions
- Contribution to RoboCup at Work league, e.g. by
  - Organization of events
  - Provision and sharing of knowledge
- Team web site

## Team Description Paper

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The Team Description Paper (TDP) is a central element of the qualification process and has to be provided by each team as part of the qualification process. The TDP should at least contain the following information in the author/title section of the paper:

- Name of the team (title)
- Team members (authors), including the team leader
- Link to the team web site
- Contact information

- The body of the TDP should contain information on the following:
  - focus of research/research interest
  - description of the hardware, including an image of the robot(s)
  - description of the software, esp. the functional and software architectures
  - innovative technology (if any)
  - reusability of the system or parts thereof
  - applicability and relevance to industrial tasks
  - usage of components (software or hardware) developed by other RoboCup at Work teams

The team description paper should cover in detail the technical and scientific approach, while the team web site should be designed for a broader audience. Both the web site and the TDP have to be written in English.

#### Submission and Evaluation

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All applications with the qualification material must be submitted by February 15th, 2019 through the following online form:

<https://goo.gl/forms/xIQkh8g8npeDyKir2>

Qualification decisions will be announced by March 4th, 2019.

Best regards,

The RoboCup at Work Technical and Organizing Committees