IPL

escola superior de tecnologia e gestão
instituto politécnico de leiria

robótica
2010
festival nacional de robótica

General Regulation

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1. Introduction and Motivation

The Portuguese Robotics Open, which had its 1st edition in 2001, aims at promoting Science and Technology among students of all ages, as well the general public, through robots competitions. The Portuguese Robotics Open, which takes place every year in a different, includes also a Conference where researchers, national and foreigner, in the field of robotics gather to present their latest work. The event has had an huge growth since its beginning, both in the number of participants has in visitors. The Portuguese Robotics Open is, currently, an initiative of the Portuguese Robotics Society.

The 10th edition of the Portuguese Robotics Open will take place in Expo-Salão Batalha from the 24th to the 28th of March, 2010, and will be organized by the Polytechnic Institute of Leiria, through its Superior School of Technology and Management.

The Open includes several competition leagues, namely Autonomous Driving (senior competition held since the 1st edition) and the competitions that follow the official RoboCup rules: Soccer Middle Size League – senior competition; Junior Soccer, Junior Search and Rescue and Junior Dance. The Open also includes demonstrations and workshops, promoted both by companies and research institutes.

By organizing this event in Portugal, we seek not only to motivate young students to participate in a technological advanced area, but also contribute to the development of research in Robotics and Automation, as well as fostering Science and technology in the country.

The Open will take place together with the 3rd FITEC (Innovation, Technology and Employment Forum), an event which aims at giving high-school students information about possible future careers. By joining these two events we not also increase the number of possible visitors, but we also bring the field of robotics to a wider audience.

By hosting the event in Batalha, a central location in Portugal, we hope to appeal to a larger participation of young students from all over the country.

2. Mobile Robotics Competition Classes

In order to cover the wide spectrum of knowledge required a priori to potential participants, the competitions are structured in two large classes, with both age levels and scientific knowledge needed well differentiated:

- Senior competitions
- Junior competitions

The senior competitions, while mainly aimed at students and researchers of research Institutes and Universities, do not include any restriction concerning the origin of the teams. As such, teams coming from any teaching facility, research unit, company, collectivity, electronics club, our individuals, can participate.

The junior competitions are essentially for basic, professional and high-schools. Admission of teams without an institution ground, e.g. companies, is subject to a decision from the organizing Committee.

Both junior and senior classes include several competitions, to be described later:

- Senior competitions
    - o Autonomous Driving (AD);
    - o Soccer Middle Size League (MSL);
- Junior competitions
    - o Junior Search and Rescue (JSR),

        with two age groups: 8-14 years and 15-19 years;
    - o Junior Dance (JD),

        with two age groups: 8-14 years and 15-19 years;
    - o Junior Soccer (JS) (2x2)

        with two age groups: 8-14 years and 15-19 years;

Other competitions might yet be included, which should be announced in due time.

3. Team Constitutions

3.1 Junior Competitions

Each institution may enroll more than one team. Teams must necessarily include an adult element (with or older than 18 years), which will be responsible by the remaining elements of the team. This element, which can be a Teacher or a student's parent, might assume responsibility for more than one team. In this case, for the accounting of the number of elements of the team and for the payment of the registration fee, it shall count only once.

Each team is typically constituted by a maximum of 3 elements and might, optionally, integrate a maximum of 5 elements through the payment of an additional fee per extra element.

All student members must be aged within the following age groups, using as reference the 1st of July, 2010: group 1, 8 to 14 years old, and group 2, from 15 to 19 years old.

3.2 Senior Competitions

Each institution may enroll more than one team. Teams representing teaching institutions should be constituted mainly by students from that institution. However, teachers, or even former students may be included. Each team is typically constituted by a maximum of 6 elements, allowing a maximum of 8 elements by paying an additional fee per extra element.

4. Registration

Registration is done through an electronic form available online (to be made available in the event website, http://robotica2010.ipleiria.pt).

Registrations should be delivered by and or mail to the organizing committee. Note that a registration will only be considered valid if it includes the proof of payment (further instructions will be made available in the event website).

Please pay attention to the following points regarding junior teams:

- If a team originates from an Unit associated with an Education Institution, that team must be registered as coming from that Education Institution. By Education Institution one means Faculties and Superior Schools, for the Superior Education, and Schools, for the non-Superior Education. By Units one means research units, interest groups, etc.;

- Each team can only be associated with an institution if the team responsible is from that institution, or if the majority of its elements are from that institution. You may be asked to deliver proof of this association;

- Admission of teams without an institution ground, i.e. no included in the two points above, is subject to a decision from the organizing Committee;

- Registration must necessarily include a term of responsibility signed by the adult element of the team. The text of that term will be made available at the event website.

Any registration might be canceled up to 15 days after the respective date limit, in which case the team will be refunded with the registration fee minus 20% for administrative fees. Cancelations after this date imply no refund whatsoever.

4.1 Junior Competitions

Maximum number of registrations:

By decision of the specialized committed of the Portuguese Robotics Society for the Portuguese Robotics Open, the following limits hold::

- JSR competition: 1 team per age group per school;
- JD and JS competitions: 2 teams per age group per school;

Note that there must exist at least a minimum of three teams in a given age group for that competition to take place.

The effective participation of the junior teams on the competition is subject to a pre-registration, available until **31/Dec/2009**. Pre-registration is made through the form available online in the event website.

The registration fee is **75 €** per team, for a maximum of three elements. Extra elements cost **25 €** per element, up to a maximum of five elements.

Registration includes access to the competitions according to the regulations, namely:

- Badges and participation certificates;
- A site at the competitions area with electric power to install the robot and the team;
- Nutrition support for the team elements;
- Sleeping space at a gymnasium in Batalha (the participant must bring its own sleeping bag);

Other services that might be included later will be announced in the event webpage. These complementary services will be available to at most three elements per team, except if noticed otherwise.

4.2 Senior Competitions

The effective participation of the junior teams on the competition is subject to a pre-registration, available until **31/Dec/2009**. Pre-registration is made through the form available online in the event website.

By decision of the specialized committee of the Portuguese Robotics Society for the Portuguese Robotics Open, if there are more than 20 teams registered in the Autonomous Driving Competition:

1) All teams participate in the 1st round;
2) For the next rounds a maximum number of teams, defined in the rules, will be classified, being the other teams excluded.

The registration fee is **200 €** per team, which includes a maximum of six elements. Two additional elements might be included with a fee of **35 €** per additional element.

Registration includes access to the competitions according to the regulations, namely:

- Badges and participation certificates;
- A site on the competition area with electric power for the team an robot;
- Accommodation in dormitories at the barracks of the Regiment of Artillery n. 4 in Leiria. Each participant must bring its own sleeping bag.

Other services that might be included later will be announced in the event webpage. These complementary services will be available to at most six elements per team, except if noticed otherwise.

5. Teachers/Tutors Role in the Junior Teams

One of the Portuguese Robotics Open goals is to foster technological learning and knowledge sharing among participants. As such, winning is not the goal! It is important that all teachers/tutors, or other any other accompanying adults, be aware of this mission, and act according to these principles.

As such, access by the teachers/tutors to the teams working site is limited. Any teacher/tutor that is caught intervening directly in the team work on the robot will receive a warning through a yellow card, to be placed on the work table. Two yellow cards lead to a red card and subsequent withdrawal of the team from the competition.

A good "golden rule" is that all teachers/tutors, or any other accompanying adults, keep their hands away from their teams robots and computers.

With the exception of the elements that make up the teams, it is not allowed to any other persons, at any time, and independently from their age, and whether or not related to any of the participating teams, to enter or stay in any of the areas reserved for competitions, or in the vicinity of the referees or members of the boards of those competitions.

Situations that demand it might be dealt with by the Portuguese Robotics Open Ethics Committee.

6. Competition Rules and Technical Specifications

The competition rules and technical specifications to the various leagues are published in the event website.

For the RoboCup competitions, the international rules will be used.

Competitions that are used as a qualifying round for the RoboCup, the organization will ensure that, beyond the general classification, an additional one with only Portuguese teams will be issued.

The qualification procedure for the participation of junior Portuguese teams in the RoboCup competition agrees to the following set of rules:

a) Each education institution may participate in RoboCup with a maximum of two teams, as long as they agree with the following conditions.

b) The two Portuguese top teams from each competition will be considered eligible to participate in the RoboCup.

c) If both teams selected from a given competition and age group belong to the same educational institution (see paragraph 4) the right to participate in RoboCup is transferred to the team that follows in that competition ranking.

d) If the number of qualified teams, from the same education institution, is higher than that define in a), the Institution may decide which teams will qualify to participate in RoboCup. For the remaining teams, this right is transferred to the team which is next in this competition and age group.

e) Only competitions in which the actual number of teams competing from different Educational Units is equal to or greater than three, are eligible to produce Robocup selected teams. Note that, for this purpose, only the teams that have actually participated are accounted for instead of the number of registered teams.

f) The final qualification procedure that designates which teams will participate in RoboCup, must be approved by the Jury that, in exceptional and duly justified situations, may decide in a different way from that that result from the previous rules.

7. Competition Prizes

All teams participating in competitions, i.e., which show up with a robot following the rules, will receive an attendance certificate. Besides this reward, additional ones will be rewarded to the three best classified teams per competition. All prizes should be published in the event website in due time.

8. Date and local

The ROBÓTICA 2010 – Portuguese Robotics Open will take place from the 24th to the 28th of March, 2010. For a more detailed description of the program check the event website.

All competitions will take place at [Expo-Salão](#) Batalha. The conference will take place at the great auditorium in the Superior School of Technology and Management of Leiria.

9. Referees and Juries

In all those competitions in which the rules provide for the existence of one or more referees, it belongs solely to these referees the evaluation and application of these rules. The referees' decisions can be appealed immediately after the end of the trial for the competition jury. Such appeals must be made verbally, to the members of the jury, exclusively by the responsible adult of that team to which the ruling has been imposed. To this purpose, a time period of 5 minutes is provided to the mentioned team responsible so that he can explain the appeal reasons. NOTE that no complementary auxiliary proof or evidence aid instruments are admissible (videos, photos or similar means). Similarly, there may be no kind of appeal on arbitration decisions relating to other team parties.

The juries are the maximum authority in interpreting and applying the rules on the various competitions. Their mission is to verify the robots conformity to the rules during the competitions and support the referees while auditing them

Through its authority, juries guarantee that the competition rules and regulation are applied. No appeal from the juries' decisions will be allowed.

The juries are selected by the Local Organizing Committee together with the SPR Specialized Committee, being their constitutions announced in the event website in due time.

10. Local Organizing Committee

The Local Organizing Committee is responsible by the material and human infra-structure needed for the event to take place, as well as its promotion and registration management. Its composition is available at the event website.

11. Contacts and Information Requests

All official information regarding ROBÓTICA2010 – Portuguese Robotics Open is available through the event website:

http://robotica2010.ipleiria.pt

Might there be any doubt after reading the information available in the website, we suggest using the following e-mails:

- Autonomous Driving: ca.robotica2010@estg.ipleiria.pt
- Soccer Middle Size League: frm.robotica2010@estg.ipleiria.pt
- Junior Search and Rescue: bsj.robotica2010@estg.ipleiria.pt
- Junior Dance: dj.robotica2010@estg.ipleiria.pt
- Junior Soccer: frj.robotica2010@estg.ipleiria.pt

Any complementary information request can be obtained electronically through the following address:

robotica2010@estg.ipleiria.pt

or through written letter to:

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