



HUMANOIDS FESTIVAL
RULES



Scuola di
Robotica

INO
Robo

HUMANOIDS ROBOTIC

We are living a charming and intriguing world in which, in the nearby future, robots will be companions of our daily life. That of the robotics is a sector in continuous expansion and a great opportunity from the working point of view.

Humanoids Festival is an annual event and competition organized by Scuola di Robotica; its main aim is to raise awareness of the benefits of learning informatics and technology, by motivating and teaching students on a humanoid robot. Programming and developing a mechatronic system, teams will create sceneries to optimize Humanoids' capabilities, while taking into account its limits and so developing skills which will be essentials to their future working lives.

The challenge was designed in partnership with teachers, in order to adapt it to the different scientific and technological curriculum of high school age boys and girls.

A GREAT OPPORTUNITY

For Students:

- To acquire technical and coding competences.
- To develop ability in Problem Solving, organizational team work skills.
- develop creativeness and communication skills.
- To discover promising professions and careers.
- To be involved in developing robots that are going to be partners and assistants of our everyday life.
- To be part of a community of new technologies creators and developers.

For Teachers:

- Raise students' interest in science and technology.
- Hold students interest encouraging their imagination.
- Experience flexible training arrangements.
- Free training, both in-class and on-line.

For Schools and Associations:

- A tool to promote on international media values of innovation and excellence that characterize the institution.

For All:

- The opportunity to meet HUMANOIDS' users community in addition to technicians and engineers teams that will offer a special assistance all through the contest.
- Discover robotic fascinating world and the sense of initiative and entrepreneurship that characterize it, a world where sense of humor is connected with creativity and passion.



TEAMS

Registration is reserved to **high school age boys' and girls' teams**.

Every high school institution or organization can enroll more than 1 team.

A team must have a **minimum of 3** and a **maximum of 10 students** and is trained by an adult coach.

Team members can only be on one team, but a coach is allowed to coach multiple teams*.

**every coach can coordinate a maximum of 3 teams*

TEAMS THAT OWN A ROBOT

Preparing for the tournament

Teams will work on robot owned by their school/organization.

The school/organization can register a maximum of 2 teams for each robot owned

TEAMS THAT DO NOT OWN A ROBOT

A few teams might be accepted in 17/18 tournament, their number will be communicated before the end of December.

NATIONAL CHAMPION TEAM EARNS ACCESS TO EUROPEAN HUMANOID FESTIVAL*

Each national tournament will be activated with a **minimum of 10** registered team.



HUMANOIDS CARE OLDER

THE SCENERY:

A humanoid robot is integral part of our daily life.
In the 2017 – 2018 contest, the robot is asked to interact with old people.

HOW CAN IT COOPERATE TO IMPROVE THEIR LIVES?

Challenges take place in some of the many places where humanoids activity might be helpful.

RESOURCES TO START

- http://www.europafacile.net/Formulari/PUBBLICAZIONI/Occup_Affarisociali/EMP-11-023-BrochureActiveAgeing_IT_WebRes.pdf
- http://ec.europa.eu/commfrontoffice/publicopinion/archives/ebs/ebs_378_en.pdf

A. HERE IS OUR TEAM!

Team is asked to describe the team, its work, challenges faced and how problems have been overcome. It is also important to underline members' roles in the team, and new skills acquired.

The Robot will of course be part of the show!!

Teams are also asked to create **A POSTER** (70 cm x 90 cm), that will be exposed during the tournaments. It will have to include at least the name and logo of the team. A template to be used by teams will be made available.

Evaluation parameters

- Team presentation.
- Team work.
- Team spirit.
- Use of ROBOT and SOFTWARE.
- Fun and originality.
- Poster/stand.
- Demo.



HI ROBOT! CAN YOU HELP ME TO..... ?

The aim is to find an innovative technological solution which will use Humanoid robots, *connected to objects*, to help older people in one or more activities of everyday life, supporting them in maintaining an independent life.

Design and implementation of the project will have to be carried on by the teams, but, everything will have to be funny and exciting!!

Teams will have to declare **target group** addressed and present the way they came to the solution proposed (case study, experts activated, existing solutions...)

The Scenery:

Teams will freely choose places of possible application of the solution.

Objects requirements:

- connection to ROBOT
- at least 1 engine
- at least 1 sensor.

Demo

Activity's demo will have to be interactive and involve the ROBOT and at least one team member.

Evaluation parameters

- Presentation of the solution and of project work.
- Innovation and feasibility.
- Connected Objects (innovation, quality of the prototype....)
- Software: technical choices, fluency, stability, dialogs, interactions.
- Demo – Design, fun, relevance, animations, accessories. originality
- **Bonus** interaction with more than 1 person.
- Testing of the project on the ground (presented with foto, video)



C. HERE WE SHOW!!

Buzzword: ***FUN AND IMAGINATION!!!***

Theatre, singing, poetry, dance.....

Which activities will Humanoid Robots have in mind to enjoy and enhance meeting moments for guests of a retirement house?

Requirements

- The activity purposed will see it interacting with at least 1 person.

Evaluation parameters

- Presentation of the activity.
- Team work.
- Team spirit.
- Use of ROBOT – SOFTWARE.
- Fun and originality.
- Demo

THE ROBOT will exhibit on a stage in front of the jury and of the Public.

D. ME & YOU

Me & You game is about creativity, team spirit, video-making, capability of interacting exchanging ideas inside and outside TEAMS' Community.

What can teams do? Use creatively digital instruments to offer everyone the possibility to be part of your team:

- Post videos and photos on social media (number of access will be evaluated)
- Publish news and communicate how your team is working, your projects, your difficulties and how you are going to find the solutions.
- Present team members and how your school/organization/community and families are involved in your projects
- Be active Community's Forum, tickle other teams with amazing videos and get new ideas reading those of other teams from all over Europe!

To be sure contents you post are well scored they shall be announced on Community forum; name and descriptions must include this information: ***“Humanoids Festival 2018”, Team NAME, Nation, School/Organization name.***

Social network:

YouTube:

- ✚ create your team channel, incorporate ***“Humanoids Festival 2018”*** in your video's names

Facebook, twitter, Instagram...:

- ✚ create your team pages/account, quote ***@humanoidsfestival*** in your posts.

In all social networks use hashtag ***#HumanoidsFestival2018*** in tweet, post, ...

JUDGING PROCESS

Juries will be made of teachers, institutional partners, engineers and robotic experts.

Jury session

- ✓ 5 minutes: setting
- ✓ 5 minutes: Teams presents to the jury and to the public.
- ✓ 5 minutes: Jury's question time
- ✓ 5 minutes: judging

Each Team will have 10 minutes time (setting included) to present and show its demo to each jury. Each test will start with team presentation to the Jury about scenery, adopted solutions and team work.

Will be particularly appreciated solutions which will demonstrate fun, simplicity, fantasy and creativity. ROBOT's behaviour will be evaluated as it should be in real life situations and not only according to demo's results.

Each test will be evaluated separately. Awards will be announced at the end of the day in each tournament. Judges will use evaluation grids* to help them determine which teams will receive awards. Awards will be determined by a deliberation process, which is formulated around discussions of team performance in each category.

Final evaluation will be the result of deliberation process of all the juries together.

**Evaluation grids will be available on the website.*



RESOURCES FOR TEAMS

ON LINE SUPPORT

Teams will receive support from Scuola di Robotica's technicians which will organize **webinar**, both in Italian and in English, about ROBOT'S programming and to answer to doubts and questions about the Rules.

Webinars will be held on January - april 2018, calendar will be published after 23 of December 2017 (deadline for admissions).

FRANCE - COACH TRAINING.

On **23 of February** in CANNES (Palais des Festival), will be held a 6 hours of free Training for team coach.

COACH TRAINING. (other countries)

6 hours of training will be organized by Webinars on line.

TECHNICAL RESOURCES

Scuola di Robotica will open a Forum for Technical assistance to teams.

For questions about rules, tournaments and any other problem, mail to: nao@scuoladirobotica.it

ROBOT AND SOFTWARE VERSIONS

All Humanoids ROBOT and software's versions can be used.

PROGRAMMING LANGUAGES

Team can choose to program ROBOTS in the preferred language (Choreographe, Python, C++ ...). Code used will have to be presented to Jury on the day of the tournament.

TECHNICAL REQUIREMENTS FOR THE DAY OF TOURNAMENT

Wi-Fi connections to ROBOTS are allowed as well as non-embedded.

Teams will **have to provide its own router** to connect to the ROBOT and to provide **laptops** and any other **necessary tool** (cables, extension cords, batteries, ...)

The day of the tournament every test will be held in different and independent areas.

Starting and ending positions of the Robot (Start and end of the test) will be chosen by teams, it is only required a stable position for the Robot.

It's important to keep in mind that ROBOT's behaviours should be replicable and stable within any little difference between team's and jury's rooms.

Teams will have to give particular attention to ambient light variations and background noise in network connections, whose conditions rely on external unmanageable factors.

NB: it's team's responsibility to make sure that ROBOT is ready for Demo to the Jury at the assigned time.