

Robot games in the ‘flying saucer’: RoboCup European Open in the Evoluon

The venue for this year’s RoboCup European Open, a tournament for autonomous robots, is the Evoluon in Eindhoven from 30 March till 3 April. Eye-catchers include the soccer-playing robots, service and music robots along with all kinds of workshops and demonstrations with robots, for young and old. Eindhoven University of Technology (TU/e) is organizing the event, which is free of charge to visitors.

Robot soccer

Robot soccer is being played in different leagues at the tournament. In the [Small Size League](#) teams of small robots on wheels play each other using a golf ball. Each team has a single central computer that controls all the robots. In the [Middle Size League](#) mobile eighty centimeter-high robots play with a real soccer ball. Each robot player in this category thinks and plays autonomously, communicating with teammates. The TU/e team that is taking part in the tournament has already two [world championships to its name in this category](#). Furthermore, there is the Standard Platform League, in which all teams have exactly the same robots, so it’s the programming that makes the difference. Here, too, the robots make decisions autonomously and communicate with each other, just as in a real soccer team. To see an example of a game, go [here](#).

Home help robots

The [@Home-League](#) is also represented at the tournament. This is a competition for robots that act as home helpers. The matches comprise challenges, such as taking an order for drinks and then serving them in the right place. The robots have to be able to understand, recognize and follow people as well as place the right drink between other objects.

Build robots yourself

Apart from the matches, there are all kinds of workshops and demonstrations. Like professors telling children about robots, workshops in which you can build or program a robot yourself, robot artist Kolja Kugler showing what his [impressive music robots](#) can do, and robots to cuddle, etc. For young and old alike, there is something to see and do at the RoboCup European Open 2016.

Fast progress

The aim of the RoboCup tournaments is to accelerate the development of affordable and reliable autonomous robotics. For example, robots that can work as a home helper, which can help senior citizens live at home independently for longer. Since the rules are becoming increasingly stricter and the teams share their knowledge after the tournaments, the technology progresses fast.

Teams of schoolchildren

The teams participating are mainly teams from universities throughout Europe that are constantly working to improve their robots. There are also Junior competitions for schoolchildren from elementary and high schools. Around 300 schoolchildren are bringing their robots to Eindhoven to compete in the Junior soccer, rescue and dance categories.

In 2013 TU Eindhoven organized the RoboCup World Cup, which attracted 40,000 visitors.

More information about the RoboCup European Open 2016 can be found on the website:

<http://www.robocup-europeanopen.org/>

The tournament is being made possible with the support of TU Eindhoven, the Ministry of Economic Affairs, the Province of Noord-Brabant, the Municipality of Eindhoven, Fontys University of Applied Sciences and the company Kora.

First Tech Challenge

Almost simultaneously, from 1 till 3 April, the Evoluon is also hosting the [First Tech Challenge Dutch Open](#), a competition for high-school teams and regional education centers throughout Europe.

Around 500 youngsters aged between 12 and 18 are participating. Apart from the technical aspects, creative thinking, team cooperation and being able to follow an engineering process are important elements. The tournament, a successor to the FIRST Lego League, is being organized by the Fontys Professional University of Applied Sciences.