

# BOTSCHALLENGES

## DOSSIER 2<sup>ND</sup> EDITION



SUMOBOTS.

### The purpose of this edition: surpass us

And so we did, we gathered 600 young people between 12 and 16 years old, increasing the number of centers registered last year from 4 to 16.

In this second edition we decided to increase the number of participants, increasing the challenge of the competition and taking it to the next level.

The course of the program was great, good organization, interest of both the youth and the centers, and of all the sponsors, since they were always aware that nothing was missing from anyone and supporting the initiative from the first moment.



## Learning and creativity

BOTCHALLENGES, in turn, is a STEAM Challenge (development of the competences of: Science, Technology, Engineering, Arts and Mathematics), awakening and improving the creativity of each student, while gradually learning each day, through effort, the incredible world of robotics.

All this is achieved through a plan of tutorials throughout the course in which they are taught to program, build, invent ... even to discuss and work in teams, making each of the members contribute their grain of sand in the project to get the best possible result and stand up to his rivals on the day of the Grand Final.

Emphasizing what the young students learned throughout the program, they were taught how to assemble an autonomous Robot part by part. The first thing they learned was "What is Arduino", to be able to make progress in construction. Later, through the kit provided, they learned to program basic functions of the motherboard by operating all peripherals, such as motors, ultrasonic sensors, ending with the programming of different combat strategies for the various situations in which they will be seen immersed in the final day.

## Six months of tutoring, an objective.

The tutorials began just after the day of presentation, in which all the centers were presented with their respective teams, and they were provided with the Sumobot Kit with everything necessary to start the project. They also witnessed a presentation to start Arduino and new technologies in the contemporary world.

These tutorials were carried out both in the centers and in other facilities, ensuring that all centers have the same possibilities of access to them.

They are planned from the beginning of the program, between the organization, the centers and the robotics specialist, which is the one that travels to the centers and, through a manual, the learning program is followed step by step until mastering Arduino and Being able to build the robot for the Grand Final throughout the training months.

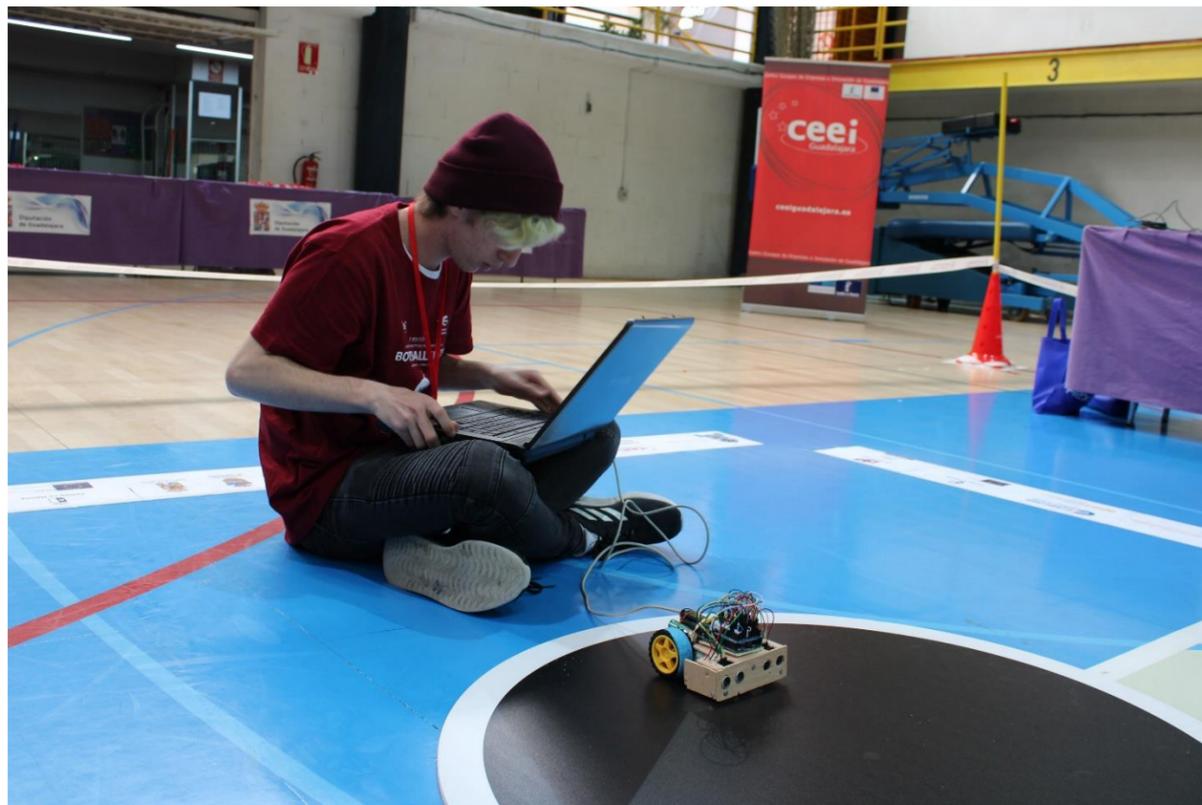
The result of the interest in the subject and its learning grow exponentially with the passing of days, young people realize how the world works on day-to-day programming, and what they are capable of doing for themselves, discovering new options for its future due to the almost total ignorance of this branch.



Tutoring day in one of the participating centers of the competition.



Last minute tests with the Sumobot.



SUMOBOT READY FOR THE COMPETITION

## What is the "Sumobot" kit made of?

The "Sumobot" kit is complete with everything necessary for the development of a fully autonomous sumo robot. It is presented in a plastic box with a lid, inside which we can find the different parts of the robot mentioned above:

- 1 microcontroller
- 1 USB cable
- 1 protoboard
- 25 flexible thin cables
- 1 swivel Wheel
- 2 infrared sensors
- 1 ultrasonic sensor
- 1 battery holder
- 1 push button
- 1 H bridge
- 5 female cables

## The Rules

### SUMOBOT MEASURES

For combat to begin and be valid, all Sumobots must meet two mandatory rules:

- The measurements must not exceed 13x13 in width and length.
- The weight should not exceed 5000g.

Also note that, just at the beginning of the fight, the robot can display all kinds of elements regardless of the measure.



The Sumobots were checked by the referees before any assault.

## Sponsorship and collaboration II Edition:

### Employers:



### Co-Financers:



### Co-Organizer:



## Competition's day.

The day began with the reception of the 16 participating centers, along with all the participating and non-participating students who would like to bring, to which they were given a healthy breakfast to start a long, but very fun day.

Four doyhos were placed in each corner of the pavilion where this event was held, and a central one that would be prepared for the final. With everything ready and the young ready, the day began with a series of combats between the centers, divided into 4 different groups, one in each corner of the pavilion. Those fights were very hard because it was the first contact they had with other "Sumobots" and their respective tactics, which had to serve to win each of the fighting ahead.

All this was experienced in a spectacular way, with the organization working at 100%, hundreds of young people both on the track and in the stands without stopping to cheer on their teammates, and 16 Sumobots that were constantly in the doyhos competing. After each fight, the scores were being pointed on the center board, which served as a guide for all teams.

Finishing this first round of fighting, the last scores were scored and the first 16 teams went to the start of the knockout rounds, round of 16.



Group phase combat.



BOTH FINALIST AT THE FINAL.

## Qualifying rounds.

In the qualifying rounds one of the most tense moments of the day was lived, it was all or nothing, and the students had to give everything to avoid staying at the doors of the final.

With the end of the round of 16, the quarter began, where very few were the lucky ones who still had options to win the competition.

And finally, the two semifinals, which were the four best teams in the entire competition at the gates of getting a place in the final and being the focus of the looks of the more than 600 young people who attended the event, along with the press and all the sponsors of the program. The two places went to the Montevalbir School and Giovanni Antonio Farina.

# THE GREAT FINAL.

## COLEGIO MONTEALBIR VS GIOVANNI ANTONIO FARINA

And finally it came, the moment that after so many months of preparation all the teams were looking for, THE FINAL.

The format of this was the same as the group fighting: the best of three rounds, which were to be the last of the second edition of the program.

The first assault added a point for the Montevalbir College, but that advantage was short-lived when the center Giovanni Antonio Farina got down to work as they had never done and won the next two rounds, proclaiming himself champion of the competition in style, and in the best possible way: tracing 600 students.

The day came to an end with the awards ceremony by all the sponsors and a photo with the champions, saying goodbye to a perfect program and looking forward to the third edition.

## THE CHAMPIONS: COLEGIO GIOVANNI ANTONIO FARINA



## El Hormiguero.

On June 21, 2019, the Giovanni Farina, Montealbir and IES Brianda de Mendoza schools, winners of the II Botschallenges-Robotics and Steam Challenge competition, visited El Hormiguero, a program that has been one of the sponsors of this edition that brought together 16 schools and institutes throughout the province of Guadalajara and 600 young people in the final held in March.

The science team of El Hormiguero was the host of this day in which they showed them the facilities, as well as the different inventions that they have been developing throughout the programs issued.

In addition to this, the students had the opportunity to listen to how science works on TV, at the same time that the El Hormiguero science team gave them some TIPS to continue improving in future projects.

During the stay of the winners of the II Botschallenges edition, a promotional video was recorded with the visit and, starting in September, the winning students will participate in three of the programs that take place live.

El Hormiguero, in addition to being one of the sponsors of the II Botschallenges edition, disseminated the event through its social networks and was part of the jury that designated the three winners. A program that is betting on science in Spain and that sees in this initiative another momentum when it comes to introducing the world of science among the youngest.



For more information or to participate in the following editions contact:

[info@ceeiguadalajara.es](mailto:info@ceeiguadalajara.es) o 949 881 425