

Robot challenge: Tech-savvy students compete in Würzburg



The Robo Penguins from Hermann-Staudinger-Gymnasium in Erlenbach showed Michael Stammberger, Head of Apprenticeship and Training at Brose, (second from right) what their robot can do.

Würzburg (17. January 2018) How do you find, transport, use and remove water? This was the question participants had to address in this year's First Lego League (FLL) robotics competition and research project. 13 student teams with around 100 participants accepted this challenge at the Lower Franconian regional tournament on 12 January at Wolfskeel-Realschule, a school in Würzburg. The nine to sixteen-year-old students built and programmed fully autonomous robots that had to complete complex tasks related to "Hydro Dynamics" at the competition. This was the fourth time the international automotive supplier Brose organized the regional competition as the main sponsor.

"The First Lego League is about creativity and sportsmanship. It fits us – and that's why we support the competition at our location in Würzburg. Together with the schools we want kids to have fun competing in a challenging technical event as a team," explained Michael Stammberger, Head of Apprenticeship and Training Brose Group. In the competition phase, students learn the working methods of engineers, technicians and scientists. And when they do the project work, they learn social skills and how to work as a team. "This is how we get young people excited about technology and teamwork at an early age. At the same time, we show them career prospects and thus contribute to their career orientation early on," stressed Stammberger. The family-owned company Brose has supported the regional competition of the First Lego League since 2015.

Each student team has four to ten members. In the practical part, students test and program their robot made of sensors, motors and Lego blocks with the support of an

adult coach from a school or university. “The toughest challenge is precision,” stressed Tobias from Matthias-Grünewald-Gymnasium in Würzburg. “The robots must be precise to the millimeter in order to complete the tasks,” reports the 15-year-old. On the day of the competition, the robots have two and a half minutes to autonomously solve as many of the 18 assigned tasks as possible. In line with the event theme, the robots had to move Lego objects on a table in different directions, for example to capture rain, turn over a manhole cover or remove a faulty pipe.

In the scientific part of the First Lego League, the young participants had a research task. Students work together to develop innovative problem-solving approaches on the topic of water. “We thought about how salt water can be converted into fresh water using as little energy as possible,” explained 15-year-old Lisa from Gymnasium Marktbreit. The students present their findings to the panel of judges in a creative way, for instance with a sketch, a presentation or a website they programmed themselves. The judges consider the results from the research task, robot competition and team task.

Team RS KnightMar from Realschule Marktheidenfeld won the regional tournament in Würzburg. Together with the runner-up MLRobotS from Main-Limes-Realschule Obernburg, they qualified for the state finals on 24 February 2018 at Ostbayerische Technische Hochschule (OTH), a university of applied sciences in Regensburg. The participants will then battle it out at the European finals in Aachen on 17 and 18 March 2018.

Over 32,000 teams in 88 countries participate in the educational program. The non-profit organization “HANDS on TECHNOLOGY” is responsible for the tournament showcasing robots and ideas in Germany, Austria, Switzerland, the Czech Republic, Hungary, Poland and Slovakia. More than 7,000 boys and girls in 900 teams registered for the First Lego League in these countries.



Winner of the regional competition in Würzburg: Team RS KnightMar from Realschule Marktheidenfeld.



The runner-up MLRobotS from Main-Limes-Realschule Obernburg also qualified for the state finals.



The robots of the student teams had two and a half minutes to complete as many of the 18 tasks as possible.