

PRESS RELEASE
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Austrian robot sailing boat is world champion!

BREITENBRUNN/AUSTRIA - In the pouring rain and frosty wind, the world championship week started in Breitenbrunn on May 20. During this first world championship, fully autonomous sailing boats from Austria, Portugal, Great Britain and Canada were competing in two competitions. The first world champion in robot sailing is the "ASV roboat" developed by Roland Stelzer, Karim Jafarmadar and Raphael Charwot from the Austrian Association for Innovative Computer Science (InnoC).

Robot boats can sail to any destination, only requiring to enter the target coordinates. The optimum route is calculated based on weather data in real-time and is adapted permanently considering the leeway. Sensor data are analysed by means of artificial intelligence and used for determining the rudder and sailing position. This way, also the tacking and jibe are carried out independently by the robot sailing boat.

48h race

The "ASV roboat" was the only boat to start in time during the material-consuming 48h competition. All other participants still had to struggle with technical difficulties. However, after a few hours, also the "ASV roboat" had to return to the box. Water had penetrated the rudder engine, tying up parts of the board electronic system. After a couple of hours, the issue was fixed and the boat ready to continue the race. All the same, the jury decided at the end of the race not to evaluate the race, since no boat had been sailing the full period of 48 hours continuously and without any external intervention.

World championship regatta

When the second competitor started during the world championship regatta on Friday, May 23 and Saturday 24, things looked completely different. Bright sunshine, a slight breeze and all four boats running fully autonomously on the water. The races could not have been more exciting.

Although the "ASV roboat" was the first to enter the finishing line during all three races, it still had to worry about the victory, given that the running time was adapted based on the length of the boat according to a handicap formula. In the end, they made it to the world championship in robotic sailing! At the positions two and three, you could find "Pinta", developed by the Welsh Aberystwyth University, and "North Star" of the Queens University in Canada. The Portuguese team of the University of Porto with its boat "FASt" made a fourth place after failures of their GPS receiver

Man vs. Machine race

A special highlight of the world championship week also was a man/machine race with the robots competing against Phillip Gross, a 15 year old emerging talent from the yacht club of Breitebrunn. This time, the man still was a length ahead. Philipp was able to sail with more foresight in quite calm weather, whereas the robots had to take their decisions from each given situation and therefore could not respond to headers, wind turns and small gusts of wind

sufficiently and beforehand. The scientists consider the result as a mandate to make further improvements.

Future of the robot sailing boats

In the future, robot sailing boats may be used as intelligent sensor buoys for oceanographic measurements or as support for the sailer, especially in dangerous situations. "For me as a sailer and yacht electronics engineer, it was fascinating to see how well the robot sailers could cope with most different wind conditions", says Robert Schepp from Germany, a member of the jury. "Now it's the industry's turn to use these technologies, for instance for improving the safety in sailing."

International conference

However, even more important than the title was for everyone the mutual scientific exchange between the teams. "The progress compared to last year was huge with all the teams, and now we look forward excitedly to the next big challenge, the first fully autonomous crossing of the Atlantic Ocean in autumn this year", says the roboat project manager Roland Stelzer. "The biggest challenge for the Atlantic crossing will surely be to assure a permanent power supply and the robustness of the materials which have to resist, come rain, come sunshine, says Karim Jafarmadar, a member of the team.

Cross-border robotics initiative "Centrobot"

The first World Robotic Sailing Championship is part of the EU project "Centrobot", a comprehensive robotics initiative in the region of Vienna-Bratislava. Apart from the European Regional Development Fund, the project is supported by the Federal Ministries of Sciences and Economics. The competition was organised by InnoC in collaboration with the yacht club of Breitenbrunn. A team of pupils of the multimedia department at HTL Spengergasse provided the spectators with spectacular live images from the regatta.

For further information please visit us at www.roboticsailing.org/en, for high resolution pictures kindly see: <http://www.roboticsailing.org/en/pressecenter/>

For any questions or queries please feel free to contact:

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