

IAF SPACE EDUCATION AND OUTREACH SYMPOSIUM (E1)
Interactive Presentations - IAF SPACE EDUCATION AND OUTREACH SYMPOSIUM (IP)

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HALF A DECADE OF EXO-RO - THE NATIONAL ROVERS COMPETITION FOR
HIGH-SCHOOLERS

Abstract

The European Space Education Resource Office Romania (ESERO Romania), in synergy with the Romanian Space Agency (ROSA) organize, since 2016, a national rovers competition aimed at youngsters of high-school age. Teams of four to six kids build and control a small rover (maximum 2.5 kg, maximum 40 x 30 x 30 cm) that navigates a terrain analogous to an extraterrestrial planet looking for signs of life, determining the suitability of the environment for human life and collecting a sample. In the ESERO tradition, outer space is being used as an exciting context and entry point for STEM, kids having to develop and use skills in robotics, programming, biology, chemistry and other fields. In 2015, the Exo-Ro inaugural edition took place at the "Muddy Volcanoes" site in the Buzau county, while 2017 saw the competition taking place underground, at the Targu Ocna salt mine. The competition moved then to Timioara, where the "Aquapic" youth educational centre served as an aquatic planet analogue. This year, the competition is once again hosted at Aquapic, but the Covid-19 pandemic determined the organization of the competition in a hybrid format – with the rovers being physically present on the field but with the teams controlling them remotely, each from the safety of their own homes. This presentation will share the evolution of the competition throughout the years, the ways the teams rose to the various challenges – including the pandemic – and the ways in which this competition helped them learn robotics and astrobiology.