

## IAF SPACE EDUCATION AND OUTREACH SYMPOSIUM (E1)

## Lift Off: Primary and Secondary Education (1)

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CODERDOJO ORADEA SPACE ROBOTICS: FOSTERING FUTURE INNOVATORS THROUGH  
HANDS-ON SPACE SCIENCE EDUCATION

**Abstract**

The Space Robotics initiative by CoderDojo Oradea combines space science with programming in a novel way to educate and entice the future generation. The program has evolved since it began in 2018, focusing on real-world involvement with rovers, CanSat contests, and, most recently, a two-phase rocket design project. This abstract describes our teaching strategy, which emphasizes experiential learning to spark students' interest in STEM and provide them the tools they need for jobs in space exploration. We highlight the initiative's inventive contribution to space science education by going into depth about our methodology, engagement with participants tactics, and the assessed influence on students' abilities and interests. The success of our program, as demonstrated by noteworthy results in national and international competitions, highlights the potential of volunteer-led, project-based learning settings in developing young learners' technical abilities, critical thinking, and collaboration.