

IAF SPACE EDUCATION AND OUTREACH SYMPOSIUM (E1)  
Space Education Outreach and Workforce Development for Emerging Communities (IPB)

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DEVELOPMENT OF EDUCATION AND SPACE INDUSTRY INITIATIVES IN A DEVELOPING  
COUNTRY WITH THE GUATEMALAN ASSOCIATION OF ENGINEERING AND SPACE SCIENCES

**Abstract**

In 2020, the launch of Guatemala's first domestically produced cubesat marked the beginning of an initiative aimed at establishing a strong connection between the international space sector and Guatemala. Guided by the core principles of education and collaboration, the Guatemalan Association of Engineering and Space Sciences was established with the primary mission of forging connections with global enterprises and addressing potential space-related opportunities within the country. Since its inception, the initiative has transformed into a legally recognized association dedicated to the promotion of STEM education, specifically focusing on the exposure and promotion of space-related activities. This evolution involves STEM outreach in all educational levels, collaborative research initiatives, the advancement of technological innovation, and the fostering of international cooperation. Notably, the association has emerged as a central figure in aerospace science, playing a key role among educational institutions, private enterprises, manufacturers, and government science extensions. The association's initiatives involve dedicated teams operating within the country, committed to the initiation and proposal of long-term research and development projects spanning from the exploration of space biology to mission-based rovers. As the association progresses, emphasis is placed on encouraging a community of young professionals capable of representing Guatemala at an international level within the aerospace domain. This vision proposes a centralized network connecting students and professionals, providing services from research projects to teacher support. Additionally, the association has shifted its focus towards providing educational opportunities in underserved villages and regions where access to education is limited. This paper will

fully explore the association's journey, current initiatives, and future plans, addressing the benefits and impactful contributions made by the association in furthering the realm of aerospace sciences within a developing country.