

IAF SPACE EDUCATION AND OUTREACH SYMPOSIUM (E1)
Enabling the Future - Developing the Space Workforce (5)

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POLISPACE: A STUDENT APPROACH FOR ENABLING THE GROWTH OF THE ITALIAN SPACE WORKFORCE

Abstract

Over the last two decades, a significant number of studies have confirmed the correlation between the enhancement of scientific achievements and the amount of hands-on experience a student has. The Italian education system is strongly focused on the theory side of an individuals' education, often resulting in limited access to practical activities for undergraduate and graduate students. Moreover, the ongoing pandemic has forced students to stay at home and abandon any scheduled practical activities they may have had to focus on a fully online education programme.

To combat these issues, a group of students from Politecnico di Milano conceived the idea to create a framework linking University students with companies and faculty researchers, building projects to encourage collaboration between their University and worldwide firms and institutions. After assessing the need for such a framework through a survey with more than 850 participants the first space association of Politecnico di Milano, Polispace, began to take shape recruiting over 30 students from 9 different countries.

The association aims to provide their student body with exposure to the space sector, access to internships and much needed practical experience through enjoyable space-based projects. The overall goal of Polispace is to foster the futures of its individual members, while creating better engineers and improving the University experience for all involved. Just over one year since its inception, Polispace has achieved a number of milestones including incubating its first student team (for the Team Space Design competition organised by the American Institute of Aeronautics and Astronautics) and starting its core project: the first CubeSat fully designed and executed by students of Politecnico di Milano. The latter will serve as a proof of concept of how Polispace can provide opportunities for student development and innovation while expanding scientific research through its activities.

In this context, PoliSpace is also partnering with several companies and institutions, offering internships and practical opportunities to students and exposing them to a professional environment. All of this is being accomplished while acting as an incubator hub for student teams looking to tackle international space-related competitions such as ESA's "Fly Your Satellite!" or CanSat competitions, in an environment where they will receive the guidance and support (through seminars, workshops etc) necessary to succeed.

This paper describes the progress made and the activities conducted by PoliSpace in its first year of operation, in the pursuit of its core goals.