

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

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ESTABLISHMENT OF SPACE EDUCATION RESEARCH LAB: A NOVEL INITIATIVE FOR
PROMOTING SPACE SCIENCE, TECHNOLOGY AND ITS APPLICATIONS

Abstract

Institute of Space Technology, Islamabad, Pakistan is a premier institute of Pakistan and offering baccalaureate and graduate programs in the fields of space science, engineering and technology. During the yester years, it has been observed that there is a need of space awareness, education and popularization at the grassroots level to develop the specialized space related human resource to achieve UN sustainable development goals (SDGs) and also for the socio-economic development of the country. In order to achieve this target, the Space Education Research Lab (SERL), a specialized research lab was established in 2020 at the Institute of Space Technology (IST) Islamabad, Pakistan under the umbrella of Pakistan's National Center of GIS Space Applications (NCGSA). SERL aims is to develop specialized human resources in the field of space science, technology and applications through awareness and outreach activities. The team SERL is engaged in space awareness activities namely the World Space Week celebrations, Act in Space, NASA Space Apps, Space Summer School, Dr. Abdus Salam Space Contest, Space Destination Schools, Space Film Festival and Space Awareness Visits. The major target audience is the school, college and undergraduate students. The lab also organizes specialized camps on CANSAT, CUBESAT, Astronomy, Rocketry and Aviation. The camps are STEM based activities including hands on design, development, testing and launch endeavors. It includes the use of software tool, simulations and mission planning. The lab also works for the STEM educators and provide trainings and workshops to science teachers related with space science and technology. SERL has developed more than 200 space related activities for different age groups and trained more than 1000 master trainers from schools and colleges. The lab also develops space-related books for children, websites, and applications for space enthusiasts. SERL has created a wide impression of space popularization and reached thousands of students and hundreds of schools and colleges. It has created its footprint through print, electronic and social media and triggered the similar initiatives at national level. Additionally, SERL inspires young aspirants to join the profession of space science and technology, creating a passionate, dedicated, and talented workforce through interactive career counseling sessions. SERL is a pioneering initiative in Pakistan and desires to share its achievements with other players and stakeholders to multiply its impact and make it sustainable too.