

SPACE EDUCATION AND OUTREACH SYMPOSIUM (E1)
Learning and Knowledge Development for a Globally Sophisticated Workforce (5)

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ESTABLISHMENT OF A MULTI-NATIONAL UNIVERSITY EFFORT TO PROMOTE
INTERNATIONAL COOPERATION AND DEVELOP THE FUTURE SPACE WORKFORCE

Abstract

During the infancy of spacefaring activities, efforts were dominated by Russia and the United States (US). Prior to the 1990's the US space program was, essentially, isolationist in nature. US space endeavors were accomplished by NASA and the US military. However, during the last 20 years, due to the end of the Cold War, increased costs and decreased budgets, the US has increasingly partnered with other spacefaring nations. In June 2010, the US National Space Policy specified a new emphasis upon international cooperation. Also in 2010, South Africa, an emerging space nation, established a national space agency and has continued to actively establish partnerships with various nations and entities in order to accelerate its involvement in space-related activities. While both the US and South Africa understand the criticality of multi-national space endeavors, future achievements can only be garnered by a solid and continuously developed space workforce. In order to foster an internationally cooperative workforce that will have the desire and skillset necessary to achieve future spacefaring goals, a collaborative effort between entities in the US and South Africa was established in 2011. Specifically, an academic partnership was initiated between the Cape Peninsula University of Technology (CPUT) in Cape Town, South Africa and the University of Alabama in Huntsville (UAH) in Huntsville, Alabama (AL). This joint effort is referred to as the ALLiance for International Excellence among the future Space workforce, or ALLIES. The first year, or Phase I, of the ALLIES program commenced with an initial emphasis upon the cross-integration of design methods and tools utilized at the respective universities as well as the design and development of a Science, Technology, Engineering and Mathematics (STEM) tool that was delivered to a school in South Africa. Phase II of the ALLIES program will continue the collaborative efforts, including the design of an easily replicable table-top wind tunnel to be integrated in secondary education schools in both South Africa and the US. The present paper will provide details and metrics establishing that both Phase I and Phase II ALLIES efforts inspired and motivated youth of both nations to pursue space careers. Additionally, data has been accumulated that verifies the ALLIES program has instilled in university engineering students – the future space workforce - the desire to seek and attain space-related achievements via multi-national efforts.