

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

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ANALYZING THE IMPACT AND BENEFITS OF UNDERGRADUATE AND GRADUATE STUDENT  
RESEARCH AT THE INTERNATIONAL ASTRONAUTICAL CONGRESS: THE IAC AS A TOOL  
FOR DEVELOPING THE FUTURE GLOBAL SPACE WORKFORCE

**Abstract**

The University of Alabama in Huntsville (UAHuntsville) is one of the United States' leading space research universities, and classified by the Carnegie Institute in the "very high" research category. UAHuntsville has been a leading contributor to the United States' space program since its beginnings, in conjunction with the arrival of the German rocket team to Huntsville, Alabama following the second World War. In 2009, UAHuntsville developed an innovative program for the global workforce development of its students. Full-cost travel scholarships to the 61st and 62nd International Astronautical Congress (IAC) meetings were awarded to any student able to meet the following criteria: 1.) They were required to develop and submit to the IAC an original research abstract for consideration. 2.) The abstract was then required to be accepted through the standard IAC process for a schedule session. 3.) The student was subsequently required to perform the necessary research and to develop the required paper and presentation. 4.) Their papers and presentations were required to meet the quality standards of a panel of UAHuntsville reviewers with at least 20 years' experience attending and presenting at the IAC.

In 2010, twelve (12) UAHuntsville students met all the criteria and presented papers in regular sessions of the non-student program, and in 2011, sixteen (16) students presented seventeen (17) papers. UAHuntsville students were drawn from all majors, representative of the multi-disciplinary portfolio of research strengths to be found at the university, which are well-aligned to those of the IAC. The group included men and women seeking Bachelor's, Master's, and PhD degrees, and citizens of several different nations.

With this level of student involvement, and two years of past performance, we are now able to examine the impact and benefits of student participation at the IAC and report on the outcomes achieved through this activity. We will demonstrate how involvement in the IAC has catapulted the students into other endeavors, programs, and careers, and will use data to report here on the effectiveness of IAC meetings as a tool for developing students and young professionals. We will present a quantitative analysis of the career growth, network development, programmatic cost, logistics, and university administrative support for this program. The paper will conclude with suggested 'best practices' for the IAC, as well as other organizations interested in fostering a global space workforce.