Paper ID: 15138
oral
student

SPACE EDUCATION AND OUTREACH SYMPOSIUM (E1)
In Orbit - Postgraduate Space Education (4)

Author: Mr. Hooman Jazebizadeh
Beihang University, China

Prof. Jingnong Weng
Beihang University, China
Dr. Ahmad Talebzadeh
Asia-Pacific Space Cooperation Organization (APSCO), China

MASTER PROGRAM ON SPACE TECHNOLOGY APPLICATIONS (MASTA) IN SATELLITE COMMUNICATIONS

Abstract

In order to translate the recommendation of the United Nations Program on Space Applications (UN-PSA) into an operational postgraduate program, Beihang University has established the Master program on Space Technology Applications (MASTA) in China particularly for Asia-Pacific applicants since 2006. MASTA is an elaborately designed and intensive master programme for students who are interested in pursuing multidisciplinary studies in relevant aspects of space science and technology. It focuses on both knowledge acquisition and operational training, and is an application-oriented program. In 2011, Beihang University has admitted students to MASTA with Satellite Communications research direction. Most of the applicants are from the states of the Asia-Pacific Space Cooperation Organization (APSCO) member states. The Satellite Communication can be considered as a system. It consists of three big segments which are space segment, ground control segment and User communication segment. MASTA program with Satellite Communication concentration utilizes module pattern and problem-based learning (PBL) methods to cover the most important topics on the design, the implementation, the operation and the applications of the satellite communication segments. This paper describes the educational features and outcomes of MASTA program with an emphasis on Satellite Communication direction. It first introduces the program stakeholders and their responsibilities for and benefit from MASTA. The paper then deals with the structure and the milestone of MASTA. The curriculum is briefly discussed. Also given is a comparison between MASTA and other educational programs on Satellite Communications in Asia, Europe, South and North America based on requirements, cost, educational methods and tools. A model is drawn from this assessment to include the stakeholders' needs and the system requirements. The last section presents the lessons learned from different perspectives including the opinions of the MASTA students as system-users. The results of the two last sections can be used to improve the educational quality and outreach of the future MASTA and international cooperation with other educational centers in space technology application.