

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

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“SATELLITE TECHNOLOGY”: AN INTERNATIONAL, INTERDISCIPLINARY MASTER  
PROGRAM WITH FOCUS ON HANDS-ON EXPERIENCES

**Abstract**

Within the spacecraft engineering programs at Bachelor, Master and PhD level University Würzburg started 2018 the new program "Satellite Technology". As main progress in modern spacecraft engineering focusses on advanced electronics and software, this program is realized within the Computer Science Institute. Specific emphasis is on modern microelectronic and data processing systems onboard the satellites, as well as algorithmic aspects in the application sectors related to Earth observation, telecommunication and scientific exploration. Specific emphasis is on hands-on experiences by the design of FloatSats, CanSats and educational CubeSats in order to complement lectures by practical implementation aspects.

The students are offered excursions to space research institutes (DLR, Fraunhofer, Max-Planck institutes) and to industry (Airbus Space, OHB,...). In the breaks between lecture periods they get offered opportunities to participate in one of the ongoing satellite realization projects. As there are currently 18 small satellites implemented in Wuerzburg there are excellent opportunities for interesting hands-on experiences.

In "Satellite Technology" 12 Bavarian partners (Universities, research institutes and industry) addressing space applications cooperate within the Elitenetzwerk Bayern to offer to the students in English language a program with emphasis on small satellite design aspects. In addition the most relevant application fields in Earth observation and in telecommunication are well represented in the program. International partner universities are integrated to allow the students to include related study segments abroad into the curriculum, in particular for Master thesis work.

This contribution addresses the international university cooperation, the contents of the curriculum, as well as the specific challenges and experiences acquired in setting up this international program.