

IAF SPACE EDUCATION AND OUTREACH SYMPOSIUM (E1)
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Author: Dr. Gisela Detrell
Institute of Space Systems, University of Stuttgart, Germany

Mr. Tharshan Maheswaran
Institute of Space Systems, University of Stuttgart, Germany

THE STUTTGART SPACE STATION DESIGN WORKSHOP – CURRENT STATUS

Abstract

The Space Station Design Workshop (SSDW) has been carried out at the Institute of Space Systems - University of Stuttgart for over 20 years. During the one-week workshop, university students and young professionals work in an interdisciplinary and international environment to design a space station. The workshop offers the opportunity both of an educational and research purpose. From one side, it allows participants to put in practice what they have learnt in theoretical lectures and work in their soft skills, but at the same time, it offers a unique opportunity to obtain creative solutions from the future generation of space experts. Several years of SSDW in Stuttgart have allowed the development of a methodology, tools and procedures required to guide the participants. Moreover, it has allowed to build a network of experts that contribute in their field of expertise. The workshop includes several lectures from those experts during the first two days. The participants are then divided in two teams (currently with 40 participants) that compete during the week. The team of experts judges after the week, which is the winning design. Several tools, guides and recipes are provided during the week. The mission statement of the workshop changes every year, adapting to the current plans on human spaceflight and space exploration. In 2021, due to the COVID-19 situation, the workshop needed to adapt, and for the first time it was offered in a digital format. This has shown us, how the well-established workshop can benefit from new ideas and methodologies. In 2022, we plan to offer an in-person workshop again, whereby this time the educational focus will be in promoting cooperation rather than competition. This paper will explain the basics of the SSDW, the innovative approaches in 2022 and will summarize the team results. Special focus will also be given to the feedback and lessons learnt, both from the organization and the participants side.