

Abstract for iSAIRAS 2014

Automation and Robotics in the German Space Program

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Abstract

The presentation reflects the achievements since iSAIRAS 2012 within the Automation and Robotics sub-program of Germany's Space Program and provides a roadmap for future activities in the field. Together with the roadmap it describes the political, economic and technological goals to be achieved for Germany within the coming years.

It will give an overview over work that was done in the areas of earth orbit infrastructure, space exploration and technology transfer into terrestrial applications. In addition the paper will summarize the status of the program's flagship project DEOS. Further it will introduce new space craft design concepts which will facilitate on-orbit servicing and promote a sustainable future satellite infrastructure and operation.

In November 2013 DLR organized the SpaceBot Cup, the first robot competition in the area of space robotics in Germany. The tasks to be accomplished were derived from a typical planetary exploration scenario. Ten teams from academia and small & mid-sized companies competed for 2 days performing robot operations in an analogue set-up featuring a realistic mission environment. The paper presents results and the lessons learned.