**Project:** Building Robotic Applications with ROS (Robot Operating System)

Project System Development (Bachelor), winter term 2020/21

**Advisor:** Prof. Horsch, Rudi Scheitler

**Introduction:**

From the homepage ros.org: The Robot Operating System (ROS) is a set of software libraries and tools that help you build robot applications. From drivers to state-of-the-art algorithms, and with powerful developer tools, ROS has what you need for your next robotics project. And it's all open source.

**Project Goal:**

The project goal is to define, implement, test and present a ROS based project by own choice. The department of computer science will provide hardware resources like a Panda robot and a RVR robot (see figure). Since these resources are limited, a simulation based approach is necessary. For simulation the software Coppelasim from Coppelia Robotics will be used.

It is also possible to build only simulation based applications.

![RVR robot from Sphero](image1) ![Panda robot](image2) ![Panda robot in simulation](image3)

**Project Execution:**

The whole group will be divided into subgroups of 4 students, which will define their ROS based application by their own.