

RoboCupRescue 2009 Robot League Team RoboRescueTeam FH-Wels (Austria)

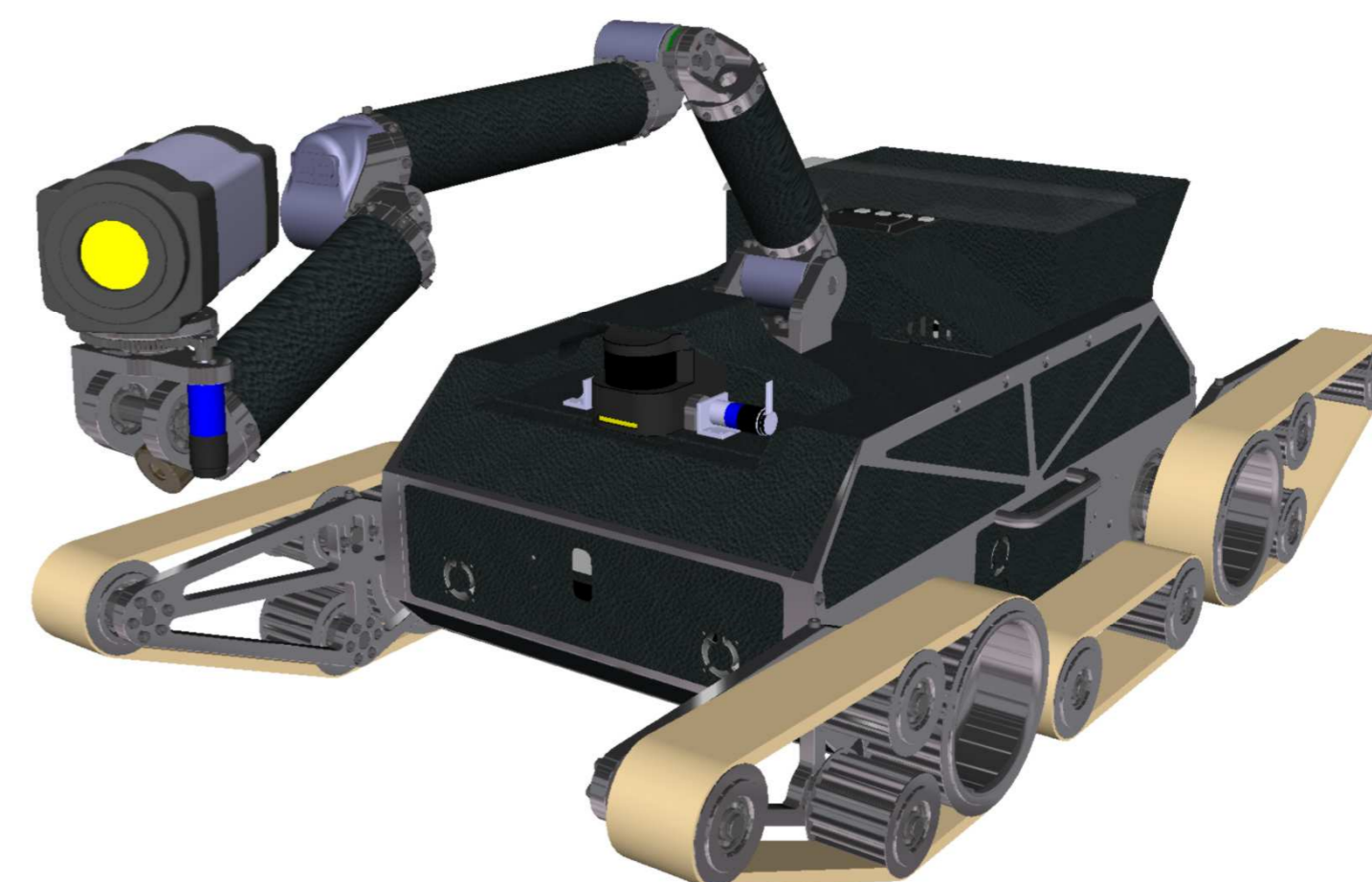


Introduction

RoboRescueTeam FH-Wels includes members which already have achieved experience by building autonomous robots for competitions. These robots were able to win competitions such as the Robot-Challenge in Vienna (AUT), the Robot SM in Gothenburg (SWE) and the RoboGames in San Francisco (USA). The robots also started at the Eurobot in La Ferté Bernard (FRA) and Heidelberg (GER).

Rescue Robot

Human rescuers have very short time to find trapped victims in a collapsed structure, otherwise the chance of finding victims still alive is nearly zero. In such a critical situation robots can support rescuers. According to this very demanding tasks the development of the robots is very complex and combines multiple disciplines such as mechanical engineering, electrical engineering and programming. This mobile platform equipped with a manipulator represents the first stage of an Austrian national founded project. A common background of our above activities is the development of a tracked vehicle with four active flippers to improve the traversability on uneven terrains, the control of the driving mechanism and the system architecture with the experiments in the programming of an embedded real-time processor and a high-performance FPGA from National Instruments to control all sensors and actuators.



Team Members and Their Contributions

- Raimund Edlinger - Team Leader, Mechanical design, Controller design and Behaviors
- Walter Rokitansky - Advisor
- Michael Zauner - Advisor
- Andreas Poelzleithner - Mechanical design
- Harald Kneidinger - 2D-Mapping
- Thomas Fink - Localization
- Thomas Hatheier - Victim Identification (Thermo camera)
- Johannes Hieslmair - Victim Identification (Stereo Vision)
- Bernhard Fahringer - Victim Identification (CO2-Sensor, Microphone)
- University of Applied Sciences Upper Austria - Sponsor
- National Instruments - Sponsor
- LKR Ranshofen GmbH - Sponsor

