# Project Practical Course: Control of Modular Robots

Advisors: Andrea Giusti, Esra Icer

TU München

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# Overview

- Introduction to reconfigurable modular robots
- Description of the project practical course
- Description of the tasks
- Organization

# Reconfigurable Modular Robots

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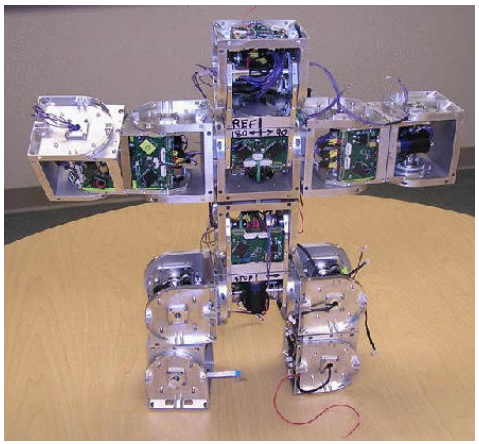
- Some examples of reconfigurable modular robots



SuperBot,
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Atron,
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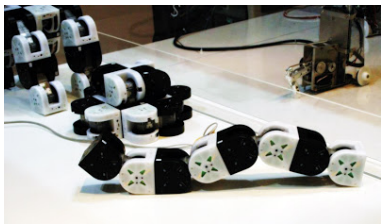

M-TRAN, AIST (Japan)

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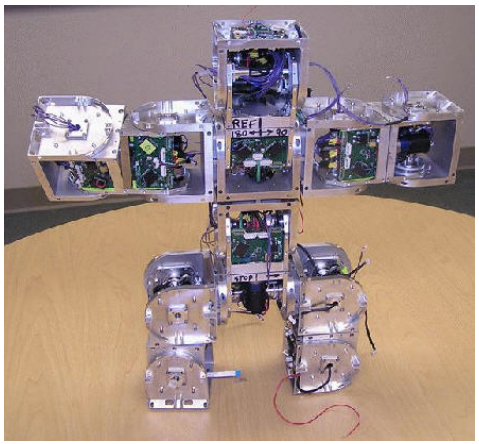

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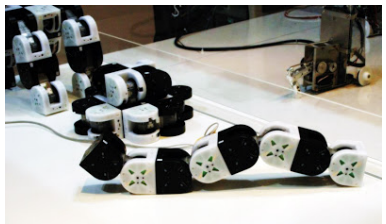

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- Video of the CMU's "Snake Monster"...

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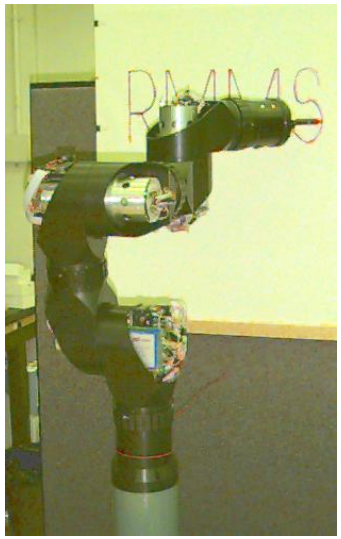

The CMU's RMMS

Schunk's LWA 3

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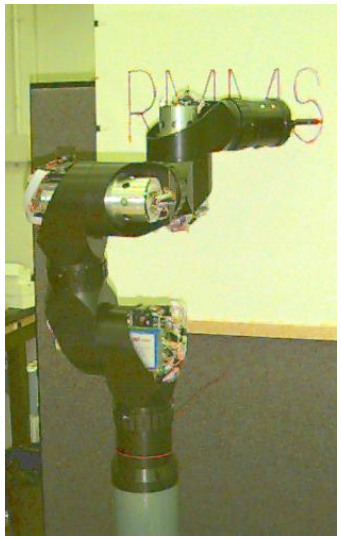

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- Video of the Traclabs' modular robotic arm...
- Video of the Schunk's modular robotic arm...

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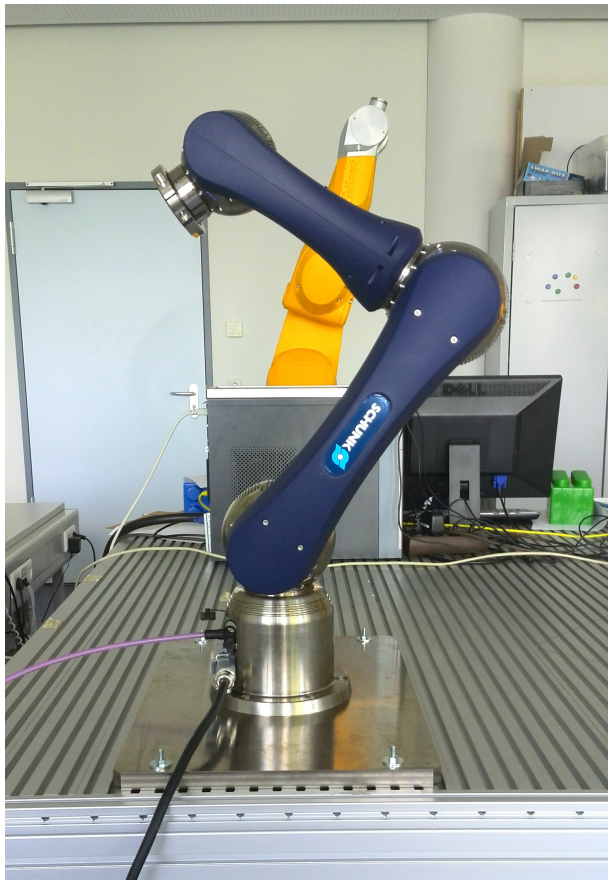


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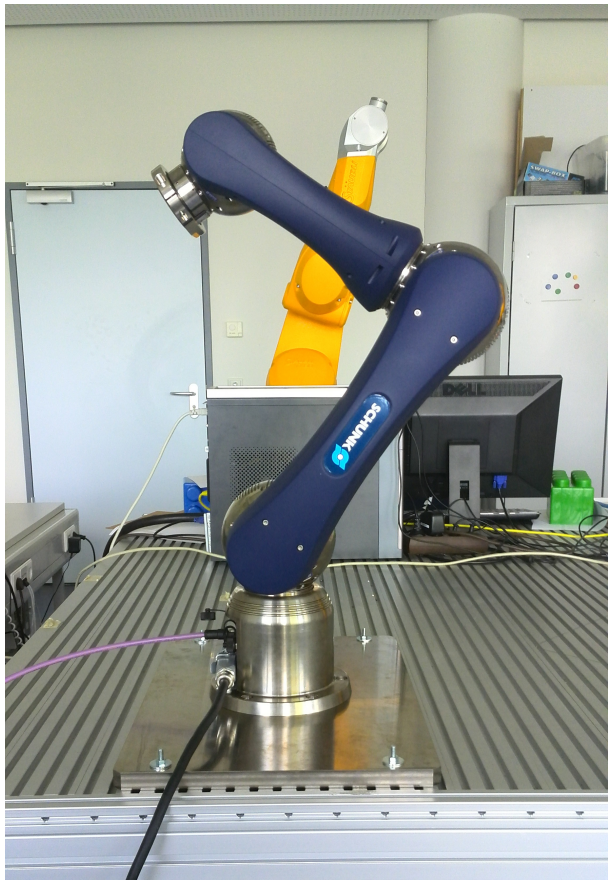


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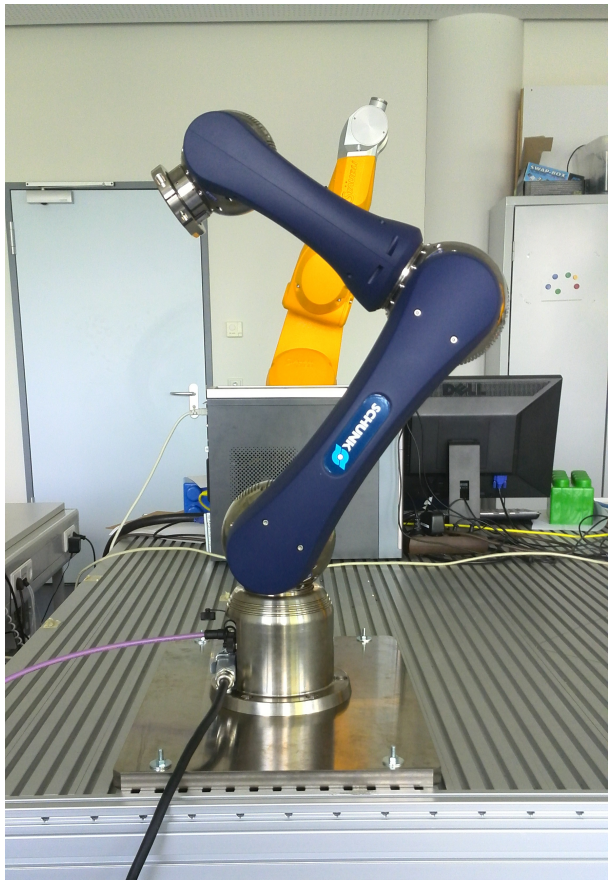


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- Tasks on **Modelling and Control of Modular Robots using Matlab and Simulink**.
- Four students will be selected and a task for each student will be assigned.

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Knowledge involved are basics of Trigonometry, Linear Algebra, Mathematical Analysis, Matlab and Simulink.

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Knowledge involved are basics of Mechanical Systems, Automatic Control, Matlab and Simulink.

Prerequisites: basics of Robotics (kinematics and dynamics) and Automatic Control.

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Prerequisites: basics of communication protocols, Matlab and Simulink.

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- **Participation and selection:** Matching system + meeting with the advisor (the meeting can be arranged also after the closure of the matching system)