

# AdaMeKoR

## Adaptive Multi-component Robot System for Health-Care

### Motivation

Nursing staff who care for people with mobility disabilities often get back and joint problems because the strain on muscles and skeleton is enormous. As a result, absences or even incapacity for work occur, in the case of already scarce nursing staff.

### Goals and approach

The overall goal of the AdaMeKoR project is the development of an adaptive and multifunction motorized bed with a robotic arm system for use in care. Nursing staff and care recipients should be supported in everyday, physically stressful care activities on the nursing bed. For this purpose, sensor components are developed in order to be able to adjust the bed position depending on the situation, for example. Various holding and support functions of the robot arm are tested in the nursing laboratory, for example for bed-wheelchair transfer or the application of objects. The system is also intended to continuously monitor the posture of the nurses during the mobilisation or transfer of care recipients and to provide guidance on optimisation in the event of unfavourable loads. In addition, DFKI RIC develops expanded concepts for the transfer of patients with different body size (height, weight). Suitability for everyday application and "design for all" aspects should be considered.

### Innovations and perspectives

A partially automated bed-robot arm system can improve the autonomy and quality of life of care recipients. For carers, robotic support for lifting and moving a patient represents a significant reduction in physical stress. This prevents damage or diseases of the lower back area.



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### Partners:

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