

Humanoid Robotics Research @ KIT

Tamim Asfour

High Performance Humanoid Technologies (H²T)

<http://www.humanoids.kit.edu>

<http://h2t.anthropomatik.kit.edu>

Institute for Anthropomatics and Robotics (IAR), High Performance Humanoid Technologies (H²T)



H²T Research Topics

Mechano-Informatics

Learning
from Observation and Experience

Perception
Vision and Haptics

Human Body
and Motion Analysis

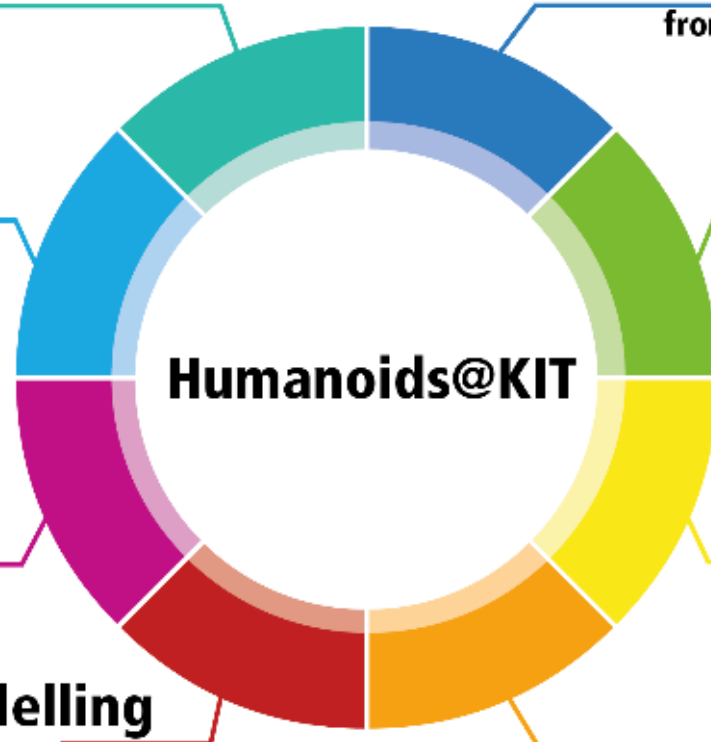
Humanoids@KIT

Grasping
and Manipulation

Balancing
and Walking

Mathematical Modelling

Robot Design



Research Topics @ H²T

■ Grasping and manipulation

- Integration of vision and haptics to deal with unknown objects
- Active perception for object segmentation
- Mobile manipulation
- Vision-based localisation

■ Learning for human observation and experience

- Marker-based (and markerless) observation of human actions
- Learning motion primitives from human demonstration
- Motion alphabets for grasping, walking and whole-body locomotion and manipulation tasks



8x

Praxis der Forschung in SS 2017 am H²T

Active Perception: Physically Plausible Scene Understanding

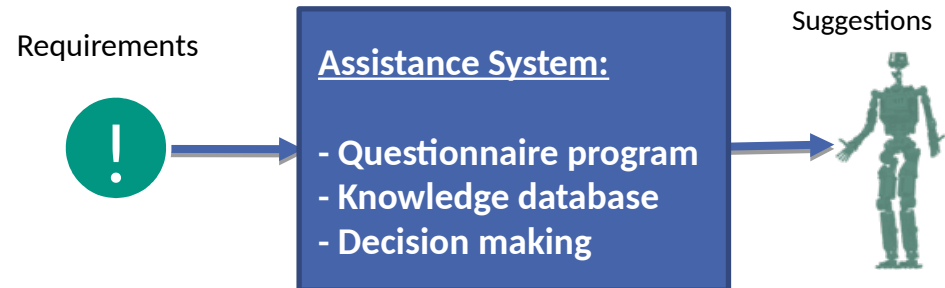
- Use physical plausibility to improve scene understanding for humanoid robots



- Required:
Programming skills in C++

Assistance System for the Design of Humanoid Robots

- Design and implement a system, which supports the design of humanoid robots



- Required:
Programming skills in C++/C or Java

H²T „special“ requirements for PdF

- 1-2 weeks time of probation (Probezeit)
- Candidates **must** spend **at least one day per week** in the H²T labs

Contact



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