KIT

Karlsruher Institut für Technologie

KOLLOQUIUM

Human Movement Observation and Analysis for enabling Humanoid Robot Learning

Dana Kulić Assistant Professor, Department of Electrical and Computer Engineering, University of Waterloo, Canada

As robots move to human environments, the ability to learn and imitate from observing human behaviour will become important. The talk will focus on our recent work on designing humanoid robots capable of continuous, on-line learning through observation of human movement. Learning behaviour and motion primitives from observation is a key skill for humanoid robots, enabling humanoids to take advantage of their similar body structure to humans. First, approaches for designing the appropriate motion representation and abstraction will be discussed.

Next, an approach for on-line, incremental learning of whole body motion primitives and primitive sequencing from observation of human motion will be described. The second half of the talk will overview recent work on learning controllers for robot movement and imitation, and accurate human movement observation from portable sensors. The talk will conclude with an overview of preliminary experimental results and a discussion of future research directions.

KIT – Campus Süd, Fakultät für Informatik, Am Fasanengarten 5, 76131 Karlsruhe, www.informatik.kit.edu

Donnerstag, 25.11.2010, 17:30

Informatik-Hauptgebäude (50.34), HS -101 (UG), Am Fasanengarten 5, 76131 Karlsruhe