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Embodied Brain-Like Intelligence for Humanoid Robotics

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ABSTRACT OF THE TALK

The Honda Research Institute Europe serves as a center of excellence in the area of intelligent systems for Honda.

The role model for the targeted intelligence is the human brain. The spectrum of research covered by the Institute ranges from detailed modelling of neurobiological phenomena to large scale intelligent systems for humanoid robotics and the automotive area.

The talk will focus on the systems oriented research with the humanoid robot ASIMO as the application platform. The elements covered will be self-collision free whole body motion generation for online interactive motion control, motion primitives and motion planning.

From those elements we will proceed towards integrated systems showing visually guided whole body interaction and finally ALIS, the autonomous learning and interacting system. The talk will conclude with an outlook on the theoretical aspects of large scale hierarchical intelligent systems.