



Team NimbRo — Prof. Sven Behnke
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Humanoid Soccer

- Play in RoboCup Humanoid league since 2004
- Won several competitions (e.g. KidSize 2007, 2008, TeenSize 2009)



- Self-constructed robots
- Fully autonomous
- PC, three cameras
- Hierarchical reactive control
- Team play
- Learning

Intuitive Multimodal Communication

- Develop museum tour guide since 2004



- Speech: ASR+TTS
- Expressive gestures
- Animated face
- Multimodal dialogue system
- Person detection
- Face detection
- Face recognition
- Head pose estimation
- Gesture recognition

Domestic Service Tasks

- Compete in RoboCup@Home since 2009



- Developed domestic service robot Dynamaid
- Won innovation award
- Omnidirectional drive
- Anthropomorphic arms
- Movable trunk
- Sensor head
- Robust indoor navigation
- Object manipulation
- Intuitive multimodal communication