

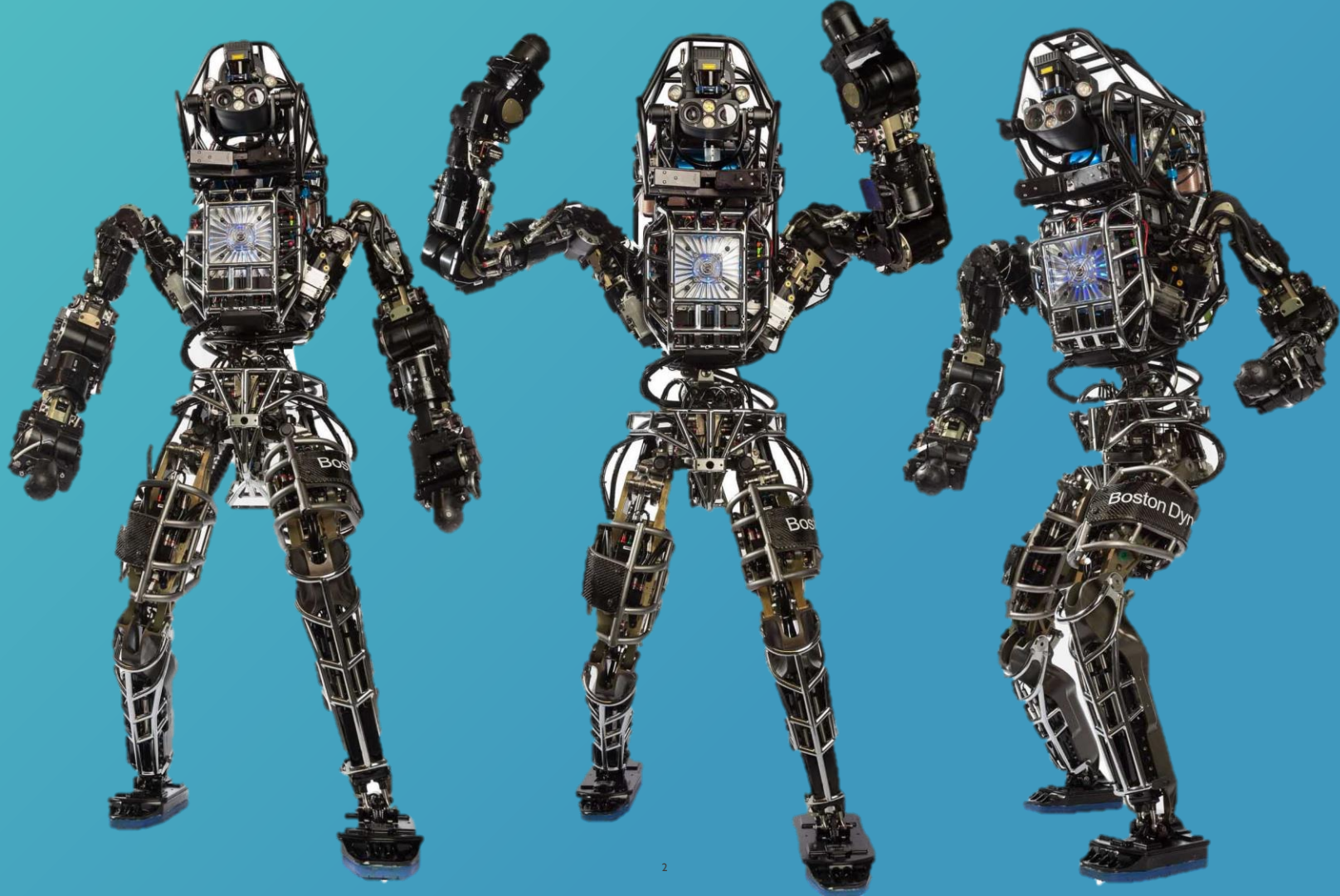


mec

INTERNET OF *ROBOTIC THINGS*

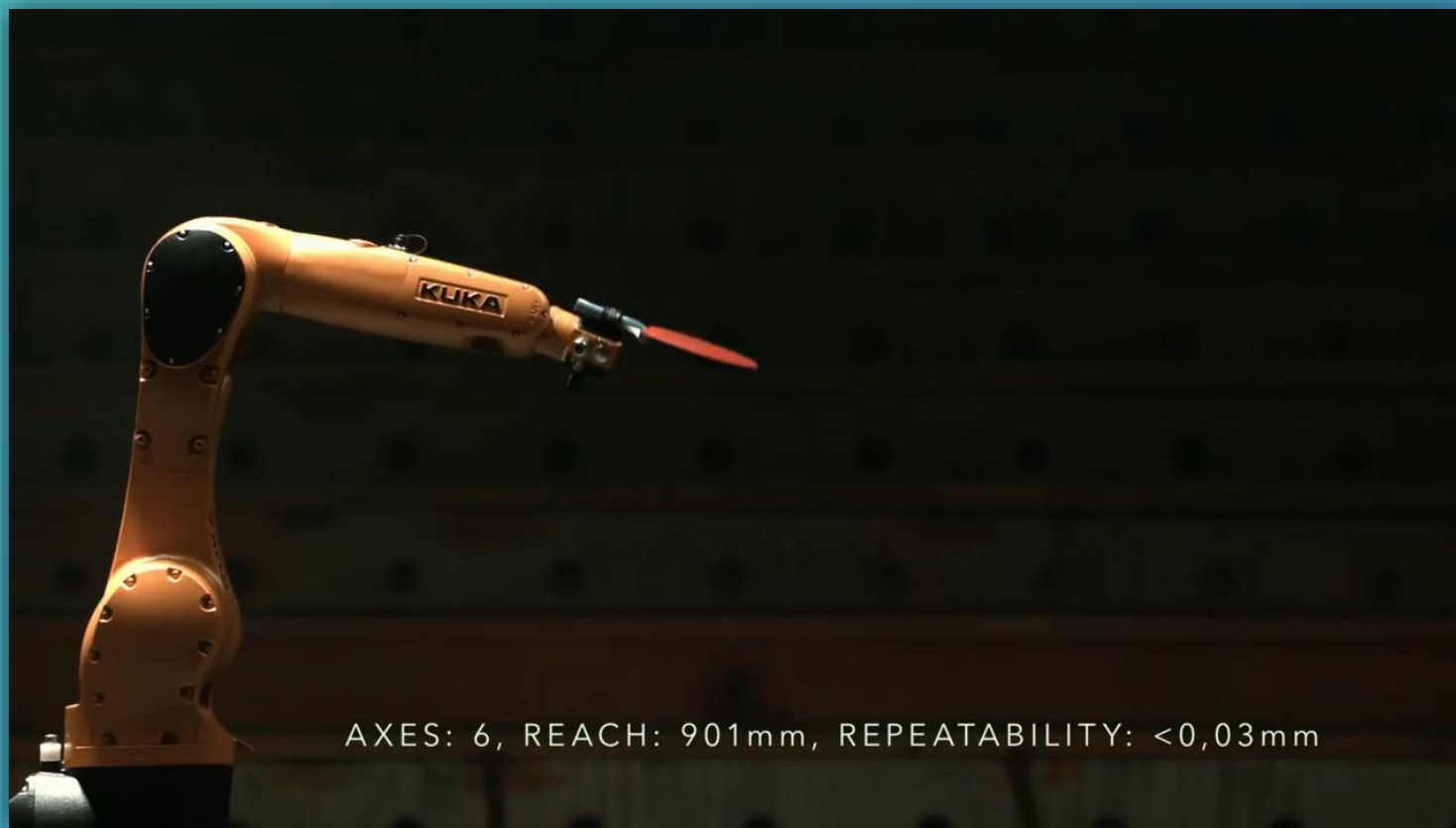
PROF. PIETER SIMOENS (RESEARCH LEAD)

KESHAV CHINTAMANI (BUSINESS DEVELOPER)





Courtesy: DARPA



AXES: 6, REACH: 901mm, REPEATABILITY: <0,03mm



DISTRIBUTED INTELLIGENCE IN THE INTERNET OF *ROBOTIC* THINGS

TAMING THE OPEN-ENDED, DYNAMIC WORLD



Task generation



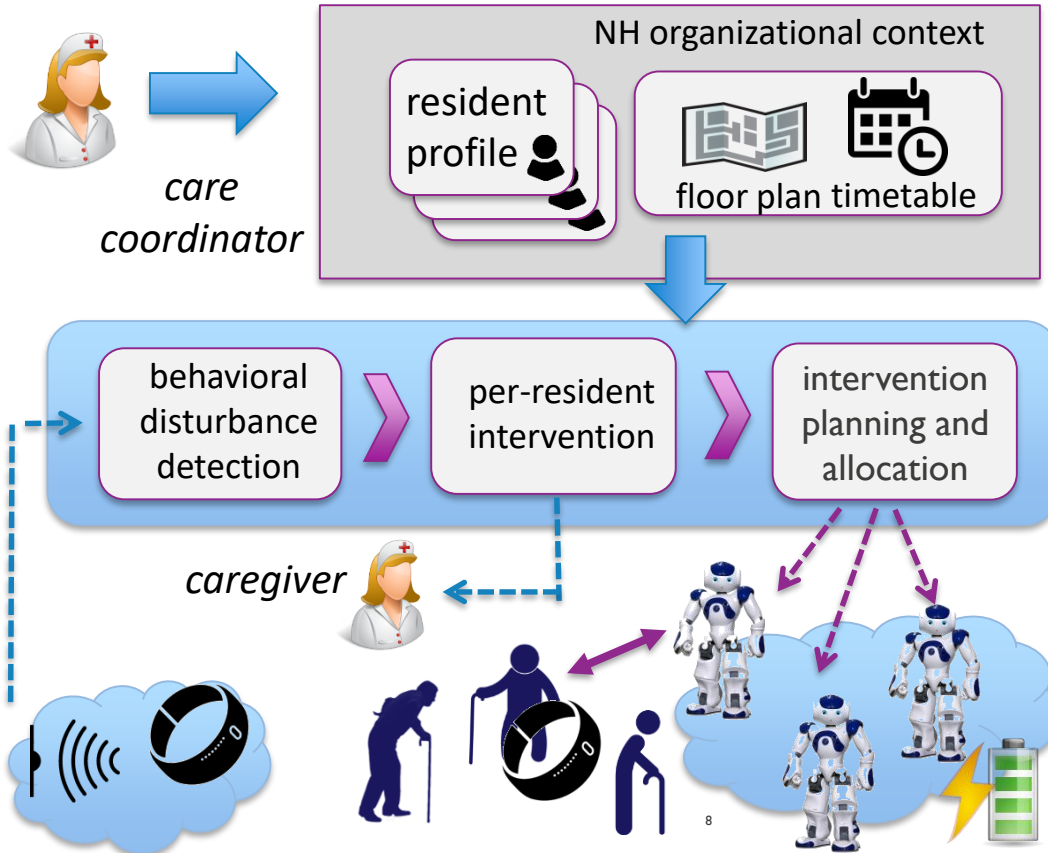
Task planning



Task execution

PERSONALIZED INTERVENTIONS FOR ALLEVIATING BEHAVIOR DISTURBANCES

24/7 CAREGIVER SUPPORT IN NURSING HOMES



Task generation

- ▶ Recognition of behavioral disturbances from sensors and wearables
- ▶ Ontology reasoning for personalized intervention strategy

Task planning

- ▶ Person tracking for path planning
- ▶ Activity recognition for tailored interventions

IOT SENSOR FUSION FOR ROBOT CONTROL



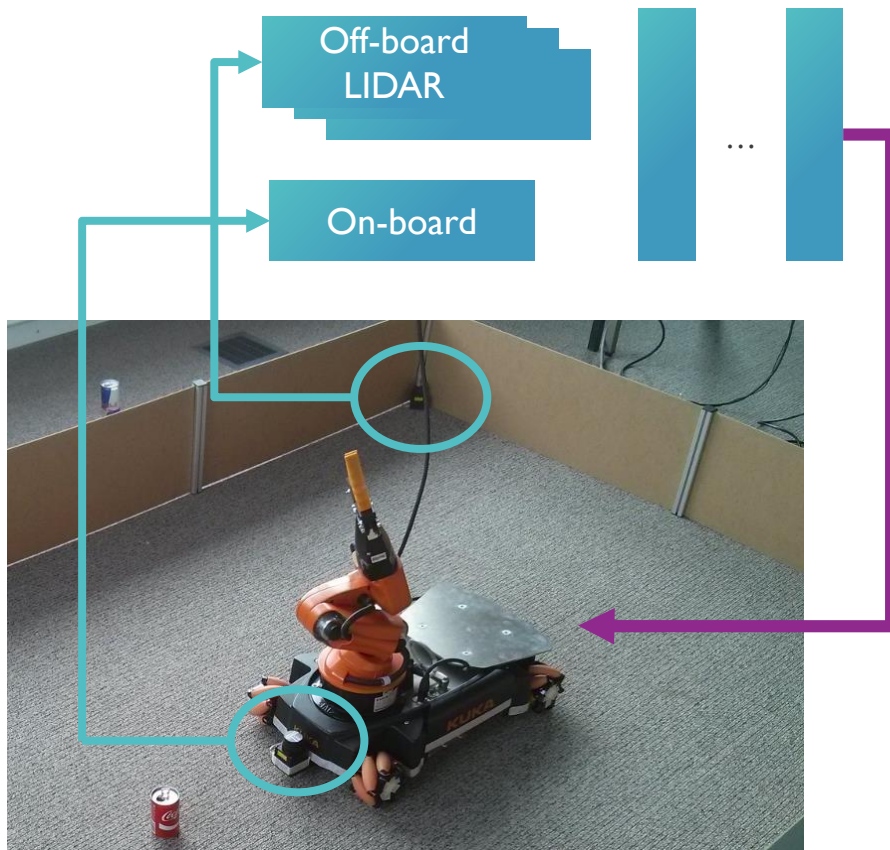
IOT SENSOR FUSION FOR ROBOT CONTROL

MODULAR DEEP REINFORCEMENT LEARNING



OSGI-based middleware for
robots, sensors and the cloud

<http://dianne.intec.ugent.be>



Task execution

- ▶ Deep Q-learning
- ▶ Fusion of on-board and off-board sensors
- ▶ Modular approach