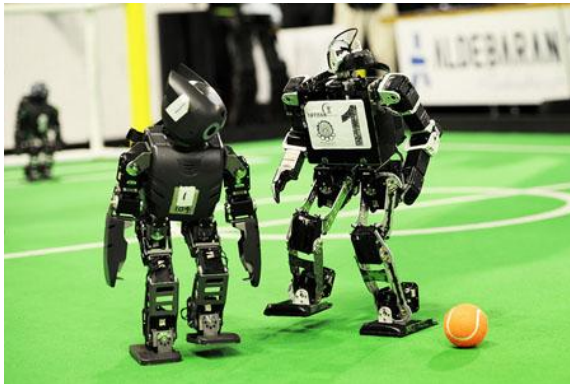# Master's thesis
Simulation of complex actuators

Hubert Woszczyk

Univerity of Liège

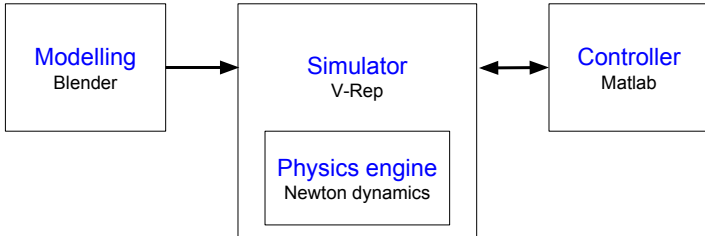Academic year 2015-2016

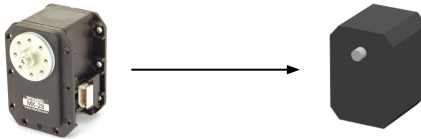## Context & Motivation

Problem statement

Required simulator features:

- realistic rigid bodies physics simulation
- constraints
- the model of the robot should be able to interpret the same instructions that the real robot will

Software choices

Modelling (1/2)

Problems :

- mass & inertia
- volume
- function
- constraints
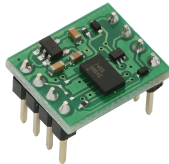
Modelling (2/2)

Blender :

- volume

V-Rep :

- mass
- inertia
- function
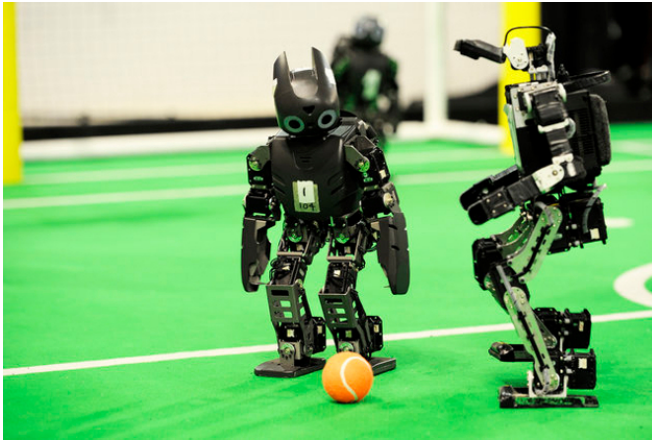- constraints

Control (1/2)

Problems :

- same orders as real robot
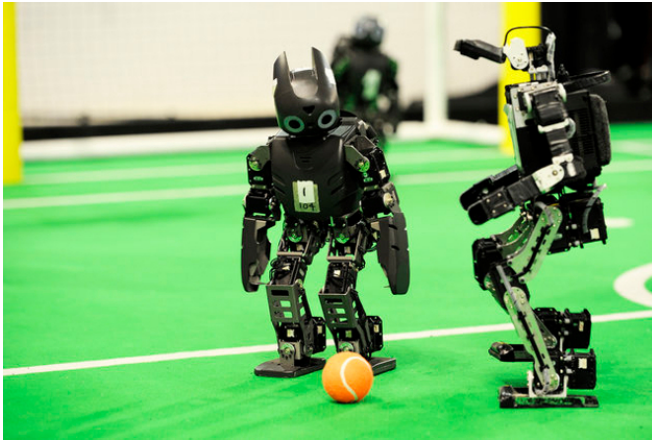- retrieve state of simulation

Control (2/2)

Solutions :

- remote control through TCP socket
- synchronous operation
- scripts

Applications (1/2)

Applications (2/2)

Conclusion