Robot Operating System – uruchomienie robota firmy Universal Robots

Dominik Belter[1]

Instytut Automatyki, Robotyki i Inżynierii Informatycznej
Politechnika Poznańska, Poznań, Poland

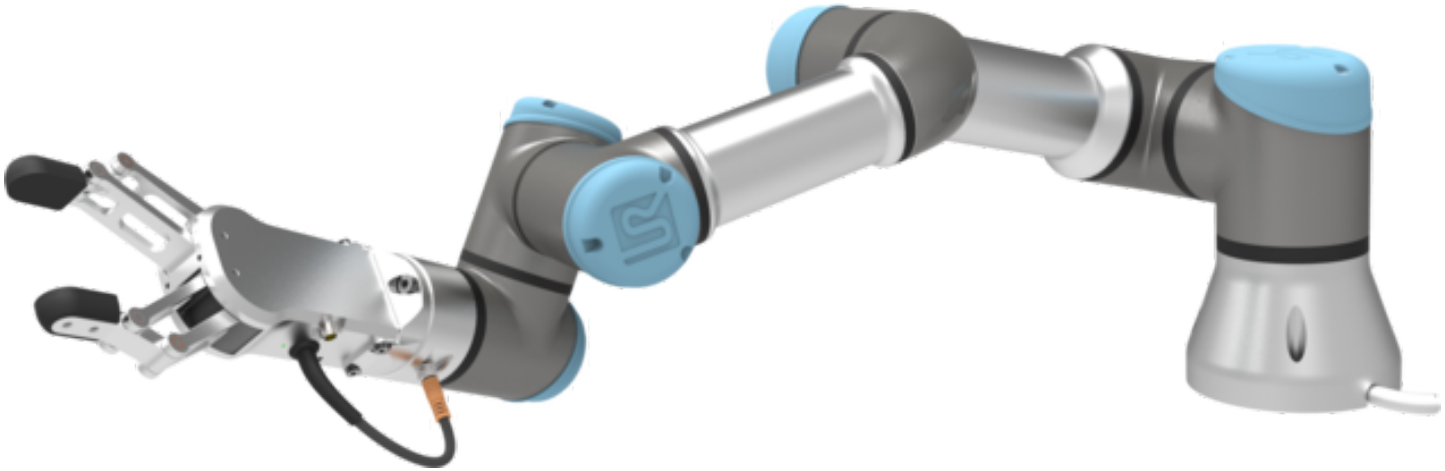
Poznań 14.11.2017

Uruchomienie ROSa

- ROS Master:

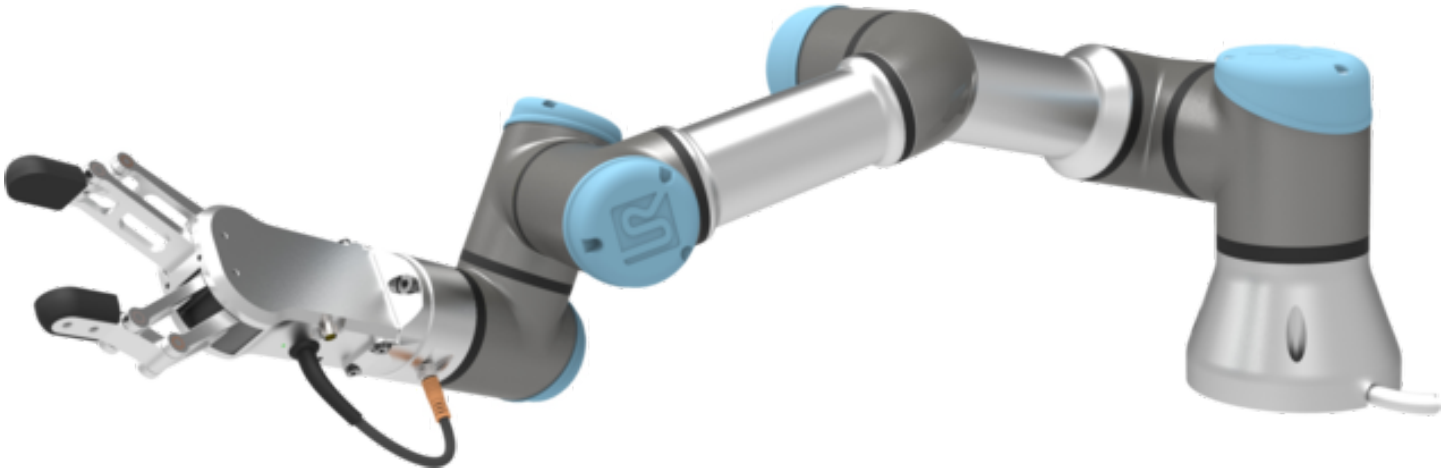
```
$ roscore
```

Sterowniki producenta



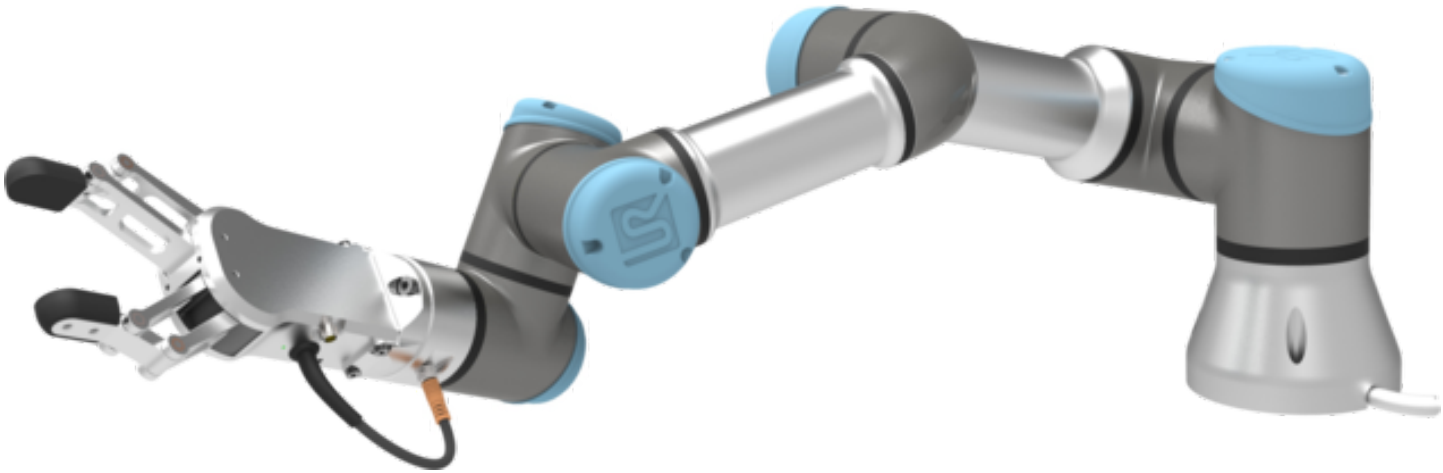
```
$ cd ~/catkin_ws/src
$ git clone https://github.com/ros-industrial/universal_robot
```

Rozszerzony Sterownik



```
$ cd ~/catkin_ws/src
$ git clone https://github.com/ThomasTimm/ur_modern_driver
```

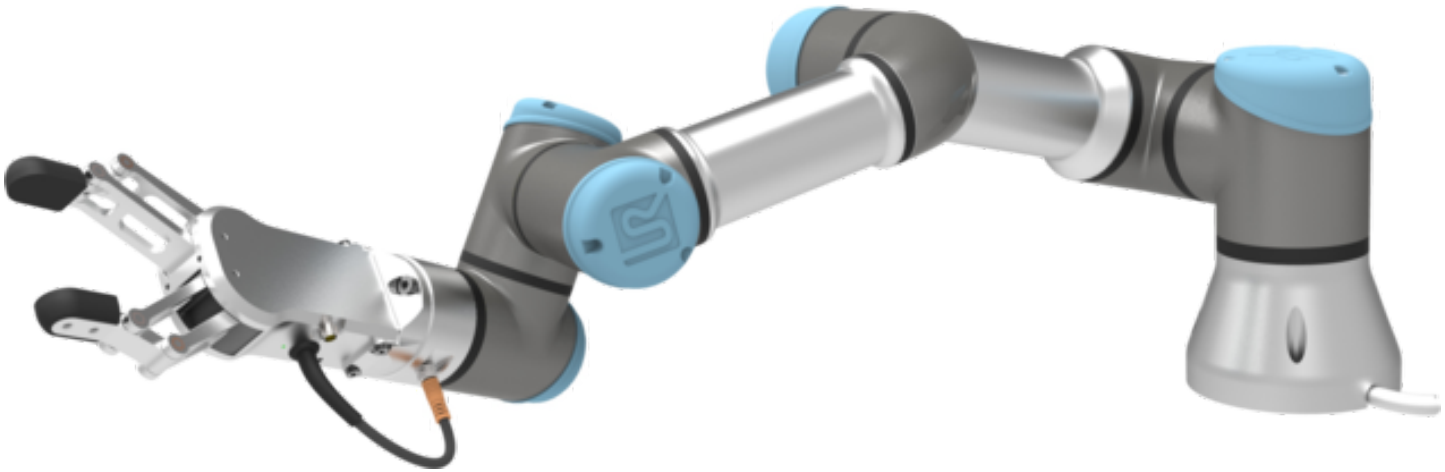
Rozszerzony Sterownik - patch



https://github.com/ThomasTimm/ur_modern_driver/issues/58

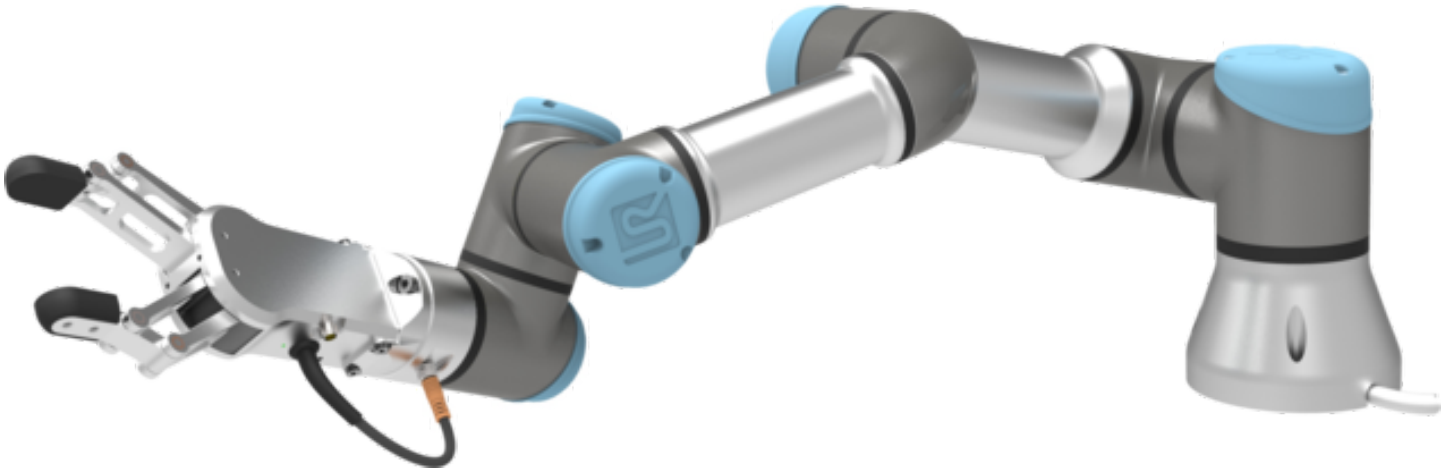
Zamiana ’controller_it->hardware_interface’ na ’controller_it->claimed_resources.at(0).hardware_interface’ w pliku ’ur_modern_driver/src/ur_hardware_interface.cpp’

Niezbędne wtyczki do Gazebo i kompilacja



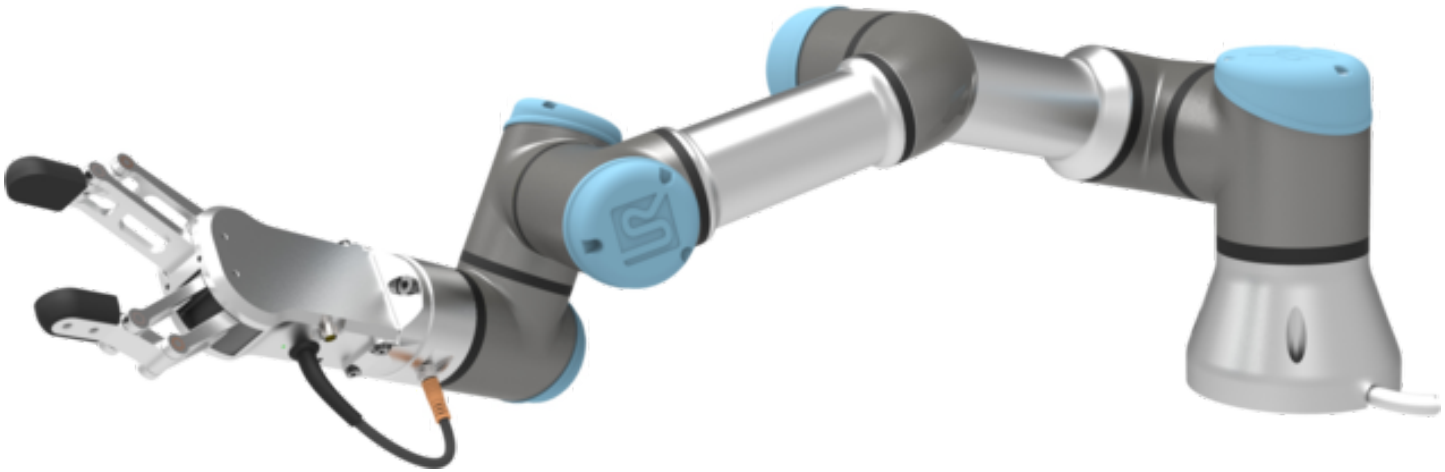
```
$ sudo apt-get install ros-kinetic-gazebo-ros-pkgs ros-kinetic-gazebo-ros-control
$ sudo apt-get install ros-kinetic-moveit-ros ros-kinetic-moveit-plugins
$ cd ~/catkin_ws
$ catkin_make
```

Uruchomienie Gazebo (w nowym terminalu)



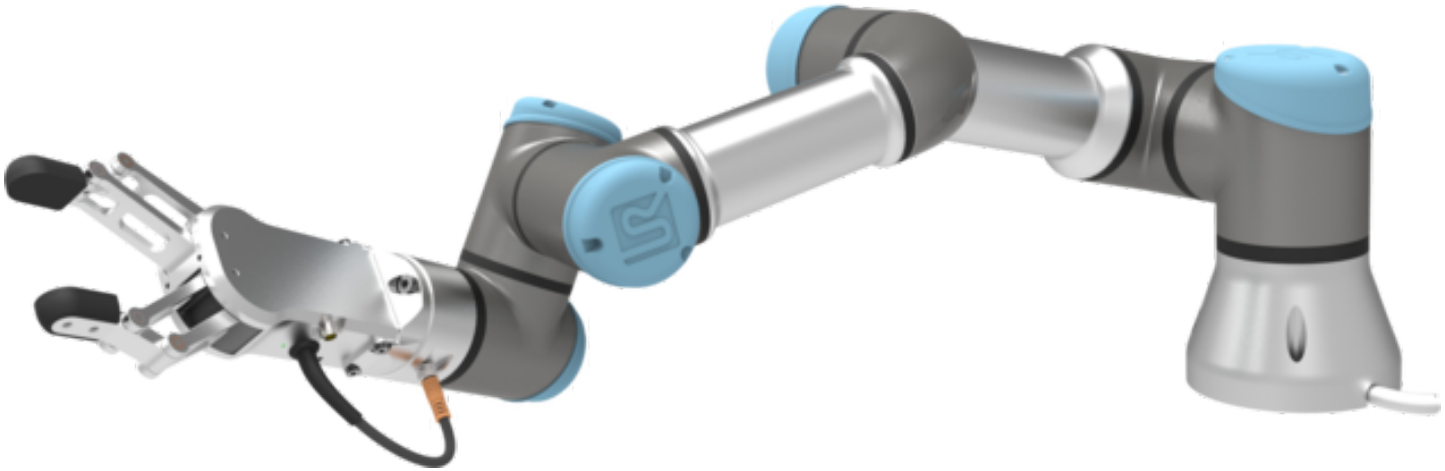
```
$ cd ~/catkin_ws
$ source devel/setup.bash
$ roslaunch ur_gazebo ur3.launch
```

Uruchomienie MoveIt! (w nowym terminalu)



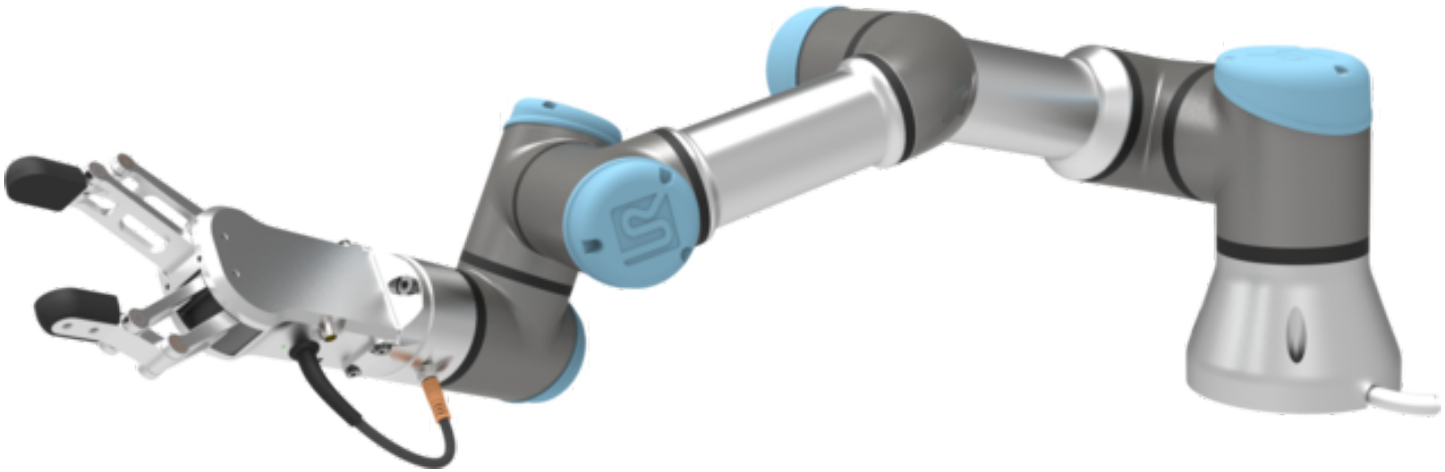
```
$ cd ~/catkin_ws
$ source devel/setup.bash
$ roslaunch ur3_moveit_config ur3_moveit_planning_execution.launch sim:=true limited:=true
```

Uruchomienie RViz (w nowym terminalu)



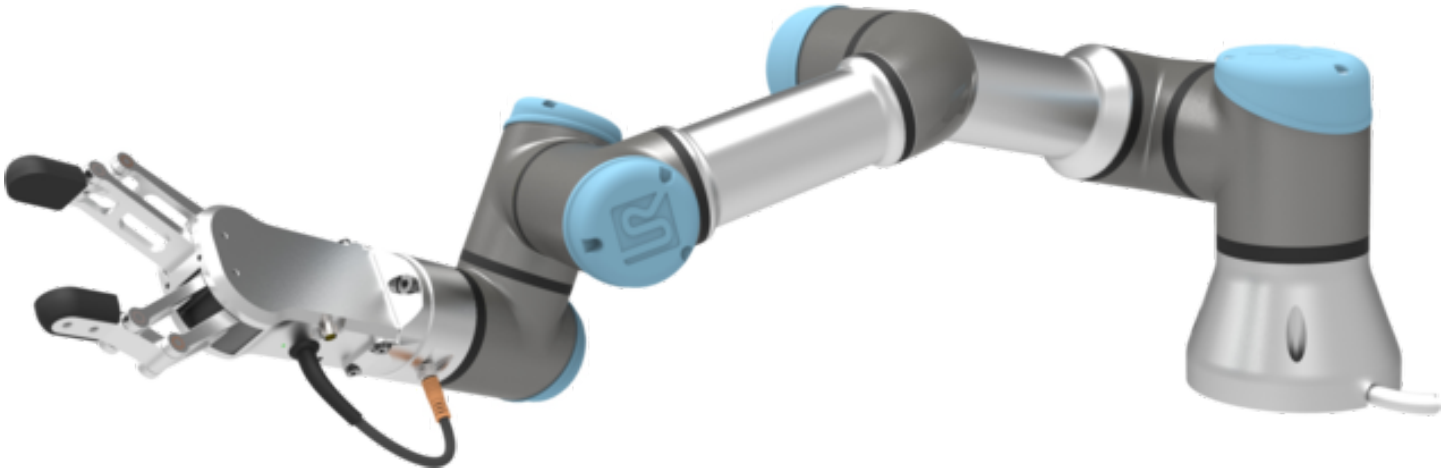
```
$ cd ~/catkin_ws
$ source devel/setup.bash
$ roslaunch ur3_moveit_config moveit_rviz.launch config:=true
```

Przykładowy program



```
$ cd ~/catkin_ws
$ git clone https://github.com/dominikbelter/control_ur3sim
$ roslaunch rosrun control_ur3sim control_ur3sim
```

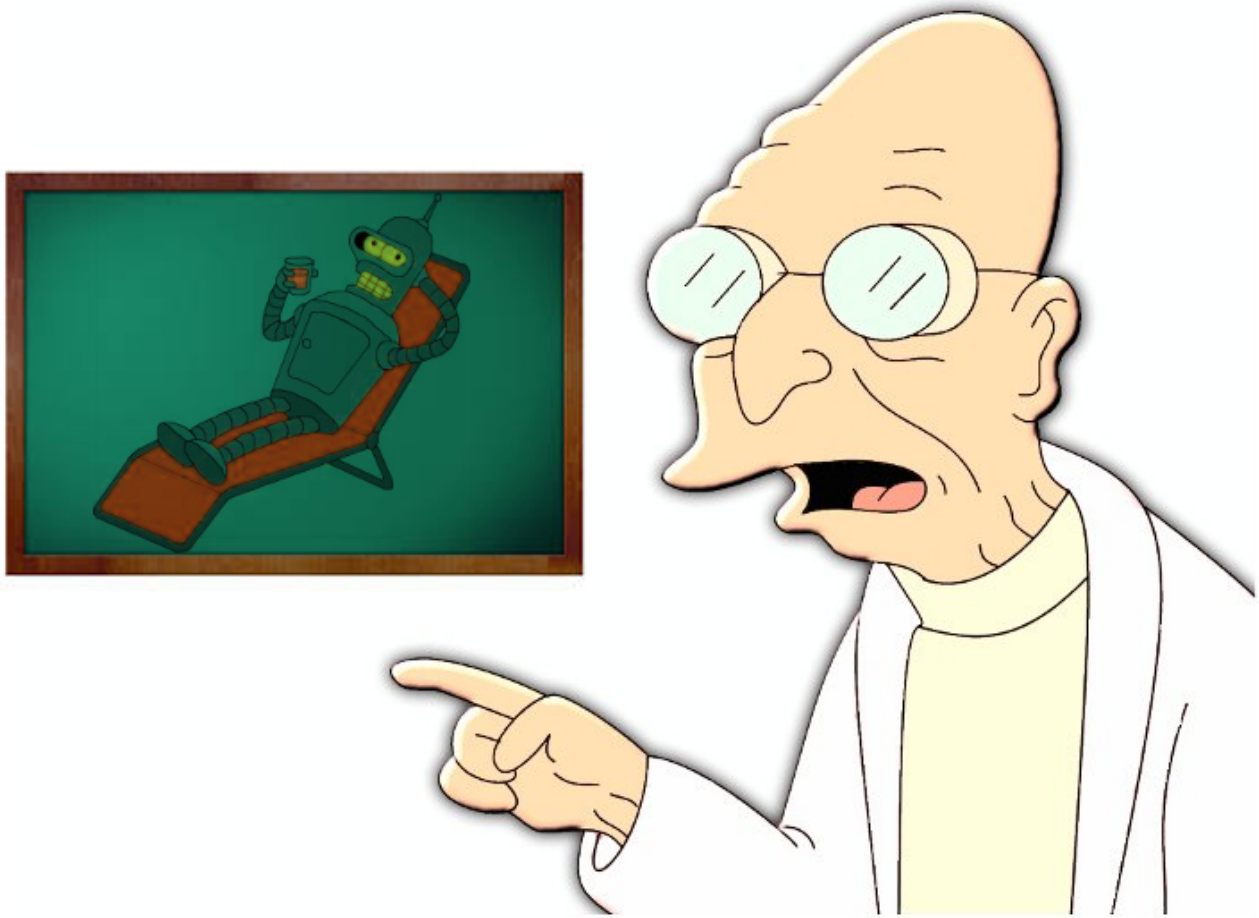
ROS - sterowanie robotem



Projekt do pobrania z Github:

```
$ cd ~/catkin_ws/src
$ git https://github.com/dominikbelter/control_ur3sim
$ cd ..
$ catkin_make
$ rosrun control_ur3sim control_ur3sim
```

Dziękuję za uwagę



lrm.put.poznan.pl
www.monoscience.com