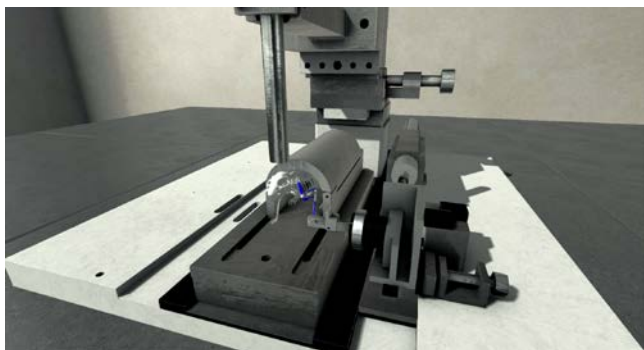


New Virtual lab

A realistic environment for the virtual robots

- ✓ Realistic environments to close the reality gap
- ✓ Wide variety of different scenarios available for more detailed testing of robots
- ✓ Improved object library for more realistic scenarios



Integration of external AI tools

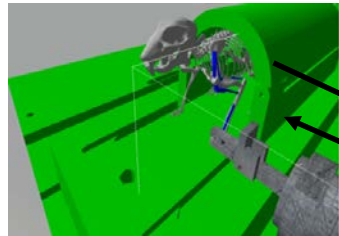
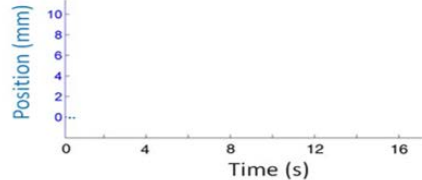
Tensorflow is usable in the NRP!

- ✓ Connect Tensorflow with spiking neural networks
- ✓ Enhance the capacities of your simulated robots
- ✓ As simple as "import tensorflow"

Run massively parallel simulations

Simulation batches can now be run in parallel

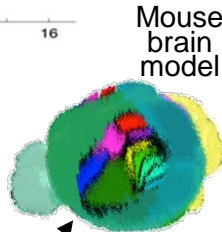
- ✓ Script your simulations in Python
- ✓ Use Jupyter notebooks online
- ✓ Access to large cluster resources



Muscle length to neural activity

Motoneurons activity to muscle activation

Spinal chord model



Study and modelling of rehabilitation-induced cortical remapping after stroke

➡ Learning of a forelimb pulling task, then study of motor task re-training in rodent model after induction of photothrombotic stroke with simultaneous intracranial recording.

➡ Implementation of a musculoskeletal model, spinal cord model and data-driven whole brain model in the NRP

➡ Simulation of the rehabilitation procedure and comparison with real data