

Simulated Robotic Manipulation Benchmark

Reference No / Version	RAL-SI-2020-P[19-0842]_1-V1.1 for the latest versions of the benchmark please refer to https://research.csiro.au/robotics/manipulation-benchmark/
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Adopted Protocol	Simulated Robotic Manipulation Protocol – Task1 (RAL-SI-2020-P[19-0842]_1-V1.1)
Scoring	<ul style="list-style-type: none"> • For scoring, the following must be recorded at 10Hz throughout the duration of the simulation. This is to be exported to a csv with the following information to be recorded in the listed order: <ul style="list-style-type: none"> ○ Position (x,y,z)* ○ Rotation (w,x,y,z)* ○ Joint Torques (J1,J2,J3,J4,J5,J6) ○ Finger Rotations (Finger 1, Finger 2, Finger 3) ○ Force (Fx,Fy,Fz)* ○ Moments (Mx, My, Mz)* • 20 Repeats of the simulation are required (used to determine if the simulator is deterministic) • Use the performance_metric.py script which can be found at https://research.csiro.au/robotics/manipulation-benchmark/ to generate results. • Sum errors for each of the following categories for all tasks in a subgroup: Euclidean distance, rotation, pose, velocity, acceleration, torque, force, moments. <p><i>*From the 'Measurement Frame' as listed in Figures 1 and 2 in the protocol (also referred to as the 'ft_mount_measurement_joint' in the URDF).</i></p>
Details of Setup	<ul style="list-style-type: none"> • Detailed information on: <ul style="list-style-type: none"> ○ Simulator/Physics Engine used; ○ Tuned parameters and their values; and ○ Anything else required to reproduce results.
Results to Submit	<ul style="list-style-type: none"> • CSV files from all 20 repeats as used for scoring. • CSV files for all other tasks from subgroup 1 (i.e. Task 2).