

# HUMAN-TO-ROBOT HANDOVER BENCHMARK

Reference No / Version	“RAL-SI-2020-B19-0835 -V1.0” for the latest versions of the benchmark, please refer to <a href="http://corsmal.eecs.qmul.ac.uk/benchmark.html">http://corsmal.eecs.qmul.ac.uk/benchmark.html</a>
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Adopted Protocol	Human-to-robot handover protocol (RAL-SI-2020-P19-0835 -V1.0)
Scoring	<p>Fill the attached table with the following rules for all the configurations:</p> <ol style="list-style-type: none"> <li>1. Prepared the cup either empty or filled with the content</li> <li>2. Weight the filled cup before and after the execution of the handover</li> <li>3. Measure distance between the initial (e.g. center of the table) and the delivery location of the cup</li> <li>4. Annotate elapsed time for the different phases: human maneuvering, handover, robot maneuvering (e.g. through visual inspection on recorded videos or automatic algorithm)</li> <li>5. Annotate estimated measures: width at the top of cup, width at the bottom, height, mass (cup + filling), fullness, delivery location, and mass of the delivered content.</li> <li>6. Measure offline human-hand pose prediction and end-effector with provided pre-recorded data</li> </ol>
Details of Setup	See human-to-robot handover protocol (RAL-SI-2020-P19-0835 -V1.0)
Results to Submit	<p>Submission through our website (<a href="http://corsmal.eecs.qmul.ac.uk/benchmark.html">http://corsmal.eecs.qmul.ac.uk/benchmark.html</a>)</p> <ul style="list-style-type: none"> <li>• Scoring table (attached to the benchmark and available online)</li> <li>• Videos of all executed configurations. Videos will be treated with strict confidentiality and just with evaluation purposes. Any compression is allowed but H264 recommended</li> <li>• Details on hardware setup (robot and sensing)</li> <li>• Details on illumination (sketch of the room, and positions and types of the light sources)</li> </ul>