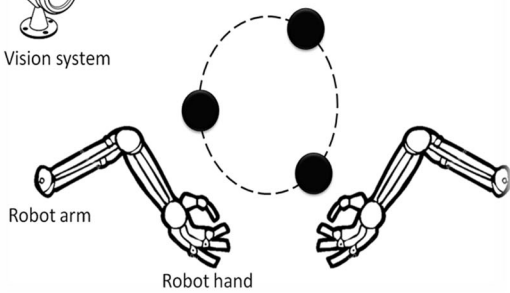


# The Mechatronics HK 2019 ~ Project Demos (overview for 9 December 2019)

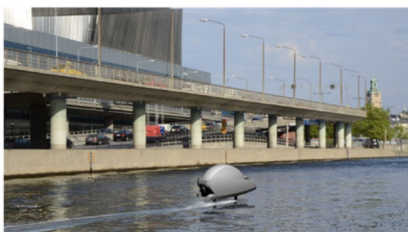


Vision system



Robot arm

Robot hand



<p><b>Auto2</b></p> <p><b>The Autonomous All-Terrain Vehicle</b></p> <p>with Skogforsk</p>	<p>The task: develop an autonomous forwarder that can traverse a specified track with different obstacles, some that it needs to avoid and some it can drive over.</p>
<p><b>JuRP</b></p> <p><b>The KTH Juggling Robot Project</b></p>	<p><b>Complicating the simple art of throwing...</b></p> <p>We have developed a prototype to throw and catch (one ball one arm, to/from itself or a human) with an emphasis on mechanics, actuators and electronics.</p>
<p><b>NEWT</b></p> <p><b>An Amphibious Two-Wheeled Vehicle for Sustainable Transportation</b></p>	<p>Contributing to the design of a transportation system that can make use of both roads and waterways with clean electric propulsion, optimized space-utilization and smooth and comfortable personal door-to-door mobility.</p>
<p><b>Relox Robotics</b></p> <p><b>Design and build a system that enables automatic trailer change for a golfball-collecting robot</b></p>	<p>Using high precision GPS technology and complex path planning algorithms, enable:</p> <ul style="list-style-type: none"> <li>➤ Autonomous Trailer Change</li> <li>➤ Robust &amp; Expandable Construction</li> <li>➤ High Power Electrical Connection</li> <li>➤ Trusted Technology</li> </ul>
<p><b>SAAB</b></p> <p><b>Design an Arrestor Hook Test Rig for a Maritime Gripen</b></p>	<p>Aircrafts landing on aircraft carriers are retarded using a tailhook catching a coiled wire strung across the deck. The retarding action sequence is complex and large forces affect the wire and the airframe. This is especially so when considering the myriad of ways the tailhook will interact with the wire. For this reason, an effective arrestor gear test rig for system testing and verification is essential.</p>

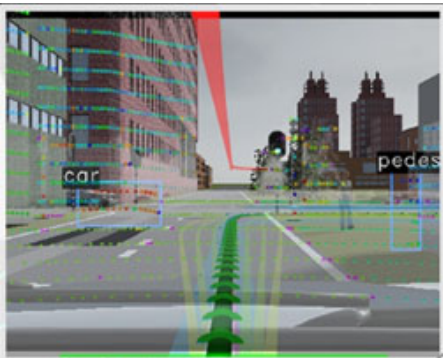
# The Embedded Systems HK 2019 ~ Project Demos (overview for 9 December 2019)



<p><b>EcoCars</b></p> <p><b>More mileage and beyond!</b></p>	<p>Implementation and verification of Energy Management Strategies on a hybrid electric racing car</p>
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<p><b>ESS-Car</b></p> <p><b>The small scale, self-driving platform for embedded systems!</b></p>	<p>Embedded Services for Self-Adaptive Cars:</p> <p>Design and implementation of embedded services for advanced system monitoring and adaptation</p>
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<p><b>NVIDIA</b></p> <p><b>Welcome to the world of Autonomous Driving!</b></p>	<p>High performance embedded systems for perception computing in automated driving.</p> <p>Our goal: to evaluate, select and deploy perception algorithms for automated driving on the NVIDIA Drive PX2</p>
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<p><b>SEUD</b></p> <p><b>Protecting Electronics from Single-Event Upsets (SEUs)</b></p>	<p><b>The Miniature Student Satellite</b></p> <p>Electronics in hostile environments are often exposed to radiation, creating electron-hole pairs and lattice displacement in the Silicon, leading to bit-flips in memory and configuration bits and a slow wear-out of the electronics. How do you protect them? Come and find out more!</p>
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<p><b>MIST</b></p> <p><b>What makes software development for space unique?</b></p>	<p><b>The Miniature Student Satellite</b></p> <p>The On-Board Computer (OBC) is the brain of the satellite. How do you ensure critical spacecraft functionality for on-board software?</p>
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<p><b>SocketSense</b></p> <p><b>Can you feel the pressure?</b></p>	<p>Flexible and wearable electronics in combination with advanced embedded systems can make life better for thousands of people. Our task? Make a testbench to determine and simulate the forces that act within a prosthetic joint using a Quantum Technology Super Sensor</p>
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