

Interactive Motion Platforms and Virtual Reality for Vehicle Simulators

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And

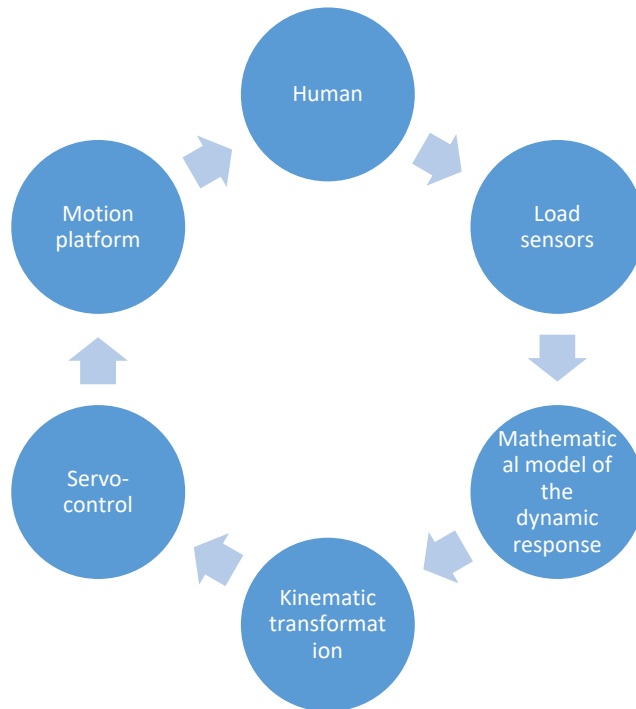
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Interactive Motion Platform



Applications:

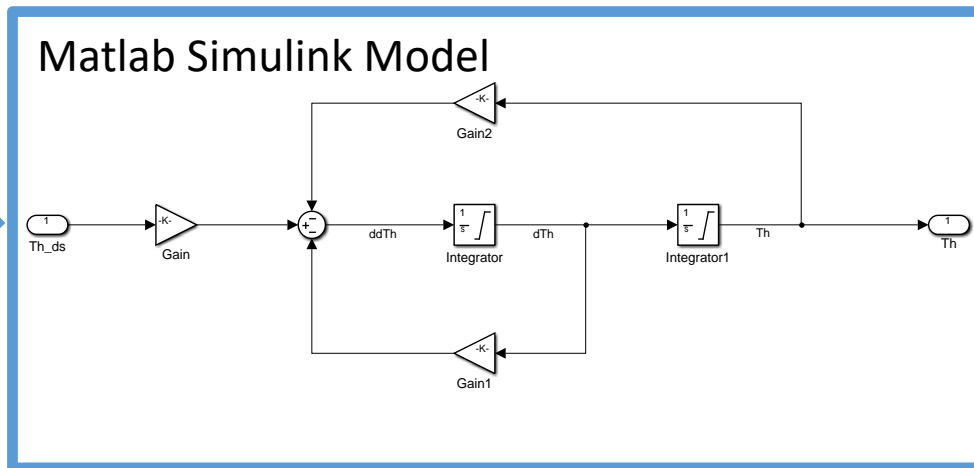
- Rehabilitation
- Fitness
- Entertainment



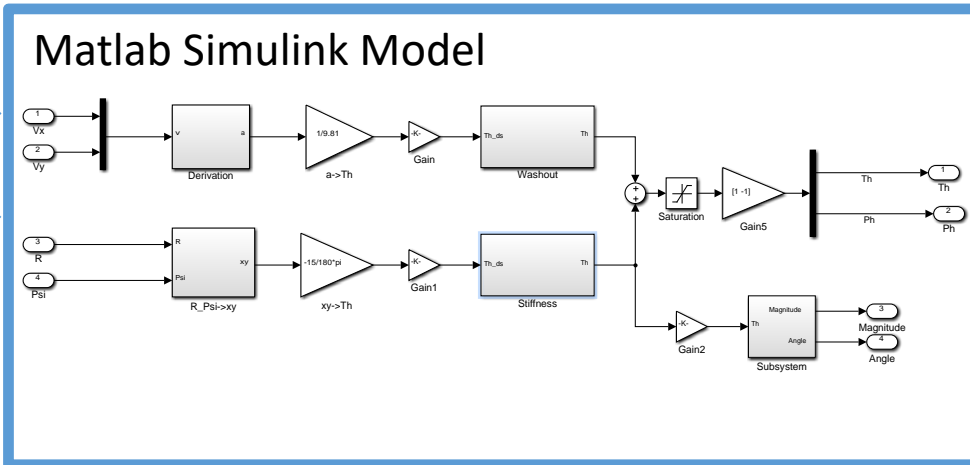
Pitch	$\pm 15^\circ$	$\pm 150^\circ/\text{s}$	$\pm 240^\circ/\text{s}^2$
Roll	$\pm 15^\circ$	$\pm 150^\circ/\text{s}$	$\pm 240^\circ/\text{s}^2$
Max. load	150 kg		

Interactive Motion Platform

Application Example 1 – Rehabilitation

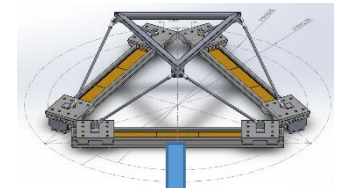
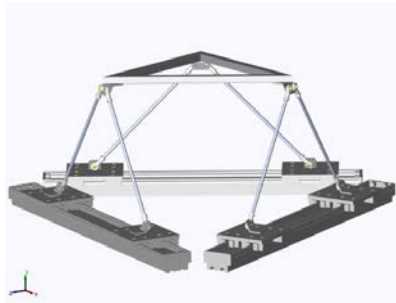


Interactive Motion Platform and VR



Application Example 2 – Entertainment

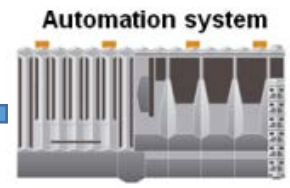
Control System Structure



SimMechanics Link

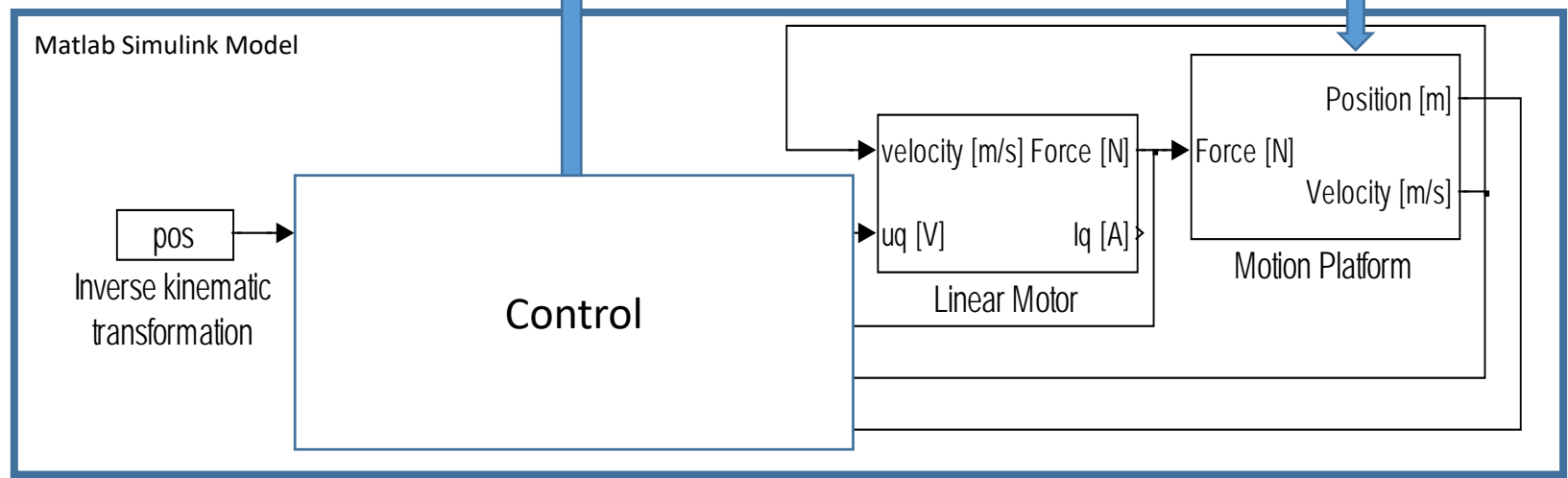


SimMechanics



Simulation
or
Real machine

B&R AS Target for Simulink



Virtual Reality Sickness



- Interactive Motion Platform and VR Glasses
 - VR sickness can occur with higher probability
- Observations
 - Camera in VR must not rotate
- Solution
 - Motion platform with 360°-rotary axis

Future Works and Plans

- Implementation of Samsung Gear VR
- Implementation of other sports vehicles
 - Bicycle
 - Motorbike
 - Kayak

