

This proves the fact that in real time braking control can be achieved without an RTOS. The control strategy implemented can be used to control the wheelchair motion on sloping roads. Repeated trials on various slopes show that with the implemented control strategy successful regenerative braking of the wheelchair can be achieved on downhill roads up to 8° declined angle and a smooth and jerk free motion of the wheelchair is achieved.

Further study can be done using more declined angles and multiple sloping roads. Accelerometers with different sensitivities can be used to achieve better performance. Strength and durability can be tested by conducting endurance trials. Battery performance can be averaged out by conducting trials in hot, humid, dry and cold climates. Differential braking can be implemented for the wheelchair to move in curved paths. Thus different features can be still added to improve the performance of the wheelchair.

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