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Study Motion of PVC-Cylindrical on Incline Plane using g-Sensor Compare with Motion Simulate

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The g-sensor with a wireless, using to study motion of hollow PVC-cylindrical on incline plane. This sensor will be packed inside PVC-cylindrical. For experimental, we drop the PVC-cylindrical on the top of incline plane length 1.2 m. By changing the height of plane at 3.5, 4.5, 5, 5.5, 6 and 6.5 cm relative to angle 0.0318, 0.0409, 0.0454, 0.0499, 0.0545 and 0.0590 rad respectively. The signal from the sensor will be sent wirelessly to a computer and shown in HyperTerminal. The data will be compared with simulated signal to determine speed and angular speed various with time. For result data at height 3.5, 4.5, 5, 5.5, 6 and 6.5 cm compared with simulated data motion error are 3.12%, 3.89%, 4.71%, 6.28%, 9.36% and 18.20% respectively. From experiment, we can find the limit of this sensor for this experiment at height 8 cm because of the clock frequency limit of the sensor.

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