



Contribution ID: 172

Type: Poster

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

*Wednesday 24 May 2017 15:45 (15 minutes)*

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 the plane at 3.5, 4.5, 5, 5.5, 6 and 6.5 cm relative to angles 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 signals to determine speed and angular speed various with time. For result data at heights 3.5, 4.5, 5, 5.5, 6 and 6.5 cm compared with simulated data motion error rates are 3.12%, 3.89%, 4.71%, 6.28%, 9.36% and 18.20% respectively. From the experiment, we can find the limit of this sensor for this experiment at a height of 8 cm because of the clock frequency limit of the sensor.

**Authors:** Mr NGAMRUNGROJ, Dusit (KMUTNB); Mr CHANGSUPAN, Prakasit (KMUTNB)

**Co-authors:** Mr THANTHONG, Pisut (kmtnb); Mr PUTCHANA, Wuttichai (KMUTNB); Mrs HONGLEARTKONGSAKUL, Kanchaya (BUU)

**Presenter:** Mr NGAMRUNGROJ, Dusit (KMUTNB)

**Session Classification:** Poster Presentation I

**Track Classification:** Physics Education