2013 臺灣國際科學展覽會
優勝作品專輯(國外作品)

作品編號　**100050**

參展科別　工程學科

作品名稱　**Smart Washer**

得獎獎項　一等獎

國　　家　Hong Kong

就讀學校　S.K.H.Li Ping Secondery School

作者姓名　Kam Mei

ABSTRACT OF EXHIBIT
TAIWAN INTERNATIONAL SCIENCE FAIR

Data and records show accidents caused by loose bolts or nuts often occur in building or mechanical structures all over the world. They may be train derailments, parts falling off amusement rides, escalator breakdowns or wheels coming off automobiles. These incidents can often cause serious casualties and should not be ignored.

At present, the only devices used to prevent screws loose are spring washer and nylon locking nuts, but they are not readily detectable with the naked eye when they failed to tighten. Based on simple mechanics and spring principled, our "Smart Washer" has been designed to detect loosen screws. Whenever the bolt or nut gets even slightly loose, the lower part of the washer will spring up, this is a sign to alert and remind the user to carry out maintenance and re-tighten the loosen screw before serious accidents occur.

評語

　　創新研究具高度未來實用性，表達議題清晰、口條清楚、台風穩健，作品建
議可多做實際應用測試。