

---

## **Design and construction of an automated rain gauge**

W.W. Rukshan Medis\*, W.G.D. Dharmaratne, J.A.P. Bodhika and  
S.S. Abeywickrama

*Department of Physics, Faculty of science, University of Ruhuna, Matara, Sri Lanka*

An “Automated Rain Gauge” has been designed and constructed successfully using a microcontroller. The method is based on measuring the mass of rain water using a load cell. The rainfall is measured and recorded automatically and recorded data displayed hourly by an LCD (liquid crystal display) attached to the rain gauge. A green light is displayed at moderate rainfall levels. If the rainfall exceeds a pre-determined threshold level, a red light will be displayed with a warning alarm. The rain gauge shows a good linear relation of rainfall to the mass of water collected on the load cell. The accuracy could be improved further using a more sensitive load cell. One main feature of the rain gauge is a warning to be given automatically if the rainfall exceeds a predetermined value.

Key words: Automatic rain gauge, LCD display, Load cell, Microcontroller

\*ruk.medis@gmail.com