

## Editorial

Monitoring and automatic control of environment is a crucial application of Wireless Sensor Networks (WSN). The investigation of efficient sensor network design that minimizes energy dissipation in a battery of the sensor node with limited battery power is a vital consideration for sensor network lifetime. Recent technological developments have permitted miniaturization and power efficiency of sensors, and integration of data into applications for building monitoring and computer interaction. Sensor networks illustrate an exceptional improvement over traditional sensors. However, there are still many challenges to be met before we see more widespread use of WSN in building and environmental monitoring applications.

The second issue of the journal is devoted to the theme, “Special Issue on Wireless Sensor Networks and Practical Applications”. In this issue we have contributed 1, the development of an on-line structural health monitoring system based on wireless sensor networks (WSN); intelligent wireless lighting control using wireless sensor and actuator networks; a WSN platform for river monitoring; classification-based event detection in ecological monitoring networks; WSNs for museums’ environmental and structural monitoring, and automatic environmental control; passive infrared sensor based intrusion detection surveillance system using wireless sensor networks; different wireless technologies for integrated e-Operations in offshore oil and gas production environments and also enhancing the resolution of wireless sensor network based subsurface plume tracking using compressed data dissemination. This issue serves as a comprehensive resource to gain more knowledge, essentially, for environmental monitoring using wireless sensor networks.

The guest editor is honoured to have Prof Clarence W. de Silva (Fellow Royal Society of Canada), a distinguished academic leader from The University British Columbia to write the *Foreword* for the second special issue. On behalf of the Journal we wish to extend our sincere thanks to all our reviewers for their hard work.

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