

# Fuzzy Power Management for Internet of Things (IOT) Wireless Sensor Nodes

Mohamed Sherif Nabil, Mohamed Misbah ElKhatib, Ashraf Tammam

**Abstract—** Internet of Things (IoT) is increasingly gaining impact from day to day in our lives. Wireless sensor networks (WSNs) are integrated into the “Internet of Things” and one of the challenges is energy saving. This paper focuses on a self-sustainable Wireless Sensor Node (WSN) for various Internet of Things applications with low power consumption. It is devoted to implement energy harvesting solutions to provide constant output voltage; therefore, a power management system (PMS) is needed to control and manage this output. That is, a DC-DC Buck-Boost converter had been proposed to control Energy Harvester output voltage via PID-like fuzzy controller.

**For the published version of record document, go to:**  
<http://dx.doi.org/10.1109/NRSC.2019.8734645>



















