

An Indian-Australian research partnership

Reliability modelling of energy efficient Wireless Sensor Networks

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Research Academy theme/s

Advanced computational engineering, simulation and manufacture

The research problem

Wireless Sensor Nodes are energy consuming and they must ensure that they will be up for the intended mission/ time period. The sensor nodes need to be more energy efficient so that the wireless transmission can take place for a longer period of time. The WSNs are designed for different applications and reliability analysis for different protocols is important for a reliable data transfer.

Project aims

The aim is to ensure reliable data transfer and improve energy utilization in wireless sensor nodes. The work also involves deploying sensor nodes for various applications and analysis of results. Modelling of the sensor and network reliability besides estimation of coverage of sensor nodes for various protocols towards optimal and efficient use of energy resources is proposed in this work. It is also proposed to evolve new protocols and algorithms to provide high reliability and energy efficient WSN.

Expected outcomes

New protocols and algorithms for high reliability and energy efficient WSN for diverse applications

Which of the above Theme does this project address?

Advanced computational engineering, simulation and manufacture

How will the project address the Goals of the above Themes?

This research project is in the field of computer science and reliability studies.