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Research Centre for Wireless Communication Technologies And Its Applications

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Wireless communication plays a significant role in day to day life. Besides communication, wireless technology has become an integral part of our daily activities. The demand for wireless technologies has been absolutely exploding. There are a number of emerging wireless technologies, including cognitive radio, wireless sensor networks, WiMAX/LTE, adaptive communications, etc. Every industry, business, social projects etc., needs wireless technology to grow and sustain in the present technological world. The wireless communication application has been extended to the medical sciences field and specifically significant advancement is noticed in medical instrumentation. As people rely heavily on wireless networks for transmission of important/private information, such as credit card

information, energy pricing, e-health data, command, and control messages, security becomes a critical issue. To significantly alleviate the skyrocketing traffic demand of wireless communication systems future wireless communication technologies must provide higher bandwidth, low latency, improved QoS along with higher energy efficiency.

Objectives:

- Design and analysis of routing and security algorithms for wireless sensor networks.

- Spectrum sensing and sharing in cognitive radio networks.

- Development and implementation of IOT based projects to resolve the real time problems.

Publications:

1. *Sumathra T*, Aparna N S, (2017) "Two Stage Parzen Window Entropy Based Co-Operative Spectrum Sensing", *International Journal of Research in Advent Technology*, Vol 5 Issue 4.

2. *Sumathra T*, Nagaraja N S, Shreeganesh Kedilaya B, (2013) "Chaotically modulated RSA/SHIFT secured IFFT/FFT based OFDM wireless system", *International Journal of Engineering Research & Technology (IJERT)*, 2 (4), pp 631-634.

3. *Sumathra.T,* Kishore.R (**2008) "**Improving Pairwise Key Establishment using Deployment Knowledge and analyze its Security Level for Sensor Networks", **IEEE** conference, page no: 1-6.

Working Papers:

1. Co-operative spectrum sensing in cognitive radio networks.
2. IOT and its applications in smart systems.