



**ABSTRACT BOOK**

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## Recent trends of Wireless Body Area Network in Health Care

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A body area network (BAN) is the inter-connection of multiple computing devices worn on, or implanted in a person's body. It assists and improves work performance in our daily life. WBAN is an emerging technology in the field of healthcare system. There are so many applications in the area of WBAN, like medical, sports, and military applications, because it provides portability, freedom to move, low power consumption, safety for human exposure, monitoring the human physiological activities, higher security protection and reduced clinical errors. WBAN's importance due to its applications in the field of health, medical, entertainment services and many more. The main idea behind WBAN technology is to deploy them in the medical system to replace wires with the help of sensor nodes implanted into the patient's body or placed around the patient body. The sensor nodes are usually light weight, low cost, low power consuming intelligence devices which are capable of sensing, computing, communicating with each other wirelessly. WBAN involves communication between very small sensor nodes with frequently changing environment; hence lots of issues still need to be addressed. WBAN offers promising and innovative applications that enhance the quality of services provided by the healthcare system; it improves patient's quality of life and saves his lives in many situations. Some of the major issues are Physical layer issues, interoperability & mobility issue, reliability, resource management, usability, Energy consumption and QoS issues. This research paper includes a comprehensive survey of recent trends in WBAN research, provides prospective solutions to some major issues using cognitive approach and a proposed concept of Cognitive Radio based WBAN architecture. In conclusion WBAN is an emerging technology in field of medical and provides comfort to human and makes work easy for medical staff.

**Keywords:** Wireless Body Area Network, Performance Applications, Sensors, Cognitive Approach.





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