Special Issue on

WBANs for Pervasive Healthcare, Consumer Electronics, and Entertainment Applications: Issues & Challenges

in KSII Transactions on Internet and Information Systems
(http://WWW.ITIIS.ORG)

A **WBAN (Wireless Body Area Network)** interconnects low-power, miniaturized, and intelligent sensor nodes in, on, or around a human body to serve a variety of healthcare, Consumer Electronics (CE), and entertainment applications. It provides unprecedented opportunities for long-term health monitoring of patients without additional interference with their normal activities. When integrated in hospitals and clinics, **WBAN** can support people with disabilities and chronic diseases and can treat or even predict life threatening diseases. Medical applications include supervised rehabilitation, early detection of abnormal condition, and treatment of chronic diseases, such as diabetes and hypertension. Non-medical applications include monitoring forgotten things, establishing social networks, monitoring of athletes, or assessing soldier fatigue and battle readiness. Numerous publications have focused on the design and development of novel technologies for **WBAN** (mostly for healthcare applications). However, many issues and challenges should be resolved to make this technology adaptable and ubiquitous for non-medical applications, such as CE and entertainment applications. This includes solutions to many technical issues and challenges such as interference, energy efficiency, reliability, network management, scalability and interoperability, and security issues. The interference and coexistence are among the most important topics to be addressed because they may degrade the performance of **WBANs** and can lead to loss of crucial health information. Other important topics are the interoperability, which may allow WBANs to work in heterogeneous wireless networks, and the integration of **WBANs** with cloud computing, which may allow to store and process huge amount of data collected by **WBANs**.

This special issue is dedicated to recent advances in **WBAN** for medical and non-medical applications. It invites high quality unpublished research & review articles that disseminate the state-of-the-art research and development on fundamental **WBAN** technologies, articulate new perspectives, and highlight open issues and challenges. Topics of interest include, but not limited to:

1- Coexistence and interferences issues
2- System Scalability and interoperability
3- End-to-End QoS management
4- Energy-efficient protocols and algorithms
5- Cross layer optimization
6- Multi-hop WBANs
7- Novel technologies for multimedia communication in WBANs
8- Integration of WBANs with cloud computing/other networks
9- Mobility management
10- RFID-based WBANs
11- Security and fault tolerance issues
12- RF propagation
13- WBAN security
14- Wireless prototype, tested, and software with hospital trials
15- Wireless Body Area Nano-network
16- **Survey and tutorial articles** in the above areas are highly encouraged

● Submission Guideline

1. All of submissions should follow **the TIIS journal's author guidelines** on the web page (**http://www.itiis.org**)

2. **SELECT** the "**Special Issue Paper on WBANs** for Pervasive Healthcare, Consumer Electronics, and Entertainment Applications: Issues & Challenges" in the manuscript type menu of the manuscript submission system. If you select other manuscript type, your submitted paper will **NOT** be considered for this special issue.

● Important Dates.

Paper submission deadline: 15 Oct 2012
First notification of acceptance: **15 Jan 2013**
Second notification of acceptance: **25 Feb 2013**
Camera ready final manuscript due: **25 March 2013**
Publication: **May/June 2013**

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