

Call for Papers

Special Track on Ultra Wide Band for Body Area Networking (UWBAN)

Co-located with the

13th International Conference on Body Area Networks (BodyNets-2018)

October 2-3, 2018

Oulu, Finland

Ultra Wide Band (UWB) is emerging as a sound technological solution for the newly emerging area of body area networking (BAN). Due to its very wide bandwidth, as well as low transmit power, UWB is a serious contender for a number of applications including remote monitoring of both vital signs (temperature, pulse oximetry, etc.) as well as other medically significant data, such as ECG and EMG. The wide bandwidth of UWB signals also makes high-resolution ranging and localization possible, particularly in indoor areas, thereby enabling indoor tracking solutions for disabled patients and children in hospitals. UWB also holds promise for medical implant applications, such as capsule endoscopy, and may even be an enabler of next-generation micro-robotic surgery applications. The first of these applications would benefit from the very high bandwidth of UWB signals in transmission of very high resolution images and video of human body organs, and the second would benefit from the high ranging and localization accuracy provided by UWB signaling.

The primary goal of this special track is to explore the state of the art in the development of UWB technology for body area networking, ranging from fundamental physical layer concepts, such as channel modeling and system architecture, to development of prototypes and clinical trials.

This special session solicits original unpublished contributions on the following areas:

- UWB channel modeling for BAN applications.
- UWB antenna design and performance for BANs.
- Energy-efficient PHY and MAC layer designs for UWB-based BANs.
- UWB-based BAN system architecture design and implementation.
- UWB-based BAN performance and coexistence issues.
- Thermal effects of UWB-based wearable and implantable sensors and SAR assessment.
- Security and privacy issues for UWB-based BAN applications.
- Performance analysis of UWB-based BAN platforms in clinical field trials.

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Important Dates:

Paper submission deadline: May 7th, 2018

Acceptance Notification: June 30th, 2018

Camera Ready Papers Due: September 2nd, 2018

Submission Instructions:

Please see <http://bodynets.org/initial-submission/> for paper formatting and submission instructions.