TC ANNUAL REPORTING FORM

IMS Technical Committee

TC-13 - Wireless & Telecommunications in Measurements

Reporting period

Starting date: May, 2014   **Ending date: May 2014**   **Date of submission: May 2014**

Website   http://ieee-ims.org/tc-13-wireless-telecommunications-measurements

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13) Lee Barford, Agilent, USA

14) Valnez Brusamareno, FURGS, Brasil

15) Subhas Mukhopadhyay, Massey University, NZ

16) Mohamed Hamid, University of Gaule, Sweeden

Meetings:

1) **IEEE I2MTC 2013**, May 8, Minneapolis, USA: Kick-off meeting

2) **IEEE I2MTC 2014**, May 14, Montevideo, Uruguay: Meeting to promote the activity of the TC in the South America IEEE I&M chapters, discussions on the extension of the TC13 topics of interest (e.g., new members were interested in the DTV), accepting new active TC13 members, and extending the TC13 activities throughout various geographical regions through its members.

Technical Activities:

1) **Special session at IEEE MEMEA14, entitled "Wireless Communications in Health Care" (http://memea2014.ieee-ims.org/content/special-sessions#7)**

"Wireless Communications in Healthcare"

The healthcare sector holds an important place in society and wireless communications present an immense potential for revolutionizing healthcare delivery. Healthcare applications of wireless technology include ubiquitous wireless sensor networks for vital sign monitoring and rehabilitation, pervasive and mobile computing, real-time human behavior monitoring and feedback, and others. The essence of the special session lies in its interdisciplinary nature, joining contributors that work in the fields of wireless and mobile communications and medical measurements.

Main topics include (but are not limited to):

- Healthcare telemetry & telemedicine
- Wearable wireless health communication standards
- Intra-body communication issues (propagation & transmission)
- Mobile computing for health status monitoring and remote diagnosis
- Wireless and mobile communication for therapy and rehabilitation
- Wireless M2M for m-Health and s-Health
- Mobile electronic health records
- Internet-of-things (IoT) advances home healthcare
- Body sensor networks
- Privacy and security issues with wireless health data
- Wireless home health network topology and technologies
- Energy management & optimization in devices & networks
- Heterogeneous & in-/on-/out- networks.
- Wireless wearable sensors

2) **Invited Speaker of the First Workshop on Wireless Communication in Measurements, University of Iasi, Romania, Professor Octavian Postolache** (http://www.ee.tuiasi.ro/?s=postolache)

Workshop "Wireless communication in measurements"
Title of the talk: *"Wireless sensor network and pervasive computing for physiotherapy"*

Book introduction: *"Pervasive and Mobile Sensing and Computing for Healthcare. Technological and Social Issues"* Editors: Subhas Chandra Mukhopadhyay, Octavian A. Postolache, Springer Berlin Heidelberg, 2012.

3) **Tutorial on Blind Signal Identification for Emerging Intelligent Radio Systems, Professor Octavia Dobre, Memorial University, IEEE I2MTC 2014, May 12, 2014,** http://imtc.ieee-ims.org/imtc2014/2014/tutorials

This tutorial was of prime interest to graduate students and researchers who liked to learn more about intelligent radio systems in general and intelligent blind signal identification in particular. It was designed for an audience

coming from either a communications or a measurement and instrumentation background. The feedback from the attendees was very good; there were about 35 people in the audience.

4) **Invited Talk entitled "Unobtrusive Smart Sensors and Processing for Physiotherapy Applications" at UFRGS Brasil, May 12, 2014, Professor Octavian Postolache, https://www.facebook.com/engenhariaUfrgs?hc_location=timeline**

5) **Educational workshop at Memorial University, Canada, June 28, 2013, ADIA Educational Resources, TIMS Telecom**

6) **Educational workshop at Memorial University, Canada, Sept. 4, 2013, National Instruments On-site for Universal Software Defined Radio platform**

7) **Invited Talks on Cognitive Radio and Spectrum Awareness at University of Breast, France, June-July 2013, Professor Octavia Dobre**

8) **Invited Talk entitled "Smart Sensor and Pervasive Computing for Vital Signs and Motor-Activity Monitoring" at IEEE SensorNets 2014, Lisbon, Portugal, Jan. 7-9, 2014, Professor Octavian Postolache.**

Plan for Next Year:

On the short term, we plan to revise the website and create Facebook and LinkedIn groups.

We plan to extend the activity of the committee during the next year by attracting new active members through whom we can further increase the activity of the committee.
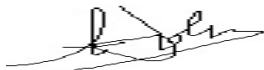
Additionally, we plan to organize doctoral consortia, special sessions and workshops.

May 15, 2014

Octavian A. Postolache, Chair

Octavia A. Dobre, Co-Chair