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## CALL FOR PAPERS FOR THE SPECIAL SESSION

### Recent advances in non-contact methods of health monitoring

#### ABSTRACT

Non-contact or contactless or stand-off monitoring has evolved as a preferred paradigm in many areas of sensing such as search and rescue, suicide detection and prevention, wellness monitoring of elderly. Contactless monitoring of physiological signals for health monitoring is gaining popularity as a single sensor can be used for monitoring several subjects simultaneously. For example, radars are being used for detecting vital signs such as the breathing rate and heart rate in hospital environment and in home-based care for monitoring the health of senior citizens. Also contactless monitoring can be used for detection of life under rubble, detection of movements and postures of people, analysis of gait, conditions like sleep apnea or sudden infant death. There are several contactless monitoring technologies from intrusive ones like cameras to non-intrusive ones like radar that do not violate the privacy of monitored subjects. This special session solicits papers that provide health monitoring solutions using all forms of contactless sensing methodologies. This fledgling area has several open research problems that when solved will revolutionize monitoring of physiological signals.

All the papers reporting about research related to the above-mentioned topics are welcome.

#### TOPICS

Original submissions on all areas but not limited to contactless sensors, instrumentation, signal processing and sensor data analytics for monitoring are welcome:

- Novel contactless sensing solutions including wearable sensors;
- Signal processing issues like quality, reliability of acquired signals/data, big data;
- Modern signal acquisition paradigms such as compressive sensing;
- Sensing paradigms such as multi-sensor, multi-modal, distributed sensing using heterogeneous and homogeneous sensors;
- Detection, estimation, classification, tracking and fusion at various levels.

#### CHAIRS



**Dr. Sreeraman Rajan**

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**Dr. Rafik Goubran**

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**Dr. Miodrag Bolic**

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Dr. Rajan (M'90-SM'06) is a Canada Research Chair (Tier II) in the Department of Systems and Computer Engineering, Carleton University, Canada. He is the Chair of the IEEE Ottawa EMBS Chapter and the IEEE Canada Area East. His research interests include signal processing, biomedical signal processing, communications and pattern classification.

Dr. Goubran (M'87, SM'07, F'12) is currently the Dean of the Faculty of Engineering and Design, Carleton University, Ottawa, Canada. His expertise includes DSP, biomedical engineering, VoIP, sensors, noise and echo cancellation, microphone arrays, and the design of smart independent living environments for seniors. He is the founding Director of the Ottawa-Carleton Institute for Biomedical Engineering, and a Fellow of the Canadian Academy of Engineering.

Dr. Bolic's (M'04-SM'08) research interests include biomedical signal processing and instrumentation, hardware/software accelerators, and Internet of Things. His current biomedical research is related to blood pressure monitoring, transcranial direct current stimulation and physiological sensing using radars.

#### SUBMISSION

Prospective authors must electronically submit a final paper (6 pages, including figures) by January 10, 2016, by pointing out the related Special Session.

All papers will receive multiple peer reviews; authors will receive timely notification of paper acceptance. If accepted, final papers must be no more than 6 pages and will be submitted electronically.

Papers must be presented at the conference orally by an author, will appear in the final conference proceedings, and will be indexed in the Scopus citation index.

#### MORE INFO

For further information, please visit MeMeA2016 website at



[memea2016.ieee-ims.org](http://memea2016.ieee-ims.org)

#### BENEVENTO

Benevento, due to the Santa Sofia's Church with its Cloister, has been part of UNESCO World Heritage Sites as "Longobards in Italy. Places of the power".

#### DATES

➤ **January 17, 2016** - Submission of Final Paper (5-6 pages) - first version

➤ **March 10, 2016** - Submission of revised Final Paper

➤ **April 4, 2016** - Final Submission, Registration

