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# CALL FOR PAPERS FOR THE SPECIAL SESSION

## Fiber Optic Sensors for medical applications

### ABSTRACT

Fiber optic sensors (FOSs) are gaining large acceptance as alternative to traditional sensors for application in medicine. These sensors allow the measurement of physical and chemical parameters employing a large number of working principles and configurations. Good metrological properties, the possibility to implement distributed sensors and their immunity to electromagnetic interferences motivate the increasing request for FOSs worldwide. These features also make FOSs an emerging solution for the monitoring parameters of interest for diagnostic and therapeutic applications. Moreover, the possibility to develop Magnetic Resonance (MR)-compatible sensors further motivates the growing interest of the research community.

This special session is an opportunity of interaction for researchers working on the development and characterization of FOSs for the measurement of parameters of physiological interest. This special session aims at but is not limited to: advances FOSs design, monitoring of parameters of diagnostic and therapeutic interest, processing of FOS signal for health state detection of persons.

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

### TOPICS

Paper submissions on all areas of fiber optic sensors are welcome. Topics of interest include but are not limited to:

- Design and characterization of FOSs for medical applications
- FOSs for monitoring effects of hyperthermal treatments
- Measurement of fluid flow and pressure in the body
- Magnetic Resonance-compatible sensors
- Fiber optic-based smart textile for health monitoring (e.g., respiratory monitoring)
- Health state monitoring by FOSs
- Orthopedic application of FOS
- Application of FOSs in robotic surgery

### CHAIRS



**Michele A CAPONERO**  
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**Michele A Caponero** received the Bachelor's degree in physics from the University of Bari, Bari, Italy, in 1986. He is a Researcher with FSN-TECFIS-MNF Unit, Research Centre of Frascati, ENEA, Frascati RM, Italy. His research interests include distributed fiber optic-based sensors for structural monitoring and for monitoring of parameters of physiological interest.



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**Paola Saccomandi** received the M.Sc. (2010) and the Ph.D (2013) degree in biomedical engineering from the Università Campus Bio-Medico di Roma. Her research interests include laser-tissue interaction and thermal measurement, and design of fiber optic-based sensors for mechanical and thermal measurements. Member of the IEEE.



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Currently, Assistant Professor of Measurements and Biomedical Instrumentation at Università Campus Bio-Medico di Roma. Earned a Master of Science (2006) and a PhD degree (2009) in Biomedical Engineering at the Università Campus Bio-Medico di Roma. His research interests focus on design and development of sensors based on fiber optic technology, flow measurements, Magnetic Resonance-compatible sensors. Member of the IEEE.

### 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

