


2006 - 2016 : Back to Benevento

CALL FOR PAPERS

FOR THE SPECIAL SESSION

MEDICAL DIAGNOSTICS & TREATMENT BY USING ULTRASOUND

ABSTRACT

Ultrasound has very wide range of applications in medicine. Ultrasonic diagnostic imaging techniques have many innovative improvements since last 10 years. The most commonly used methods are pulsed-echo (2 MHz to 7 MHz) and Doppler imaging (2 MHz to 4 MHz). Available systems offer a real-time imaging, where the moving fetus is displayed on a color monitor. Pulse-echo techniques are employed with a transducer array that is used and the reflected signals are monitored. Therapeutic ultrasound techniques including physiotherapy, healing, cauterization etc. have numerous applications in medicine too. For example, HIFU transducer that produces up to few hundreds of Watts in MHz frequencies is used as an emerging and a novel tool in cancer therapy in medicine. Diagnostic and therapeutic ultrasound techniques need to be supported by metrological tools in order to establish the safe use of ultrasound.

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

CHAIRS



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Dr. Baki Karaböce
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Giovanni Durando was born in Torino -Italy- in 1970. He obtained a degree in physics at the University of Torino in 1999, in 2003 he got the Doctorate degree in Metrology at the Politecnico of Torino. In May 2009 he accepted a permanent position as physicist at the INRIM (Istituto Nazionale di Ricerca Metrologica) in the Thermodynamic department. His experimental activity is focused on acoustics, ultrasound and metrology.

Baki Karaböce was born in Denizli, Turkey in 1967. He has received BSc in 1992 and MSc 1997 in Physics. He has a PhD at Yeditepe University in Istanbul. He has studied ultrasound in cancer therapy in his PhD. He has been working at National Metrology Institute (UME) of Turkey since 1992. He is expert on acoustics, ultrasonics and metrology. He is head of medical metrology laboratory at UME.

MORE INFORMATION

For further information, please visit
 MeMeA2016 website at



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".



TOPICS

Paper submissions on all areas of Medical diagnostics & treatment by using ultrasound are welcome. Topics of interest include but are not limited to:

- Diagnostic ultrasound (pulsed echo and Doppler imaging)
- Metrology for ultrasound and ultrasound dose concept
- Ultrasound treatment techniques (i.e lithotripsy) and treatment planning
- Ultrasound power and pressure field characterization of HIFU transducers
- Characterization of temperature effect on tissue mimicking materials (TMM) induced by HIFU transducers
- Production techniques and measurements of TMM
- Transducers and systems
- EURAMET (European Association of National Metrology Institutes) health projects

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

SUBMISSION

Prospective authors must electronically submit a final paper (5-6 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.