



# CALL FOR PAPERS FOR THE SPECIAL SESSION

## NOVEL TECHNIQUES IN MEDICAL ULTRASOUND

### ABSTRACT

Ultrasound has a very wide range of applications in medicine. Ultrasonic diagnostic imaging techniques have many innovative improvements since the last 10 years. The most commonly used methods are pulsed-echo (2.0 to 7.0 MHz) and Doppler imaging (2 to 4 MHz). Therapeutic ultrasound techniques including physiotherapy, healing, cauterization etc. have numerous applications in medicine too. For example, a HIFU transducer that produces up to a few hundreds of watts in MHz frequencies is used as an emerging and 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.

### TOPICS

- Diagnostic ultrasound (pulsed echo and Doppler imaging)
- Metrology for ultrasound
- Ultrasound dose concept
- Ultrasound treatment techniques
- Ultrasound 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
- Ultrasound in cosmetics
- Other ultrasound related therapeutic techniques

### CHAIRS

**Dr. Baki Karaböce**  
TÜBİTAK UME

[baki.karaboce@tubitak.gov.tr](mailto:baki.karaboce@tubitak.gov.tr)



**Emel Çetin**  
TUBİTAK UME

[emel.cetin@tubitak.gov.tr](mailto:emel.cetin@tubitak.gov.tr)

