Special Issue

Medical Microwave Radiometry for R&D and Practical Applications

Message from the Guest Editors

This Special Issue of Diagnostics is dedicated to Medical Microwave Radiometry for R&D and Practical Applications. Unlike infrared thermography, which visualizes the temperature of the skin, microwave radiometry (MWR) is based on the measurement of the tissue's own electromagnetic radiation in the microwave range. It allows for non-invasive detection of thermal anomalies of internal tissues at a depth of several centimeters. MWR can be used for non-invasive monitoring of the temperature of internal tissues during hypo- and hyper-thermia. It is known that the temperature of a malignant tumor depends on its growth rate; therefore, the temperature of the tumor is a natural indicator of the aggressiveness of the tumor. Diseases associated with inflammatory processes of internal tissues are the subjects of research by MWR. Almost all human organs could be examined by MWR. The availability of non-expensive big MWR data has attracted the interest of machine learning specialists in order to improve the sensitivity and specificity of the method.

Guest Editors

Prof. Dr. Igor Goryanin

- 1. School of Informatics, University of Edinburgh, Edinburgh EH8 9YL, UK $\,$
- 2. Biological Systems Unit, Okinawa Institute Science and Technology, Okinawa 904-0495, Japan

Dr. Sergey G. Vesnin MMWR Ltd., Edinburgh EH10 5LZ, UK

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Diagnostics
Editorial Office
MDPI, Grosspeteranlage 5
4052 Basel, Switzerland
Tel: +41 61 683 77 34
diagnostics@mdpi.com

mdpi.com/journal/diagnostics





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Editor-in-Chief

Prof. Dr. Andreas Kjaer

Department of Clinical Physiology, Nuclear Medicine & PET National University Hospital, Rigshospitalet, University of Copenhagen, Blegdamsvej 9, DK-2100 Copenhagen, Denmark

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