Abstracts

On the Possible Use of Microwave-Active Imaging for Remote Thermal Sensing (Short Papers)

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Recent results have demonstrated the feasibility of quasi-real-time, active as well as harmless microwave imaging for biomedical purposes. Such a process allows tomographic reconstructions based on differences in the complex permittivity of tissues, the temperature dependence of which can be used for remote thermal sensing. A basic experiment conducted in water at 3-GHz yielded information on spatial resolution and temperature sensitivity. Discussion is devoted to potential capabilities and limitations of this remote-sensing approach in more complicated situations.

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