

Review of: "Investigations on Input Impedance and Radiation Pattern of a UWB Antenna for Microwave Imaging"

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Potential competing interests: No potential competing interests to declare.

In this paper, the authors have investigated the effects of input impedance and radiation pattern of a UWB antenna on microwave imaging capabilities.

The UWB antenna S-parameters were calculated using numerical simulations on the CST software package, and the UWB antenna was fabricated and characterized experimentally. The topic is interesting, but the quality of the manuscript could be further improved through:

1. Updating the list of references since most of them are old. In particular, cross-comparison of both simulation and experimental results should be made with their counterparts published in the last 2 years (2023, 2024).
2. In some figures, there is a relatively significant difference between measured and simulation results – more visible in Fig. 4, where almost 100% difference in VSWR results around low (2 GHz) and around high (14 GHz) frequency bands. Physical explanations are essential; otherwise, authors may need to check the simulation setup and re-validate the results.
3. For microwave imaging applications, it would be very interesting if the authors could provide an illustrative system describing the inclusion of the proposed UWB antenna into a full imaging system.

Recommendation: Major