

PROJECT / Microwave medical imaging

MWI-MedScan

Main Objective:

Traditional medical imaging technologies are expensive, require large infrastructures, and may bare health risk. Microwaves have appeared as a potential complementary imaging technique, not to replace but to be used as part of early low-cost screening protocols. Microwave imaging (MWI) is particularly relevant for early breast cancer detection, AVC detection or even bone cracks. The advantage of microwaves is the larger contrast of affected tissues when compared to gold standard techniques. The disadvantage is clearly the lower resolution. Following the efforts worldwide to perfect the MWI technique for medical imaging, the objective of the project is to advance on the antenna design to improve resolution and method sensitivity. The project will work towards the development of a lab demonstrator, having in mind future low-cost portable devices to be used in the front-line of massive screening programmes.

Reference: S045, Funding: IT, Start Date: 01-09-2014

Team: [Carlos Antonio Cardoso Fernandes](#), [Jorge Manuel Lopes Leal Rodrigues da Costa](#), [João Manuel de Almeida Monteiro Felício](#), [Késia Cristiane dos Santos Farias](#), Raquel Cruz Conceição

Groups: [Antennas and Propagation – Lx](#)

Local Coordinator: [Carlos Antonio Cardoso Fernandes](#)