



## **A full-wave numerical model for the interaction of L-band electromagnetic radiation with a simplified forest-like vegetation**

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Microwave radiometry has gained considerable interest during the last years for remote sensing of soil moisture content. While there is an increasing number of proven methods for soil with little or no vegetation, areas covered with forests and forest-like vegetation are less well understood. In particular, the interaction of electromagnetic radiation in the frequency band of interest (L-band for the ESA SMOS satellite currently under development) with tree structures of various size and geometry is a complex electromagnetic scattering process. In this contribution we investigate the potential of a full-wave electromagnetic approach, based on a finite-element time domain method (FETD), for analyzing the electromagnetic scattering problem for vegetation like objects of simple shape.