# Abstracts

## Combining an Autoregressive (AR) Model with the FD-TD Algorithm for Improved Computational Efficiency

In this paper, we combine an autoregressive (AR) model with the FD-TD algorithm. It is shown that this greatly improves the computational efficiency of the FD-TD technique. The AR model can be set up using a short segment of the time domain trace generated by FD-TD. Through extrapolation, future segments of the response can be accurately predicted. It is shown that the AR model is more robust and accurate than other prediction techniques used with EM modeling. A number of numerical examples is shown.

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