# Abstracts

## Uniaxial perfectly matched layer media for an unconditionally stable 3-D ADI-FD-TD method

*An Ping Zhao. "Uniaxial perfectly matched layer media for an unconditionally stable 3-D ADI-FD-TD method." 2002 Microwave and Wireless Components Letters 12.12 (Dec. 2002 [MWCL]): 497-499.*

An unsplit-field perfectly matched layer (PML) medium based on Gedney's uniaxial PML (UPML) scheme is proposed for an unconditionally stable three-dimensional alternating direction implicit finite-difference time-domain (ADI-FD-TD) method. The effectiveness of the proposed ADI-UPML absorber is demonstrated through a numerical example. In addition, to have a better understanding on the ADI-FD-TD method, the actual performance (i.e., while both the reflection and dispersion errors are considered) of the ADI-UPML as a function of the time step is also illustrated.

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