1.
Record Nr.	UNISALENTO991000382799707536
Autore	Sarris, Costas D.
Titolo	Adaptive mesh refinement for time-domain numerical electromagnetics / Costas D. Sarris
Pubbl/distr/stampa	San Rafael, Calif. : Morgan & Claypool Publishers, c2007
ISBN	1598290789
	9781598290783
Descrizione fisica	xvii, 135 p. : ill. ; c2007
Collana	Synthesis lectures on computational electromagnetics, 1932-1716 ; #11
Disciplina	530.141
Soggetti	Electromagnetism - Mathematics
	Maxwell equations - Numerical solutions
	Time-domain analysis
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Nota di bibliografia	Includes bibliographical references
Nota di contenuto	1. Introduction -- 2. A numerical interface between FDTD and Haar MRTD : formulation and applications -- 2.1. Introduction -- 2.2. Multiresolution analysis : a brief overview -- 2.3. Derivation of time-domain schemes by the method of moments -- 2.4. Two-dimensional hybrid arbitrary-order Haar MRTD/FDTD scheme : formulation -- 2.5. Numerical results : validation -- 2.6. Numerical results : applications -- 2.7. Conclusions -- 3. Efficient implementation of adaptive mesh refinement in the Haar wavelet-based MRTD technique -- 3.1. Introduction -- 3.2. Wavelet-based front-tracking -- 3.3. Adaptive Haar wavelet simulation of pulse compression in an optical fiber filter -- 3.4. Conclusions -- 4. The dynamically adaptive mesh refinement (AMR)-FDTD technique : theory -- 4.1. Introduction -- 4.2. AMR-FDTD : overview of the algorithm -- 4.3. Mesh tree and field update procedure in AMR-FDTD -- 4.4. Adaptive mesh refinement -- 4.5. AMR-FDTD and MRTD : similarities and differences -- 5. Dynamically adaptive mesh refinement in FDTD : microwave circuit applications -- 5.1. Introduction -- 5.2. Microstrip low-pass filter -- 5.3. Microstrip branch coupler -- 5.4. Microstrip spiral inductor -- 5.5. Discussion : stability and accuracy of AMR-FDTD results -- 5.6. Conclusion -- 6. Dynamically adaptive mesh refinement in FDTD : optical applications