

1048-65-375

kazufumi ito* (kio@math.ncsu.edu), Dept.of Mathematics, Box 8205, North Carolina State University, Raleigh, NC 27695. *High order finite difference schemes for wave equation in heterogeneous media.*

A fourth order full time-space discretization that extends naturally the Yee's scheme is discussed. It is a compact, well-structured, explicit time and space finite difference scheme and provides an efficient and high resolution method for wave propagation problems. A second order interface treatment is developed. (Received February 10, 2009)