

ADVANCES IN NUMERICAL METHODS FOR LINEAR AND NON-LINEAR DYNAMICS AND WAVE PROPAGATION

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Key words: new space and time discretization methods, high-order accurate methods, fictitious domain methods with embedded meshes, numerical dispersion, filtering spurious oscillations.

ABSTRACT

The objective of this symposium is to discuss new advances in numerical methods for linear and non-linear dynamics and wave propagation. Topics of interest include, but are not limited to: new space and time discretization methods for dynamical systems; high-order accurate methods including finite, spectral, isogeometric elements and others; methods with reduced numerical dispersion; filtering spurious oscillations; fictitious domain methods with the special treatment of the boundary conditions; new implicit and explicit time-integration methods for structural dynamics, wave propagation and impact problems; adaptive methods with space and time error estimators; application of new numerical methods to engineering dynamics and wave propagation problems; and others.