## CONTENTS

## SHORT NOTES

1199 Cancellation problem of preconditioning method at low Mach numbers Sang-Hyeon Lee
1211 On the application of explicit spatial filtering to the variables or fluxes of linear equations Christophe Bogey and Christophe Bailly

## REGULAR ARTICLES

1218 Open boundaries for the nonlinear Schrödinger equation A. Soffer and C. Stucchio

1233 Space-time discontinuous Galerkin discretization of rotating shallow water equations V.R. Ambati and O. Bokhove

1262 Realization of isotropy of the lattice Boltzmann method via rotation of lattice velocity bases Raoyang Zhang, Ilya Staroselsky, and Hudong Chen
1271 A fully implicit, fully adaptive time and space discretisation method for phase-field simulation of binary alloy solidification J. Rosam, P.K. Jimack, and A. Mullis

The efficient implementation of a finite element, multi-resolution viscosity method for hyperbolic conservation laws

Marcus Calhoun-Lopez and Max D. Gunzburger
A discontinuous Galerkin implementation of a domain decomposition method for kinetic-hydrodynamic coupling multiscale problems in gas dynamics and device simulations Shanqin Chen, Weinan E, Yunxian Liu, and Chi-Wang Shu
An efficient vector finite element method for nonlinear electromagnetic modeling
A. Fisher, D. White, and G. Rodrigue

1347 A general fictitious domain method with immersed jumps and multilevel nested structured meshes Isabelle Ramière, Philippe Angot, and Michel Belliard

Continued inside

