

Volume 16, Number 5**[Editorial Board](#)***Commun. Comput. Phys.*, No. 5, [16 \(2014\)](#).**Articles in the Issue:****Regular Articles:**

László Kónozsy and Dimitris Drikakis

A unified fractional-step, artificial compressibility and pressure-projection formulation for solving the incompressible Navier-Stokes equations.*Commun. Comput. Phys.*, 16 (2014), pp. 1135-1180.Published Online: August 29, 2014. [Abstract](#)

Full Article

Wakana Iwakami, Yuzuru Yatagai, Nozomu Hatakeyama and Yuji Hattori

A New approach for error reduction in the volume penalization method.*Commun. Comput. Phys.*, 16 (2014), pp. 1181-1200.Published Online: August 29, 2014. [Abstract](#)

Full Article

Langhua Hu, Siyang Yang and Guo-Wei Wei

Simulation of inviscid compressible flows using PDE transform.*Commun. Comput. Phys.*, 16 (2014), pp. 1201-1238.Published Online: August 29, 2014. [Abstract](#)

Full Article

Feng Shi, Guoping Liang, Yubo Zhao and Jun Zou

New splitting methods for convection-dominated diffusion problems and Navier-Stokes equations.*Commun. Comput. Phys.*, 16 (2014), pp. 1239-1262.Published Online: August 29, 2014. [Abstract](#)

Full Article

Mingchao Cai, Andy Nonaka, John B. Bell, Boyce E. Griffith and Aleksandar Donev

Efficient variable-coefficient finite-volume Stokes solvers.*Commun. Comput. Phys.*, 16 (2014), pp. 1263-1297.Published Online: August 29, 2014. [Abstract](#)

Full Article

Da Meng, Bin Zheng, Guang Lin and Maria L. Sushko

Numerical solution of 3D Poisson-Nernst-Planck equations coupled with classical density functional theory for modeling ion and electron transport in a confined environment.*Commun. Comput. Phys.*, 16 (2014), pp. 1298-1322.Published Online: August 29, 2014. [Abstract](#)

Full Article

Manuel Jesús Castro Díaz, Yuanzhen Cheng, Alina Chertock and Alexander Kurganov

Solving two-mode shallow water equations using finite volume methods.*Commun. Comput. Phys.*, 16 (2014), pp. 1323-1354.Published Online: August 29, 2014. [Abstract](#)

Full Article

Dirk Klindworth and Kersten Schmidt

An efficient calculation of photonic crystal band structures using Taylor expansions.*Commun. Comput. Phys.*, 16 (2014), pp. 1355-1388.Published Online: September 2, 2014. [Abstract](#)

Full Article

Dong Wang, Sihong Shao, Changhao Yan, Wei Cai and Xuan Zeng

Feature-scale simulations of particulate slurry flows in chemical mechanical polishing by smoothed particle hydrodynamics.*Commun. Comput. Phys.*, 16 (2014), pp. 1389-1418.Published Online: September 2, 2014. [Abstract](#)

Full Article

Author index to volume 16*Commun. Comput. Phys.*, 16 (2014), pp. 1419-1421.