Lista de publicaţii

August 30, 2013

Madalina Petcu

1 Articole publicate

[1] M. Petcu, R. Temam, D. Wirosoetisno. Existence and regularity results for the primitive equations. *Comm. Pure Appl. Analysis*, 3(1):115–131, March 2004.

[2] M. Petcu, R. Temam. Control for the sine-Gordon equation. ESAIM: COCV, 10:553–573, 2004.

[3] M. Petcu. Gevrey class regularity for the primitive equations in space dimension 2. *Asymptotic Analysis*, 39(1):1–13, 2004.

[4] M. Petcu, A. Rousseau. On the δ-Primitive and Boussinesq type equations. *Advances in Differential Equations*, 10(5): 579–599, 2005.

[5] M. Petcu, R. Temam, D. Wirosoetisno. Renormalization group method applied to the primitive equation. *Journal of differential equations*, 208: 215–257, 2005.

[6] M. Petcu. Euler Equation in a channel in space dimension 2 and 3. *Discrete and Continuous Dynamical Systems* – series A, 13, no. 3, 755–778, 2005.

[7] M. Petcu, A. Rousseau. Numerical time-schemes for an ocean related system of PDEs. *Numerical Methods in Partial Differential Equations*, 22: 32–47, 2006.

[8] M. Petcu, D. Wirosoetisno. Sobolev and Gevrey regularity for the primitive equations in a space dimension 3, *Applicable Analysis*, 84(2005), no. 8, 769–788.

[9] M. Petcu. Euler equations in a 3D channel with nonhomogenous boundary conditions, *Differential and Integral Equations*, 19, no. 3, 297–326, 2006.

[10] M. Petcu. On the three-dimensional primitive equations, *Advances in Differential Equations*, 11, no. 11, 1201–1226, 2006

[11] M. Petcu. On the backward uniqueness of the primitive equations, *Journal de Mathématiques Pures et Appliquées*, 87, no. 3, 275–289, 2007

[12] B. Ewald, M. Petcu, R. Temam. Stochastic solutions of the two-dimensional primitive equations of the ocean and atmosphere, *Analysis and Applications*, 5, no. 2, 183–198, 2007

[13] M. Gander, M. Petcu. Analysis of the modified parareal algorithm for second-order ordinary differential equations, *AIP Conference Proceedings: Numerical Analysis and Applied Mathematics*, 233–236, 2007

[14] M. Gander, M. Petcu. Analysis of a Krylov subspace enhanced parareal algorithm, *ESAIM Proc.*, 25, pp.114–129, 2008

[15] M. Petcu, R. Temam. The Shallow Water equations with Dirichlet boundary conditions on the velocity, DCDS-S, vol. 4, no. 1, 2011

[16] L. Cherfils, M. Petcu, M. Pierre. A finite element discretization of the Cahn-Hilliard equation with dynamic boundary conditions, DCDS-A, vol. 27, no.4, 1511–1533, 2010

[17] K. Lucas, M. Petcu, A. Rousseau. Quasi-hydrostatic primitive equations for ocean global circulation models, *Chin. Ann. Math.*, 31B(5), 1–20, 2010

[18] C. Jung, M. Petcu, R. Temam. Singular perturbation analysis on a homogeneous ocean circulation model, *Analysis and Applications*, vol. 9, no. 3 (2011), 275–313

[19] S. Faure, M. Petcu, R. Temam, J. Tribbia. On the inaccuracies of some finite volume discretizations of the linearized Shallow Water problem, *International Journal of Numerical Analysis and Modeling*, vol. 8, no. 3, pp. 518–541, 2011

[20] M. Petcu, R. Temam. The Shallow Water equations with transparent boundary conditions , *Mathematical Methods in the Applied Sciences*, DOI: 10.1002/mma.1482, 2011

[21] A. Huang, M. Petcu, R. Temam. Supercritical Shallow Water equations with topography, *Annals of the University of Bucharest, Mathematics Section*, 2 (LX), 63–82, 2011

[22] M. Petcu. Exponential Decay of the Power Spectrum and Finite Dimensionality for Solutions of the Three Dimensional Primitive Equations, *Numerische Mathematik*, DOI 10.1007/s00211-011-0405-0, 2011

[23] M. Petcu, R. Temam. An interface problem: the two-layer Shallow Water equations, *DCDS-A*, vol. 33, no. 11 & 12, 5327-5345, 2013

[24] A. Bousquet, M. Marion, M. Petcu, R. Temam. Multilevel finite volume methods and boundary conditions for geophysical flows, *Computers&Fluids*, 74 (2013) 66–90

[25] A. Bousquet, M. Petcu, M. C. Shiue, R. Temam, J. Tribbia. Boundary conditions for limited area models, *Communications in Computational Physics*, vol. 14, no. 3, 664–702, 2013

2   Articlole în pregătire

[26] M. Petcu, R. Temam, D. Wirosoetisno. Renormalization group method for the three dimensional primitive equations

[27] L. Cherfils, M. Petcu. A numerical analysis for the Cahn-Hilliard equation with non-permeable walls

[28] A. Huang, M. Petcu, R. Temam. The nonlinear $2D$ supercritical inviscid shallow water equations in a rectangle

[29] H. Israel, A. Miranville, M. Petcu. Well-posedness and long time behavior of a perturbed Cahn-Hilliard system with regular potentials

3   Cărţi/Capitole în cărţi

1. M. Petcu, R. Temam, M. Ziane. Some mathematical problems in fluid dynamics, *Handbook of Numerical Analysis* special volume on *Computational Methods for the Ocean and the Atmosphere*, 577-750, 2009