

Recent Papers

VASSILIOS A. DOUGALIS

1. (2007) (with J. L. Bona and D. Mitsotakis) Numerical solution of KdV-KdV systems of Boussinesq Equations: I, The numerical scheme and generalized solitary waves, *J. Math. And Computers in Simulation*, 74 (2007), pp. 214-228.[\(\[pdf\]\)](#).
2. (2007) (with D.E. Mitsotakis and J.-C. Saut) On some Boussinesq systems in two space dimensions: Theory and numerical analysis, *ESAIM: Math. Modelling and Numer. Anal.* v. 41, pp. 825-854.[\(\[pdf\]\)](#).
3. (2007) (with A. Duran, M.A. Lopez-Marcos and D.E. Mitsotakis) A numerical study of the stability of solitary waves of the Bona-Smith family of Boussinesq systems, *J. Nonlinear Sci.* v. 17, pp. 569-607.[\(\[pdf\]\)](#).
4. (2008) (with G.A. Athanassoulis, K.A. Belibassakis, D.A. Mitsoudis and N.A. Kampanis) Coupled mode and finite element approximations of underwater sound propagation problems In general stratified environments, *J.Comp.Acoustics*, v.16, pp.83-116.[\(\[pdf\]\)](#).
5. (2008) (with J.L.Bona and D.E.Mitsotakis) Numerical solution of KdV-KdV systems of Boussinesq equations : II Generation and evolution of radiating solitary waves, *Nonlinearity* v. 21, pp. 2825-2848.[\(\[pdf\]\)](#).
6. (2009) (with D. Mitsotakis and J.-C. Saut) On initial-boundary value problems for a Boussinesq system of BBM-BBM type in a plane domain ,*J. of Discrete and Continuous Dynamical Systems* v. 23, pp. 1191-1204.[\(\[pdf\]\)](#).
7. (2009) (with D.C. Antonopoulos and D.E. Mitsotakis) Initial-boundary-value problems for the Bona-Smith family of Boussinesq systems, *Advances in Differential Equations*, v.14 (2009) pp.27-53.[\(\[pdf\]\)](#).
8. (2009) (with F. Sturm and G.E. Zouraris) On an initial-boundary value problem for a wide-angle parabolic equation in a waveguide with a variable bottom, *Mathematical Methods in the Applied Sciences*, v.32, pp. 1519-1540.[\(\[pdf\]\)](#).
9. (2009) (with D.C. Antonopoulou and G.E. Zouraris) Galerkin methods for parabolic and Schroedinger equations with dynamical boundary conditions and applications to underwater acoustics, *SIAM J. Numer. Anal.* , v.47, pp.2752-2781.[\(\[pdf\]\)](#).
10. (2010) (with D.C.Antonopoulos and D.E.Mitsotakis) Numerical solution of Boussinesq systems of the Bona-Smith family, *Appl. Numer. Math.*, v.60, pp. 314-336.[\(\[pdf\]\)](#).
11. (2010) (with D.E.Mitsotakis and J.- C. Saut) Boussinesq systems of Bona-Smith type on plane domains: Theory and numerical analysis, *J. of Scientific Computing*, v.44, pp.109-135.[\(\[pdf\]\)](#).
12. (2010) (with D.C.Antonopoulos and D.E. Mitsotakis) Galerkin approximations of periodic solutions of Boussinesq systems, *Bull. Greek Math. Soc.*, v.57, pp.13-30.[\(\[pdf\]\)](#).
13. (2012) (with D.C. Antonopoulos) Numerical solution of the ‘classical’ Boussinesq system. *Math. and Computers in Simulation*, v.82, pp. 984-1007.[\(\[pdf\]\)](#).

14. (2013) (with D.C.Antonopoulos) Error estimates for Galerkin approximation of the 'classical' Boussinesq system, Math.Comp. 82 (2013), pp.689-717, Extended version in arXiv: 1008. 4248).([\[pdf\]](#)).
15. (2013) (with A. Duran and D. E. Mitsotakis) Numerical approximation of solitary waves of the Benjamin equation. (To appear in Math. and Computers in Simulation).([\[pdf\]](#)).
16. (2013) (with D.C.Antonopoulou and G. E. Zouraris) A finite difference method for the wide-angle 'parabolic' equation in waveguide with downsloping bottom, Num. Meth. PDEs, 29 (2013), pp.1416-1440. ([\[pdf\]](#)).
17. (2013) (with A.Duran and D.E.Mitsotakis) Numerical solution of the Benjamin equation. (To appear,see also ArXiv:1310.2749.).([\[pdf\]](#)).
18. (2014) (With D.C.Antonopoulos) Notes on error estimates for the standard Galerkin-finite element method for the Shallow Water equations. (To appear, also arXiv: 1403.5699).([\[pdf\]](#)).