

CURRICULUM VITAE

Athanassios G. Bratsos

2019

1. PERSONAL DATA

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Professor

Department of Naval Architecture Engineering,
Faculty of Technological Applications,
Technological Educational Institution (T.E.I.) Athens,
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2. EDUCATION

2.1 B.Sc.

[Department of Mathematics](#)

University of Athens, Greece.

2.2 Postgraduate studies

i) M.Sc. in Numerical Analysis

Department of Mathematics and Statistics,

[Brunel](#) University, UK.

Title of dissertation: *Second order Parabolic PDE's*

ii) Ph.D. in Numerical Analysis

Department of Mathematics and Statistics,

[Brunel](#) University, UK.

Title of thesis: [Numerical Solutions of Nonlinear Partial Differential Equations](#)

Advisor: Professor *Emeritus* [E.H. Twizell](#)

External examiner: Professor Abdul Q. M. Khaliq,

Department of Mathematical Sciences and Center for
Computational Science,

Middle Tennessee State University,
Murfreesboro, TN 37132, USA.
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3. PROFESSIONAL EXPERIENCE

- **1976-77** Programmer & Analyst
- **1977-79** Teacher in Secondary Education
- **1980-82** Associate Professor in the Centre of Higher Technical Education of Kozani, Greece
- **1983-86** Associate Professor in the Centre of Higher Technical Education of Athens, Greece
- **since 1887** Professor in the Technological Educational Institution (T.E.I.) of Athens
- **01/09/2016** Retired
- **28/11/2016** He was awarded the title of Emeritus Professor.

4. PUBLICATIONS IN JOURNALS

- 4.1. **A. G. Bratsos** and E. H. Twizell, [*The solution of the sine Gordon equation using the method of lines*](#), Intern. J. Computer Math., Vol. **61** No. 3-4 (1996), pp. 271-292.
- 4.2. E.H. Twizell, **A.G. Bratsos** and J.C. Newby, [*A finite-difference method for solving the cubic Schrödinger equation*](#), Math. Comput. Simulation, Vol. **43** No. 1 (1997), pp. 67-75.
- 4.3. **A. G. Bratsos**, E. H. Twizell, [*A family of parametric finite-difference methods for the solution of the sine-Gordon equation*](#), Appl. Math. Comput., Vol. **93** (1998), pp. 117-137.
- 4.4. **A. G. Bratsos** and E. H. Twizell, [*An explicit finite-difference scheme for the solution of the Kadomtsev-Petviashvili equation*](#), Intern. J. Computer Math., Vol. **68** No. 1-2 (1998), pp. 157-187.
- 4.5. A. G. Bratsos, [*The solution of the Boussinesq equation using the method of lines*](#), Comput. Methods Appl. Mech. Engrg., Vol. **157** No. 1-2 (1998), pp. 33-44.
- 4.6. A. G. Bratsos, [*A linearized finite-difference method for the solution of the nonlinear cubic Schrödinger Equation*](#), Communications in Applied Analysis,

Vol. 4 No. 1 (2000), pp 133-139.

- 4.7. A. G. Bratsos, [A parametric scheme for the numerical solution of the Boussinesq equation](#), J. Appl. Math. Comput., Vol. 8, No. 1 (2001), pp. 45-57.
- 4.8. A. G. Bratsos, [A linearized finite-difference scheme for the numerical solution of the nonlinear cubic Schrödinger equation](#), J. Appl. Math. Comput., Vol. 8 No. 3 (2001), pp. 459-467.
- 4.9. V. D. Tsiantos, T. Schrefl, J. Fidler and A. Bratsos, [Cost-effective way to speed up micromagnetic simulations in granular media](#), Appl. Numer. Math., Vol. 39 No. 2 (2001), pp. 191-204.
- 4.10. A. G. Bratsos, [A linearized scheme for the numerical solution of the sine-Gordon equation](#), Applied Mathematical Sciences, Vol. 1 No. 4 (2002), pp. 405-413.
- 4.11. M. S. Ismail, A. G. Bratsos, [A predictor-corrector scheme for the numerical solution of the Boussinesq equation](#), J. Appl. Math. Comput., Vol. 13 No 1-2 (2003), pp. 11-27.
- 4.12. **A. G. Bratsos**, Ch. Tsitouras, and D. G. Natsis, [Linearized numerical schemes for the Boussinesq equation](#), Appl. Numer. Anal. Comput. Math., Vol. 2 No. 1 (2005), pp. 34-53.
- 4.13. A. G. Bratsos, [On the numerical solution of the nonlinear cubic Schrödinger equation](#), Intern. J. of Pure and Appl. Math. Sci., Vol. 2 No. 2 (2005), pp. 217-226.
- 4.14. **A. G. Bratsos**, D. G. Natsis, [A global extrapolated procedure for the Boussinesq equation](#), J. Appl. Math. Comput., Vol. 21 No. 1-2 (2006), pp. 23-43.
- 4.15. A. G. Bratsos, [An explicit numerical scheme for the Sine-Gordon equation in 2+1 dimensions](#), Appl. Numer. Anal. Comput. Math., Vol. 2 No. 2 (2005), pp. 189-211.
- 4.16. A. G. Bratsos, I. Th. Famelis, A. Kollias and Ch. Tsitouras, [Phase-Fitted Numerov type models](#), Appl. Math. Comput., Vol. 184 (1 SPEC. ISS.) (2007), pp. 23-29.

- 4.17. A. G. Bratsos, *An extrapolated linearized numerical scheme for the one-dimensional sine-Gordon equation*, [Pacific-Asian Journal of Mathematics](#) Vol. **1** No. 2 (2007), pp. 91-102.
- 4.18. **A. G. Bratsos**, I. Th. Famelis and A. M. Prospathopoulos, [A parametric finite-difference method for shallow sea waves](#), *Int. J. Numer. Meth. Fluids*, Vol. **53** No. 1 (2007), pp. 129-147.
- 4.19. A. G. Bratsos, [The solution of the two-dimensional sine-Gordon equation using the method of lines](#), *J. Comput. Appl. Math.*, Vol. **206** No. 1 (2006), pp. 251-277.
- 4.20. A. G. Bratsos, [A third-order numerical scheme for the two-dimensional sine-Gordon equation](#), *Math. Comput. Simulation*, Vol. **76** No 4 (2007) pp. 271-282.
- 4.21. A. G. Bratsos, [A modified predictor-corrector scheme for the two-dimensional sine-Gordon equation](#), *Numer. Algorithms*, Vol. **43** No. 4 (2006), pp. 295-308.
- 4.22. A. G. Bratsos, [A modified explicit numerical scheme for the two-dimensional sine-Gordon equation](#), *Intern. J. Computer Math.* Vol. **85** No. 2 (2008), pp. 241-252.
- 4.23. A. G. Bratsos, [A second order numerical scheme for the improved Boussinesq equation](#), [Phys. Lettr. A.](#), Vol. **370** No. 2 (2007), pp. 145-147.
- 4.24. A. G. Bratsos, [A fourth order numerical scheme for the one-dimensional sine-Gordon equation](#), *Intern. J. Computer Math.*, Vol. **85** No. 7 (2008), pp. 1083-1095.
- 4.25. A. G. Bratsos, [Solitary-wave propagation and interactions for the "good" Boussinesq equation](#), *Intern. J. Computer Math.*, Vol. **85** No. 9 (2008), pp. 1431-1440.
- 4.26. A. G. Bratsos, [A numerical method for the one-dimensional sine-Gordon equation](#), [Numer Methods Partial Differential Eq](#), Vol. **24** No. 3 (2008), pp. 833-844.

- 4.27. A. G. Bratsos, M. Ehrhardt, I. Th. Famelis, [A discrete Adomian decomposition method for discrete nonlinear Schrödinger equations](#), Appl. Math. Comput. Vol. **197** No. 1 (2008), pp. 190-205.
- 4.28. A. G. Bratsos, [A predictor-corrector scheme for the improved Boussinesq equation](#), Chaos Solitons & Fractals Vol. **40** No. 5 (2009), pp. 2083-2094.
- 4.29. A. G. Bratsos, [A second order numerical scheme for the solution of the one-dimensional Boussinesq equation](#), Numer. Algorithms Vol. **46** No. 1 (2007), pp. 45-58.
- 4.30. A. G. Bratsos, [An improved numerical scheme for the sine-Gordon equation in 2+1 dimensions](#), Int. J. Numer. Meth. Engng. Vol. **75** No. 7 (2008), pp. 787-799.
- 4.31. A. G. Bratsos, [On the Numerical Solution of the Klein-Gordon Equation](#), Numer Methods Partial Differential Eq. Vol. **25** No. 4 (2009), pp. 939-951.
- 4.32. A. G. Bratsos, [A note on a paper by A. G. Bratsos, M. Ehrhardt and I. Th. Famelis](#), Appl. Math. Comput. Vol. **211** (2009), pp. 242–245.
- 4.33. **A. G. Bratsos** and L. A. Petrakis, [A modified Predictor-Corrector scheme for the Klein-Gordon equation](#), Intern. J. Computer Math. Vol. **87** (2010), pp. 1892-1904.
- 4.34. A. G. Bratsos and L. A. Petrakis, [An explicit numerical scheme for the modified Burgers' equation](#), Numerical Methods in Biomedical Engineering, Vol. **27** (2011), pp. 232-237.
- 4.35. A. G. Bratsos, [A modified numerical scheme for the cubic Schrödinger equation](#), Numer Methods Partial Differential Eq., Vol. **27** No 3 (2011), pp. 608-620.
- 4.36. A. G. Bratsos, [A fourth-order numerical scheme for solving the modified Burgers equation](#), Computers and Mathematics with Applications Vol. **60** (2010), pp. 1393-1400.

- 4.37. A. G. Bratsos, [A second order numerical scheme for the Burgers-Huxley equation](#), International Journal of Computational Mathematics and Numerical Simulation, Vol. 4 No. 2 (2011), pp. 247-257.
- 4.38. A. G. Bratsos, [A modified numerical method for the generalized Burgers-Huxley equation](#), International Journal of Numerical Methods and Applications, Vol. 5 No. 1 (2011), pp. 45-55.
- 4.39. A. G. Bratsos, [A fourth order improved numerical scheme for the generalized Burgers-Huxley equation](#), American Journal of Computational Mathematics, Vol. 1 No. 3 (2011), pp. 152-158.
- 4.40. A. G. Bratsos, [An improved second-order numerical method for the generalized Burgers-Fisher equation](#), ANZIAM Journal, Vol. 54 No. 3 (2013), pp. 181-199.
- 4.41. **A. G. Bratsos** and A Q. M. Khaliq, [A conservative exponential time differencing method for the nonlinear Schrödinger equation](#), International Journal of Computer Mathematics, Vol. 94 No. 2 (2017), pp. 230-251.
- 4.42. **A. G. Bratsos** and A Q. M. Khaliq, [An exponential time differencing method of lines for the Burgers and the modified Burgers equations](#), Numerical Methods for Partial Differential Equations, Vol. 34 No. 6 (2018), pp. 2024-2039.
- 4.43. **A. G. Bratsos** and A Q. M. Khaliq, [An exponential time differencing method of lines for Burgers–Fisher and coupled Burgers equations](#), Journal of Computational and Applied Mathematics, Vol. 356 (2019), pp. 182-197.
- 4.44. **A. G. Bratsos** and A Q. M. Khaliq, An efficient exponential time differencing scheme for the generalized Burgers–Huxley equation, to be appeared in [International Journal of Engineering Mathematics and Physics](#).

Books in Greek 8

5. PUBLICATIONS IN INTERNATIONAL CONGRESSES

- 5.1. A. G. Bratsos, *A Parametric Finite-Difference Scheme for the solution of the cubic Nonlinear Schrödinger Equation*, in [Proceedings](#): Achim Sydow, 15th IMACS World Congress on Scientific Computation, Modelling and Applied Mathematics: Numerical Mathematics, Eds. Wiss-&-Technik-Verlang Vol. **2**, pp 143-148 (1997) ISBN 3896855506, 9783896855503, 24-29 August, Berlin, Germany.
- 5.2. A. G. Bratsos, T. R. Taha, *A parametric linearized finite-difference method for the solution of the nonlinear cubic Schrödinger equation*, in: [Proceedings of 16th IMACS World Congress on Scientific Computation, Applied Mathematics and Simulation](#), August 21-25, 2000, Lausanne, Switzerland, Vol I (2000), No. 141-3.
- 5.3. A. G. Bratsos, *A finite-difference scheme for the numerical solution of the sine-Gordon equation*, in: Proceedings of [HERCMA 2001](#) (5^o Hellenic-European Conference on Computer Mathematics and its Applications), 20-22 September 2001, Athens, Greece, Vol 1 (2002), pp. 157-162.
- 5.4. A. G. Bratsos, E. H. Twizell, *A finite-difference scheme for the solution of the Boussinesq equation*, in: Proceeding of [HERCMA 2001](#) (5^o Hellenic-European Conference on Computer Mathematics and its Applications), 20-22 September 2001, Athens, Greece, Vol 1 (2002), pp. 150-156.
- 5.5. A. G. Bratsos, *A finite-difference scheme for the sine-Gordon equation in two space variables*, in: Proceedings of 4th GRACM on Computational Mechanics [GRACM 2002](#), June 27-29, 2002, University of Patras Vol. I (2002), pp. 96-102.
- 5.6. D. G. Natsis, V. Kotsakis and A. G. Bratsos, *L^1 Convergence of the sine Fourier series with respect to strongly O -regularly quasimonotonic sequences*, in: Proceedings of 4th GRACM on Computational Mechanics [GRACM 2002](#), June 27-29, 2002, University of Patras, Vol. III (2002), pp. 1050-1054.
- 5.7. A. G. Bratsos, *A linearized scheme for the numerical solution of the Boussinesq equation*, in: [Proceedings](#) of 4th [MATHMOD](#) (IMACS International Symposium on Mathematical Modelling), Vienna University of Technology, 5-7 February 2003, Vienna, Austria, Vol. **2** (2003), pp. 251-260.
- 5.8. A. G. Bratsos, D. Natsis and V. Kotsakis, *Application of alternative boundary conditions to a linearized scheme concerning the numerical solution of the*

- Boussinesq equation*, in: Proceedings of CESA 2003 (The Multiconference on "Computational Engineering in Systems Applications" CESA 2003, Ecole Centrale de Lille, France, 9-11 July 2003.
- 5.9.** A. G. Bratsos, V. Kotsakis and S. Sarantopoulos, *A linearized scheme for the Kadomtsev-Petviashvili equation*, in: Proceedings of CESA 2003 (The Multiconference on *Computational Engineering in Systems Applications* CESA 2003, Ecole Centrale de Lille, France, 9-11 July 2003.
- 5.10.** A. G. Bratsos, D. Natsis, *An extrapolated linearized finite-difference scheme for the numerical solution of the sine Gordon equation in one space variable*, in: Proceedings of CESA 2003 (The Multiconference on *Computational Engineering in Systems Applications* CESA 2003, Ecole Centrale de Lille, France, 9-11 July 2003.
- 5.11.** A. G. Bratsos, *A Global Extrapolated procedure for the Boussinesq equation*, in: Proceedings of [HERCMA 2003](#) (6^o Hellenic-European Conference on Computer Mathematics and its Applications), 20-22 September 2003, Athens, Greece, Vol. I (2004), pp. 301-308.
- 5.12.** A. G. Bratsos, D. Natsis, *A numerical approach for the coupled Schrödinger equation*, in: Proceedings of [HERCMA 2003](#) (6^o Hellenic-European Conference on Computer Mathematics and its Applications), 20-22 September 2003, Athens, Greece, Vol. I (2004), pp. 309-312.
- 5.13.** A. G. Bratsos, V. Kotsakis, *A fourth order explicit approximant for the two dimensional sine-Gordon equation*, in: Proceedings of [HERCMA 2003](#) (6^o Hellenic-European Conference on Computer Mathematics and its Applications), 20-22 September 2003, Athens, Greece, Vol. I (2004), pp. 313-318.
- 5.14.** A. G. Bratsos, D. G. Natsis, [*A finite-difference scheme for the numerical solution of the nonlinear cubic Schrödinger equation*](#), in: [Proceedings](#) 1st International Conference *From Scientific Computing to Computational Engineering*, 8-10 September 2004, Athens, Greece, Vol. I (2004), pp. 49-55.
- 5.15.** A. G. Bratsos, S. Sarantopoulos, [*A numerical method for a soliton type equation describing shallow water waves*](#), in: [Proceedings](#) 1st International Conference *From Scientific Computing to Computational Engineering*, 8-10 September 2004, Athens, Greece, Vol. I (2004), pp. 106-113.
- 5.16.** A. G. Bratsos, A. M. Prospathopoulos, D. G. Natsis, S. Sarantopoulos, [*A numerical*](#)

- [scheme for a shallow water equation in constant-depth environment](#), in: [Proceedings](#) 1st International Conference *From Scientific Computing to Computational Engineering*, 8-10 September 2004, Athens, Greece, Vol. I (2004), pp. 114-120.
- 5.17. A. G. Bratsos, D. Natsis, V. Kotsakis, *Linearized numerical schemes for the Boussinesq equation*, in: [Proceedings](#) of [ICNAAM 2004](#) (International Conference of Numerical Analysis and Applied Mathematics), 10-14 September 2004, Chalkis, Greece, Wiley-VCH (2004), pp. 56-59.
- 5.18. A. G. Bratsos, *An explicit numerical scheme for the Sine-Gordon equation in 2+1 dimensions*, in: [Proceedings](#) of [ICNAAM 2004](#) (International Conference of Numerical Analysis and Applied Mathematics), 10-14 September 2004, Chalkis, Greece, Wiley-VCH (2004), pp. 60-63.
- 5.19. K. A. Belibassakis, Ch. N. Stefanakos, A. Bratsos, A. M. Prospathopoulos, [Numerical simulation of weakly nonlinear wave propagation in variable bathymetry regions](#), in: [Proceedings](#) of [ICNAAM 2004](#) (International Conference of Numerical Analysis and Applied Mathematics), 10-14 September 2004, Chalkis, Greece, Wiley-VCH (2004), pp. 38-41.
- 5.20. D. G. Natsis, A. G. Bratsos, D. P. Papadopoulos, *A numerical scheme for a shallow water equation*, in: [Proceedings](#) of [ICCMSE 2004](#) (International Conference of Computational Methods in Sciences and Engineering), 19-23 November 2004, Athens, Greece, Lecture Series on Computer and Computational Sciences, Vol. 1 (2004), pp. 406-409.
- 5.21. A. G. Bratsos, D. P. Papadopoulos, Ch. Skokos, [A numerical solution of the Boussinesq equation using the Adomian method](#), in: [Proceedings](#) of [ICCMSE 2004](#) (International Conference of Computational Methods in Sciences and Engineering), 19-23 November 2004, Athens, Greece, Lecture Series on Computer and Computational Sciences, Vol. 1 (2004), pp. 83-86.
- 5.22. A. G. Bratsos, I. Th. Famelis, Ch. Tsitouras, *Phase-Fitted Numerov type models*, in: [Proceedings](#) of [ICCMSE 2004](#) (International Conference of Computational Methods in Sciences and Engineering), 19-23 November 2004, Athens, Greece, Lecture Series on Computer and Computational Sciences, Vol. 1 (2004), pp. 87-90.
- 5.23. A. G. Bratsos, [On the stability of a numerical scheme concerning a shallow water](#)

- [equation](#), in: [Proceedings](#) of 1st IC – EpsMsO (1st International Conference on Experiments/Process/System Modelling /Simulation /Optimization), 6-9 July 2005, Athens, Greece.
- 5.24. A. G. Bratsos, D. G. Natsis, [An explicit finite-difference scheme for the coupled Schrödinger equation](#), in: [Proceedings](#) of 1st IC – EpsMsO (1st International Conference on Experiments/Process/System Modelling/Simulation/Optimization), 6-9 July 2005, Athens, Greece.
- 5.25. A. G. Bratsos, I. Th. Famelis, [A numerical scheme for the Kadomtsev-Petviashvili equation](#), in: [Proceedings](#) of 1st IC – EpsMsO (1st International Conference on Experiments/Process/System Modelling/ Simulation/ Optimization), 6-9 July 2005, Athens, Greece.
- 5.26. I. Th. Famelis, A. G. Bratsos, [A solution of the Boussinesq equation using the Adomian decomposition method](#), in: [Proceedings](#) of 1st IC – EpsMsO (1st International Conference on Experiments / Process / System Modelling / Simulation / Optimization), 6-9 July 2005, Athens, Greece.
- 5.27. A. G. Bratsos, *A three-time level implicit scheme for the numerical solution of the undamped sine-Gordon equation*, in: 21th Biennial Conference on Numerical Analysis, 28 June – 1 July 2005, Dundee, Scotland, England.
- 5.28. A. G. Bratsos, Ch. Tsitouras, D. G. Natsis, *An extrapolated linearized finite-difference scheme for the numerical solution of the Boussinesq equation*, in: Proceedings of [17th IMACS](#) World Congress on Scientific Computation, Applied Mathematics and Simulation, 11-15 July 2005, Paris, France, paper T2-I-21-0179.
- 5.29. A. G. Bratsos, I. Th. Famelis, D. P. Papadopoulos, *On the solution of the Boussinesq equation using the Adomian decomposition method*, in: Proceedings of [17th IMACS](#) World Congress on Scientific Computation, Applied Mathematics and Simulation, 11-15 July 2005, Paris, France, paper T2-I-21-0178.
- 5.30. A. G. Bratsos, K. Belibassakis, D. G. Natsis, D. P. Papadopoulos, [On the numerical modelling of a shallow water equation](#), in: Proceedings of [17th IMACS](#) World Congress on Scientific Computation, Applied Mathematics and Simulation, 11-15 July 2005, Paris, France, paper T1-I-28-0176.
- 5.31. A. G. Bratsos, I. Th. Famelis, K. Belibassakis, *An implicit numerical method for a shallow water equation in 2+1 dimensions*, in [ICNAAM 2005](#) (International

- Conference of Numerical Analysis and Applied Mathematics), 16-20 September 2005, Rhodes, Greece, Wiley-VCH (2005), pp. 103-106.
- 5.32.** I. Th. Famelis, A. G. Bratsos, *On the solution of the cubic Schrödinger equation*, in [ICNAAM 2005](#) (International Conference of Numerical Analysis and Applied Mathematics), 16-20 September 2005, Rhodes, Greece, Wiley-VCH (2005), pp. 175-178.
- 5.33.** A. G. Bratsos, D. G. Natsis, [A numerical scheme for the Davey-Stewartson equation](#), in: [Proceedings](#) of [HERCMA 2005](#) (7^o Hellenic-European Conference on Computer Mathematics and its Applications), 22-24 September 2005, Athens, Greece.
- 5.34.** I. Th. Famelis, A. G. Bratsos, [A solution of the cubic nonlinear Schrödinger equation using the Adomian decomposition method](#), in: Proceedings of [HERCMA 2005](#) (7^o Hellenic-European Conference on Computer Mathematics and its Applications), 22-24 September 2005, Athens, Greece.
- 5.35.** A. G. Bratsos, I. Th. Famelis, *On the numerical solution of the Kadomtsev-Petviashvili equation*, in: Proceedings of [ICCMSE 2005](#) (International Conference of Computational Methods in Sciences and Engineering), 21-26 October 2005, Loutraki, Greece, Lecture Series on Computer and Computational Sciences, Vol. 4 (2005), pp. 920-923.
- 5.36.** A. G. Bratsos, *On the Numerical Solution of the Sine-Gordon Equation in 2+1 Dimensions*, in: Proceedings of [ICCMSE 2005](#) (International Conference of Computational Methods in Sciences and Engineering), 21-26 October 2005, Loutraki, Greece, Lecture Series on Computer and Computational Sciences, Vol. 4 (2005), pp. 916-919.
- 5.37.** A. G. Bratsos, A. M. Prospathopoulos, I. Th. Famelis, *On the numerical solution of the one-dimensional shallow sea waves*, in: Proceedings of 5th MATHMOD (IMACS International Symposium on Mathematical Modelling), Vienna University of Technology, 8-10 February 2006, Vienna, Austria.
- 5.38.** A. G. Bratsos, *A three-time level numerical scheme for the two-dimensional sine-Gordon equation*, in: Proceedings of 2nd International Conference *From Scientific Computing to Computational Engineering*, 5-7 July 2006, Athens, Greece.
- 5.39.** L. A. Petrakis, A. G. Bratsos, T. Papakostas, [A Mathematical Model for the](#)

- [Atmospheric Pollution](#), in: [Proceedings](#) of 2nd International Conference *From Scientific Computing to Computational Engineering*), 5-7 July 2006, Athens, Greece.
- 5.40. A. G. Bratsos, D. G. Natsis and L. A. Petrakis, [On the numerical solution of the coupled Schrödinger equation](#), in: [Proceedings](#) of 2nd International Conference *From Scientific Computing to Computational Engineering*), 5-7 July 2006, Athens, Greece.
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- 5.42. I. Th. Famelis, A. M. Prospathopoulos, S. Sarantopoulos, A. G. Bratsos, [On the numerical solution of the one-dimensional shallow water equations in constant-depth environment](#), in: [Proceedings](#) of 2nd International Conference *From Scientific Computing to Computational Engineering*), 5-8 July 2006, Athens, Greece.
- 5.43. A. G. Bratsos, *A fourth-order implicit scheme for the two-dimensional sine-Gordon equation*, in: [Proceedings of 11th Seminar NUMDIFF](#) (Numerical Solution of Differential and Differential-Algebraic Equations), 7-10 September, 2006, Haale, Germany.
- 5.44. A. G. Bratsos, [A third order numerical scheme for the sine-Gordon equation](#), in: [Proceedings](#) of 2nd IC – EpsMsO (2nd International Conference on Experiments/ Process/ System Modelling/ Simulation/ Optimization), 4-7 July 2007, Athens, Greece.
- 5.45. I. Th. Famelis, A. G. Bratsos, [The theta parameter influence on the numerical solution of various models describing one-dimensional shallow water waves](#), in: [Proceedings](#) of 2nd IC – EpsMsO (2nd International Conference on Experiments/ Process/ System Modelling/ Simulation/ Optimization), 4-7 July 2007, Athens, Greece.
- 5.46. T. Papakostas, A. G. Bratsos, I. Th. Famelis, A. I. Delis and D. G. Natsis, [An explicit numerical scheme for the atmospheric pollution](#), in: [Proceedings](#) of 2nd IC – EpsMsO (2nd International Conference on Experiments/ Process/ System Modelling/ Simulation/ Optimization), 4-7 July 2007, Athens, Greece.

- 5.47. A. G. Bratsos, *A numerical scheme for an improved model of Boussinesq type equations*, in 8th International Conference on Mathematical and Numerical Aspects of Waves, University of Reading, 23-27 July 2007, England.
- 5.48. A. G. Bratsos, *On the numerical solution of the sine-Gordon equation*, in: [Proceedings of HERCMA 2007](#) (8^o Hellenic-European Conference on Computer Mathematics and its Applications), 20-22 September 2007, Athens, Greece.
- 5.49. T. Papakostas, A. G. Bratsos, I. Th. Famelis, A. I. Delis, *An implicit numerical scheme for the atmospheric pollution*, in: [Proceedings of HERCMA 2007](#) (8^o Hellenic-European Conference on Computer Mathematics and its Applications), 20-22 September 2007, Athens, Greece.
- 5.50. I. Th. Famelis, M. Ehrhardt, A. G. Bratsos, *A discrete Adomian decomposition for the cubic Schrödinger equation*, in [HERCMA 2007](#) (8^o Hellenic-European Conference on Computer Mathematics and its Applications), 20-22 September 2007, Athens, Greece.
- 5.51. A. G. Bratsos, *A numerical method for Burgers equation*, in: [Proceedings of 3rd IC-SCCE](#) (International Conference *From Scientific Computing to Computational Engineering*), 9-12 July 2008, Athens, Greece.
- 5.52. A. G. Bratsos, L. A. Petrakis, *An explicit method for the cubic Schrödinger equation*, in: [Proceedings of 3rd IC-SCCE](#) (International Conference *From Scientific Computing to Computational Engineering*), 9-12 July 2008, Athens, Greece.
- 5.53. A. G. Bratsos, *A numerical scheme for the cubic Schrödinger equation*, in: [NumAn 2008](#) (*Conference in Numerical Analysis*), 1-5 September 2008, Kalamata, Greece.
- 5.54. A. G. Bratsos, L. A. Petrakis, *A numerical scheme for the Klein-Gordon equation*, in: [NUMAN 2008](#) (*Conference in Numerical Analysis*), 1-5 September 2008, Kalamata, Greece.
- 5.55. A. G. Bratsos, L. A. Petrakis, *A numerical scheme for the modified Burgers' equation*, in: [Proceedings of 3rd IC – EpsMsO](#) (3rd International Conference on Experiments/ Process/ System Modelling/ Simulation/ Optimization), 8-11 July 2009, Athens, Greece.
- 5.56. A. G. Bratsos, *A modified numerical scheme for the cubic Schrödinger and the modified Burgers' equation*, in [Proceedings of European Conference on Numerical Mathematics and Advanced Applications, ENUMATH 2009](#), organized by the

Division of Scientific Computing at the Department of Information Technology of Uppsala University in Uppsala, Sweden, between June 29 and July 3, 2009.

- 5.57. A. G. Bratsos, [A predictor-corrector scheme for the modified Burgers' equation](#), in International Conference on Modern Mathematical Methods in Science and Technology ([M3ST09](#)), Department of Mathematics of the University of Athens, IACM and the Greek Mathematical Society, Poros, Greece, 3-5 September 2009.
- 5.58. A. G. Bratsos, [An implicit numerical scheme for the modified Burgers' equation](#), in: [Proceedings of HERCMA 2009](#) (9^o Hellenic-European Conference on Computer Mathematics and its Applications), 24-26 September 2009, Athens, Greece.
- 5.59. A. G. Bratsos, [A numerical scheme for the modified Burger's Equation](#), in [NumAn 2010](#) (Conference in Numerical Analysis), 15-18 September 2010, Chania Crete, Greece.
- 5.60. A. G. Bratsos, [An improved numerical scheme for the generalized Burgers-Fisher equation](#), in [NumAn 2012](#) (Conference in Numerical Analysis), 4-9 September 2012, Ioannina, Greece.
- 5.61. A. G. Bratsos, [A modified predictor-corrector method for the generalized Burgers-Huxley equation](#), in [NumAn 2014](#) (Conference in Numerical Analysis), 2-5 September 2014, Chania Crete, Greece.
- 5.62. A. G. Bratsos, [An improved numerical method for the nonlinear cubic Schrödinger equation](#), in [M3ST 2015](#) - Modern Mathematical Methods in Science and Technology Department of Mathematics of the University of Athens, Kalamata, Greece, 30 August – 1 September 2015.

6. SESSIONS IN CONGRESSES

- 6.1. HERCMA 98, 24-26 September 1998, Athens, Greece
<http://www.aueb.gr/conferences/hercma1998>
Nonlinear numerical computations of differential equations
- 6.2. 16th IMACS World Congress on Scientific Computation, Applied Mathematics and Simulation, August 21-25, 2000, Lausanne, Switzerland, with Professor [Thiab R. Taha](#), Department of Computer Science, University of Georgia, 415 Graduate Studies Research Centre, Athens, Georgia 30602-7404, USA

<http://imacs2000.epfl.ch/>

Nonlinear Wave Equations

- 6.3. HERCMA 2001, 20-22 September 2001, Athens, Greece
<http://www.aueb.gr/conferences/hercma2001>
Computational Methods for Nonlinear Wave Equations
- 6.4. CESA 2003 (The Multiconference on *Computational Engineering in Systems Applications* CESA 2003, Ecole Centrale de Lille, France, 9-11 July 2003
<http://cesa2003.ec-lille.fr/>
Mathematical computational and analytical methods for nonlinear pde's
- 6.5. HERCMA 2003, September 20-22, Athens, Greece
<http://www.aueb.gr/conferences/hercma2003>
Analytical and Computational Approaches to Applied Propagation Problems
- 6.6. 1st IC–SCCE (1st International Conference *From Scientific Computing to Computational Engineering*), 8-10 September 2004, Athens, Greece
<http://www.scce.gr/2004/default.htm>
- i. [Numerical Methods for Applied Physical Problems](#),
 - ii. [Development of Mathematical Methods for Waves in Shallow Water](#)
- 6.7. ICNAAM 2004 (International Conference of Numerical Analysis and Applied Mathematics), 10-14 September 2005, Chalkis, Greece
<http://www.uop.gr/icnaam/>

7. CITATIONS

According to the data base [Scopus](#) there are 313 citations, while in [Scolar.Google](#) 929.

8 OTHER SCIENTIFIC ACTIVITIES

8.1. Member of the Editorial Board in:

- International Journal of Engineering Mathematics and Physics
http://ijemaps.com/?page_id=22
- International Journal of Computer Mathematics
<https://www.tandfonline.com/loi/gcom20>

8.2. Referee in:

- SeMa <http://www.springer.com/mathematics/journal/40324>
- Journal Computational Applied Mathematics <http://ees.elsevier.com/cam/>
- Numerical Methods Partial Differential Equations
<http://www3.interscience.wiley.com/cgi-bin/jhome/35979>
- Applied Mathematical Modelling <http://ees.elsevier.com/apm>
- Computer Physics Communications <http://ees.elsevier.com/cpc/>
- Discrete Dynamics in Nature and Society
<http://www.hindawi.com/journals/ddns/>
- Applied Mathematics Computation <http://www.elsevier.com/locate/amc>
- Advances in Difference Equations
<http://www.advancesindifferenceequations.com/>
- Journal of Mathematical Physics
<http://scitation.aip.org/content/aip/journal/jmp/info/about>
- Applied Mathematical Modelling <http://ees.elsevier.com/apm/>
- Computers and Mathematics with Applications
<http://ees.elsevier.com/camwa/>
- Journal of Partial Differential Equations <http://www.global-sci.org/jpde/>
- Communications Nonlinear Sc. Numerical Simulation
<http://ees.elsevier.com/cnsns/default.asp>
- International Journal Computer Mathematics
<http://www.tandfonline.com/toc/gcom20/current>
- TECHNOP <http://www.techno-press.org/?journal=sem&subpage=8>

- TWMS <http://iam.bsu.edu.az/en>
- Phys SC ZNA <http://www.znaturforsch.com/a.htm>
- AIP Publishing LLC <http://aipadvances.aip.org/readers>
- Numerical Algorithms
<http://www.springer.com/computer/theoretical+computer+science/journal/11075>
- Hindawi <http://www.hindawi.com/>
- SIAM Journal of Scientific Computing <http://sisc.siam.org/cgi-bin/main.plex>
- Etc.

8.3. Member of:

Greek Mathematical Society <http://www.hms.gr/>

9. RESEARCH PROJECTS

Computational Methods for Applied Technological Problems

Details in: <http://users.uniwa.gr/bratsos/arcprop.htm>