

REFERENCES

References

- [1] Adomian, G. and Rach, R., “Analytic Solution of Nonlinear Boundary-Value Problems in Several Dimensions by Decomposition”, *Journal of Mathematical Analysis and Applications*, Vol. 174, pp. 118-137 (1993).
- [2] Adomian, G., “Solving Frontier Problems of Physics, the Decomposition Method”, Boston, MA, Kluwer Academic Publishers, (1994).
- [3] Ali, A. H. A., “Finite Element Studies of the Korteweg-de Vries Equation”, Ph. D. Thesis, University of Wales, UK, (1989).
- [4] Chan, Tony F. and Kerkhoven, Tom, “Fourier Methods with Extended Stability Intervals for the Korteweg-de Vries Equation”, *SIAM J. Numer. Anal.*, Vol. 22, No. 3, (1985).
- [5] Drazin, P. G. and Johnson, R. S., “Solitons, an Introduction”, Cambridge, (1996).
- [6] Evans, G., Blackledge, J., and Yardley, P., “Numerical Methods for Partial Differential Equations”, Springer-Verlag London limited, (2000).
- [7] Gardner, C.S., Greene, J.M., Kruskal, M.D. and Miura, R.M., “Method for Solving the Korteweg-de Vries Equation “, *J. Phys. Rev. Lett.* ,Vol. 19, pp. 1095-1097, (1967).
- [8] Gardner, L. R. T. and Gardner, G. A., “Solitary Waves of the Regularized Long Wave Equation”, *J. Comp. Phys.* , Vol. 91, No. 2, pp. 441-450, (1990).
- [9] Gardner, L. R. T. and Gardner, G. A., “Solitary Waves of the Equal Width Wave Equation”, *J. Comp. Phys.* , pp. 218-223, (1991).
- [10] Gardner, L. R. T., Gardner, G. A. and Ali, A. H. A., “Simulation of Solitons Using Quadratic Spline Finite Elements”, *Computer Methods in Applied Mechanics and Engineering*, Vol. 92, pp. 231-243, (1991).
- [11] Gulsu, Mustafa and Ozis, Turgut “Numerical Solution of Burgers’ Equation with Restrictive Taylor Approximation”, *Applied Math. & Computation*, Vol. 171, pp 1192-1200, Issue 2, (2005).

- [12] Gulsu, Mustafa “A Finite Difference Approach for Solution of Burgers’ Equation”, *Applied Math. & Computation* Vol. 175, pp 1245-1255, (2006).
- [13] Herman, R. L. and Knickerbocker, C. J., “Numerically Induced Phase Shift in the KdV Soliton”, *J. Comp. Phys.* , Vol. 104, pp. 50-55, (1993).
- [14] Hoffman J. D. , “Numerical Methods for Engineers and Scientists”, McGraw-Hill, (1992).
- [15] Hoffmann Klaus A. , “Computational Fluid Dynamics for Engineers”, Austin, Texas, (1989).
- [16] Ibrahim, M. A. K., Shamardan, A. B. and Yousef, Y. K., “On the Numerical Solution of Singularly Perturbed Parabolic Partial Differential Equations”, *Journal of Natural Sciences and Mathematics*, Vol. 27, No. 1, pp. 41-50, April, (1987).
- [17] Ismail, Hassan N. A. and Elbarbary, Elsayed M. E., “Accelerating Technique for any Implicit Finite Difference Scheme for Two Dimensional Convection-Diffusion Equation”, 23rd International Conference for Statistics & Computer Science and its Applications, pp. 452-458, Cairo, (1998).
- [18] Ismail, Hassan N. A. and Elbarbary, Elsayed M. E., “Highly Accurate Method for the Convection-Diffusion Equation”, *Int. J. Computer Math.* Vol. 72, pp. 271-280, (1999).
- [19] Ismail, Hassan N. A. and Hassan, Adel Y., “Restrictive Padé Approximation for Singularly Perturbed Initial–Boundary Value Problem for Hyperbolic Partial Differential Equations”, 9th International Conference for Aerospace Science & Aviation Technology (ASAT-9), Cairo, pp. 61-69, (2001).
- [20] Ismail, Hassan N. A., Elbarbary, Elsayed M. E. and Hassan, Adel Y., “Highly Accurate Method for Solving Initial Boundary Value Problem for First Order Hyperbolic Differential Equation”, *Int. J. Computer Math.* Vol. 77, pp. 251-261, (2001).
- [21] Ismail, Hassan N. A., Elbarbary, Elsayed M. E., “Restrictive Taylor’s Approximation and Parabolic Partial Differential Equations”, *Int. J. Computer Math.* , Vol. 78, pp. 73-82, (2001).

- [22] Ismail, Hassan N. A. and Elbietar, Amal A., "Restrictive Padé Approximation for Singularly Perturbed Initial–Boundary Value Problem for Parabolic Partial Differential Equations", J. Inst. Math. & Comp. Sciences, Vol. 12, No. 2, pp. 153-161, (2001).
- [23] Ismail, Hassan N. A. , Elbarbary, Elsayed M. E. and Elbietar, Amal A., "Restrictive Padé Approximation for the Solution of Schrodinger Equation", Int. J. Computer Math. Vol. 79 No. 5, pp. 603-613, (2002).
- [24] Ismail, Hassan N. A., Elbarbary, Elsayed M. E. and Salem, Ghada S. E., "Restrictive Taylor's Approximation for Solving Convection-Diffusion Equation", 27th International Conference for Statistics & Computer Science and its Applications, Cairo, pp. 493-501(2002), and Applied Math. & Computation Vol. 147, pp 335-363, Issue 2, (2004).
- [25] Ismail, Hassan N. A., Elbarbary, Elsayed M. E. and Salem, Ghada S. E., "Restrictive Taylor's Approximation for two Dimensions Initial-Boundary Value Problem for Parabolic Partial Differential Equations", 27th International Conference for Statistics & Computer Science and its Applications, Cairo, pp. 547-555, (2002) and Applied Math. & Computation Vol. 147, pp 607-615, Issue 3, (2004).
- [26] Ismail, Hassan N. A., Elbarbary, Elsayed M. E. and Salem, Ghada S. E., "Restrictive Taylor's Approximation for Solving two Dimensions Convection-Diffusion Equation", 1st International Conference on Engineering Mathematics and Physics, MTC, Cairo, pp 63-71, (2002).
- [27] Ismail, Hassan N. A., "Unique Solvability of Restrictive Padé and Restrictive Taylor's Approximations", 28th International Conference for Statistics & Computer Science and its Applications, pp 79-86 (2003), and Applied Math. & Computation, Vol. 152, pp, 89-97 (2004).
- [28] Ismail, Hassan N. A. and Elsaid, Mahmoud Farouk, "Restrictive Padé Approximation for Variable Coefficient Linear Initial Boundary Value Problem for Hyperbolic Partial Differential Equations", J. Inst. Math. & Comput. Sc. Vol. 14, No. 1, pp 1-10 (2003).

- [29] Ismail, Hassan N. A., Elbarbary, Elsayed M. E. and Salem, Ghada S. E., “Restrictive Taylor’s Approximation for Solving Singularly Perturbed parabolic PDE”, 28th International Conference for Statistics & Computer Science and its Applications, pp 1-8 Cairo, and J. Inst. Math. & Comput. Sc. Vol. 14, No. 1, pp 19-26 (2003).
- [30] Ismail, Hassan N. A., Elsayed, Zeinab and Abd Rabboh, Aziza A., “A Restrictive Padé Approximation for the Solution of Generalized Burger’s Equation”, J. Inst. Math. & Comput. Sc. Vol. 14, No. 1, pp 31-35 (2003).
- [31] Ismail, Hassan N. A., Elbarbary, Elsayed M. E. and Salem, Ghada S. E., “Restrictive Taylor’s Approximation for Solving Singularly Perturbed Initial Boundary Value Problem for Hyperbolic PDE”, 28th International Conference for Statistics & Computer Science and its Applications, pp 9-16 Cairo, (2003).
- [32] Ismail, Hassan N. A., and Abd Rabboh, Aziza A., “A Restrictive Padé Approximation for the Solution of Generalized Huxley and Burger’s Huxley Equations”, 28th International Conference for Statistics & Computer Science and its Applications, pp 17-24 Cairo, (2003).
- [33] Ismail, Hassan N. A., Raslan, Kamal R. and Salem, Ghada S. E., “Solitary Wave Solutions for the General KdV Equation by Adomian Decomposition Method”, 28th International Conference for Statistics & Computer Science and its Applications, pp 65-77 Cairo, and publication in Applied Math. & Computation Vol. 154, pp 17-29, Issue 1, (2003).
- [34] Ismail, Hassan N. A. “On the Convergence of the Restrictive Padé Approximation to the Exact Solutions of IBVP of Parabolic and Hyperbolic Types”, 29th International Conference for Statistics & Computer Science and its Applications, Vol. 2, pp 1-10, Cairo (2004), and publication in Applied Math. & Computation Vol. 162, pp 155-166, (2005).
- [35] Ismail Hassan N. A. and Salem Ghada S. E., “ On The Convergence of The Restrictive Taylor Approximation to The Exact Solutions of IBVP for Parabolic, Hyperbolic, Convection Diffusion, And KdV Equations”, 29th International Conference for Statistics & Computer Science and its Applications, Vol. 2, pp 11-22, Cairo, (2004).

- [36] Ismail, Hassan N. A., Raslan, Kamal R., & Abd Rabboh, Aziza A. "Adomian Decomposition Method for Burger's-Huxley and Burger's-Fisher Equations", *Applied Math. & Computation* Vol. 159, pp 291-301, (2004).
- [37] Ismail, Hassan N. A., & Abd Rabboh, Aziza A. "On the Convergence of the Restrictive Padé Approximation to the Exact Solutions of Non-Linear IBVP for the Generalized Burger's Huxley and Generalized Burger's-Fisher Equations", *29th International Conference for Statistics & Computer Science and its Applications*, Vol. 2, pp 23-32, Cairo (2004).
- [38] Ismail, Hassan N. A., Elshobaky, Entisarar M. & Khattab, Aliya M. K., "On the General Term of a Cauchy Product of Two Series of the Truncation Error for Some Restrictive Approximations for IBVP for Parabolic and Hyperbolic Equations", *29th International Conference for Statistics & Computer Science and its Applications*, Vol. 2, pp 33-45, Cairo (2004).
- [39] Ismail, Hassan N. A., Raslan, Kamal R., Salem, Ghada S. E., & Abd Rabboh, Aziza A. "Comparison Study between Restrictive Taylor, Restrictive Padé Approximations and Adomian Decomposition Method for the Solitary Wave Solution of the General KdV Equation", *29th International Conference for Statistics & Computer Science and its Applications*, Vol. 2, pp 45-64, Cairo (2004), and publication in *Applied Math. & Computation* Vol. 167, pp 849-869, (2005).
- [40] Ismail, Hassan N. A., Elshobaky, Entisarar M. & Khattab, Aliya M. K., "Covergene Invariance of Restrictive Levels for Restrictive Padé Approximations to the Exact Solution of a Class of IBVP for Parabolic and Hyperbolic Types", *Second International Conference on Engineering Mathematics and Physics EMP*, pp 30-43, Cairo November (2004).
- [41] Ismail, Hassan N. A., & Abd Rabboh, Aziza A. "Comparison Between the Adomian Decomposition Method and the Restrictive Padé Approximation Method for Burger's Huxley and Burger's-Fisher Equations", *Second International Conference on Engineering Mathematics and Physics EMP*, pp 44-55, Cairo November (2004).

- [42] Ismail, Hassan N. A., & Abd Rabboh, Aziza A. "A Restrictive Padé Approximation for the Solution of the Generalized Fisher and Burger-Fisher Equations", *Applied Math. & Computation* Vol. 154, pp 203-210, (2004).
- [43] Ismail Hassan N. A. "More General Approach on the Convergence of the Restrictive Padé Approximation to the Exact Solutions of Types of IBVPs for Parabolic and Hyperbolic PDEs", *30th International Conference for Statistics & Computer Science and its Applications*, Vol. 2, pp 51-60, Cairo (2005).
- [44] Ismail, Hassan N. A., & Abd Rabboh, Aziza A. "Nonlinear Schrodinger equation Via Restrictive Padé Approximation", *30th International Conference for Statistics & Computer Science and its Applications*, Vol. 2, pp 61-67, Cairo (2005).
- [45] Ismail, Hassan N. A., & Elshafay, Ahmed A. "Implicit Restrictive Padé Method of Almost Exact Solution for IBVP for Two-Dimensional Parabolic PDEs", *31th International Conference for Statistics & Computer Science and its Applications*, Vol. 2, pp 37-47 Cairo, (2006).
- [46] Ismail, Hassan N. A., & Elshafay, Ahmed A. "Explicit Restrictive Taylor's Methods of Almost Exact Solution for IBVP for Two-Dimensional Parabolic PDEs", *31th International Conference for Statistics & Computer Science and its Applications*, Vol. 2, pp 49-59 Cairo, (2006).
- [47] Ismail, Hassan N. A., Gomaa, Mohamed A. & Elsayy, Nabila M. "On Rounding-Off Error & Restrictive Approximation", *31th International Conference for Statistics & Computer Science and its Applications*, Vol. 2, pp 61-73 Cairo, (2006).
- [48] Ismail, Hassan N. A., & Elshafay, Ahmed A. "Restrictive Approximation for Higher Dimension IBV Problem for Parabolic PDE", *3rd International Conference on Mathematics and Engineering Physics ICMEP-3, M.T.C., EM11*, pp 106-119, Cairo (2006).
- [49] Jain, P. C., Shankar, Rama and Bhardwaj, Dheeraj, "Numerical Solution of the Korteweg-de Vries (KdV) Equation", *Chaos, Solitons & Fractals*, Vol. 8, No. 6, pp. 943-951, (1997).

- [50] Kutluay, S., Bahadir, A. R., and Ozdes, A., "A Small Time Solutions for the Korteweg-de Vries Equation", *Applied Math. & Comput.*, Vol. 107, pp. 203-210, (2000).
- [51] Leveque, Randall J., "Numerical Methods for conservation laws," Birkhauser Verlag Basel, (1992).
- [52] Mitchell, A. R., "Computational methods in partial differential equations", John Wiley & Sons Ltd, London, (1969).
- [53] Richtmyer, Robert D. and Morton, K. W., "Difference Methods for Initial-Value Problems", John Wiley & Sons Interscience, New York, (1967).
- [54] Salkuyeh, Davod Khojasteh "On the Finite Difference Approximation to the Convection-Diffusion Equation", publication in *Applied Math. & Computation*, Vol. 179, Issue 1, pp. 79-86, (2006).
- [55] Smith, G. D., "Numerical Solution of Partial Differential Equations", Clarendon Press, Oxford, (1985).
- [56] Wadati, Miki, "The Exact Solution of the Modified Korteweg-de Vries Equation", *J. Phys. Soc. Jpn.*, Vol. 32, (1972).
- [57] Wadati, Miki, "The Modified Korteweg-de Vries Equation", *J. Phys. Soc. Jpn.*, Vol. 34, pp. 1289-1296, (1973).
- [58] Ward, Cheney and Kincaid, David, "Numerical Mathematics and Computing", California, (1994).
- [59] Wazwaz, A. M., "Analytical Approximations and Padé Approximants for Volterra's Population Model", *Appl. Math. Comput.*, Vol. 100, pp. 13-25, (1999).
- [60] Wazwaz, A. M., "The Modified Decomposition Method and Padé Approximants for Solving the Thomas-Fermi Equation", *Appl. Math. Comput.*, Vol. 105, pp. 11-19, (1999).
- [61] Wazwaz, A. M., "Solitary Wave Solutions for the Modified KdV Equation by Adomian Decomposition Method", *International Journal of Applied Mathematics*, Vol. 3 No.4, pp. 361-368, (2000).
- [62] Wazwaz, A. M., "A new Algorithm for Calculating Adomian Polynomial for nonlinear Operators", *Appl. Math. Comput.*, Vol. 111 pp. 53-69, (2000).

- [63] Wazwaz, A. M., “Construction of Solitary Wave Solutions and Rational Solutions for the KdV Equation by Adomian Decomposition Method”, *Chaos, Solitons and Fractals*, Vol. 12, pp. 2283-2293, (2001).
- [64] Williams, W. E., “Partial Differential Equations”, Clarendon Press, Oxford, (1980).