

Prof. ALAATTİN ESEN

Personal Information

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International Researcher IDs

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Education Information

Doctorate, Inonu University, Fen-Edebiyat Fakültesi, Matematik Bölümü, Turkey 1998 - 2003

Postgraduate, Inonu University, Fen-Edebiyat Fakültesi, Matematik Bölümü, Turkey 1995 - 1997

Undergraduate, Inonu University, Fen-Edebiyat Fakültesi, Matematik Bölümü, Turkey 1990 - 1994

Foreign Languages

English, B2 Upper Intermediate

Research Areas

Mathematics, Differential Equations, Numerical Analysis, Natural Sciences

Academic Titles / Tasks

Professor, Inonu University, Fen-Edebiyat Fakültesi, Matematik, 2013 - Continues

Associate Professor, Inonu University, Fen-Edebiyat Fakültesi, Matematik, 2007 - 2013

Research Assistant PhD, Inonu University, Fen-Edebiyat Fakültesi, Matematik, 2003 - 2007

Research Assistant, Inonu University, Fen-Edebiyat Fakültesi, Matematik, 1995 - 2003

Academic and Administrative Experience

Inonu University, Fen-Edebiyat Fakültesi, Matematik Bölümü, 2012 - Continues

Inonu University, Fen Bilimleri Enstitüsü, 2014 - 2016

Inonu University, Fen Bilimleri Enstitüsü, 2008 - 2014

Courses

Mesleki Matematik, Associate Degree, 2013-2014

Kısmi Diferansiyel Denklemler, Undergraduate, 2013-2014
Nümerik Analiz, Undergraduate, 2013-2014
Uygulamalı Matematik, Undergraduate, 2013-2014
Diferansiyel Denklemler, Undergraduate, 2013-2014
Kısmi Diferansiyel Denklemler ve Uygulamaları, Undergraduate Minor, 2013-2014

Advising Theses

AKSAN E. N., ESEN A., Hareketli sınır değer problemlerinin nümerik çözümleri, Doctorate, H.KARABENLİ(Student), 2016
Esen A., Uçar Y., Boussinesq tipi denklemlerin galerkin sonlu eleman yöntemi ile nümerik çözümleri, Doctorate, B.KARAAĞAÇ(Student), 2016
ESEN A., BULUT F., Lineer olmayan kısmi türevli denklemlerin haar dalgacıkları ile nümerik çözümleri, Doctorate, Ö.ORUÇ(Student), 2016
ESEN A., Kesirli mertebeden kısmi diferansiyel denklemlerin B-spline sonlu eleman yöntemleri ile çözümleri, Doctorate, O.TAŞBOZAN(Student), 2015
ESEN A., Lineer olmayan kesirli mertebeden türevli kısmi diferansiyel denklemlerin homotopi analiz yöntemi ile çözümü, Postgraduate, O.TAŞBOZAN(Student), 2011
ESEN A., Bazı nonlinear kısmi diferansiyel denklemlerin tam çözümleri üzerine, Postgraduate, G.ESRA(Student), 2009

Published journal articles indexed by SCI, SSCI, and AHCI

- I. **A collocation method for solving time fractional nonlinear Korteweg–de Vries–Burgers equation arising in shallow water waves**
Karaagac B., Esen A., Owolabi K. M., Pindza E.
INTERNATIONAL JOURNAL OF MODERN PHYSICS C, vol.34, no.07, pp.1-16, 2023 (SCI-Expanded)
- II. **A new numerical approach to Gardner Kawahara equation in magneto-acoustic waves in plasma physics**
Ucar Y., Yagmurlu N. M., Esen A., Karaagac B.
INTERNATIONAL JOURNAL FOR NUMERICAL METHODS IN FLUIDS, vol.95, no.6, pp.979-991, 2023 (SCI-Expanded)
- III. **Numerical approximation to the MEW equation for the single solitary wave and different types of interactions of the solitary waves**
Başhan A., Uçar Y., Yağmurlu N. M., Esen A.
JOURNAL OF DIFFERENCE EQUATIONS AND APPLICATIONS, no.28, pp.1-21, 2022 (SCI-Expanded)
- IV. **Higher order Haar wavelet method integrated with strang splitting for solving regularized long wave equation**
BULUT F., Oruc O., ESEN A.
MATHEMATICS AND COMPUTERS IN SIMULATION, vol.197, pp.277-290, 2022 (SCI-Expanded)
- V. **An application of Chebyshev wavelet method for the nonlinear time fractional Schrodinger equation**
Esra Kose G., Oruc O., ESEN A.
MATHEMATICAL METHODS IN THE APPLIED SCIENCES, vol.45, no.11, pp.6635-6649, 2022 (SCI-Expanded)
- VI. **Highly accurate numerical scheme based on polynomial scaling functions for equal width equation**
Oruc O., ESEN A., BULUT F.
WAVE MOTION, vol.105, 2021 (SCI-Expanded)
- VII. **A new perspective for the numerical solution of the Modified Equal Width wave equation**
BAŞHAN A., YAĞMURLU N. M., UÇAR Y., ESEN A.
MATHEMATICAL METHODS IN THE APPLIED SCIENCES, vol.44, no.11, pp.8925-8939, 2021 (SCI-Expanded)
- VIII. **Single soliton and double soliton solutions of the quadratic-nonlinear Korteweg-de Vries equation for small and long-times**
BAŞHAN A., ESEN A.

NUMERICAL METHODS FOR PARTIAL DIFFERENTIAL EQUATIONS, vol.37, no.2, pp.1561-1582, 2021 (SCI-Expanded)

- IX. **Numerical solutions of Boussinesq equation using Galerkin finite element method**
UÇAR Y., ESEN A., Karaagac B.
NUMERICAL METHODS FOR PARTIAL DIFFERENTIAL EQUATIONS, vol.37, no.2, pp.1612-1630, 2021 (SCI-Expanded)
- X. **Numerical investigation of dynamic Euler-Bernoulli equation via 3-Scale Haar wavelet collocation method**
Oruc O., ESEN A., BULUT F.
HACETTEPE JOURNAL OF MATHEMATICS AND STATISTICS, vol.50, no.1, pp.159-179, 2021 (SCI-Expanded)
- XI. **Finite difference method combined with differential quadrature method for numerical computation of the modified equal width wave equation**
Bashan A., YAĞMURLU N. M., UÇAR Y., ESEN A.
NUMERICAL METHODS FOR PARTIAL DIFFERENTIAL EQUATIONS, vol.37, no.1, pp.690-706, 2021 (SCI-Expanded)
- XII. **Dynamics of modified improved Boussinesq equation via Galerkin Finite Element Method**
Karaagac B., UÇAR Y., ESEN A.
MATHEMATICAL METHODS IN THE APPLIED SCIENCES, vol.43, no.17, pp.10204-10220, 2020 (SCI-Expanded)
- XIII. **A Strang Splitting Approach Combined with Chebyshev Wavelets to Solve the Regularized Long-Wave Equation Numerically**
Oruc O., ESEN A., BULUT F.
MEDITERRANEAN JOURNAL OF MATHEMATICS, vol.17, no.5, 2020 (SCI-Expanded)
- XIV. **A UNIFIED FINITE DIFFERENCE CHEBYSHEV WAVELET METHOD FOR NUMERICALLY SOLVING TIME FRACTIONAL BURGERS' EQUATION**
Oruc O., ESEN A., BULUT F.
DISCRETE AND CONTINUOUS DYNAMICAL SYSTEMS-SERIES S, vol.12, no.3, pp.533-542, 2019 (SCI-Expanded)
- XV. **Singular solitons in the pseudo-parabolic model arising in nonlinear surface waves**
İLHAN O. A., ESEN A., BULUT H., Baskonus H. M.
RESULTS IN PHYSICS, vol.12, pp.1712-1715, 2019 (SCI-Expanded)
- XVI. **A haar wavelet approximation for two-dimensional time fractional reaction-subdiffusion equation**
Oruc O., ESEN A., BULUT F.
ENGINEERING WITH COMPUTERS, vol.35, no.1, pp.75-86, 2019 (SCI-Expanded)
- XVII. **Chebyshev Wavelet Method for Numerical Solutions of Coupled Burgers' Equation**
Oruc O., Bulut F., Esen A.
HACETTEPE JOURNAL OF MATHEMATICS AND STATISTICS, vol.48, no.1, pp.1-16, 2019 (SCI-Expanded)
- XVIII. **The Hunter-Saxton Equation: A Numerical Approach Using Collocation Method**
KARAAĞAÇ B., ESEN A.
NUMERICAL METHODS FOR PARTIAL DIFFERENTIAL EQUATIONS, vol.34, no.5, pp.1637-1644, 2018 (SCI-Expanded)
- XIX. **A new perspective for the numerical solutions of the cmKdV equation via modified cubic B-spline differential quadrature method**
Bashan A., YAĞMURLU N. M., UÇAR Y., ESEN A.
INTERNATIONAL JOURNAL OF MODERN PHYSICS C, vol.29, no.6, 2018 (SCI-Expanded)
- XX. **A new perspective for quintic B-spline based Crank-Nicolson-differential quadrature method algorithm for numerical solutions of the nonlinear Schrodinger equation**
Bashan A., UÇAR Y., YAĞMURLU N. M., ESEN A.
EUROPEAN PHYSICAL JOURNAL PLUS, vol.133, no.1, 2018 (SCI-Expanded)
- XXI. **Optical solitons to the space-time fractional (1+1)-dimensional coupled nonlinear Schrodinger equation**
ESEN A., Sulaiman T. A., Bulut H., Baskonus H. M.
OPTIK, vol.167, pp.150-156, 2018 (SCI-Expanded)
- XXII. **Numerical Solutions of the Improved Boussinesq Equation by the Galerkin Quadratic B-Spline Finite**

Element Method

KARAAĞAÇ B., UÇAR Y., ESEN A.

FILOMAT, vol.32, no.16, pp.5573-5583, 2018 (SCI-Expanded)

- XXIII. **AN APPLICATION OF FINITE ELEMENT METHOD FOR A MOVING BOUNDARY PROBLEM**
AKSAN E. N., KARABENLİ H., ESEN A.
THERMAL SCIENCE, vol.22, 2018 (SCI-Expanded)
- XXIV. **An effective approach to numerical soliton solutions for the Schrodinger equation via modified cubic B-spline differential quadrature method**
BAŞHAN A., YAĞMURLU N. M., UÇAR Y., ESEN A.
CHAOS SOLITONS & FRACTALS, vol.100, pp.45-56, 2017 (SCI-Expanded)
- XXV. **Numerical solution of the KdV equation by Haar wavelet method**
ORUC O., BULUT F., ESEN A.
PRAMANA-JOURNAL OF PHYSICS, vol.87, no.6, 2016 (SCI-Expanded)
- XXVI. **Numerical Solutions of Regularized Long Wave Equation By Haar Wavelet Method**
ORUC O., BULUT F., ESEN A.
MEDITERRANEAN JOURNAL OF MATHEMATICS, vol.13, no.5, pp.3235-3253, 2016 (SCI-Expanded)
- XXVII. **A Haar wavelet collocation method for coupled nonlinear Schrodinger-KdV equations**
ORUC O., ESEN A., BULUT F.
INTERNATIONAL JOURNAL OF MODERN PHYSICS C, vol.27, no.9, 2016 (SCI-Expanded)
- XXVIII. **Numerical Solution of Time Fractional Burgers Equation by Cubic B-spline Finite Elements**
ESEN A., TASBOZAN O.
MEDITERRANEAN JOURNAL OF MATHEMATICS, vol.13, no.3, pp.1325-1337, 2016 (SCI-Expanded)
- XXIX. **Double Exp-Function Method for Multisoliton Solutions of The Tzitzeica-Dodd-Bullough Equation**
ESEN A., YAĞMURLU N. M., TASBOZAN O.
ACTA MATHEMATICAE APPLICATAE SINICA-ENGLISH SERIES, vol.32, no.2, pp.461-468, 2016 (SCI-Expanded)
- XXX. **A unified approach for the numerical solution of time fractional Burgers' type equations**
ESEN A., BULUT F., ORUC O.
EUROPEAN PHYSICAL JOURNAL PLUS, vol.131, no.4, 2016 (SCI-Expanded)
- XXXI. **A new approach on numerical solutions of the Improved Boussinesq type equation using quadratic B-spline Galerkin finite element method**
UÇAR Y., KARAAĞAÇ B., ESEN A.
APPLIED MATHEMATICS AND COMPUTATION, vol.270, pp.148-155, 2015 (SCI-Expanded)
- XXXII. **Numerical Solutions of Fractional System of Partial Differential Equations By Haar Wavelets**
BULUT F., ORUC Ö., ESEN A.
CMES-COMPUTER MODELING IN ENGINEERING & SCIENCES, vol.108, no.4, pp.263-284, 2015 (SCI-Expanded)
- XXXIII. **A Haar wavelet-finite difference hybrid method for the numerical solution of the modified Burgers' equation**
ORUC Ö., BULUT F., ESEN A.
JOURNAL OF MATHEMATICAL CHEMISTRY, vol.53, no.7, pp.1592-1607, 2015 (SCI-Expanded)
- XXXIV. **An approach to time fractional gas dynamics equation: Quadratic B-spline Galerkin method**
ESEN A., TASBOZAN O.
APPLIED MATHEMATICS AND COMPUTATION, vol.261, pp.330-336, 2015 (SCI-Expanded)
- XXXV. **Approximate Analytical Solution to Time-Fractional Damped Burger and Cahn-Allen Equations**
ESEN A., YAĞMURLU N. M., TASBOZAN O.
APPLIED MATHEMATICS & INFORMATION SCIENCES, vol.7, no.5, pp.1951-1956, 2013 (SCI-Expanded)
- XXXVI. **A Numerical Solution to Fractional Diffusion Equation for Force-Free Case**
TASBOZAN O., ESEN A., YAĞMURLU N. M., UÇAR Y.
ABSTRACT AND APPLIED ANALYSIS, 2013 (SCI-Expanded)
- XXXVII. **A Galerkin Finite Element Method to Solve Fractional Diffusion and Fractional Diffusion-Wave Equations**
ESEN A., UÇAR Y., YAGMURLU N. M., TASBOZAN O.

- MATHEMATICAL MODELLING AND ANALYSIS, vol.18, no.2, pp.260-273, 2013 (SCI-Expanded)
- XXXVIII. **The (G'/G)-expansion method for some nonlinear evolution equations**
KUTLUAY S., ESEN A., TASBOZAN O.
APPLIED MATHEMATICS AND COMPUTATION, vol.217, no.1, pp.384-391, 2010 (SCI-Expanded)
- XXXIX. **Application of the Exp-function method to the two dimensional sine-Gordon equation**
ESEN A., KUTLUAY S.
INTERNATIONAL JOURNAL OF NONLINEAR SCIENCES AND NUMERICAL SIMULATION, vol.10, no.10, pp.1355-1359, 2009 (SCI-Expanded)
- XL. **Exp-function Method for Solving the General Improved KdV Equation**
KUTLUAY S., ESEN A.
INTERNATIONAL JOURNAL OF NONLINEAR SCIENCES AND NUMERICAL SIMULATION, vol.10, no.6, pp.717-725, 2009 (SCI-Expanded)
- XLI. **New Solitary Solutions for the Generalized RLW Equation by He's Exp-function Method**
ESEN A., KUTLUAY S.
INTERNATIONAL JOURNAL OF NONLINEAR SCIENCES AND NUMERICAL SIMULATION, vol.10, no.5, pp.551-556, 2009 (SCI-Expanded)
- XLII. **Solitary wave solutions of the modified equal width wave equation**
ESEN A., KUTLUAY S.
COMMUNICATIONS IN NONLINEAR SCIENCE AND NUMERICAL SIMULATION, vol.13, no.8, pp.1538-1546, 2008 (SCI-Expanded)
- XLIII. **A lumped Galerkin method for the numerical solution of the modified equal-width wave equation using quadratic B-splines**
Esen A.
INTERNATIONAL JOURNAL OF COMPUTER MATHEMATICS, vol.83, pp.449-459, 2006 (SCI-Expanded)
- XLIV. **A heat balance integral solution of the thermistor problem with a modified electrical conductivity**
Kutluay S., WOOD A., Esen A.
APPLIED MATHEMATICAL MODELLING, vol.30, no.4, pp.386-394, 2006 (SCI-Expanded)
- XLV. **Application of a lumped Galerkin method to the regularized long wave equation**
Esen A., Kutluay S.
APPLIED MATHEMATICS AND COMPUTATION, vol.174, no.2, pp.833-845, 2006 (SCI-Expanded)
- XLVI. **A linearized implicit finite-difference method for solving the equal width wave equation**
Esen A., Kutluay S.
INTERNATIONAL JOURNAL OF COMPUTER MATHEMATICS, vol.83, no.3, pp.319-330, 2006 (SCI-Expanded)
- XLVII. **A finite difference solution of the regularized long-wave equation**
Kutluay S., Esen A.
MATHEMATICAL PROBLEMS IN ENGINEERING, vol.2006, 2006 (SCI-Expanded)
- XLVIII. **A numerical solution of the equal width wave equation by a lumped Galerkin method**
Esen A.
APPLIED MATHEMATICS AND COMPUTATION, vol.168, no.1, pp.270-282, 2005 (SCI-Expanded)
- XLIX. **Numerical solution of Burgers' equation by quadratic B-spline finite elements**
OZIS T., Esen A., Kutluay S.
APPLIED MATHEMATICS AND COMPUTATION, vol.165, no.1, pp.237-249, 2005 (SCI-Expanded)
- L. **Finite element approaches to the PTC thermistor problem**
Kutluay S., Esen A.
APPLIED MATHEMATICS AND COMPUTATION, vol.163, no.1, pp.147-162, 2005 (SCI-Expanded)
- LI. **Numerical solutions of the thermistor problem by spline finite elements**
Kutluay S., Esen A.
APPLIED MATHEMATICS AND COMPUTATION, vol.162, no.1, pp.475-489, 2005 (SCI-Expanded)
- LII. **Finite element solution of the thermistor problem with a ramp electrical conductivity**
Kutluay S., ESEN A.
APPLIED MATHEMATICS AND COMPUTATION, vol.161, no.3, pp.897-913, 2005 (SCI-Expanded)

- LIII. **A lumped Galerkin method for solving the Burgers equation**
Kutluay S., Esen A.
INTERNATIONAL JOURNAL OF COMPUTER MATHEMATICS, vol.81, no.11, pp.1433-1444, 2004 (SCI-Expanded)
- LIV. **A B-spline finite element method for the thermistor problem with the modified electrical conductivity**
Kutluay S., Esen A.
APPLIED MATHEMATICS AND COMPUTATION, vol.156, no.3, pp.621-632, 2004 (SCI-Expanded)
- LV. **A linearized numerical scheme for Burgers-like equations**
Kutluay S., Esen A.
APPLIED MATHEMATICS AND COMPUTATION, vol.156, no.2, pp.295-305, 2004 (SCI-Expanded)
- LVI. **Numerical solutions of the Burgers' equation by the least-squares quadratic B-spline finite element method**
Kutluay S., Esen A., Dag I.
JOURNAL OF COMPUTATIONAL AND APPLIED MATHEMATICS, vol.167, no.1, pp.21-33, 2004 (SCI-Expanded)
- LVII. **A variational approximation to the problem of the deflection of a bar**
Aksan E. N., Ozdes A., Esen A.
APPLIED MATHEMATICS AND COMPUTATION, vol.150, no.2, pp.525-531, 2004 (SCI-Expanded)
- LVIII. **An isotherm migration formulation for one-phase Stefan problem with a time dependent Neumann condition**
Kutluay S., Esen A.
APPLIED MATHEMATICS AND COMPUTATION, vol.150, no.1, pp.59-67, 2004 (SCI-Expanded)
- LIX. **A numerical solution of the Stefan problem with a Neumann-type boundary condition by enthalpy method**
Esen A., Kutluay S.
APPLIED MATHEMATICS AND COMPUTATION, vol.148, no.2, pp.321-329, 2004 (SCI-Expanded)

Articles Published in Other Journals

- I. **A Trigonometric Quintic B-Spline Basis Collocation Method for the KdV-Kawahara Equation**
Karaagac B., Esen A., Owolabi K. M., Pindza E.
NUMERICAL ANALYSIS AND APPLICATIONS, vol.16, no.3, pp.216-228, 2023 (ESCI)
- II. **An Application of Trigonometric Quintic B-Spline Collocation Method for Sawada-Kotera Equation**
KARABENLİ H., ESEN A., YAĞMURLU N. M.
Adıyaman Üniversitesi Fen Bilimleri Dergisi, vol.12, no.2, pp.269-282, 2022 (Peer-Reviewed Journal)
- III. **Numerical Investigation of Modified Fornberg Whitham Equation**
YAĞMURLU N. M., YILDIZ E., UÇAR Y., ESEN A.
Mathematical Sciences and Applications E-Notes, vol.9, no.2, pp.81-94, 2021 (Peer-Reviewed Journal)
- IV. **A Crank-Nicolson Approximation for the time Fractional Burgers Equation**
Onal M., ESEN A.
Applied Mathematics and Nonlinear Sciences, vol.5, no.2, pp.177-184, 2020 (ESCI)
- V. **Collocation Method for the KdV-Burgers-Kuramoto Equation with Caputo Fractional Derivative**
YAĞMURLU N. M., UÇAR Y., ESEN A.
Fundamentals of Contemporary Mathematical Sciences, vol.1, no.1, pp.1-13, 2020 (Peer-Reviewed Journal)
- VI. **A Lumped Galerkin finite element method for the generalized Hirota-Satsuma coupled KdV and coupled MKdV equation**
YAĞMURLU N. M., KARAAĞAÇ B., ESEN A.
Tbilisi Mathematical Journal, vol.12, no.3, pp.159-173, 2019 (ESCI)
- VII. **Exact solutions of nonlinear evolution equations using the extended modified Exp(-Omega(xi)) function method**
KARAAĞAÇ B., Kutluay S., Yagmurlu N. M., ESEN A.

TBILISI MATHEMATICAL JOURNAL, vol.12, no.3, pp.109-119, 2019 (ESCI)

- VIII. **A Lumped Galerkin finite element method for the generalized Hirota-Satsuma coupled KdV and coupled MKdV equations**
YAĞMURLU N. M., Karaagac B., ESEN A.
TBILISI MATHEMATICAL JOURNAL, vol.12, no.3, pp.159-173, 2019 (ESCI)
- IX. **Genelleştirilmiş hiperbolik Burgers denkleminin yeni mixed-dark soliton çözümleri**
DÜŞÜNCELİ F., BAŞKONUŞ H. M., ESEN A., BULUT H.
Balıkesir Üniversitesi Fen Bilimleri Enstitüsü Dergisi, vol.21, no.2, pp.503-511, 2019 (Peer-Reviewed Journal)
- X. **A New Perspective on The Numerical Solution for Fractional Klein Gordon Equation**
Karaagac B., UÇAR Y., YAĞMURLU N. M., ESEN A.
JOURNAL OF POLYTECHNIC-POLITEKNİK DERGİSİ, vol.22, no.2, pp.443-451, 2019 (ESCI)
- XI. **NUMERICAL SOLUTIONS FOR THE FOURTH ORDER EXTENDED FISHER-KOLMOGOROV EQUATION WITH HIGH ACCURACY BY DIFFERENTIAL QUADRATURE METHOD**
Bashan A., UÇAR Y., YAĞMURLU N. M., ESEN A.
SIGMA JOURNAL OF ENGINEERING AND NATURAL SCIENCES-SIGMA MUHENDISLIK VE FEN BİLİMLERİ DERGİSİ, vol.9, no.3, pp.273-284, 2018 (ESCI)
- XII. **Quadratic B-Spline Galerkin Method for Numerical Solutions of Fractional Telegraph Equations**
TAŞBOZAN O., ESEN A.
Bulletin of Mathematical Sciences and Applications, vol.18, pp.23-39, 2017 (Peer-Reviewed Journal)
- XIII. **A numerical treatment based on Haar wavelets for coupled KdV equation**
Oruç Ö., Bulut F., ESEN A.
An International Journal of Optimization and Control: Theories Applications (IJOCTA), vol.7, no.2, pp.195, 2017 (Peer-Reviewed Journal)
- XIV. **Numerical Solution of Time Fractional Schrödinger Equation by Using Quadratic B-Spline Finite Elements**
ESEN A., TAŞBOZAN O.
Annales Mathematicae Silesianae, vol.31, no.1, pp.83-98, 2017 (Scopus)
- XV. **Numerical solutions for a Stefan problem**
KARABENLİ H., ESEN A., AKSAN E. N.
New Trends in Mathematical Science, vol.4, no.4, pp.175-187, 2016 (Peer-Reviewed Journal)
- XVI. **Numerical Solutions of the Sine-Gordon Equation by Collocation Method**
TASBOZAN O., YAĞMURLU N. M., UÇAR Y., ESEN A.
Sohag J. Math, vol.3, no.1, pp.1-6, 2016 (Peer-Reviewed Journal)
- XVII. **Numerical Solutions of the Sine-Gordon Equation by Collocation Method**
TASBOZAN O., YAĞMURLU N. M., UÇAR Y., ESEN A.
Sohag J. Math, vol.3, no.1, pp.1-6, 2016 (Peer-Reviewed Journal)
- XVIII. **Numerical Solutions of the Combined KdV MKdV Equation by a quinic B spline Collocation Method**
YAĞMURLU N. M., TAŞBOZAN O., UÇAR Y., ESEN A.
Applied Mathematics& Information Sciences Letters, vol.4, no.1, pp.19-24, 2016 (Peer-Reviewed Journal)
- XIX. **Finite Difference Methods for Fractional Gas Dynamics Equation**
ESEN A., KARAAGAC B., TASBOZAN O.
Appl. Math. Inf. Sci. Lett, vol.4, no.1, pp.1-4, 2016 (Peer-Reviewed Journal)
- XX. **Numerical Solutions of the Sine-Gordon Equation by Collocation Method**
TASBOZAN O., YAĞMURLU N. M., UÇAR Y., ESEN A.
Sohag J. Math, vol.3, no.1, pp.1-6, 2016 (Peer-Reviewed Journal)
- XXI. **Numerical Solutions of the Sine-Gordon Equation by Collocation Method**
TASBOZAN O., YAĞMURLU N. M., UÇAR Y., ESEN A.
Sohag J. Math, vol.3, no.1, pp.1-6, 2016 (Peer-Reviewed Journal)
- XXII. **A B-spline collocation method for solving fractional diffusion and fractional diffusion-wave equations**
ESEN A., TASBOZAN O., UÇAR Y., YAĞMURLU N. M.

- TBILISI MATHEMATICAL JOURNAL, vol.8, no.2, pp.181-193, 2015 (ESCI)
- XXIII. **Numerical solution of time fractional Burgers equation**
Esen A., Tasbozan O.
ACTA UNIVERSITATIS SAPIENTIAE-MATHEMATICA, vol.7, no.2, pp.167-185, 2015 (ESCI)
- XXIV. **Cubic B-spline collocation method for solving time fractional gas dynamics equation**
Esen A., Tasbozan O.
TBILISI MATHEMATICAL JOURNAL, vol.8, no.2, pp.221-231, 2015 (ESCI)
- XXV. **Numerical solution of time fractional nonlinear Schrodinger equation arising in quantum mechanics by cubic B spline finite elements**
ESEN A., TAŞBOZAN O.
Malaya Journal of Matematik, vol.3, no.4, pp.387-397, 2015 (Peer-Reviewed Journal)
- XXVI. **Numerical solution of some fractional partial differential equations using collocation finite element method**
UÇAR Y., YAĞMURLU N. M., Tasbozan O., ESEN A.
Progress in Fractional Differentiation and Applications, vol.1, no.3, pp.157-164, 2015 (Scopus)
- XXVII. **Approximate Analytical Solutions of the Damped Burgers and Boussinesq Burgers Equations**
ESEN A., TAŞBOZAN O., KUTLUAY S.
Çankaya University Journal of Science and Engineering, vol.11, no.1, pp.65-76, 2014 (Peer-Reviewed Journal)
- XXVIII. **Solving Fractional Diffusion And Fractional Diffusion Wave Equations By Petrov Galerkin Finitye Element Method**
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- I. **Solving 5th Order KdV-Burger-Fisher Equation via Quintic Trigonometric B-spline Collocation Method**
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Supported Projects

ESEN A., Project Supported by Higher Education Institutions, İNÖNÜ ÜNİVERSİTESİ FEN EDEBİYAT FAKÜLTESİ

MATEMATİK BÖLÜMÜ LİSANSÜSTÜ EĞİTİM DERSLİĞİ ALTYAPI PROJESİ, 2016 - Continues

ESEN A., BULUT F., ORUÇ Ö., Project Supported by Higher Education Institutions, Lineer olmayan kısmi diferansiyel denklemlerin Haar dalgacıkları ve Yüksek mertebeli Haar dalgacıkları yöntemleri ile çözümleri, 2021 - 2022

ESEN A., Project Supported by Higher Education Institutions, Kesirli mertebeden Burgers denkleminin Sonlu Fark Yöntemleri ile Nümerik Çözümleri, 2018 - 2020

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