

Prof. DOĞAN KAYA

Personal Information

Office Phone: [+90 444 0 413](tel:+904440413) Extension: 4618 & 3112

Fax Phone: [+90 216 489 9714](tel:+902164899714)

Email: dogank@ticaret.edu.tr

Web: <https://avesis.ticaret.edu.tr/dogank>

Address: Sutluce Mahallesi, Imrahor Caddesi, No: 90, Beyoglu 34445, Istanbul, TURKIYE.

International Researcher IDs

ScholarID: CGc6eqwAAAAJ

ORCID: 0000-0002-8400-5313

Publons / Web Of Science ResearcherID: ABD-9843-2020

ScopusID: 7004487747

Yoksis Researcher ID: 4284

Education Information

Doctorate, University of Newcastle Upon Tyne, SCIENCE INSTITUTE, DEPARTMENT OF COMPUTER SCIENCES, England
1992 - 1995

Postgraduate, Firat University, Fen Bilimleri Enstitüsü, Matematik (YI) (Tezli), Turkey 1988 - 1990

Undergraduate, Van Yüzüncü Yıl University, Fen-Edebiyat Fakültesi, Matematik Bölümü, Turkey 1984 - 1988

Foreign Languages

English, C1 Advanced

Dissertations

Doctorate, Parallel Algorithms for Linear Algebra on a Shared Memory Multiprocessor, University of Newcastle Upon Tyne, Computing Laboratory, DEPARTMENT OF COMPUTING SCIENCE , 1995

Postgraduate, Lineer olamayan differansiyel denklemler, Firat University, Fen Bilimleri Enstitüsü, Matematik (YI) (Tezli), 1990

Research Areas

Natural Sciences

Academic Titles / Tasks

Professor, Istanbul Commerce University, İnsan ve Toplum Bilimleri Fakültesi, Matematik Bölümü, 2011 - Continues

Professor, Firat University, Fen Fakültesi, Matematik Bölümü, 2006 - 2011

Associate Professor, Firat University, Fen Fakültesi, Matematik Bölümü, 2000 - 2006

Assistant Professor, Firat University, Fen Fakültesi, Matematik Bölümü, 1995 - 2000

Academic and Administrative Experience

Istanbul Commerce University, 2022 - Continues

Istanbul Commerce University, 2022 - Continues

Istanbul Commerce University, 2014 - 2017

Istanbul Commerce University, 2011 - 2013

Ardahan University, 2009 - 2010

Ardahan University, 2008 - 2010

Firat University, 2002 - 2005

Courses

Differential Equations 1, Undergraduate, 2023 - 2024, 2022 - 2023

Nümerik Analiz 1, Undergraduate, 2023 - 2024

Kariyer Planlama, Undergraduate, 2023 - 2024

Computer Programming I, Undergraduate, 2023 - 2024

Business Mathematics 1, Undergraduate, 2023 - 2024

Diferensiyel Denklemler I ve II, Undergraduate, 2022 - 2023, 2012 - 2013, 2011 - 2012

KISMİ DİFERANSİYEL DENKLEMLER, Undergraduate, 2021 - 2022

Lineer Cebir 1 ve 2, Undergraduate, 2021 - 2022

Mathematics 1 and 2, Undergraduate, 2021 - 2022

Matematik 1 ve 2, Undergraduate, 2021 - 2022

ENGINEERING MATHEMATICS I and II, Undergraduate, 2020 - 2021, 2019 - 2020, 2018 - 2019

Mathematical Analysis I ve II, Undergraduate, 2020 - 2021, 2019 - 2020, 2018 - 2019, 2017 - 2018, 2013 - 2014, 2012 - 2013, 2011 - 2012

Mühendislik Matematiği I ve II, Undergraduate, 2020 - 2021

Lineer Cebir 1, Undergraduate, 2019 - 2020

Random Process, Postgraduate, 2017 - 2018

Rastgele Süreç, Undergraduate, 2017 - 2018

ENGINEERING MATHEMATICS II, Undergraduate, 2016 - 2017

ENGINEERING MATHEMATICS I, Undergraduate, 2016 - 2017

MATHEMATICS II, Undergraduate, 2016 - 2017

Kismi Diferansiyel Denklemler İçin Sonlu Elemanlar Yöntemi, Doctorate, 2016 - 2017

Mathematical Analysis I, Undergraduate, 2016 - 2017

Mathematical Analysis II, Undergraduate, 2016 - 2017

Mühendislikte Sonlu Elemanlar Yöntemi, Doctorate, 2016 - 2017

SEMINAR , Postgraduate, 2016 - 2017

MATHEMATICS I, Undergraduate, 2016 - 2017

Nümerik Analiz, Undergraduate, 2013 - 2014, 2012 - 2013, 2011 - 2012

Differential Equation , Undergraduate, 2012 - 2013

Nümerik Analiz, Undergraduate, 2010 - 2011, 2009 - 2010, 2008 - 2009, 2007 - 2008, 2006 - 2007, 2005 - 2006, 2004 - 2005, 2003 - 2004, 2002 - 2003, 2000 - 2001

Lineer Olmayan Diferansiyel Denklemler, Doctorate, 2006 - 2007, 2005 - 2006, 2004 - 2005, 2003 - 2004, 2002 - 2003, 2000 - 2001

Advising Theses

DOĞAN K., Başlangıç ve sınır koşullarına sahip bazı lineer olmayan kısmi diferansiyel denklemler için simetri analizi, Doctorate, G.İSKENDERÖĞLU(Student), 2020

DOĞAN K., İntegralebilir denklemler için soliton çözümler ve uygulamaları, Postgraduate, B.KUTLU(Student), 2015

DOĞAN K., Bazı lineer olmayan kısmi diferansiyel denklemlerin özel dönüşümler yardımıyla dalga çözümleri ve bu çözümlerin analizleri, Doctorate, S.DURAN(Student), 2012

DOĞAN K., Lineer olmayan kısmi diferansiyel denklemlerin hareket eden dalga çözümleri için bazı metotlar ve çözümlerin sayısal analizleri, Doctorate, B.KILIÇ(Student), 2012

DOĞAN K., Bazı özel lineer olmayan diferansiyel denklemlerin çözümlerinin elde edilmesi ve bu çözümlerin karşılaştırılması, Doctorate, A.YOKUŞ(Student), 2011

DOĞAN K., Bazı lineer olmayan kısmi diferansiyel denklemlerin periyodik dalga çözümleri, Doctorate, Y.UĞURLU(Student), 2010

DOĞAN K., Lineer ve lineer olmayan diferansiyel denklemlerin sayısal çözümlerinin elde edilmesi ve elde edilen sonuçların irdelenmesi, Postgraduate, Z.SARIATEŞ(Student), 2010

DOĞAN K., Diferansiyel denklemlerin çözümlerinin asimptotik davranışları ve kararlılığı, Postgraduate, S.DURAN(Student), 2006

DOĞAN K., Difüzyon denklemlerin çözümlerinin patlaması, Postgraduate, Y.UĞURLU(Student), 2005

DOĞAN K., Doğrusal olmayan parabolik veya hiperbolik diferansiyel denklemlerde global çözümlerin yokluğu (blow up), Doctorate, N.POLAT(Student), 2005

DOĞAN K., Kısmi diferansiyel denklemler için bazı yaklaşım metodları ve uygulamaları, Doctorate, İ.ENAM(Student), 2004

DOĞAN K., Kısmi diferansiyel denklemlerin çözümlerinin azalması ve kararlılığı, Postgraduate, T.BAKI(Student), 2003

DOĞAN K., Başlangıç ve sınır değer problemlerinin seriler yardımcı ile çözümleri, Postgraduate, S.ÇİÇEK(Student), 2002

DOĞAN K., Burgers denkleminin sayısal çözümlerinin karşılaştırılması üzerine bir çalışma, Postgraduate, A.YOKUŞ(Student), 2002

DOĞAN K., Lineer cebirsel denklem sistemlerinin sayısal çözümleri ve bu çözümlerin sayısal irdelenmesi, Postgraduate, İ.ENAM(Student), 1999

DOĞAN K., Kısmi diferansiyel denklemlerin analitik çözümleri ve sayısal çözümlerinin karşılaştırılması, Postgraduate, T.TUTAK(Student), 1999

Jury Memberships

Associate Professor Exam, Associate Professor Exam, Eskişehir Osmangazi Üniversitesi, December, 2023

Published journal articles indexed by SCI, SSCI, and AHCI

- I. **An expansion method for generating travelling wave solutions for the (2 + 1)-dimensional Bogoyavlensky-Konopelchenko equation with variable coefficients**
Yokuş A., Duran S., KAYA D.
Chaos, Solitons and Fractals, vol.178, 2024 (SCI-Expanded)
- II. **Application of some nonclassical methods for p-defocusing complex Klein-Gordon equation**
Yokus A., İSKENDERÖĞLU G., KAYA D.
Optical and Quantum Electronics, vol.55, no.5, 2023 (SCI-Expanded)
- III. **Chirped self-similar pulses and envelope solutions for a nonlinear Schrödinger's in optical fibers using Lie group method**
İSKENDERÖĞLU G., KAYA D.
Chaos, Solitons and Fractals, vol.162, 2022 (SCI-Expanded)
- IV. **Refraction simulation of internal solitary waves for the fractional Benjamin-Ono equation in fluid dynamics**
Duran S., Yokuş A., Durur H., KAYA D.
Modern Physics Letters B, vol.35, no.26, 2021 (SCI-Expanded)

- V. **Breaking analysis of solitary waves for the shallow water wave system in fluid dynamics**
Duran S., KAYA D.
European Physical Journal Plus, vol.136, no.9, 2021 (SCI-Expanded)
- VI. **Comparison exact and numerical simulation of the traveling wave solution in nonlinear dynamics**
Yokus A., KAYA D.
International Journal of Modern Physics B, vol.34, no.29, 2020 (SCI-Expanded)
- VII. **Role of Gilson-Pickering equation for the different types of soliton solutions: a nonlinear analysis**
Yokus A., Durur H., Abro K. A., KAYA D.
European Physical Journal Plus, vol.135, no.8, 2020 (SCI-Expanded)
- VIII. **Symmetry analysis of initial and boundary value problems for fractional differential equations in Caputo sense**
ISKENDEROGLU G., KAYA D.
Chaos, Solitons and Fractals, vol.134, 2020 (SCI-Expanded)
- IX. **Lie group analysis for initial and boundary value problem of time-fractional nonlinear generalized KdV partial differential equation**
KAYA D., ISKENDEROGLU G.
Turkish Journal of Mathematics, vol.43, no.3, pp.1263-1275, 2019 (SCI-Expanded)
- X. **Solutions of the fractional combined KdV-mKdV equation with collocation method using radial basis function and their geometrical obstructions**
KAYA D., Gulbahar S., Yokus A., Gulbahar M.
Advances in Difference Equations, vol.2018, no.1, 2018 (SCI-Expanded)
- XI. **Numerical solutions of the Fractional KdV-Burgers-Kuramoto equation**
KAYA D., Gulbahar S., Yokus A.
Thermal Science, vol.22, 2018 (SCI-Expanded)
- XII. **Comparison of three semi-analytical methods for solving (1+1)-dimensional dispersive long wave equations**
Ugurlu Y., KAYA D., Inan I. E.
Computers and Mathematics with Applications, vol.61, no.5, pp.1278-1290, 2011 (SCI-Expanded)
- XIII. **Reply to Comment on 'Exact solutions to the various nonlinear evolution equations'**
KAYA D., Inan I. E.
Physica Scripta, vol.83, no.1, 2011 (SCI-Expanded)
- XIV. **Auto-Bäcklund transformation and similarity reductions for coupled Burger's equation**
Inan I. E., KAYA D., Ugurlu Y.
Applied Mathematics and Computation, vol.216, no.9, pp.2507-2511, 2010 (SCI-Expanded)
- XV. **Exact solutions to the various nonlinear evolution equations**
KAYA D., Inan I. E.
Physica Scripta, vol.79, no.4, 2009 (SCI-Expanded)
- XVI. **Application of new triangular functions to nonlinear partial differential equations**
Abdel-Salam E. A., KAYA D.
Zeitschrift fur Naturforschung - Section A Journal of Physical Sciences, vol.64, no.1-2, pp.1-7, 2009 (SCI-Expanded)
- XVII. **Existence, asymptotic behaviour, and blow up of solutions for a class of nonlinear wave equations with dissipative and dispersive terms**
Polat N., KAYA D.
Zeitschrift fur Naturforschung - Section A Journal of Physical Sciences, vol.64, no.5-6, pp.315-326, 2009 (SCI-Expanded)
- XVIII. **Solutions of the Cahn-Hilliard equation**
Ugurlu Y., KAYA D.
Computers and Mathematics with Applications, vol.56, no.12, pp.3038-3045, 2008 (SCI-Expanded)
- XIX. **Exact and numerical solutions of generalized Drinfeld-Sokolov equations**
Ugurlu Y., KAYA D.
Physics Letters, Section A: General, Atomic and Solid State Physics, vol.372, no.16, pp.2867-2873, 2008 (SCI-

- Expanded)
- XX. **Analytic method for solitary solutions of some partial differential equations**
 Uğurlu Y., KAYA D.
 Physics Letters, Section A: General, Atomic and Solid State Physics, vol.370, no.3-4, pp.251-259, 2007 (SCI-Expanded)
- XXI. **Exact solutions of some nonlinear partial differential equations**
 Inan I. E., KAYA D.
 Physica A: Statistical Mechanics and its Applications, vol.381, no.1-2, pp.104-115, 2007 (SCI-Expanded)
- XXII. **A numerical comparison of a Kawahara equation**
 KAYA D., Al-Khaled K.
 Physics Letters, Section A: General, Atomic and Solid State Physics, vol.363, no.5-6, pp.433-439, 2007 (SCI-Expanded)
- XXIII. **A analytic and numerical solution to a modified Kawahara equation and a convergence analysis of the method**
 Polat N., KAYA D., Tutalar H. I.
 Applied Mathematics and Computation, vol.181, no.1, pp.193-199, 2006 (SCI-Expanded)
- XXIV. **A analytic and numerical solution to a modified Kawahara equation and a convergence analysis of the method**
 Polat N., KAYA D., Tutalar H. I.
 Applied Mathematics and Computation, vol.179, no.2, pp.466-472, 2006 (SCI-Expanded)
- XXV. **Some exact solutions to the potential Kadomtsev-Petviashvili equation and to a system of shallow water wave equations**
 Inan I. E., KAYA D.
 Physics Letters, Section A: General, Atomic and Solid State Physics, vol.355, no.4-5, pp.314-318, 2006 (SCI-Expanded)
- XXVI. **A numerical solution and an exact explicit solution of the NLS equation**
 El-Sayed S. M., KAYA D.
 Applied Mathematics and Computation, vol.172, no.2 SPEC. ISS., pp.1315-1322, 2006 (SCI-Expanded)
- XXVII. **The exact and numerical solitary-wave solutions for generalized modified Boussinesq equation**
 KAYA D.
 Physics Letters, Section A: General, Atomic and Solid State Physics, vol.348, no.3-6, pp.244-250, 2006 (SCI-Expanded)
- XXVIII. **Blow up of solution for the generalized Boussinesq equation with damping term**
 Polat N., KAYA D.
 Zeitschrift fur Naturforschung - Section A Journal of Physical Sciences, vol.61, no.5-6, pp.235-238, 2006 (SCI-Expanded)
- XXIX. **A numerical implementation of the decomposition method for the Lienard equation**
 KAYA D., El-Sayed S. M.
 Applied Mathematics and Computation, vol.171, no.2, pp.1095-1103, 2005 (SCI-Expanded)
- XXX. **An application for a modified KdV equation by the decomposition method and finite element method**
 Geyikli T., KAYA D.
 Applied Mathematics and Computation, vol.169, no.2, pp.971-981, 2005 (SCI-Expanded)
- XXXI. **Parallel algorithms for reduction of a symmetric matrix to tridiagonal form on a shared memory multiprocessor**
 KAYA D.
 Applied Mathematics and Computation, vol.169, no.2, pp.1045-1062, 2005 (SCI-Expanded)
- XXXII. **Comparison of the solutions obtained by B-spline FEM and ADM of KdV equation**
 Geyikli T., KAYA D.
 Applied Mathematics and Computation, vol.169, no.1, pp.146-156, 2005 (SCI-Expanded)
- XXXIII. **A numerical application of the decomposition method for the combined KdV-MKdV equation**
 KAYA D., Inan I. E.

- Applied Mathematics and Computation, vol.168, no.2, pp.915-926, 2005 (SCI-Expanded)
- XXXIV. Exact and numerical traveling wave solutions of Whitham-Broer-Kaup equations**
El-Sayed S. M., KAYA D.
Applied Mathematics and Computation, vol.167, no.2, pp.1339-1349, 2005 (SCI-Expanded)
- XXXV. An implementation of the ADM for generalized one-dimensional Klein-Gordon equation**
KAYA D.
Applied Mathematics and Computation, vol.166, no.2, pp.426-433, 2005 (SCI-Expanded)
- XXXVI. On experimental results and explicit exact solutions for the generalized Boussinesq type equation**
KAYA D.
Applied Mathematics and Computation, vol.165, no.2, pp.303-311, 2005 (SCI-Expanded)
- XXXVII. Parallel algorithms for reduction of a general matrix to upper Hessenberg form on a shared memory multiprocessor**
KAYA D., Wright K.
Applied Mathematics and Computation, vol.165, no.1, pp.195-212, 2005 (SCI-Expanded)
- XXXVIII. A decomposition method for finding solitary and periodic solutions for a coupled higher-dimensional Burgers equations**
KAYA D., Yokus A.
Applied Mathematics and Computation, vol.164, no.3, pp.857-864, 2005 (SCI-Expanded)
- XXXIX. The symmetric tridiagonal eigenproblem on a shared memory multiprocessor: Part II**
KAYA D.
Applied Mathematics and Computation, vol.163, no.1, pp.213-244, 2005 (SCI-Expanded)
- XL. Parallel algorithms for LU decomposition on a shared memory multiprocessor**
KAYA D., Wright K.
Applied Mathematics and Computation, vol.163, no.1, pp.179-191, 2005 (SCI-Expanded)
- XLI. Blow-up of solutions for the damped Boussinesq equation**
Polat N., KAYA D., Tutarlar H. I.
Zeitschrift fur Naturforschung - Section A Journal of Physical Sciences, vol.60, no.7, pp.473-476, 2005 (SCI-Expanded)
- XLII. A convergence analysis of the ADM and an application**
KAYA D., Inan I. E.
Applied Mathematics and Computation, vol.161, no.3, pp.1015-1025, 2005 (SCI-Expanded)
- XLIII. An experience using different synchronisation mechanisms on a shared memory multiprocessors**
KAYA D.
Applied Mathematics and Computation, vol.161, no.3, pp.1027-1036, 2005 (SCI-Expanded)
- XLIV. An application of the modified decomposition method for two dimensional sine-Gordon equation**
KAYA D.
Applied Mathematics and Computation, vol.159, no.1, pp.1-9, 2004 (SCI-Expanded)
- XLV. An application of the decompositionmethod for the two-dimensional KdV-Burgers equation**
KAYA D.
Computers and Mathematics with Applications, vol.48, no.10-11, pp.1659-1665, 2004 (SCI-Expanded)
- XLVI. On the numerical solution of the system of two-dimensional Burgers' equations by the decomposition method**
El-Sayed S. M., KAYA D.
Applied Mathematics and Computation, vol.158, no.1, pp.101-109, 2004 (SCI-Expanded)
- XLVII. Numerical comparison of methods for solving parabolic equations**
Al-Khaled K., KAYA D., Noor M. A.
Applied Mathematics and Computation, vol.157, no.3, pp.735-743, 2004 (SCI-Expanded)
- XLVIII. The decomposition method for solving (2 + 1)-dimensional Boussinesq equation and (3 + 1)-dimensional KP equation**
El-Sayed S. M., KAYA D.
Applied Mathematics and Computation, vol.157, no.2, pp.523-534, 2004 (SCI-Expanded)

- XLIX. An application of the ADM to seven-order Sawada-Kotara equations**
 El-Sayed S. M., KAYA D.
 Applied Mathematics and Computation, vol.157, no.1, pp.93-101, 2004 (SCI-Expanded)
- L. A numerical solution of the Klein-Gordon equation and convergence of the decomposition method**
 KAYA D., El-Sayed S. M.
 Applied Mathematics and Computation, vol.156, no.2, pp.341-353, 2004 (SCI-Expanded)
- LI. The symmetric tridiagonal eigenproblem on a shared memory multiprocessor: Part I**
 KAYA D.
 Applied Mathematics and Computation, vol.156, no.1, pp.189-209, 2004 (SCI-Expanded)
- LII. A reliable method for the numerical solution of the kinetics problems**
 KAYA D.
 Applied Mathematics and Computation, vol.156, no.1, pp.261-270, 2004 (SCI-Expanded)
- LIII. Adomian's decomposition method applied to systems of nonlinear algebraic equations**
 KAYA D., El-Sayed S. M.
 Applied Mathematics and Computation, vol.154, no.2, pp.487-493, 2004 (SCI-Expanded)
- LIV. Finite difference method for solving fourth-order obstacle problems**
 Al-SAID E. A., Noor M. A., KAYA D., Al-Khaled K.
 International Journal of Computer Mathematics, vol.81, no.6, pp.741-748, 2004 (SCI-Expanded)
- LV. Series solution to the Pochhammer-Chree equation and comparison with exact solutions**
 Shawagfeh N., KAYA D.
 Computers and Mathematics with Applications, vol.47, no.12, pp.1915-1920, 2004 (SCI-Expanded)
- LVI. Solitary-wave solutions for compound KdV-type and compound KdV-Burgers-type equations with nonlinear terms of any order**
 KAYA D.
 Applied Mathematics and Computation, vol.152, no.3, pp.709-720, 2004 (SCI-Expanded)
- LVII. A numerical simulation and explicit solutions of the generalized Burgers-Fisher equation**
 KAYA D., El-Sayed S. M.
 Applied Mathematics and Computation, vol.152, no.2, pp.403-413, 2004 (SCI-Expanded)
- LVIII. Exact and numerical soliton solutions of some nonlinear physical models**
 KAYA D.
 Applied Mathematics and Computation, vol.152, no.2, pp.551-560, 2004 (SCI-Expanded)
- LIX. An application of the decomposition method for the KdVB equation**
 KAYA D.
 Applied Mathematics and Computation, vol.152, no.1, pp.279-288, 2004 (SCI-Expanded)
- LX. Exact and numerical traveling wave solutions for nonlinear coupled equations using symbolic computation**
 KAYA D., Inan I. E.
 Applied Mathematics and Computation, vol.151, no.3, pp.775-787, 2004 (SCI-Expanded)
- LXI. Comparing numerical methods for Helmholtz equation model problem**
 El-Sayed S. M., KAYA D.
 Applied Mathematics and Computation, vol.150, no.3, pp.763-773, 2004 (SCI-Expanded)
- LXII. A numerical simulation of solitary-wave solutions of the generalized regularized long-wave equation**
 KAYA D.
 Applied Mathematics and Computation, vol.149, no.3, pp.833-841, 2004 (SCI-Expanded)
- LXIII. Solitary wave solutions for a generalized Hirota-Satsuma coupled KdV equation**
 KAYA D.
 Applied Mathematics and Computation, vol.147, no.1, pp.69-78, 2004 (SCI-Expanded)
- LXIV. Comparing numerical methods for the solutions of systems of ordinary differential equations**
 Shawagfeh N., KAYA D.
 Applied Mathematics Letters, vol.17, no.3, pp.323-328, 2004 (SCI-Expanded)
- LXV. The decomposition method applied to solve high-order linear Volterra-Fredholm integro-differential**

equations

El-Sayed S. M., KAYA D., Zarea S.

International Journal of Nonlinear Sciences and Numerical Simulation, vol.5, no.2, pp.105-112, 2004 (SCI-Expanded)

- LXVI. **Numerical soliton-like solutions of the potential Kadomtsev-Petviashvili equation by the decomposition method**

KAYA D., El-Sayed S. M.

Physics Letters, Section A: General, Atomic and Solid State Physics, vol.320, no.2-3, pp.192-199, 2003 (SCI-Expanded)

- LXVII. **A numerical method for solving Jaulent-Miodek equation**

KAYA D., El-Sayed S. M.

Physics Letters, Section A: General, Atomic and Solid State Physics, vol.318, no.4-5, pp.345-353, 2003 (SCI-Expanded)

- LXVIII. **A numerical solution of the sine-Gordon equation using the modified decomposition method**

KAYA D.

Applied Mathematics and Computation, vol.143, no.2-3, pp.309-317, 2003 (SCI-Expanded)

- LXIX. **An explicit and numerical solutions of some fifth-order KdV equation by decomposition method**

KAYA D.

Applied Mathematics and Computation, vol.144, no.2-3, pp.353-363, 2003 (SCI-Expanded)

- LXX. **On the solution of the coupled Schrödinger-KdV equation by the decomposition method**

KAYA D., El-Sayed S. M.

Physics Letters, Section A: General, Atomic and Solid State Physics, vol.313, no.1-2, pp.82-88, 2003 (SCI-Expanded)

- LXXI. **On a generalized fifth order KdV equations**

KAYA D., El-Sayed S. M.

Physics Letters, Section A: General, Atomic and Solid State Physics, vol.310, no.1, pp.44-51, 2003 (SCI-Expanded)

- LXXII. **An application of the decomposition method for the generalized KdV and RLW equations**

KAYA D., El-Sayed S. M.

Chaos, Solitons and Fractals, vol.17, no.5, pp.869-877, 2003 (SCI-Expanded)

- LXXIII. **A numerical comparison of partial solutions in the decomposition method for linear and nonlinear partial differential equations**

KAYA D., Yokus A.

Mathematics and Computers in Simulation, vol.60, no.6, pp.507-512, 2002 (SCI-Expanded)

- LXXIV. **An application for a generalized KdV equation by the decomposition method**

KAYA D., Aassila M.

Physics Letters, Section A: General, Atomic and Solid State Physics, vol.299, no.2-3, pp.201-206, 2002 (SCI-Expanded)

- LXXV. **The use of Adomian decomposition method for solving a specific nonlinear partial differential equations**

KAYA D.

Bulletin of the Belgian Mathematical Society - Simon Stevin, vol.9, no.3, pp.343-349, 2002 (SCI-Expanded)

- LXXVI. **Application of the decomposition method for second order wave equations**

KAYA D.

International Journal of Computer Mathematics, vol.75, no.2, pp.235-245, 2000 (SCI-Expanded)

- LXXVII. **On Local Solutions of a Mildly Degenerate Hyperbolic Equation**

Aassila M., KAYA D.

Journal of Mathematical Analysis and Applications, vol.238, no.2, pp.418-428, 1999 (SCI-Expanded)

- LXXVIII. **On the solution of a Korteweg-de Vries like equation by the decomposition method**

KAYA D.

International Journal of Computer Mathematics, vol.72, no.4, pp.531-539, 1999 (SCI-Expanded)

Articles Published in Other Journals

- I. Lie symmetry analysis of Caputo time-fractional K(m,n) model equations with variable coefficients
İSKENDERÖĞLU G., KAYA D.
Sigma Journal of Engineering and Natural Sciences, 2024 (Peer-Reviewed Journal)
- II. Numerical comparison of Caputo and Conformable derivatives of time fractional Burgers-Fisher equation
Yokus A., Durur H., KAYA D., Ahmad H., Nofal T. A.
Results in Physics, vol.25, 2021 (Scopus)
- III. Applications of the Sub Equation Method for the High Dimensional Nonlinear Evolution Equation
DURAN S., KAYA D.
Erzincan Üniversitesi Fen Bilimleri Enstitüsü Dergisi, vol.14, no.3, pp.898-906, 2021 (Peer-Reviewed Journal)
- IV. Modeling of dark solitons for nonlinear longitudinal wave equation in a magneto-electro-elastic circular rod
Durur H., Yokus A., KAYA D., Ahmad H.
Sound and Vibration, vol.55, no.3, pp.241-251, 2021 (ESCI)
- V. Hyperbolic Type Traveling Wave Solutions of Regularized Long Wave Equation
H., YOKUŞ A., KAYA D.
Bilecik Şeyh Edebali Üniversitesi Fen Bilimleri Dergisi, vol.7, no.2, pp.815-824, 2020 (Peer-Reviewed Journal)
- VI. Symmetry Analysis and Conservation Laws of the Boundary Value Problems for Time-Fractional Generalized Burgers' Differential Equation
ISKENDEROGLU G., KAYA D.
Fundamental journal of mathematics and applications (Online), vol.2, no.2, pp.139-147, 2019 (Peer-Reviewed Journal)
- VII. ON LIE GROUP ANALYSIS OF BOUNDARY VALUE PROBLEM WITH CAPUTO FRACTIONAL DERIVATIVE
İSKENDERÖĞLU G., KAYA D.
Sigma Journal of Engineering and Natural Sciences, vol.10, pp.369-376, 2019 (Scopus)
- VIII. New Wave Solutions for Nonlinear Differential Equations using an Extended Bernoulli Equation as a New Expansion Method
DURAN S., KAYA D.
ITM, vol.22, pp.1-5, 2018 (Peer-Reviewed Journal)
- IX. Symmetry solution on fractional equation
ISKANDAROVA G., KAYA D.
An International Journal of Optimization and Control: Theories & Applications (IJOCTA), vol.7, no.3, pp.255-259, 2017 (Peer-Reviewed Journal)
- X. A review of the semi analytic numerical methods for higher order nonlinear partial equations
KAYA D.
Contemporary Analysis and Applied Mathematics, vol.3, no.1, pp.133-152, 2015 (Peer-Reviewed Journal)
- XI. Applications of a new expansion method for finding wave solutions of nonlinear differential equations
Duran S., KAYA D.
World Applied Sciences Journal, vol.18, no.11, pp.1582-1592, 2012 (Scopus)
- XII. An application for the higher order modified KdV equation by decomposition method
KAYA D.
Communications in Nonlinear Science and Numerical Simulation, vol.10, no.6, pp.693-702, 2005 (Scopus)
- XIII. Explicit solutions of generalized nonlinear Boussinesq equations
KAYA D.
Journal of Applied Mathematics, vol.1, no.1, pp.29-37, 2001 (Scopus)

Books & Book Chapters

- I. **Partial differential equations that lead to solitons**
Kaya D.
in: Encyclopedia of Complexity and Systems Science Series, Mohamed Atef Helal, Editor, Springer Nature, New York, pp.193-201, 2022
- II. **Semi-analytical methods for solving the KdV and mKdV equations**
Kaya D.
in: Encyclopedia of Complexity and Systems Science, Mohamed Atef Helal, Editor, Springer Nature, New York, pp.139-159, 2022
- III. **Comparison of Exact and Numerical Solutions for the Sharma-Tasso-Olver Equation**
KAYA D., YOKUŞ A., DEMİROĞLU U.
in: Numerical Solutions of Realistic Nonlinear Phenomena, J. A. Tenreiro Machado, Dumitru Baleanu, Necati Ozdemir, Editor, Springer Nature Switzerland AG 2020, Cham, pp.53-65, 2020

Refereed Congress / Symposium Publications in Proceedings

- I. **Euler-Bernoulli beam equation: invariant equations and solutions**
ISKENDERÖĞLU G., KAYA D.
ICAAM 2022, Turkey, 31 October - 06 November 2022
- II. **On Lie group analysis of boundary value problem with Caputo fractional derivative**
ISKENDERÖĞLU G., KAYA D.
ICOMAA 2019, Turkey, 3 - 05 May 2019
- III. **An Application for Sharma-Tasso-Olver Equations by Using Auto-Bäcklund Transformation**
KAYA D., YOKUŞ A., Demiroğlu U.
International Conference on Applied Mathematics in Engineering (ICAME) Balikesir, Turkey, 27 - 29 September 2018
- IV. **Symmetry Analysis and Conservation Laws of the Boundary Value Problems for Time-Fractional Generalized Burgers' Differential Equation**
ISKANDAROVA G., KAYA D.
ICAA 2018, Turkey, 11 - 14 September 2018
- V. **An application for time-fractional K(m,m) model equations by symmetry method**
ISKANDAROVA G., KAYA D.
ICAAM 2018, Cyprus (Kktc), 6 - 09 September 2018
- VI. **An Implementation of Auto-Bäcklund Transformation**
YOKUŞ A., KAYA D., Demiroğlu U.
International Conference on Applied Mathematics in Engineering (ICAME), 27 - 29 September 2018
- VII. **Applications of a New Expansion Method for Finding Wave Solutions of Nonlinear Differential Equations**
DURAN S., KAYA D.
International Conference on Applied Mathematics in Engineering (ICAME), Balikesir, Turkey, 27 - 29 June 2018, pp.155
- VIII. **Lie Group Analysis and Galilean Group Analysis for Partial Differential Equations**
ISKANDAROVA G., KAYA D.
ICOMAA 2018, Turkey, 11 - 13 May 2018
- IX. **A Study on Finding Exact Solutions for the System of Shallow Water Wave equation using Extended Bernoulli Sub-Equation method**
DURAN S., KAYA D.
3rd International Conference on Computational Mathematics and Engineering Sciences (CMES2018), Girne, Cyprus (Kktc), 4 - 06 May 2018, pp.311

- X. **Symmetry solution on fractional equation**
ISKANDAROVA G., KAYA D.
CMES-2017, Turkey, 20 - 22 May 2017
- XI. **Group analysis method for time-fractional nonlinear generalized Burgers differential equation**
İŞKENDERÖĞLU G., KAYA D.
SDEA-III, Turkey, 14 - 17 August 2017
- XII. **Finite Difference and Generalized Taylor Series Methods for Space and Time Fractional Burgers Equation**
YOKUŞ A., KAYA D.
International Conference on Advancements in Mathematical Sciences (AMS), 12 - 14 May 2016
- XIII. **A new approach for Painlevé analysis of the generalized Kawahara equation**
Kutlu B., KAYA D.
International Conference on Advancements in Mathematical Sciences, AMS 2015, Antalya, Turkey, 5 - 07 November 2015, vol.1676
- XIV. **Soliton Solutions to Integrable Equations and Kawahara Equation**
YOKUŞ A., KAYA D.
3rd International Conference on "Applied Mathematics & Approximation Theory - AMAT 2015, 28 - 31 May 2015