

# Prof. Ercan ÇELİK

## Personal Information

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## International Researcher IDs

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## Education Information

Associate Degree, Ataturk University, Açıköğretim Fakültesi, Turkey 2014 - 2016

Doctorate, Ataturk University, Fen Bilimleri Enstitüsü, Matematik Anabilim Dalı, Turkey 1998 - 2002

Postgraduate, Ataturk University, Fen Bilimleri Enstitüsü, Matematik Anabilim Dalı, Turkey 1995 - 1998

Undergraduate, Ataturk University, Fen Fakültesi, Matematik, Turkey 1991 - 1995

## Foreign Languages

English, B2 Upper Intermediate

## Dissertations

Doctorate, Diferensiyel-Cebirsel Denklemlerin Nümerik Çözümü, Atatürk Üniversitesi, Fen Bilimleri Enstitüsü, Matematik/ Uygulamalı Matematik, 2002

Postgraduate, Gröbner Bazı ve Uygulamaları, Atatürk Üniversitesi, Fen Bilimleri Enstitüsü, Matematik/ Uygulamalı Matematik, 1998

## Research Areas

Mathematics, Differential Equations, Integral Equations, Partial Differential Equations, Optimization, Numerical Analysis, Natural Sciences

## Academic Titles / Tasks

Professor, Ataturk University, Fen Fakültesi, Matematik, 2016 - Continues

Associate Professor, Ataturk University, Fen Fakültesi, Matematik, 2010 - 2016

Assistant Professor, Ataturk University, Fen Fakültesi, Matematik, 2008 - 2010

Assistant Professor, Yildiz Technical University, Faculty Of Arts & Science, Department Of Mathemeatics, 2006 - 2008

Assistant Professor, Ataturk University, Fen Fakültesi, Matematik, 2002 - 2006

Research Assistant, Ataturk University, Fen Fakültesi, Matematik, 1995 - 2002

## Academic and Administrative Experience

Head of Department, Ataturk University, Fen Fakültesi, Matematik, 2018 - Continues  
Atatürk Üniversitesi, Narman Myo, 2013 - 2016

## Courses

İleri Kısmi Diferansiyel Denklemler-I-II, Doctorate, 2020 - 2021  
Uygulamalı Matematik, Undergraduate, 2019 - 2020  
Uzmanlık Alan Dersi II, Doctorate, 2020 - 2021  
Diferansiyel Denklemler-I-II, Undergraduate, 2020 - 2021, 2019 - 2020  
İleri Nümerik Analiz-I-II, Doctorate, 2019 - 2020  
Uzmanlık Alan Dersi I, Doctorate, 2019 - 2020  
Differential-Algebraic Equation-I-II, Postgraduate, 2020 - 2021, 2019 - 2020  
Kısmi Diferansiyel Denklemler, Undergraduate, 2019 - 2020  
Differential Equation, Undergraduate, 2020 - 2021, 2019 - 2020  
Nümerik Analiz, Undergraduate, 2019 - 2020  
Matematik-I-II, Undergraduate, 2016 - 2017

## Advising Theses

ÇELİK E., Lucas Polinomları ile Diferansiyel-Cebirsel Denklemlerin Nümerik Çözümü, Postgraduate, B.BULUR(Student), 2018  
ÇELİK E., Fuzzy Metre Kullanılarak Fuzzy Sayılarının Sıralanması ve Sonuçların Karşılaştırılması, Doctorate, E.ABBASI(Student), 2018  
ÇELİK E., Kesirli Mertebeden Bir Matematiksel Modelin Çözümü, Doctorate, M.Ali(Student), 2017  
ÇELİK E., Kesirli Kompleks Dönüşüm Metodu ile Kesirli Diferansiyel- Cebirsel Denklemlerin Nümerik Çözümü, Doctorate, E.SEFİDĞAR(Student), 2017  
ÇELİK E., Aralık-Değerli Bulanık Topsis Yöntemi ile Yatırım Fırsatlarını Değerlendirme, Postgraduate, N.Mohammadi(Student), 2017  
ÇELİK E., Diferansiyel-Cebirsel Denklemler ve Kesirli Mertebeden Diferansiyel-Cebirsel Denklemlerin Homotopi Pertürbe Dönüşüm Metodu ve Yeni İteratif Dönüşüm Metodu ile Çözümü, Doctorate, R.Najafi(Student), 2016  
ÇELİK E., Çarpımsal(Multiplikatif) Türev ve Çarpımsal Lineer Diferansiyel Denklemler, Doctorate, N.TUNCELİ(Student), 2016  
ÇELİK E., Lineer Kompleks Diferansiyel Denklemlerin Legendre Polinomları ile Nümerik Çözümleri, Doctorate, F.DÜŞÜNCELİ(Student), 2015  
ÇELİK E., Uyumlu Kesirli Türev ve Dizisel Lineer Diferansiyel Denklemler, Atatürk Üniversitesi, Doctorate, E.ÜNAL(Student), 2015  
ÇELİK E., Diferansiyel Cebirsel Denklemlerin Haar Dalgacık Metodu İle Nümerik Çözümü, Doctorate, M.KARABACAK(Student), 2014  
ÇELİK E., Kesirli Mertebeden Kısmi Diferansiyel Cebirsel Denklemlerin Farklı Metodlarla Nümerik Çözümü, Doctorate, G.Dilek(Student), 2014  
ÇELİK E., Fuzzy Kesirli Diferansiyel Denklemlerin Sayısal Çözümleri, Doctorate, E.KHODADADİGNANDNAR(Student), 2014  
ÇELİK E., Numerical solution of Fractional Partial Differential-Algebraic Equations, Doctorate, K.TABATAHAEİ(Student), 2013  
ÇELİK E., Quasi Optiğin Durgun Denklemi İçin Optimal Kontrol Problemi ve Onun Nümerik Çözümü, Doctorate, Y.KOÇAK(Student), 2013  
ÇELİK E., RSA Kripto sistemini Etkileyen Faktörler, Doctorate, İ.OKUMUŞ(Student), 2012

ÇELİK E., Kısmi Diferansiyel-Cebirsel Denklemlerin Çok Değişkenli Padé Yaklaşımı ile Nümerik Çözümü, Doctorate, M.YİĞİDER(Student), 2011

ÇELİK E., Lineer Diferansiyel-Cebirsel Denklemlerin Hermite Polinomları yaklaşımı ile Nümerik Çözümü, Postgraduate, D.ÖZGÖKKURT(Student), 2011

ÇELİK E., Diferansiyel-Cebirsel Denklemlerin Laguerre Polinomları ile Nümerik Çözümü, Postgraduate, M.AKÇAY(Student), 2010

ÇELİK E., Diferansiyel-Cebirsel Denklemlerin Legendre Polinomları ile Nümerik Çözümü, Postgraduate, F.BERK(Student), 2010

ÇELİK E., Çok Değişkenli Padé Yaklaşımları ve Uygulamaları, Postgraduate, V.TÜRÜT(Student), 2007

ÇELİK E., Diferansiyel-Cebirsel Denklemlerin En Küçük Kareler Yaklaşımı ile Nümerik Çözümü, Postgraduate, M.AKAR(Student), 2007

ÇELİK E., Diferansiyel-Cebirsel Denklemlerin Adomian Ayrıştırma metodu ile Nümerik çözümü, Postgraduate, O.Kızıloğlu(Student), 2005

ÇELİK E., Diferansiyel-Cebirsel Denklemlerin Chebyshev Yaklaşımı ile Nümerik çözümü, Postgraduate, T.Yeloğlu(Student), 2004

## **Jury Memberships**

Associate Professor Exam, Associate Professor Exam, Bingöl Üniversitesi, October, 2021

Post Graduate, Post Graduate, Atatürk Üniversitesi, September, 2021

Doctorate, Doctorate, Atatürk Üniversitesi, August, 2021

Doctorate, Doctorate, Atatürk Üniversitesi, June, 2021

Post Graduate, Post Graduate, Ağrı İbrahim Çeçen Üniversitesi, June, 2021

PhD Thesis Monitoring Committee Member, PhD Thesis Monitoring Committee Member, Atatürk Üniversitesi, June, 2021

PhD Thesis Monitoring Committee Member, PhD Thesis Monitoring Committee Member, Atatürk Üniversitesi, June, 2021

Doctoral Examination, Doctoral Examination, Fırat Üniversitesi, June, 2021

PhD Thesis Monitoring Committee Member, PhD Thesis Monitoring Committee Member, Atatürk Üniversitesi, June, 2021

Associate Professor Exam, Associate Professor Exam, Orta Doğu Teknik Üniversitesi, May, 2021

Doctoral Examination, Doctoral Examination, Atatürk Üniversitesi, February, 2021

Doctoral Examination, Doctoral Examination, Atatürk Üniversitesi, February, 2021

Post Graduate, Post Graduate, Erzurum Teknik Üniversitesi, December, 2020

Associate Professor Exam, Associate Professor Exam, Eskişehir Osmangazi Üniversitesi, November, 2020

Associate Professor Exam, Associate Professor Exam, Orta Doğu Teknik Üniversitesi, October, 2020

Post Graduate, Post Graduate, Atatürk Üniversitesi, October, 2020

Doctorate, Doctorate, İnönü Üniversitesi, August, 2020

Doctoral Examination, Doctoral Examination, Fırat Üniversitesi, July, 2020

PhD Thesis Monitoring Committee Member, PhD Thesis Monitoring Committee Member, Atatürk Üniversitesi, June, 2020

PhD Thesis Monitoring Committee Member, PhD Thesis Monitoring Committee Member, Atatürk Üniversitesi, June, 2020

Appointment to Academic Staff-Assistant Professorship, Appointment Academic Staff, Yıldız Teknik Üniversitesi, May, 2020

Post Graduate, Post Graduate, Ağrı İbrahim Çeçen Üniversitesi, May, 2020

Associate Professor Exam, Associate Professor Exam, Bingöl Üniversitesi, March, 2020

PhD Thesis Monitoring Committee Member, PhD Thesis Monitoring Committee Member, Atatürk Üniversitesi, February, 2020

Post Graduate, Post Graduate, Kafkas Üniversitesi, January, 2020

PhD Thesis Monitoring Committee Member, PhD Thesis Monitoring Committee Member, Atatürk Üniversitesi, January, 2020

## Published journal articles indexed by SCI, SSCI, and AHCI

- I. **Investigation on the new exact solutions of generalized Rosenau-Kawahara-RLW equation with p-th order nonlinearity occurring in ocean engineering models**  
TAŞBOZAN O., ÇELİK E., Kurt A., Akinyemi L.  
Applied Mathematics, vol.39, no.4, pp.642-653, 2024 (SCI-Expanded)
- II. **USING FUZZY-ROUGH SET EVALUATION FOR FEATURE SELECTION AND NAIVE BAYES TO CLASSIFY THE PARKINSON DISEASE**  
Lanbaran N. M., ÇELİK E., Kotan O.  
MISKOLC MATHEMATICAL NOTES, vol.23, no.2, pp.787-800, 2022 (SCI-Expanded)
- III. **Numerical solution of Volterra-Fredholm integral equations with Hosoya polynomials**  
Gecmen M. Z., ÇELİK E.  
MATHEMATICAL METHODS IN THE APPLIED SCIENCES, vol.44, no.14, pp.11166-11173, 2021 (SCI-Expanded)
- IV. **On the modulation instability analysis and deeper properties of the cubic nonlinear Schrodinger's equation with repulsive delta-potential**  
Li Y., ÇELİK E., Guirao J. L. G., Saeed T., Mehmet Baskonus H.  
RESULTS IN PHYSICS, vol.25, 2021 (SCI-Expanded)
- V. **New exact solutions for the doubly dispersive equation using the improved Bernoulli sub-equation function method**  
Dusunceli F., Celik E., Askin M., Bulut H.  
INDIAN JOURNAL OF PHYSICS, vol.95, no.2, pp.309-314, 2021 (SCI-Expanded)
- VI. **ANALYZING A NOVEL CORONAVIRUS MODEL (COVID-19) IN THE SENSE OF CAPUTO-FABRIZIO FRACTIONAL OPERATOR**  
Dokuyucu M. A., ÇELİK E.  
APPLIED AND COMPUTATIONAL MATHEMATICS, vol.20, no.1, pp.49-69, 2021 (SCI-Expanded)
- VII. **ON THE EXISTENCE AND UNIQUENESS OF THE SOLUTION OF AN OPTIMAL CONTROL PROBLEM FOR SCHRÖDINGER EQUATION**  
Kucuek G. D., YAGUB G., ÇELİK E.  
DISCRETE AND CONTINUOUS DYNAMICAL SYSTEMS-SERIES S, vol.12, no.3, pp.503-512, 2019 (SCI-Expanded)
- VIII. **Numerical solution for high-order linear complex differential equations with variable coefficients**  
Dusunceli F., ÇELİK E.  
NUMERICAL METHODS FOR PARTIAL DIFFERENTIAL EQUATIONS, vol.34, no.5, pp.1645-1658, 2018 (SCI-Expanded)
- IX. **Novel features of the nonlinear model arising in nano-ionic currents throughout microtubules**  
ÇELİK E., Bulut H., Baskonus H. M.  
INDIAN JOURNAL OF PHYSICS, vol.92, no.9, pp.1137-1143, 2018 (SCI-Expanded)
- X. **Cancer treatment model with the Caputo-Fabrizio fractional derivative**  
Dokuyucu M. A., ÇELİK E., Bulut H., Baskonus H. M.  
EUROPEAN PHYSICAL JOURNAL PLUS, vol.133, no.3, 2018 (SCI-Expanded)
- XI. **Analysis of Keller-Segel Model with Atangana-Baleanu Fractional Derivative**  
DOKUYUCU M. A., BALEANU D., ÇELİK E.  
FILOMAT, vol.32, no.16, pp.5633-5643, 2018 (SCI-Expanded)
- XII. **Modified iteration method for solving fractional gas dynamics equation**  
NAJAFİ R., Kucuk G. D., ÇELİK E.  
MATHEMATICAL METHODS IN THE APPLIED SCIENCES, vol.40, no.4, pp.939-946, 2017 (SCI-Expanded)
- XIII. **Solutions around a regular a singular point of a sequential conformable fractional differential equation**  
Unal E., GÖKDOĞAN A., ÇELİK E.  
KUWAIT JOURNAL OF SCIENCE, vol.44, no.1, pp.9-16, 2017 (SCI-Expanded)
- XIV. **Multiplicative Laplace transform and its applications**  
YALÇIN N., ÇELİK E., GÖKDOĞAN A.

- OPTIK, vol.127, no.20, pp.9984-9995, 2016 (SCI-Expanded)
- XV. **EXISTENCE AND UNIQUENESS THEOREMS FOR SEQUENTIAL LINEAR CONFORMABLE FRACTIONAL DIFFERENTIAL EQUATIONS**  
Gokdogan A., Unal E., ÇELİK E.  
MISKOLC MATHEMATICAL NOTES, vol.17, no.1, pp.267-279, 2016 (SCI-Expanded)
- XVI. **A Note on Optimal Control Problem Governed by Schrodinger Equation**  
Kocak Y., ÇELİK E., Aksoy N. Y.  
OPEN PHYSICS, vol.13, no.1, pp.407-413, 2015 (SCI-Expanded)
- XVII. **The numerical solution of partial differential-algebraic equations**  
YİĞİDER M., ÇELİK E.  
ADVANCES IN DIFFERENCE EQUATIONS, 2013 (SCI-Expanded)
- XVIII. **On The Numerical Solution of differential algebraic equations with Index 3 by Pade approximation**  
ÇELİK E., TABATABEI K.  
Applied Mathematics & Information Sciences, vol.2, pp.1-6, 2013 (SCI-Expanded)
- XIX. **The variational iteration method for fuzzy fractional differential equations with uncertainty**  
Khodadadi E., ÇELİK E.  
FIXED POINT THEORY AND APPLICATIONS, pp.1-7, 2013 (SCI-Expanded)
- XX. **On the Numerical Solution of Differential-Algebraic Equations with Hessenberg Index-3**  
Karta M., ÇELİK E.  
DISCRETE DYNAMICS IN NATURE AND SOCIETY, 2012 (SCI-Expanded)
- XXI. **Optimal control problem for stationary quasi-optic equations**  
Kocak Y., ÇELİK E.  
BOUNDARY VALUE PROBLEMS, 2012 (SCI-Expanded)
- XXII. **Multivariate pade approximation for solving partial differential equations (PDE)**  
Turut V., ÇELİK E., Yigider M.  
INTERNATIONAL JOURNAL FOR NUMERICAL METHODS IN FLUIDS, vol.66, no.9, pp.1159-1173, 2011 (SCI-Expanded)
- XXIII. **The Numerical Method for Solving Differential Equations of Lane-Emden Type by Pade Approximation**  
Yigider M., Tabatabaei K., ÇELİK E.  
DISCRETE DYNAMICS IN NATURE AND SOCIETY, 2011 (SCI-Expanded)
- XXIV. **Chebyshev series approximation for solving differential-algebraic equations (DAEs)**  
Celik E., Yeloglu T.  
INTERNATIONAL JOURNAL OF COMPUTER MATHEMATICS, vol.83, pp.651-662, 2006 (SCI-Expanded)
- XXV. **The numerical solution of physical problems modeled, as a systems of differential-algebraic equations (DAEs)**  
Celik E., BAYRAM M.  
JOURNAL OF THE FRANKLIN INSTITUTE-ENGINEERING AND APPLIED MATHEMATICS, vol.342, no.1, pp.1-6, 2005 (SCI-Expanded)
- XXVI. **Numerical solution of differential-algebraic equation systems and applications**  
ÇELİK E., BAYRAM M.  
Applied Mathematics and Computation, vol.154, no.2, pp.405-413, 2004 (SCI-Expanded)
- XXVII. **On the numerical solution of chemical differential-algebraic equations by Pade series**  
ÇELİK E.  
Applied Mathematics and Computation, vol.153, no.1, pp.13-17, 2004 (SCI-Expanded)
- XXVIII. **The modified successive approximations method and padé approximants for solving the differential equation with variant retarded argumend**  
ÇELİK E., AYKUT A., BAYRAM M.  
Applied Mathematics and Computation, vol.151, no.2, pp.393-400, 2004 (SCI-Expanded)
- XXIX. **The successive approximation method and Padé approximants for solutions the non-linear boundary value problem**

- ŞİMŞEK H., ÇELİK E.  
Applied Mathematics and Computation, vol.146, pp.681-690, 2003 (SCI-Expanded)
- XXX. **Numerical solutions of chemical differential-algebraic equations**  
ÇELİK E., KARADUMAN E., BAYRAM M.  
Applied Mathematics and Computation, vol.139, pp.259-264, 2003 (SCI-Expanded)
- XXXI. **On the numerical solution of differential-algebraic equations by Padé series**  
ÇELİK E., BAYRAM M.  
Applied Mathematics and Computation, vol.137, no.1, pp.151-160, 2003 (SCI-Expanded)
- XXXII. **Arbitrary order numerical method for solving differential-algebraic equation by Padé series**  
ÇELİK E., BAYRAM M.  
Applied Mathematics and Computation, vol.137, no.1, pp.57-65, 2003 (SCI-Expanded)
- XXXIII. **Numerical method to solve chemical differential-algebraic equations**  
Celik E., Karaduman E., BAYRAM M.  
INTERNATIONAL JOURNAL OF QUANTUM CHEMISTRY, vol.89, no.5, pp.447-451, 2002 (SCI-Expanded)

### Articles Published in Other Journals

- I. **The Solution of Linear Volterra Integral Equation of the First Kind with ZZ- Transform**  
ÖZDEMİR E., ÇELİK E., ŞENER KILIÇ S. Ş.  
TURKISH JOURNAL OF SCIENCE, vol.6, no.3, pp.127-133, 2021 (Peer-Reviewed Journal)
- II. **Numerical Solution of Volterra Integral Equations Using Hosoya Polynomial**  
GEÇMEN M. Z., ÇELİK E., DOKUYUCU M. A.  
TURKISH JOURNAL OF SCIENCE, vol.6, no.3, pp.110-117, 2021 (Peer-Reviewed Journal)
- III. **Prediction of Breast Cancer through Tolerance-based Intuitionistic Fuzzy-rough Set Feature Selection and Artificial Neural Network**  
Lanbaran N. M., ÇELİK E.  
GAZI UNIVERSITY JOURNAL OF SCIENCE, vol.34, no.4, pp.1064-1075, 2021 (ESCI)
- IV. **EVALUATION OF INVESTMENT OPPORTUNITIES WITH INTERVAL-VALUED FUZZY TOPSIS METHOD**  
ÇELİK E., YİĞİDER M., LANBARAN MOHAMMADI N.  
Applied Mathematics and Nonlinear Sciences, vol.5, no.1, pp.461-474, 2020 (ESCI)
- V. **Analytical and approximate solutions of Fractional Partial Differential-Algebraic Equations**  
ÇELİK E., GÜNERHAN H.  
Applied Mathematics and Nonlinear Sciences, vol.5, no.1, pp.109-120, 2020 (ESCI)
- VI. **Approximate solution of the problem of delayed variable boundary value by the CAS wavelet method**  
ÇELİK E., ÖZTÜRK E. D., AYKUT A.  
Communication in Mathematical Modeling and Applications, vol.4, no.1, pp.1-8, 2019 (Peer-Reviewed Journal)
- VII. **Çarpımsal Cauchy-Euler ve Legendre Diferansiyel Denklemi**  
YALÇIN N., ÇELİK E.  
Gümüşhane Üniversitesi Fen Bilimleri Enstitüsü Dergisi, vol.9, no.3, pp.373-382, 2019 (Peer-Reviewed Journal)
- VIII. **Fixed point theorem for defuzzification and its application in decision making units**  
ÇELİK E., ABBASI E., SANEIFARD R.  
New Trends in Mathematical Sciences, vol.7, no.2, pp.214-221, 2019 (Peer-Reviewed Journal)
- IX. **A valid and advanced method for ranking the fuzzy numbers**  
ÇELİK E., ABBASI E., SANEIFARD R.  
Communication in Mathematical Modeling and Applications, vol.3, pp.23-30, 2018 (Peer-Reviewed Journal)
- X. **Improved of Approximating Function  $Li(x)$**   
OKUMUŞ İ., ÇELİK E.  
International Journal of Engineering and Applied Sciences (IJEAS), vol.5, 2018 (Peer-Reviewed Journal)
- XI. **Solution of multiplicative homogeneous linear differential equations with constant exponentials**  
YALÇIN N., ÇELİK E.

- New Trends in Mathematical Science, vol.2, pp.58-67, 2018 (Peer-Reviewed Journal)
- XII. **The Solution of Multiplicative Non-Homogeneous Linear Differential Equations**  
YALÇIN N., ÇELİK E.  
Journal of Applied Mathematics and Computation, vol.2, 2018 (Peer-Reviewed Journal)
- XIII. **Numerical Solution of Fractional Differential Equation in a Model of HIV Infection of CD4 T Cells**  
ÇELİK E., SEFİDĞAR E., SHIRI B.  
INTERNATIONAL JOURNAL OF APPLIED MATHEMATICS & STATISTICS, vol.56, pp.23-32, 2017 (ESCI)
- XIV. **The One Dimensional Keller-Segel Model**  
DOKUYUCU M. A., ÇELİK E.  
Eastern Anatolian Journal of Science, vol.3, pp.38-41, 2017 (Peer-Reviewed Journal)
- XV. **FIBONACCI MATRIX POLYNOMIAL METHOD FOR LINEAR COMPLEX DIFFERENTIAL EQUATIONS**  
DÜŞÜNCELİ F., ÇELİK E.  
Asian Journal of Mathematics and Computer Research, vol.15, pp.229-238, 2017 (Peer-Reviewed Journal)
- XVI. **On the Solution of Stephan Inverse Problems**  
NAJAFİ R., ALIYEV N., ÇELİK E.  
New Trends in Mathematical Sciences, vol.4, pp.174-179, 2016 (Peer-Reviewed Journal)
- XVII. **Non Linear Difusion for Chemotaxis and Birth Death Process for Keller Segel Model**  
DOKUYUCU M. A., ÇELİK E.  
New Trends in Mathematical Sciences, vol.4, pp.204-211, 2016 (Peer-Reviewed Journal)
- XVIII. **Numerical Approximation of an Optimal Control Problem for Quasi Optics Equation**  
KOÇAK Y., YILDIRIM AKSOY N., ÇELİK E.  
Eastern anatolian journal of science, vol.2, pp.67-71, 2016 (Peer-Reviewed Journal)
- XIX. **Solving fuzzy fractional Riccati differential equations by the variational iteration method**  
KHODADADI E., KARABACAK M., ÇELİK E.  
International Journal of Engineering and Applied Sciences, vol.2, pp.35-40, 2015 (Peer-Reviewed Journal)
- XX. **The Numerical Solution of Fractional Differential Algebraic Equations FDAEs by Haar Wavelet Functions**  
KARABACAK M., ÇELİK E.  
International Journal of Engineering and Applied Sciences, vol.2, pp.65-71, 2015 (Peer-Reviewed Journal)
- XXI. **Solutions of Sequential Conformable Fractional Differential Equations around an Ordinary Point and Conformable Fractional Hermite Differential Equation**  
ÜNAL E., GÖKDOĞAN A., ÇELİK E.  
British Journal of Applied Science & Technology, vol.10, pp.1-11, 2015 (Peer-Reviewed Journal)
- XXII. **An Effective Tool: Numerical Solutions by Legendre Polynomials for High-order Linear Complex Differential Equations**  
FARUK D., ÇELİK E.  
British Journal of Applied Science Technology, vol.8, pp.348-355, 2015 (Peer-Reviewed Journal)
- XXIII. **The numerical solution of fractional differential algebraic equations by Haar wavelet functions**  
ÇELİK E., KARABACAK M.  
International Journal of Engineering and Applied Sciences, vol.2, no.2, 2015 (Peer-Reviewed Journal)
- XXIV. **Well posedness of Optimal Control Problem for the Schrödinger Equations with Complex Potential**  
ÇELİK E., KOÇAK Y., DOKUYUCU M. A.  
International Journal of Mathematics and Computation, vol.26, 2015 (Peer-Reviewed Journal)
- XXV. **On a Stability Theorem of the Optimal Control Problem For Quasi Optic Equation**  
KOÇAK Y., ÇELİK E., YILDIRIM AKSOY N.  
Journal of Progressive Research in Mathematics, vol.5, pp.487-492, 2015 (Peer-Reviewed Journal)
- XXVI. **Numerical Solution of Fractional Partial Differential Algebraic Equations**  
ÇELİK E., Tabatabaei K., Gunerhan E.  
AASCIT Communications, vol.2, no.5, pp.230-236, 2014 (Peer-Reviewed Journal)
- XXVII. **Numerical Solution of Fractional Partial Differential Algebraic Equation by Adomian Decomposition Method and Multivariate Pade Approximation**

- ÇELİK E., YİĞİDER M., KÜÇÜK G. D.  
British Journal of Applied Science Technology, vol.4, no.25, 2014 (Peer-Reviewed Journal)
- XXVIII. **The Numerical Solution of Fractional Differential Algebraic Equations FDAEs**  
KARABACAK M., ÇELİK E.  
New Trends in Mathematical Sciences, vol.1, pp.1-6, 2013 (Peer-Reviewed Journal)
- XXIX. **solving a Class of Volterra Integral Equation Systems by the Differential Transform Method**  
ÇELİK E.  
International Journal of Nonlinear Science, vol.16, no.1, pp.87-91, 2013 (Peer-Reviewed Journal)
- XXX. **The Numerical Solution of Fractional Differential Algebraic Equations**  
ÇELİK E., KARABACAK M.  
New Trends in Mathematical Sciences, vol.1, no.2, pp.1-6, 2013 (Peer-Reviewed Journal)
- XXXI. **The differential transform method for solving heat-like and wave-like equations with variable coefficients**  
Tabatabaei K., ÇELİK E., Tabatabaei R.  
TURKISH JOURNAL OF PHYSICS, vol.36, no.1, pp.87-98, 2012 (ESCI)
- XXXII. **The Numerical Solution of Partial Differential Algebraic Equations by Multivariate Padé Approximation**  
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- XIV. **Malkus waterwheel model with constant proportional Caputo operatör**

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- XIX. **Analysis of a Nonlinear Alcoholism Model via new Fractional Operator**  
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- XX. **Fuzzy Rough Fuzz,fication in Data Mining and Decision Making**  
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- XXI. **Analysis of the Hunter-Saxton Equation With Caputo-Fabrizio Fractional Derivative**  
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- XXII. **GegenbauerPolynomial Method for Linear Complex Differential Equations**  
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- XXIII. **New Exact Solutions for the Doubly Dispersive Equation Using an Improved Bernoulli Sub-Equation Function Method**  
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- XXIV. **Approximate Solution of Delayed Variable Boundary Value Problem by the Cas Wavelet Meyhod**  
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- XXV. **7th International Conference on Applied Analysis and Mathematical Modeling**  
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- XXVI. **Numerical Solution of Logistic Equation, International Conference on Advances in Natural and Applied Sciences (ICANAS 2018)**  
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- XXVII. **Numerical Analysis on Mathematical Models of Tumour Growth and Treatment**  
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- XXVIII. **On the Existence and Uniqueness of the Solutions of Space and Time Fractional Telegraph Equations**  
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- XXIX. **Analysis of Logistic Equation with Atangana-Baleanu Derivative with Fractional Order**  
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- XXX. **Analysis of Cancer Treatment Model with a Fractional Derivative without Singular Kernel**  
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- XXXII. **Analysis of the Tumor Growth and Treatment Model**  
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- XXXV. **Uncertainty Representation of Grey Systems and Interval Valued Fuzzy Sets**  
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- XXXVI. **On The Numerical Solution of Differential-Algebraic Equations (DAEs) by Lucas Polynomials**  
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- XXXVIII. **Analysis of Keller-Segel Model with Atangana-Baleanu Derivative**  
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- XXXIX. **On the analytical solutions of partial differential-algebraic equations by the homotopy perturbation transform method**  
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- XL. **Some new feature in complex domain of the nonlinear model arising in the dynamics of ionic currents along microtubules**  
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- XLI. **Numerical Solution for Linear Complex Differential Equations via Pell Matrix Polynomial**  
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- XLII. **An Improved Parametric Approach for Ranking Fuzzy Numbers**

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- XLIII. **Numerical approximation of the Keller-Segel Model with new fractional derivative**  
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- XLV. **Nonlinear solutions of the space- and time-fractional coupled Burgers equations**  
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- XLVI. **Analysis of Keller-Segel Model with Caputo and Caputo-Fabrizio Derivatives**  
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- XLVII. **Lucas Matrix Polynomial Method for Linear Complex Differential Equations**  
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- XLVIII. **The Solution of Multiplicative Non-Homogeneous Linear Differential Equations**  
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- XLIX. **Laplace Transform method for solving Coupled system of Fractional Differential Equations**  
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- L. **Evaluation of Investment Opportunities with Interval-Valued Fuzzy Topsis Method**  
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- LI. **Analysis of the Keller-Segel Model with the Caputo Fractional Derivative**  
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- LII. **On a Elliptic Optimal Control Problem International Conference on Advances in Natural and Applied Sciences**  
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International Conference on Advances in Natural and Applied Sciences, Antalya, Turkey, 21 - 23 April 2016
- LIII. **An optimal control problem with Final Observation for Quasi Optics equation**  
KOÇAK Y., ÇELİK E.  
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- LIV. **Numerical Solution of a Fractional Differential Equation in a Model a HIV Infection CD4 Cells**  
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- LV. **The Solutions of Multiplicative Hermite Differential Equation and Multiplicative Hermite Polynomials**  
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- LVI. **A note on stability of the solution in an optimal control problem for Quasi Optics equation**  
KOÇAK Y., ÇELİK E.  
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- LVII. **On a necessary condition for optimal control of parabolic equation**  
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- LVIII. **Fractional Complex Transform Method and Applications**  
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- LIX. **Application of gray numbers in the multi criteria decision**  
 Mohammadi N., ÇELİK E.  
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- LX. **A Method for Finding Exact Solution of Differential Algebraic Equations**  
 ÇELİK E., Najafi R., KÜÇÜK G. D.  
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- LXI. **Fibonacci Matrix Polynomial Method for Linear Complex Differential Equations**  
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- LXII. **On Optimal Control by Coefficients in a Schrödinger Equation**  
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- LXIII. **On Inverse Problem for a String Vibrational Equation**  
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- LXIV. **On the Solution of Multiplicative Linear Differential Equations without Right Hand Side**  
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- LXV. **Non linear Diffusion in the Keller Segel Model**  
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- LXVI. **Numerical Solution by Hermite polynomials for linear Complex Differential Equations in a Circular Domain**  
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- LXVII. **An inverse problem for Quasi Optic Equation**  
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- LXVIII. **Modelling of birth death process**  
 DOKUYUCU M. A., ÇELİK E.  
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- LXIX. **The numerical solution of the fractional Algebraic differential equations by fractional complex transform method**  
 elham s., ÇELİK E.  
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- LXX. **Multiplicative Laplace Transform and Its Applications**  
 GÖKDOĞAN A., YALÇIN N., ÇELİK E.  
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- LXXI. **Multivariate Padé Approximations For Solving Nonlinear Diffusion Equations**  
 TURUT V., ÇELİK E., GÜZEL N.  
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- LXXII. **Mathematical Models for Biological Aggregation**  
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- LXXIII. **On Boundary Control of a Schrödinger Equation**  
KOÇAK Y., ÇELİK E.  
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- LXXIV. **General Solution to Sequential Linear Conformable Fractional Differential Equations With Constant Coefficients**  
ÜNAL E., GÖKDOĞAN A., ÇELİK E.  
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- LXXV. **Numerical Solution for High Order Linear Complex Differential Equations with variable coefficients in a Circular Domain**  
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- LXXVI. **Well Posedness of Optimal Control Problem for the Schrodinger Equations with Complex Potential**  
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- LXXVII. **Numerical solution for high order linear complex differential equations in a circular domain**  
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- LXXVIII. **Integral mean value method for solving of the nonlinear two dimensional Fredholm integral equations of the second kind**  
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- LXXIX. **The comparison between the Adomian decomposition method and Homotopy perturbation method with mean value method for solving nonlinear Fredholm integral equations**  
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- LXXX. **The finite difference approximations of the optimal control problem for stationary equation of Quasi Optic**  
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- LXXXIV. **NUMERICAL SOLUTION OF FRACTIONAL PARTIAL DIFFERENTIAL ALGEBRAIC EQUATIONS**

- KÜÇÜK G. D., YİĞİDER M., ÇELİK E.  
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- LXXXV. **THE NUMERICAL SOLUTION OF FRACTIONAL DIFFERENTIAL ALGEBRAIC EQUATIONS FDAEs BY HAAR WAVELET METHOD**  
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- LXXXVII. **FIXED POINT THEOREM FOR DEFUZZIFICATION AND ITS APPLICATION IN DECISION MAKING UNITS**  
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- LXXXVIII. **An Optimal Control Problem Governed by Stationary Equation of Quasi Optic**  
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- LXXXIX. **Classification of Factors that Affect the Speed of The RSA Cryptosystem**  
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- XC. **The Numerical Solution of Fractional Differential Algebraic Equations**  
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- XCII. **Variational Iteration Method for Fuzzy Fractional Differential Equations with Uncertainty**  
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- XCIII. **The Numerical Solutions of Partial Differential Algebraic Equations PDAEs by Multivariate Padé Approximation**  
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- XCV. **Fast decryption algorithm for RSA**  
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- XCVI. **OPTİMAL CONTROL PROBLEM FOR STATİONARY QUASİ OPTİC EQUATİON**  
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- XCVII. **The Variational Iteration Method for Solving Fuzzy Fractional Differential Equations**  
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- XCVIII. **Numerical Solutions of the Helmholtz Equation by Multivariate Padé Approximation**  
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- XCIX. **Stochastic Model in the Evolution of a Single Crystal**  
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- C. **Improved of Approximating Function Li x**  
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- CI. **Stochastik Model in the Evolotion of a Single Crystal**  
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## Activities in Scientific Journals

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## Scientific Refereeing

TUBITAK Project, 1001 - Program for Supporting Scientific and Technological Research Projects, Ataturk University, Turkey, May 2021

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Publication: 187

Citation (WoS): 414

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## Representation and Promotion Activities

Institutional Representation, Atatürk Üniversitesi, Fen Fakültesi, Matematik, Turkey, Erzurum, 2019 - 2021