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### Education Information

Doctorate, Yildiz Technical University, Faculty Of Chemical And Metallurgical Engineering, Matematik Mühendisliği, Turkey 2001 - 2005

### Research Areas

Engineering and Technology

### Courses

Analitik Geometri, Undergraduate, 2016 - 2017, 2015 - 2016, 2014 - 2015, 2013 - 2014

Mühendisler İçin Matematiksel Metodlar, Postgraduate, 2015 - 2016

integral dönüşümler, Undergraduate, 2016 - 2017, 2015 - 2016

İleri Analiz 1, Undergraduate, 2015 - 2016

Diferansiyel Denklemler, Undergraduate, 2014 - 2015

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

- I. **Wavelet methods for fractional electrical circuit equations**  
TURAL POLAT S. N., Dincel A. T.  
Physica Scripta, vol.98, no.11, 2023 (SCI-Expanded)
- II. **Hermite Wavelet Method for Nonlinear Fractional Differential Equations**  
TURAN DİNCEL A., TURAL POLAT S. N., Sahin P.  
Fractal and Fractional, vol.7, no.5, 2023 (SCI-Expanded)
- III. **Solution Method for Systems of Nonlinear Fractional Differential Equations Using Third Kind Chebyshev Wavelets**  
Tural Polat S. N., Turan Dincel A.  
Axioms, vol.2023, no.12, pp.546, 2023 (SCI-Expanded)
- IV. **Euler Wavelet Method as a Numerical Approach for the Solution of Nonlinear Systems of Fractional Differential Equations**  
TURAL POLAT S. N., TURAN DİNCEL A.  
Fractal and Fractional, vol.7, no.3, 2023 (SCI-Expanded)
- V. **Numerical solution method for multi-term variable order fractional differential equations by shifted**

### **Chebyshev polynomials of the third kind**

TURAL POLAT S. N., TURAN DİNCEL A.

Alexandria Engineering Journal, vol.61, no.7, pp.5145-5153, 2022 (SCI-Expanded)

- VI. **Fourth kind Chebyshev Wavelet Method for the solution of multi-term variable order fractional differential equations**  
Dincel A. T., TURAL POLAT S. N.  
ENGINEERING COMPUTATIONS, vol.39, no.4, pp.1274-1287, 2022 (SCI-Expanded)
- VII. **Flow field analysis of grooved surfaces**  
Bayraktar S., Tekercioglu R., Dincel A.  
INTERNATIONAL JOURNAL OF ENVIRONMENTAL SCIENCE AND TECHNOLOGY, vol.16, no.9, pp.5365-5368, 2019 (SCI-Expanded)
- VIII. **Solution to fractional-order Riccati differential equations using Euler wavelet method**  
TURAN DİNCEL A.  
Scientia Iranica, vol.26, pp.1608-1616, 2019 (SCI-Expanded)
- IX. **Investigation of energy release rate under mode II loading in a rectangular orthotropic plate with a band crack using 3D finite element analysis**  
TURAN DİNCEL A.  
Arabian Journal Of Geosciences, vol.12, pp.1-5, 2019 (SCI-Expanded)
- X. **Calculation and 3D analyses of ERR in the bandcrack front contained in a rectangular plate made of multilayered material**  
TURAN DİNCEL A., SURKHAY A.  
OPEN CHEMISTRY, vol.16, pp.516-519, 2018 (SCI-Expanded)
- XI. **Mathematical modelling and 3D FEM analysis of the influence of initial stresses on the ERR in a band crack's front in the rectangular orthotropic thick plate**  
Dincel A., AKBAROV S.  
Computers, Materials and Continua, vol.53, no.3, pp.249-270, 2017 (SCI-Expanded)
- XII. **On the Energy Release Rate at the Crack Tips in a Finite Pre-Strained Strip**  
AKBAROV S., TURAN A.  
CMC-COMPUTERS MATERIALS & CONTINUA, vol.24, no.3, pp.257-270, 2011 (SCI-Expanded)
- XIII. **ENERGY RELEASE RATE IN A PRESTRESSED SANDWICH PLATE-STRIP CONTAINING INTERFACE CRACKS**  
AKBAROV S., TURAN A.  
MECHANICS OF COMPOSITE MATERIALS, vol.45, no.6, pp.597-608, 2009 (SCI-Expanded)
- XIV. **Mathematical modelling and the study of the influence of initial stresses on the SIF and ERR at the crack tips in a plate-strip of orthotropic material**  
AKBAROV S., TURAN A.  
APPLIED MATHEMATICAL MODELLING, vol.33, no.9, pp.3682-3692, 2009 (SCI-Expanded)
- XV. **Influence of initial stresses on stress intensity factors at crack tips in a composite**  
AKBAROV S., YAHNİOĞLU N., TURAN DİNCEL A.  
Mechanics Of Composite Materials, vol.40, pp.299-308, 2004 (SCI-Expanded)

### **Articles Published in Other Journals**

- I. **Genocchi polynomial method for the multiterm variable-order fractional differential equations**  
TURAL POLAT S. N., TURAN DİNCEL A.  
SIGMA JOURNAL OF ENGINEERING AND NATURAL SCIENCES-SIGMA MUHENDISLIK VE FEN BILIMLERI DERGISI, vol.40, no.1, pp.79-84, 2022 (ESCI)
- II. **A sine-cosine wavelet method for the approximation solutions of the fractional Bagley-Torvik equation**  
TURAN DİNCEL A.

SIGMA JOURNAL OF ENGINEERING AND NATURAL SCIENCES-SIGMA MUHENDISLIK VE FEN BILIMLERI DERGISI, vol.40, no.1, pp.150-154, 2022 (ESCI)

- III. **Efficient Method for the Solution of Fractional-order Differential Equations with Variable Coefficients**  
TURAN DİNCEL A.  
European Journal of Science and Technology, pp.205-210, 2019 (Peer-Reviewed Journal)
- IV. **The Effect of the Shear Modulus on Planes which is Perpendicular to the Crack's Edge-planes and Parallel to the Crack's Front on the ERR in an Orthotropic Rectangular Prism with a Band Crack**  
TURAN DİNCEL A.  
Afyon Kocatepe University Journal of Sciences and Engineering, vol.17, pp.338-345, 2017 (Peer-Reviewed Journal)
- V. **INFLUENCE OF THE INITIAL STRESSES ON THE ENERGY RELEASERATE IN A COMPOSITE BEAM WITH SINGLE EDGE-CRACK**  
TURAN DİNCEL A.  
Academic Journal of Science, vol.5, pp.493-498, 2016 (Peer-Reviewed Journal)
- VI. **The Comparison of the Initial Stresses Influence on Stress Intensity Factor of Mode I and Mode II at the Crack Tips in a Composite Strip**  
TURAN DİNCEL A.  
Academic Journal of Science, vol.3, pp.65-73, 2014 (Peer-Reviewed Journal)
- VII. **On loss of stability of a strip with two parallel macro-cracks under finite precritical deformation**  
TURAN DİNCEL A., AKBAROV S.  
INTERNATIONAL APPLIED MECHANICS, vol.46, no.3, pp.359-365, 2010 (Scopus)
- VIII. **ÇATLAK İÇEREN ÖNGERİLMELİ ŞERİTTEKİ GERİLME BİRİKİMİ ŞİDDETİ FAKTÖRÜ NÜN SONLU ELEMANLAR YÖNTEMİ İLE HESAPLANMASINDA SİNGÜLER SONLU ELEMANLARIN ETKİSİ**  
TURAN DİNCEL A.  
SIGMA JOURNAL OF ENGINEERING AND NATURAL SCIENCES-SIGMA MUHENDISLIK VE FEN BILIMLERI DERGISI, vol.23, pp.16-24, 2005 (ESCI)

### **Refereed Congress / Symposium Publications in Proceedings**

- I. **A Numerical Method for Linear Fractional Differential Equations**  
Şahin P., Turan Dincel A., Tural Polat S. N.  
International Conference on Applied Physics and Mathematics, Lisbon, Portugal, 29 - 30 January 2022, pp.47
- II. **Fourth-Kind Chebyshev Wavelets Based Approximation Method for Solving Bagley-Torvik Equation**  
TURAN DİNCEL A.  
International Natural Science, Engineering and Material Technologies Conference, İstanbul, Turkey, 9 - 10 September 2019, pp.29
- III. **Taylor Wavelet Method for Solving Fractional-order Differential Equations**  
TURAN DİNCEL A.  
5th International Conference on Computational and Experimental Science and Engineering, 12 - 16 October 2018
- IV. **Investigation of energy release rate under mode II loading in a rectangular orthotropic plate with a band crack using 3D finite element analysis**  
TURAN DİNCEL A.  
International Conference on Sustainable Sciences and Technology, 12 - 16 October 2018
- V. **Flow Field Analysis of Grooved Surfaces**  
BAYRAKTAR S., Tekercioglu R., TURAN DİNCEL A.  
4th International Conference on Computational and Experimental Science and Engineering, Antalya, Turkey, 4 - 08 October 2017
- VI. **Calculation and 3D ERR Analyses in the Band Crack Front Contained in a Rectangular Plate Made of Multilayered Material**  
TURAN DİNCEL A., AKBAROV S. D.

4th INTERNATIONAL CONFERENCE ON COMPUTATIONAL AND EXPERIMENTAL SCIENCE AND ENGINEERING, 4 - 08 October 2017

- VII. **Legendre-Wavelet Galerkin Method for the Solution of Fractional Order Differential Equations System**  
Seçer A., Taşçı F., Turan Dıncel A., Tekercioğlu R.  
ICCESEN 2017, Antalya, Turkey, 04 October 2017, vol.1, no.1, pp.204
- VIII. **Calculation and 3D ERR Analyses in the band crack front contained in the rectangular plate made of multilayered material Rectangular Plate Made of Multilayered Material**  
TURAN DİNCEL A., AKBAROV S.  
4th International Conference on Computational and Experimental Science and Engineering, Antalya, Turkey, 04 October 2017, vol.1, no.1, pp.516
- IX. **On the ERR at the Band Crack Front in a Rectangular Prism**  
TURAN DİNCEL A.  
82nd The IIER International Conference, Germany, 3 - 04 October 2016
- X. **Influence of the Initial Stresses on the Energy Release Rate in a composite beam with single edge crack**  
TURAN DİNCEL A.  
International journal art and sciences, 3 - 06 November 2015
- XI. **On the Energy Release Rate in a composite thick plate with band crack**  
TURAN DİNCEL A.  
XVII International on Mechanics of Composite Materials, 26 - 30 May 2014
- XII. **Fractional Supersymmetric  $sl(2)$ :  $U_{35}(sl(2))$  and  $U_{36}(sl(2))$**   
UÇAN Y., KÖŞKER R., TEKERCİOĞLU R., TURAN DİNCEL A.  
IECMSA-2013: 2nd International Eurasian Conference on Mathematical Sciences and Applications, Sarajevo, Kosova, 26 August 2013, pp.217
- XIII. **Some spectral properties of singular Sturm Liouville problem**  
TURAN DİNCEL A.  
International Journal of Arts and Sciences, 1 - 04 December 2008
- XIV. **Energy Release Rate in a Prestressed Sandwich Plate Strip Containing Interfacial Cracks**  
AKBAROV S., TURAN DİNCEL A.  
XV International Conference - Mechanics of Composite Materials, Latvia, 26 - 30 May 2008
- XV. **The Influence of the Initial Stresses on Stress Intensity Factor of Mode II at the Crack Tips in a Composite Strip**  
AKBAROV S., TURAN DİNCEL A.  
Conference on Damage in Composite Materials: Simulation and Non-Destructive Testing, Germany, 18 - 19 September 2006
- XVI. **On The Energy Release Rate at crack tips in a Finite prestrained strip**  
AKBAROV S., TURAN DİNCEL A.  
FOURTEENTH INTERNATIONAL CONFERENCE MECHANICS OF COMPOSITE MATERIALS, 29 May - 02 June 2006, pp.8-9
- XVII. **The Influence of the Finite Initial Strain-State to the SIF of Mode I at the Crack Tips in a Strip**  
AKBAROV S., TURAN DİNCEL A.  
Twelfth Annual International Conference on Composites/Nano Engineering, Spain, 1 - 06 August 2005
- XVIII. **Influence of Initial Stresses on Stress Intensity Factors at Crack Tips in a Composite Strip**  
AKBAROV S., YAHNIOĞLU N., TURAN DİNCEL A.  
Thirteenth International Conference, Mechanics of Composite Materials, Latvia, 16 - 20 May 2004
- XIX. **On the Determination of the SIF at the Macro-Crack Tips in the Pre-stretched Anisotropic Strip**  
YAHNIOĞLU N., TURAN DİNCEL A.  
6th International Fracture Conference, Konya, Turkey, 10 September 2003, pp.20-24
- XX. **Çatlak içeren öngerilmeli şeritte gerilme birikimi şiddeti faktörüne öngerilmenin etkisi**  
YAHNIOĞLU N., Turan A.

13. Ulusal Mekanik Konferansı 8-12 Eylül 2003 Gaziantep Üniversitesi-Gaziantep, 2003, 01 September 2003

XXI. **Mathematical Modelling of Friction, Wear and Lubrication in Artificial Hip Joints**

TURAN DİNCEL A., Turan A.

The International Journal of Arts & Sciences (IJAS) Conferences,Orlando,USA

## **Supported Projects**

TURAL POLAT S. N., TURAN DİNCEL A., Project Supported by Higher Education Institutions, Kesirli Mertebeden Elektrik Devre Denklemlerinin Dalgacık Yöntemleri ile Yaklaşık Çözümleri, 2021 - 2022

## **Metrics**

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