

Assoc. Prof. Soner Aydınlık

Personal Information

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International Researcher IDs

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Education Information

Doctorate, Istanbul Technical University, Matematik Mühendisliği, Turkey 2016 - 2020

Postgraduate, Istanbul Technical University, Fen-Edebiyat, Matematik Mühendisliği, Turkey 2014 - 2016

Undergraduate, Anadolu University, İşletme Fakültesi, İşletme Bölümü, Turkey 2010 - 2014

Undergraduate, Istanbul Technical University, Fen-Edebiyat, Matematik Mühendisliği, Turkey 2009 - 2014

Foreign Languages

English, C1 Advanced

Dissertations

Doctorate, Klasik ve mikrogermeli ortam teorisiyle modellenen plakların caputo kesirli türevi yardımıyla nonlokal titreşim analizi, Istanbul Technical University, Fen Bilimleri Enstitüsü, 2020

Postgraduate, Chebyshev sonlu farklar yöntemi ile adi türevli yüksek mertebe başlangıç ve sınır değer problemlerinin çözümü, Istanbul Technical University, Fen Bilimleri Enstitüsü, 2016

Research Areas

Mechanics of Solid Bodies, Mechanical, Mathematics, Numerical Analysis, Natural Sciences, Engineering and Technology

Academic Titles / Tasks

Associate Professor, Istanbul Technical University, Fen-Edebiyat, Matematik Mühendisliği, 2023 - Continues

Assistant Professor, Dogus University, Software Engineering, 2020 - 2023

Researcher, Poznan University of Technology, 2021 - 2022

Research Assistant, Istanbul Technical University, Fen-Edebiyat, Matematik Mühendisliği, 2017 - 2020

Research Assistant, Isik University, Matematik, 2015 - 2017

Lecturer, Ozyegin University, 2015 - 2015

Published journal articles indexed by SCI, SSCI, and AHCI

- I. **The analysis and validation of natural frequencies and mode shapes of 3D plates in the framework of the generalized thermoelastic theory**
Aydinlik S., Kiriş A., Sumelka W.
JOURNAL OF THERMAL STRESSES, vol.46, no.1, pp.43-58, 2023 (SCI-Expanded)
- II. **An effective approach based on Smooth Composite Chebyshev Finite Difference Method and its applications to Bratu-type and higher order Lane-Emden problems**
Aydinlik S., Kiriş A., Roul P.
MATHEMATICS AND COMPUTERS IN SIMULATION, vol.202, pp.193-205, 2022 (SCI-Expanded)
- III. **An efficient method for oxygen diffusion in a spherical cell with nonlinear oxygen uptake kinetics**
Aydinlik S.
International Journal of Biomathematics, vol.15, no.5, 2022 (SCI-Expanded)
- IV. **First Order Smooth Composite Chebyshev Finite Difference Method for Solving Coupled Lane-Emden Problem in Catalytic Diffusion Reactions**
Aydinlik S., Kiriş A.
MATCH-COMMUNICATIONS IN MATHEMATICAL AND IN COMPUTER CHEMISTRY, vol.87, no.2, pp.463-476, 2022 (SCI-Expanded)
- V. **Three-dimensional analysis of nonlocal plate vibration in the framework of space-fractional mechanics & Theory and validation**
Aydinlik S., Kiriş A., Sumelka W.
THIN-WALLED STRUCTURES, vol.163, 2021 (SCI-Expanded)
- VI. **Nonlocal vibration analysis of microstretch plates in the framework of space-fractional mechanics-theory and validation**
Aydinlik S., Kiriş A., Sumelka W.
EUROPEAN PHYSICAL JOURNAL PLUS, vol.136, no.2, 2021 (SCI-Expanded)
- VII. **Fractional Calculus Approach to Nonlocal Three-Dimensional Vibration Analysis of Plates**
Aydinlik S., Kiriş A.
AIAA JOURNAL, vol.58, no.1, pp.355-361, 2020 (SCI-Expanded)
- VIII. **A high-order numerical method for solving nonlinear Lane-Emden type equations arising in astrophysics**
Aydinlik S., Kiriş A.
ASTROPHYSICS AND SPACE SCIENCE, vol.363, no.12, 2018 (SCI-Expanded)

Articles Published in Other Journals

- I. **Mikro Hasarlı Plakların Riesz-Caputo Kesirli Türevi ile Titreşim Analizi (TR Dizin)**
AYDINLIK S., KIRIŞ A.
Afyon Kocatepe Üniversitesi Fen ve Mühendislik Bilimleri Dergisi, vol.22, no.5, pp.989-997, 2022 (Peer-Reviewed Journal)
- II. **An Effective Numerical Technique for Boundary Value Problems Arising from an Adiabatic Tubular Chemical Reactor Theory (TR Dizin)**
AYDINLIK S.
Bitlis Eren Üniversitesi Fen Bilimleri Dergisi, vol.11, no.3, pp.857-860, 2022 (Peer-Reviewed Journal)
- III. **An Efficient Method for Solving Fractional Integral and Differential Equations of Bratu Type (Accepted-ESCI-Ulusal)**
AYDINLIK S., KIRIŞ A.
Turkish World Mathematical Society Journal of Applied and Engineering Mathematics, 2022 (Peer-Reviewed Journal)
- IV. **Doğrusal Olmayan Tekil Sınır Değer Problemlerinin Chebyshev Sonlu Farklar Yöntemi ile Çözümü (TR Dizin)**
AYDINLIK S., KIRIŞ A.

Refereed Congress / Symposium Publications in Proceedings

- I. **A high accuracy numerical approach for a beam equation with third order nonlinear boundary conditions**
AYDINLIK S.
1st International Conference on Innovative Academic Studies (ICIAS), Turkey, 10 September 2022
- II. **Shifted Legendre Pseudospectral Method for the Solution of Variable Delay Differential Equations**
AYDINLIK S.
3rd International Conference on Applied Engineering and Natural Sciences (ICAENS), Turkey, 20 July 2022
- III. **CHEBYSHEV SONLU FARKLAR YÖNTEMİ İLE ADI TÜREVLİ TEKİL PERTÜRBASYON SINIR DEĞER PROBLEMLERİNİN ÇÖZÜMÜ**
AYDINLIK S., KIRIŞ A.
3. ULUSAL BAŞKENT DİSİPLİNLER ARASI BİLİMSEL ÇALIŞMALAR KONGRESİ, IZDAS, 14 March 2021
- IV. **Vibration Analysis of Microelongated Plates With Riesz Caputo Fractional Derivative**
AYDINLIK S., KIRIŞ A.
5rd International Mediterranean Science and Engineering Congress IMSEC, 21 October 2020
- V. **An efficient numerical method for solving nonlinear singular boundary value problems arising in various physical models**
AYDINLIK S., KIRIŞ A.
3rd International Conference on Pure and e-Applied Mathematics ICPAM-VAN, 03 September 2020
- VI. **Chebyshev Finite Difference Method To Solve Fractional Bratu Type And Fractional Nonlinear Lane Emden-Type Equations**
AYDINLIK S., KIRIŞ A.
International Conference on Multidisciplinary Sciences, ICOMUS, 22 August 2019
- VII. **A HIGH-ORDER NUMERICAL METHOD FOR SOLVING BRATU-TYPE PROBLEMS**
AYDINLIK S., KIRIŞ A.
International Conference on Multidisciplinary Sciences, ICOMUS, 22 August 2019
- VIII. **Free vibration of composite sandwich beams with microstretch viscoelastic core**
AYDINLIK S., KIRIŞ A., İNAN E.
ICOVP, 13th International Conference on Vibration Problems, 29 November 2017

Metrics

Publication: 21

Citation (WoS): 1

Citation (Scopus): 33

H-Index (WoS): 1

H-Index (Scopus): 3