

Assoc. Prof. Yeşim AKBULUT

Personal Information

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International Researcher IDs

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Education Information

Doctorate, Ataturk University, Fen Bilimleri Enstitüsü, Matematik, Turkey 2007 - 2012

Undergraduate, Ataturk University, Kâzım Karabekir Eğitim Fakültesi, Matematik Öğretmenliği, Turkey 2002 - 2007

Dissertations

Doctorate, Hiperbolik bir problemde başlangıç şartının optimal kontrolü, Atatürk Üniversitesi, Matematik, Uygulamalı Matematik, 2012

Research Areas

Mathematics, Differential Equations, Partial Differential Equations, Optimization, Natural Sciences

Academic Titles / Tasks

Associate Professor, Ataturk University, Fen Fakültesi, Matematik, 2021 - Continues

Assistant Professor, Ataturk University, Fen Fakültesi, Matematik, 2018 - 2021

Assistant Professor, Ataturk University, Fen Fakültesi, Matematik, 2014 - 2018

Research Assistant, Ataturk University, Fen Fakültesi, Matematik, 2009 - 2014

Courses

Sayısal Yöntemler, Undergraduate, 2023 - 2024

Fark Denklemler, Undergraduate, 2023 - 2024, 2022 - 2023

Bilgisayar Uygulamaları, Undergraduate, 2023 - 2024, 2020 - 2021

Partial differential equation, Undergraduate, 2023 - 2024, 2022 - 2023

Uzmanlık Alan Dersi, Postgraduate, 2023 - 2024

Sayısal Yöntemler (B), Undergraduate, 2023 - 2024

İleri Diferansiyel Denklemler I, Postgraduate, 2023 - 2024

Postgraduate, 2023 - 2024

Nümerik Analiz, Undergraduate, 2023 - 2024

Optimization, Undergraduate, 2023 - 2024

Published journal articles indexed by SCI, SSCI, and AHCI

- I. **Sidewise Profile Control of 1-D Waves**
SARAÇ Y., Zuazua E.
JOURNAL OF OPTIMIZATION THEORY AND APPLICATIONS, vol.193, no.1-3, pp.931-949, 2022 (SCI-Expanded)
- II. **ON OPTIMAL CONTROL OF THE INITIAL VELOCITY OF AN EULER-BERNOULLI BEAM SYSTEM**
Engin A., Sarac Y., Celik E.
THERMAL SCIENCE, vol.26, 2022 (SCI-Expanded)
- III. **Existence and multiplicity of solutions for a Schrodinger-Kirchhoff type equation involving the fractional $p(\cdot)$ -Laplacian operator in R^N**
Ayazoğlu R., Saraç Y., Şener Kılıç S. Ş., Alisoy G.
COLLECTANEA MATHEMATICA, vol.72, no.1, pp.129-156, 2021 (SCI-Expanded)
- IV. **Estimating fixed points of non-expansive mappings with an application**
Jubair M., Khan F. A., Ali J., SARAÇ Y.
AIMS MATHEMATICS, vol.6, no.9, pp.9590-9601, 2021 (SCI-Expanded)
- V. **A comparative study on theoretical and experimental methods using basic electrical parameters of Au/CNTs/InP/Au-Ge diodes**
Saraç Y., Sener S. Ş., Baltakesmez A., Güzeldir B., Sağlam M.
JOURNAL OF ALLOYS AND COMPOUNDS, vol.824, 2020 (SCI-Expanded)
- VI. **Weak solutions to hyperbolic problems with inhomogeneous Dirichlet and Neumann boundary conditions**
Şener S. Ş., SARAÇ Y., SUBAŞI M.
Applied Mathematical Modelling, vol.37, no.5, pp.2623-2629, 2013 (SCI-Expanded)
- VII. **Symbolic and Numeric Computation of Optimal Initial Velocity in a Wave Equation**
Sarac Y.
JOURNAL OF COMPUTATIONAL AND NONLINEAR DYNAMICS, vol.8, no.1, 2013 (SCI-Expanded)
- VIII. **A minimizer for optimizing the initial velocity in a wave equation**
SUBAŞI M., SARAÇ Y.
Optimization, vol.61, no.3, pp.327-333, 2012 (SCI-Expanded)
- IX. **A variational technique for optimal boundary control in a hyperbolic problem**
Subai M., Sara Y., Kaar A.
APPLIED MATHEMATICS AND COMPUTATION, vol.218, no.12, pp.6629-6636, 2012 (SCI-Expanded)
- X. **On the Regularized Solutions of Optimal Control Problem in a Hyperbolic System**
SARAÇ Y., SUBAŞI M.
ABSTRACT AND APPLIED ANALYSIS, 2012 (SCI-Expanded)
- XI. **A procedure for the Galerkin method for a vibrating system**
Subaşı M., Şener S. Ş., Saraç Y.
Computers and Mathematics with Applications, vol.61, no.9, pp.2854-2862, 2011 (SCI-Expanded)

Articles Published in Other Journals

- I. **Promoting mathematics via banknotes: two examples from Turkey**
Singh B., AKBULUT Y.
BRITISH JOURNAL FOR THE HISTORY OF MATHEMATICS, vol.39, no.2, pp.155-159, 2024 (ESCI)
- II. **Identification of the Initial Temperature from the Given Temperature Data at the Left End of a Rod**
Saraç Y., Şener Kılıç S. Ş.
Applied Mathematics and Nonlinear Sciences, vol.4, no.2, pp.469-474, 2019 (ESCI)
- III. **On Approximate Solution of the Euler-Bernoulli Beam Equation via Galerkin Method**
SARAÇ Y.
Erzincan Üniversitesi Fen Bilimleri Enstitüsü Dergisi, vol.11, no.2, pp.341-346, 2018 (Peer-Reviewed Journal)
- IV. **Identification of the Transverse Distributed Load in the Euler-Bernoulli Beam Equation from**

Boundary Measurement

SARAÇ Y., ŞENER S. Ş.

International Journal of Modeling and Optimization, vol.8, no.1, pp.13-16, 2018 (Peer-Reviewed Journal)

V. On solution of an optimal control problem governed by a linear wave equation

SARAÇ Y.

New Trends in Mathematical Science, vol.4, pp.245, 2016 (Peer-Reviewed Journal)

VI. A REGULARIZED OPTIMAL CONTROL PROBLEM FOR FIRST ORDER LINEAR DIFFERENTIAL EQUATIONS

SARAÇ Y., SUBAŞI M.

Advances and Applications in Mathematical Sciences, vol.3, pp.17-29, 2010 (ESCI)

Books & Book Chapters

I. Permütasyon ve Kombinasyon

SARAÇ Y.

in: Matematik II, Nejmi Cengiz, Editor, Atatürk Üniversitesi Rektörlüğü, 2016

II. Lineer Denklem Sistemleri

SARAÇ Y.

in: Matematik II, Nejmi Cengiz, Editor, Atatürk Üniversitesi Rektörlüğü, 2016

Refereed Congress / Symposium Publications in Proceedings

I. ON OPTIMAL CONTROL OF AN INITIAL CONDITION IN A PARABOLIC SYSTEM BY A VARIATIONAL METHOD

AKBULUT Y.

10th INTERNATIONAL CONFERENCE ON APPLIED SCIENCES, İzmir, Turkey, 22 - 24 December 2023

II. On a Necessary Condition for an Optimal Control Problem in a Parabolic System

AKBULUT Y.

6TH INTERNATIONAL CONFERENCE ON MATHEMATICAL AND RELATED SCIENCES, Turkey, 20 - 22 November 2023

III. The variational formulation of an optimal boundary control for a parabolic equation

Engin A., AKBULUT Y.

7th International Conference on Computational Mathematics and Engineering Sciences, Elazığ, Turkey, 20 May 2023

IV. Optimal control of the boundary condition in a parabolic system

Koç T., AKBULUT Y.

7th International Conference on Computational Mathematics and Engineering Sciences, Elazığ, Turkey, 20 May 2023

V. Nodal profile control for 1-d wave equation

AKBULUT Y.

IX Partial Differential Equations, Optimal Design and Numerics, Benasque, Spain, 21 September 2022

Supported Projects

AKBULUT Y., KOÇ T., Project Supported by Higher Education Institutions, BİR ISI GEÇİRGENLİK PROBLEMİNDE SOL UÇTAKİ ISI AKISININ OPTİMAL KONTROLÜ, 2023 - 2024

Metrics

Publication: 42

Citation (WoS): 40

Citation (Scopus): 35

H-Index (WoS): 4

H-Index (Scopus): 3

Scholarships

2219-Yurt Dışı Doktora Sonrası Araştırma Burs Programı, TÜBİTAK, 2022 - 2023

Non Academic Experience

Friedrich-Alexander-University, Erlangen-Nürnberg

Friedrich-Alexander-University, Erlangen-Nürnberg