

Prof. Hakkı Duru

Personal Information

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International Researcher IDs

ScholarID: 1w326

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Publons / Web Of Science ResearcherID: AAC-8449-2019

ScopusID: 56043249200

Yoksis Researcher ID: 17425

Education Information

Doctorate, Van Yüzüncü Yil University, Fen Bilimleri Enstitüsü, Matematik, Turkey 1990 - 1995

Postgraduate, Ataturk University, Fen Bilimleri Enstitüsü, Matematik, Turkey 1987 - 1990

Undergraduate, Istanbul Technical University, Fen-Edebiyat Fakültesi, Matematik Mühendisliği, Turkey 1976 - 1986

Foreign Languages

English, B2 Upper Intermediate

Dissertations

Doctorate, Singüler pertürbe olmuş başlangıç-sınır-değer Sobolev Problemi için fark şemaları, Van Yüzüncü Yil University, Fen Bilimleri Enstitüsü, Matematik, 1995

Postgraduate, David Turner derleyicisi için algoritmik yaklaşım, Ataturk University, Fen Bilimleri Enstitüsü, Matematik, 1990

Research Areas

Mathematics, Computer Science, Differential Equations, Numerical Analysis, Natural Sciences

Academic Titles / Tasks

Professor, Van Yüzüncü Yil University, Fen Fakültesi, Matematik Bölümü, 2019 - Continues

Associate Professor, Van Yüzüncü Yil University, Fen Fakültesi, Matematik Bölümü, 2009 - 2019

Assistant Professor, Van Yüzüncü Yil University, Fen Fakültesi, Matematik Bölümü, 1997 - 2009

Research Assistant, Van Yüzüncü Yil University, Fen Fakültesi, Matematik Bölümü, 1987 - 1997

Academic and Administrative Experience

Member of the Senate, Van Yüzüncü Yil University, Muradiye Meslek Yüksekokulu, 2021 - Continues
Director of Vocational School, Van Yüzüncü Yil University, Muradiye Meslek Yüksekokulu, 2021 - Continues
Meslek Yüksekokulu Kurulu Üyesi, Van Yüzüncü Yil University, Muradiye Meslek Yüksekokulu, 2021 - Continues
Meslek Yüksekokulu Yönetim Kurulu Üyesi, Van Yüzüncü Yil University, Muradiye Meslek Yüksekokulu, 2021 - Continues
Head of Department, Van Yüzüncü Yil University, Muradiye Meslek Yüksekokulu, Tıbbi Hizmetler ve Teknikler Bölümü, 2021 - 2022
Meslek Yüksekokulu Kurulu Üyesi, Van Yüzüncü Yil University, Muradiye Meslek Yüksekokulu, Kozmetik Bakım ve Güzellik Hizmetleri Bölümü, 2021 - 2022
Head of Department, Van Yüzüncü Yil University, Muradiye Meslek Yüksekokulu, Mimarlık ve Şehir Planlama Bölümü, 2021 - 2022
Head of Department, Van Yüzüncü Yil University, Muradiye Meslek Yüksekokulu, Toptan ve Perakende Satış Bölümü, 2021 - 2022
Head of Department, Van Yüzüncü Yil University, Muradiye Meslek Yüksekokulu, Kozmetik Bakım ve Güzellik Hizmetleri Bölümü, 2021 - 2022
Head of Department, Van Yüzüncü Yil University, Muradiye Meslek Yüksekokulu, Park ve Bahçe Bitkileri Bölümü, 2021 - 2022
Staj Başkanı, Van Yüzüncü Yil University, Erciş Meslek Yüksekokulu, İnşaat Bölümü, 2020 - 2021
Meslek Yüksekokulu Kurulu Üyesi, Van Yüzüncü Yil University, Erciş Meslek Yüksekokulu, İnşaat Bölümü, 2020 - 2021
Head of Department, Van Yüzüncü Yil University, Erciş Meslek Yüksekokulu, İnşaat Bölümü, 2020 - 2021
Meslek Yüksekokulu Kurulu Üyesi, Van Yüzüncü Yil University, Erciş Meslek Yüksekokulu, Terapi ve Rehabilitasyon Bölümü, 2020 - 2021
Head of Department, Van Yüzüncü Yil University, Erciş Meslek Yüksekokulu, Terapi ve Rehabilitasyon Bölümü, 2020 - 2021
Meslek Yüksekokulu Kurulu Üyesi, Van Yüzüncü Yil University, Erciş Meslek Yüksekokulu, Muhasebe ve Vergi Bölümü, 2019 - 2021
Head of Department, Van Yüzüncü Yil University, Erciş Meslek Yüksekokulu, Muhasebe ve Vergi Bölümü, 2019 - 2021
Head of Department, Van Yüzüncü Yil University, Erciş Meslek Yüksekokulu, Finans-Bankacılık ve Sigortacılık Bölümü, 2019 - 2021
Meslek Yüksekokulu Kurulu Üyesi, Van Yüzüncü Yil University, Erciş Meslek Yüksekokulu, Finans-Bankacılık ve Sigortacılık Bölümü, 2019 - 2021
Staj Başkanı, Van Yüzüncü Yil University, Erciş Meslek Yüksekokulu, Finans-Bankacılık ve Sigortacılık Bölümü, 2019 - 2021
Staj Başkanı, Van Yüzüncü Yil University, Erciş Meslek Yüksekokulu, Muhasebe ve Vergi Bölümü, 2019 - 2021
Member of the Senate, Van Yüzüncü Yil University, 2019 - 2021
Director of Vocational School, Van Yüzüncü Yil University, Erciş Meslek Yüksekokulu, 2019 - 2021
Meslek Yüksekokulu Kurulu Üyesi, Van Yüzüncü Yil University, Erciş Meslek Yüksekokulu, Finans-Bankacılık ve Sigortacılık Bölümü, 2019 - 2021
Meslek Yüksekokulu Yönetim Kurulu Üyesi, Van Yüzüncü Yil University, Erciş Meslek Yüksekokulu, 2019 - 2021
Head of Department, Van Yüzüncü Yil University, Erciş Meslek Yüksekokulu, Terapi ve Rehabilitasyon Bölümü, 2019 - 2020
Head of Department, Van Yüzüncü Yil University, Erciş Meslek Yüksekokulu, Pazarlama ve Reklamcılık Bölümü, 2019 - 2020
Meslek Yüksekokulu Kurulu Üyesi, Van Yüzüncü Yil University, Erciş Meslek Yüksekokulu, Pazarlama ve Reklamcılık Bölümü, 2019 - 2020
Meslek Yüksekokulu Kurulu Üyesi, Van Yüzüncü Yil University, Erciş Meslek Yüksekokulu, Terapi ve Rehabilitasyon Bölümü, 2019 - 2020

Supervised Theses

Duru H., SNGÜLER PERTÜRBE ÖZELLİKLİ GECKMELİ SOBOLEV PROBLEMLER İÇİN NÜMERİK METODLAR, Doctorate,

Jury Memberships

Associate Professor Exam, Associate Professor Exam, Van Yüzüncü Yil University, October, 2023

Doctorate, Doctorate, Van Yüzüncü Yil Üniversitesi, September, 2023

Appointment to Academic Staff-Assistant Professorship, Appointment to Academic Staff-Assistant Professorship, Van Yüzüncü Yil Üniversitesi, July, 2022

PhD Thesis Monitoring Committee Member, PhD Thesis Monitoring Committee Member, Van Yüzüncü Yil Üniversitesi, June, 2022

PhD Thesis Monitoring Committee Member, PhD Thesis Monitoring Committee Member, Van Yüzüncü Yil Üniversitesi, January, 2022

PhD Thesis Monitoring Committee Member, PhD Thesis Monitoring Committee Member, Van Yüzüncü Yil Üniversitesi, December, 2021

Published journal articles indexed by SCI, SSCI, and AHCI

- I. **A computational method for the singularly perturbed delay pseudo-parabolic differential equations on adaptive mesh**
Gunes B., Duru H.
International Journal of Computer Mathematics, vol.100, no.8, pp.1667-1682, 2023 (SCI-Expanded)
- II. **The stability and convergence analysis for singularly perturbed Sobolev problems with Robin type boundary condition**
DURU H., Güneş B.
Georgian Mathematical Journal, 2023 (SCI-Expanded)
- III. **A second-order difference scheme for the singularly perturbed Sobolev problems with third type boundary conditions on Bakhvalov mesh**
Gunes B., Duru H.
Journal of Difference Equations and Applications, vol.28, no.3, pp.385-405, 2022 (SCI-Expanded)
- IV. **A novel computational method for solving nonlinear Volterra integro-differential equation**
Çakır M., Gunes B., Duru H.
Kuwait Journal of Science, vol.48, no.1, pp.1-9, 2021 (SCI-Expanded)
- V. **Uniform difference method for singularly perturbed delay Sobolev problems**
Baratichiyaneh A., Durus H.
QUAESTIONES MATHEMATICAE, vol.43, pp.1713-1736, 2020 (SCI-Expanded)
- VI. **On adaptive mesh for the initial boundary value singularly perturbed delay Sobolev problems**
Baratichiyaneh A., Duru H.
NUMERICAL METHODS FOR PARTIAL DIFFERENTIAL EQUATIONS, vol.36, pp.228-248, 2020 (SCI-Expanded)
- VII. **A parameter-uniform numerical method for a Sobolev problem with initial layer**
AMIRALIYEV G. M., Duru H., AMIRALIYEVA I. G.
NUMERICAL ALGORITHMS, vol.44, no.2, pp.185-203, 2007 (SCI-Expanded)
- VIII. **Uniform difference method for a parameterized singular perturbation problem**
AMIRALIYEV G. M., KUDU M., Duru H.
APPLIED MATHEMATICS AND COMPUTATION, vol.175, no.1, pp.89-100, 2006 (SCI-Expanded)
- IX. **A note on a parameterized singular perturbation problem**
AMIRALIYEV G., Duru H.
JOURNAL OF COMPUTATIONAL AND APPLIED MATHEMATICS, vol.182, no.1, pp.233-242, 2005 (SCI-Expanded)
- X. **Finite-difference method for parameterized singularly perturbed problem**
Amiraliyev G., Kudu M., Duru H.

- Journal of Applied Mathematics, vol.2004, no.3, pp.191-199, 2004 (SCI-Expanded)
- XI. **Some specialties of the solutions of the differential equations in Banach space**
Duru H., GULLE A.
APPLIED MATHEMATICS AND COMPUTATION, vol.157, no.3, pp.667-675, 2004 (SCI-Expanded)
- XII. **The Hardy-Littlewood-Sobolev inequality for (beta, gamma)-distance Riesz potentials**
Cinar I., DURU H.
APPLIED MATHEMATICS AND COMPUTATION, vol.153, no.3, pp.757-762, 2004 (SCI-Expanded)
- XIII. **Difference schemes for the singularly perturbed Sobolev periodic boundary problem**
Duru H.
APPLIED MATHEMATICS AND COMPUTATION, vol.149, no.1, pp.187-201, 2004 (SCI-Expanded)
- XIV. **A uniformly convergent difference method for the periodical boundary value problem**
AMIRALIYEV G., Duru H.
COMPUTERS & MATHEMATICS WITH APPLICATIONS, vol.46, pp.695-703, 2003 (SCI-Expanded)
- XV. **On continuity properties of potentials depending on lambda-distance**
Cinar I., DURU H.
APPLIED MATHEMATICS AND COMPUTATION, vol.139, pp.531-534, 2003 (SCI-Expanded)
- XVI. **A uniformly convergent finite difference method for a singularly perturbed initial value problem**
AMIRALIYEV G., Duru H.
APPLIED MATHEMATICS AND MECHANICS-ENGLISH EDITION, vol.20, no.4, pp.379-387, 1999 (SCI-Expanded)

Articles Published in Other Journals

- I. **A ROBUST NUMERICAL METHOD FOR SINGULARLY PERTURBED SOBOLEV PERIODIC PROBLEMS ON B-MESH**
Duru H., Shazhdekeyeva N., Adiyeva A.
KazNU Bulletin. Mathematics, Mechanics, Computer Science Series, vol.122, no.2, pp.36-48, 2024 (Scopus)
- II. **A second-order numerical method for pseudo-parabolic equations having both layer behavior and delay parameter**
Güneş B., Duru H.
Communications Faculty of Sciences University of Ankara Series A1: Mathematics and Statistics, vol.73, no.2, pp.569-587, 2024 (ESCI)
- III. **An efficient numerical scheme on adaptive mesh for solving singularly perturbed quasilinear boundary value problems**
DURU H., Demirbaş M., Güneş B.
BULLETIN OF COMPUTATIONAL APPLIED MATHEMATICS, vol.12, no.1, pp.1-24, 2024 (ESCI)
- IV. **A NUMERICAL SCHEME ON S-MESH FOR THE SINGULARLY PERTURBED INITIAL BOUNDARY VALUE SOBOLEV PROBLEMS WITH LARGE TIME DELAY**
Baratichiyaneh A., DURU H.
Journal of Mathematics, Mechanics and Computer Science, vol.117, no.1, pp.94-111, 2023 (Scopus)
- V. **Singüler Pertürbe Özellikli Kuasilineer Gecikmeli Diferansiyel Denklemlerin Nümerik Çözümleri**
DURU H., Gürbüz B.
Yüzüncü Yıl Üniversitesi Fen Bilimleri Enstitüsü Dergisi, vol.27, no.2, pp.330-343, 2022 (Peer-Reviewed Journal)
- VI. **A Numerical Method for Solving Singularly Perturbed Quasilinear Boundary Value Problems on Shishkin Mesh**
DURU H., Demirbaş M.
Turkish Journal of Mathematics and Computer Science, vol.14, no.1, pp.145-154, 2022 (Peer-Reviewed Journal)
- VII. **The finite difference method on adaptive mesh for singularly perturbed nonlinear 1D reaction diffusion boundary value problems**
DURU H., Güneş B.
Journal of Applied Mathematics and Computational Mechanics, vol.19, no.4, pp.45-56, 2020 (Peer-Reviewed)

- Journal)
- VIII. **Parçalı Düzgün Şebekede Singüler Pertürbe Özellikli Lineer Olmayan Reaksiyon Difüzyon Problemleri için Fark Şemaları**
DURU H., GÜNEŞ B.
Erzincan Üniversitesi Fen Bilimleri Enstitüsü Dergisi, vol.12, pp.425-436, 2019 (Peer-Reviewed Journal)
- IX. **Parçalı Düzgün Şebekede Singüler Pertürbe Özellikli Lineer Olmayan Reaksiyon Difüzyon Problemleri İçin Nümerik Çözümler**
Duru H., Güneş B.
Erzincan Üniversitesi Fen Bilimleri Dergisi, vol.12, no.1, pp.425-436, 2019 (Peer-Reviewed Journal)
- X. **Numerical Solutions For Singularly Perturbed Nonlinear Reaction Diffusion Boundary Value Problems**
DURU H., Güneş B.
IOSR Journal of Mathematics, vol.15, no.1, pp.35-49, 2019 (Peer-Reviewed Journal)
- XI. **Convergence of various iterations to solution of boundary value problem for abstract elliptic equation.**
gulle a., DURU H., Mamedov y. D.
International Journal of Applied Mathematics, vol.2, no.11, pp.1273-1284, 2000 (Peer-Reviewed Journal)
- XII. **Convergence of the iterative processes to the solution of the boundary problem with the parameter.**
gulle a., DURU H.
Transactions of Academy of Sciences of Azerbaijan. Series of Physical-Technical and Mathematical Sciences, vol.18, no.3-4, pp.34-40, 1998 (Peer-Reviewed Journal)

Books

- I. **Nümerik Analiz**
Duru H., Amiralı G.
Pegema, Ankara, 2002

Papers Published in Refereed Scientific Meetings

- I. **A ROBUST NUMERICAL METHOD FOR SINGULARLY PERTURBED DELAY PSEUDO-PARABOLIC PROBLEMS**
DURU H., Güneş B.
TRENDS IN THE DEVELOPMENT OF PHYSICAL AND MATHEMATICAL EDUCATION: THEORETICAL RESEARCH AND PRACTICAL EXPERIENCE, Atyrau, Kazakhstan, 10 November 2022
- II. **A new numerical approach for solving nonlinear Volterra integro differential equation**
ÇAKIR M., Güneş B., DURU H.
3rd International Conference on Pure and Applied Mathematics (ICPAM), Van, Turkey, 03 September 2020, pp.48
- III. **FINITE DIFFERENCE SCHEMES ON ADAPTIVE MESH FOR THE SINGULARLY PERTURBED SOBOLEV INITIAL AND PERIODIC BOUNDARY PROBLEM**
Duru H., Güneş B.
4rd International Conference on computational Mathematics and Engineering Science (CMES-2019), Antalya, Turkey, 20 - 22 April 2019, vol.4, pp.116
- IV. **Uniform Difference Method for Singularly Perturbed Nonlinear reaction Diffusion Problems.**
Duru H., Güneş B.
3rd International Conference on computational Mathematics and Engineering Science (CMES-2018), Girne, Cyprus (Kktc), 4 - 06 May 2018, vol.3, pp.177
- V. **FINITE DIFFERENCE SCHEMES ON SHISHKIN MESHE FOR THE INITIAL BOUNDARY VALUE SINGULARLY PERTURBED DELAY SOBOLEV PROBLEMS**

DURU H., Baratichiyaneh A.

1. International Turkish World Engineering and Science Congress, 7 - 10 December 2017

VI. FINITE DIFFERENCE SCHEMES ON SHISHKIN MESHE FOR THE INITIAL BOUNDARY VALUE SINGULARLY PERTURBED DELAY SOBOLEV PROBLEMS

Duru H., Baratichiyaneh A.

I. INTERNATIONAL TURKISH WORLD ENGINEERING AND SCIENCE CONGRESS, Antalya, Turkey, 7 - 10 December 2017, pp.312

VII. On adaptive mesh for the initial boundary value singularly perturbed delay Sobolev problems

Duru H., Baratichiyaneh a.

Caucasian Mathematics Conference (CMC)-II Van, Turkey, August 22-24, 2017, Van, Turkey, 22 - 24 August 2017, pp.58

VIII. UNIFORM DIFFERENCE METHOD FOR SINGULARLY PERTURBED DELAY SOBOLEV PROBLEMS

Duru H., Baratichiyaneh A.

International Conference on Computational Mathematics and Engineering Sciences (CMES2017), İstanbul, Turkey, 20 - 22 May 2017, pp.112

IX. Uniform method for singularly perturbed Sobolev Problem

Duru H.

ICPAM 2015 - INTERNATIONAL CONFERENCE ON PURE AND APPLIED MATHEMATICS, Van, Turkey, 25 - 28 August 2015, pp.112

X. Numerical Methods for Sinfularly Perturbed Problem

Duru H.

5. Mathematics Conference, Payam Noor University, Shiraz, Iran, 24 - 25 October 2012, pp.25

Supported Projects

AMİRALİ G., Erdoğan F., Duru H., Çakır M., Şevgin S., Project Supported by Higher Education Institutions, Nonlinear dispersive wave propagation problems for mathematical and computational methods, 2005 - 2008

Peer Reviews in Scientific Publications

Journal of Mathematical Modeling, Other Indexed Journal, November 2023

Metrics

Publication: 39

Citation (WoS): 67

Citation (Scopus): 138

H-Index (WoS): 5

H-Index (Scopus): 8

Congress and Symposium Activities

1. International Turkish World Engineering and Science Congress, Attendee, Antalya, Turkey, 2017

Caucasian Mathematics Conference (CMC)-II Van, Turkey, August 22-24, 2017, Session Moderator, Van, Turkey, 2017

Caucasian Mathematics Conference (CMC)-II Van, Turkey, August 22-24, 2017, Attendee, Van, Turkey, 2017

International Conference on Computational Mathematics and Engineering Sciences (CMES2017), Session Moderator, İstanbul, Turkey, 2017

2nd International Conference on Computational Mathematics and engineering Sciences-CMES2017, Attendee, İstanbul,

Turkey, 2017

5. Mathematics Conference Payame Noor University, Attendee, Shirâz, Iran, 2012