

## Assoc. Prof. ELİF DEMİRÇİ

### Personal Information

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### International Researcher IDs

ScholarID: a790WVQAAAAJ

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Publons / Web Of Science ResearcherID: P-8739-2015

ScopusID: 37025114600

Yoksis Researcher ID: 24067

### Education Information

Doctorate, Ankara University, Fen Bilimleri Enstitüsü, Matematik (Dr), Turkey 2005 - 2011

Postgraduate, Ankara University, Fen Bilimleri Enstitüsü, Matematik (YI) (Tezli), Turkey 2002 - 2005

Undergraduate, Ankara University, Fen Fakültesi, Matematik Bölümü, Turkey 1998 - 2002

### Foreign Languages

English, C1 Advanced

### Dissertations

Doctorate, Kesirli basamaktan bir diferensiyel denklem üzerine, Ankara University, Fen Bilimleri Enstitüsü, Matematik (Dr), 2011

Postgraduate, Fonksiyon yaklaşımları ve çeşitli bağlayıcı fonksiyonlar, Ankara University, Fen Bilimleri Enstitüsü, Matematik (YI) (Tezli), 2005

### Research Areas

Life Sciences, Mathematics, Differential Equations, Dynamic Systems and Ergodic Theory

### Academic Titles / Tasks

Associate Professor, Ankara University, Fen Fakültesi, Matematik Bölümü, 2018 - Continues

Assistant Professor, Ankara University, Fen Fakültesi, Matematik Bölümü, 2014 - 2018

Research Assistant PhD, Ankara University, Fen Fakültesi, Matematik Bölümü, 2011 - 2014

Research Assistant, Ankara University, Fen Fakültesi, Matematik Bölümü, 2004 - 2011

Research Assistant, Florida Institute of Technology, Mathematical Sciences, 2008 - 2009

### Courses

Computer Programming, Undergraduate, 2023 - 2024, 2022 - 2023, 2021 - 2022  
READING AND WRITING SKILLS FOR MATHEMATICIANS, Undergraduate, 2022 - 2023  
Bilgisayar programlama II, Undergraduate, 2021 - 2022  
DIFFERENTIAL EQUATIONS, Undergraduate, 2021 - 2022  
ADVANCED PROGRAMMING, Undergraduate, 2021 - 2022  
DIFFERENTIAL EQUATIONS, Undergraduate, 2022 - 2023  
Bilgisayar Programlama I, Undergraduate, 2022 - 2023  
İngilizce Matematiksel Kavramlar, Undergraduate, 2021 - 2022  
DIFFERENTIAL EQUATIONS, Undergraduate, 2022 - 2023  
Bilgisayar Programlama 1 , Undergraduate, 2022 - 2023, 2021 - 2022  
Differential Equations, Undergraduate, 2021 - 2022, 2015 - 2016, 2014 - 2015  
Differential Equations, Undergraduate, 2021 - 2022  
İLERİ PROGRAMLAMA II, Undergraduate, 2016 - 2017, 2015 - 2016  
DIFFERENTIAL EQUATIONS (GEO. ENG.), Undergraduate, 2016 - 2017, 2012 - 2013  
BİLGİSAYAR PROGRAMLAMA 2, Undergraduate, 2016 - 2017, 2014 - 2015, 2013 - 2014  
İleri Programlama 1, Undergraduate, 2015 - 2016  
Diferensiyel Denklemler, Undergraduate, 2015 - 2016  
Bilgisayar Programlama II, Undergraduate, 2015 - 2016, 2011 - 2012  
Finansal Matematiğe Giriş 1, Undergraduate, 2014 - 2015, 2013 - 2014  
Diferensiyel Denklemler (Elektronik Müh.), Undergraduate, 2014 - 2015  
Bilgisayar Programlama I, Undergraduate, 2013 - 2014, 2011 - 2012  
Matematik (Sağlık Bil. Fak.), Undergraduate, 2013 - 2014  
Diferensiyel denklemler (Gıda Müh), Undergraduate, 2012 - 2013  
Diferensiyel Denklemler Bilg. Müh., Undergraduate, 2012 - 2013  
Matematik I (Ziraat), Undergraduate, 2012 - 2013  
Diferensiyel Denklemler (Ziraat), Undergraduate, 2012 - 2013  
Matematik I, Undergraduate, 2011 - 2012  
Diferensiyel denklemler I, Undergraduate, 2011 - 2012  
Matematik II (Ziraat Fak.), Undergraduate, 2011 - 2012

## Advising Theses

DEMİRCİ E., Optimal control of epidemic models, Postgraduate, Ö.BAŞ(Student), 2021  
DEMİRCİ E., Mathematical models of tumor-immune system interactions, Postgraduate, M.GÖZET(Student), 2020

## Jury Memberships

PhD Thesis Monitoring Committee Member, PhD Thesis Monitoring Committee Member, Ankara Üniversitesi, October, 2023  
PhD Thesis Monitoring Committee Member, PhD Thesis Monitoring Committee Member, Ankara Üniversitesi, July, 2022

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

- I. **Mittag-Leffler stability of neural networks with Caputo-Hadamard fractional derivative**  
DEMİRCİ E., KARAKOÇ F., Kutahyalıoğlu A.  
MATHEMATICAL METHODS IN THE APPLIED SCIENCES, vol.47, no.12, pp.10091-10100, 2024 (SCI-Expanded)
- II. **Parameter estimation for a SEIRS model with COVID-19 data of Türkiye**  
ÜNAL A., DEMİRCİ E.

ANALELE STIINTIFICE ALE UNIVERSITATII OVIDIUS CONSTANTA-SERIA MATEMATICA, vol.31, no.3, pp.229-244, 2023 (SCI-Expanded)

- III. **A fractional order model for obesity epidemic in a non-constant population**  
DEMİRCİ E.  
ADVANCES IN DIFFERENCE EQUATIONS, vol.2017, 2017 (SCI-Expanded)
- IV. **A fractional order SEIR model with vertical transmission**  
ÖZALP N., DEMİRCİ E.  
MATHEMATICAL AND COMPUTER MODELLING, vol.54, no.1-2, pp.1-6, 2011 (SCI-Expanded)
- V. **A FRACTIONAL ORDER SEIR MODEL WITH DENSITY DEPENDENT DEATH RATE**  
DEMİRCİ E., ÜNAL A., ÖZALP N.  
HACETTEPE JOURNAL OF MATHEMATICS AND STATISTICS, vol.40, no.2, pp.287-295, 2011 (SCI-Expanded)

### Articles Published in Other Journals

- I. **A Novel Mathematical Model of the Dynamics of COVID-19**  
DEMİRCİ E.  
Gazi University Journal of Science, vol.36, no.3, pp.1302-1309, 2023 (ESCI)
- II. **A FRACTIONAL ORDER MODEL OF HEPATITIS B TRANSMISSION UNDER THE EFFECT OF VACCINATION**  
DEMİRCİ E.  
COMMUNICATIONS FACULTY OF SCIENCES UNIVERSITY OF ANKARA-SERIES A1 MATHEMATICS AND STATISTICS, vol.71, no.2, pp.566-580, 2022 (ESCI)
- III. **CONVERGENCE OF SOLUTIONS OF NONAUTONOMOUS NICHOLSON'S BLOWFLIES MODEL WITH IMPULSES**  
DEMİRCİ E., KARAKOÇ F.  
COMMUNICATIONS FACULTY OF SCIENCES UNIVERSITY OF ANKARA-SERIES A1 MATHEMATICS AND STATISTICS, vol.68, no.2, pp.1922-1929, 2019 (ESCI)
- IV. **On Local Asymptotic Stability of  $q$ -Fractional Nonlinear Dynamical Systems**  
KOCA İ., DEMİRCİ E.  
APPLICATIONS AND APPLIED MATHEMATICS-AN INTERNATIONAL JOURNAL, vol.11, no.1, pp.174-183, 2016 (ESCI)
- V. **A new mathematical approach for rabies endemy**  
DEMİRCİ E.  
Applied Mathematical Sciences, vol.8, no.1-4, pp.59-67, 2014 (Scopus)
- VI. **Monotone iterative technique for a coupled system of first order differential equations**  
DEMİRCİ HAMAMCIOĞLU E., ÖZALP N.  
COMMUNICATIONS FACULTY OF SCIENCES UNIVERSITY OF ANKARA-SERIES A1 MATHEMATICS AND STATISTICS, vol.62, no.2, pp.1-11, 2013 (ESCI)

### Books & Book Chapters

- I. **Nümerik Analiz Bilimsel Hesaplama Matematiği**  
ÖZALP N., DEMİRCİ HAMAMCIOĞLU E.  
Gazi Kitabevi, Ankara, 2012

### Refereed Congress / Symposium Publications in Proceedings

- I. **An Optimal Control Problem For COVID-19 Pandemic**

DEMİRCİ E.

Joint Mathematics Meetings 2024, San-Francisco, Costa Rica, 3 - 06 January 2024

- II. **Parameter Estimation for A Seirs Covid-19 Model with Turkey Data**  
Ünal A., Demirci E.  
IECMSA, 29 August - 01 September 2022, pp.90
- III. **Seir Model for Covid-19 Outbreak**  
Ünal A., Demirci E., Özgökkurt İ.  
IECMSA, 29 August - 01 September 2022, pp.109
- IV. **A new Mathematical Model for COVID-19 Pandemic**  
DEMİRCİ E.  
ICOMAA-2022, İstanbul, Turkey, 11 May 2022
- V. **A Fractional Order Epidemic Model for HBV in a Non-Constant Population**  
DEMİRCİ HAMAMCIOĞLU E.  
SEARCDE 2017, 7 - 08 October 2017
- VI. **A Fractional Order Epidemic Model with Vaccination**  
DEMİRCİ HAMAMCIOĞLU E.  
Caucasian Mathematics Conference (CMC-II), 22 - 24 August 2017
- VII. **A Fractional Order Model for Obesity Epidemic**  
DEMİRCİ HAMAMCIOĞLU E.  
2nd International Conference On analysis and Its Applications, 12 - 14 July 2016
- VIII. **A Mathematical Model for Obesity Epidemic in a Non Constant Population**  
DEMİRCİ HAMAMCIOĞLU E., BADEMLER S.  
JMM 2015, San-Antonio, Northern Mariana Islands, 10 - 13 January 2015
- IX. **A Mathematical Model of Obesity Epidemic**  
DEMİRCİ HAMAMCIOĞLU E.  
IECMSA-2014, Viyana, Austria, 25 - 28 August 2014
- X. **A Method to Solve Fractional Differential Equations**  
DEMİRCİ HAMAMCIOĞLU E.  
AIMS Conference on Dynamical Systems, Differential Equations and Applications, Orlando, United States Of America, 7 - 11 July 2012
- XI. **On a Fractional Order Epidemic Model**  
DEMİRCİ HAMAMCIOĞLU E.  
2011 Joint Mathematics Meetings, New Orleans, United States Of America, 6 - 08 January 2011
- XII. **Kesirli Basamaktan bir Epidemik Model**  
ÖZALP N., ÜNAL A., DEMİRCİ HAMAMCIOĞLU E.  
V. Ankara Matematik Günleri Sempozyumu, Ankara, Turkey, 3 - 04 June 2010
- XIII. **An SEIR Model of Fractional Order with Vertical Transmission**  
DEMİRCİ HAMAMCIOĞLU E.  
2010 Joint Mathematics Meetings, San-Francisco, Costa Rica, 13 - 16 January 2010
- XIV. **Coral Reef Processes Diving into the Interface between Ecology and Mathematics**  
DEMİRCİ HAMAMCIOĞLU E.  
Embry-Riddle Student Mathematics Conference, Turkey, 11 - 13 April 2009
- XV. **Monotone Iterative Technique for a System of Differential Equations with Initial Boundary Conditions**  
DEMİRCİ HAMAMCIOĞLU E.  
WCNA-2008, Orlando, United States Of America, 2 - 09 July 2008
- XVI. **Lineer olmayan başlangıç sınır değer problemleri için monoton iteratif yöntem**  
DEMİRCİ HAMAMCIOĞLU E., ÖZALP N.  
III. Ankara Matematik Günleri Sempozyumu, Turkey, 22 - 23 May 2008

## Supported Projects

Demirci E., Ünal A., Azap A., TUBITAK Project, Covid-19 salgını için bir matematiksel model ve optimal kontrol problemi, 2021 - 2023

## Activities in Scientific Journals

COMMUNICATIONS FACULTY OF SCIENCES UNIVERSITY OF ANKARA-SERIES A1 MATHEMATICS AND STATISTICS, Assistant Editor/Section Editor, 2021 - Continues

## Scientific Refereeing

TUBITAK Project, 2209-A - Üniversite Öğrencileri Araştırma Projeleri Destekleme Programı, Ankara University, Turkey, October 2022

TUBITAK Project, 2209-A - Üniversite Öğrencileri Araştırma Projeleri Destekleme Programı, Ankara University, Turkey, October 2022

TUBITAK Project, 2209-A - Üniversite Öğrencileri Araştırma Projeleri Destekleme Programı, Ankara University, Turkey, October 2022

TUBITAK Project, 2209-A - Üniversite Öğrencileri Araştırma Projeleri Destekleme Programı, Ankara University, Turkey, October 2022

TUBITAK Project, 2209-A - Üniversite Öğrencileri Araştırma Projeleri Destekleme Programı, Ankara University, Turkey, April 2022

TUBITAK Project, 2209-A - Üniversite Öğrencileri Araştırma Projeleri Destekleme Programı, Ankara University, Turkey, April 2022

TUBITAK Project, 2209-A - Üniversite Öğrencileri Araştırma Projeleri Destekleme Programı, Ankara University, Turkey, April 2022

TUBITAK Project, 2209-A - Üniversite Öğrencileri Araştırma Projeleri Destekleme Programı, Ankara University, Turkey, April 2022

## Metrics

Publication: 29

Citation (WoS): 295

Citation (Scopus): 343

H-Index (WoS): 5

H-Index (Scopus): 5

## Congress and Symposium Activities

BEYOND 2023- Computational Science, Mathematical Modelling and Engineering Conference, Session Moderator, Ankara, Turkey, 2023