

Assoc. Prof. ARZU ÜNAL

Personal Information

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International Researcher IDs

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Education Information

Doctorate, Ankara University, Fen Bilimleri Enstitüsü, Matematik (Dr), Turkey 2002 - 2008

Postgraduate, Ankara University, Fen Bilimleri Enstitüsü, Matematik (YI) (Tezli), Turkey 1999 - 2002

Undergraduate, Ankara University, Fen Fakültesi, Matematik Bölümü, Turkey 1995 - 1999

Foreign Languages

English, B2 Upper Intermediate

Dissertations

Doctorate, Painlevé analizi ve Backlund dönüşümü yardımıyla lineer olmayan kısmi türevli denklemlerin incelenmesi, Ankara University, Fen Bilimleri Enstitüsü, Matematik (Dr), 2008

Academic Titles / Tasks

Research Assistant, Ankara University, Fen Fakültesi, Matematik Bölümü, 2000 - 2013

Courses

DOĞRUSAL PROGRAMLAMA, Undergraduate, 2022 - 2023

Diferensiyel Denklemler , Undergraduate, 2021 - 2022

OPTİMİZASYON, Undergraduate, 2021 - 2022

BİLGİSAYAR PROGRAMLAMA II, Undergraduate, 2021 - 2022

Optimization, Undergraduate, 2021 - 2022

Diferensiyel Denklemler, Undergraduate, 2022 - 2023

Bilgisayar Programlama I, Undergraduate, 2022 - 2023

Linear Programming, Undergraduate, 2022 - 2023

MAT 233 BİLGİSAYAR PROGRAMLAMA, Undergraduate, 2015 - 2016, 2013 - 2014

MAT 211 DİF. DENK (ELEK. MÜH), Undergraduate, 2015 - 2016

MAT 101 MATEMATİK (KİMYA), Undergraduate, 2015 - 2016

MAT 224 KISMİ TÜR. DENK. (ELEK. MÜH), Undergraduate, 2015 - 2016

MAT 234 BİLGİSAYAR PROGRAMLAMA, Undergraduate, 2015 - 2016, 2013 - 2014

MAT 231 DİF. DENK (GIDA), Undergraduate, 2015 - 2016, 2010 - 2011

MAT 102 MATEMATİK (KİMYA), Undergraduate, 2015 - 2016
MAT 210 DİFERENSİYEL DENK (JEO MÜH), Undergraduate, 2013 - 2014
MAT 231 DİF. DENK. (GIDA), Undergraduate, 2013 - 2014
MAT231 DİF. DENK. (ZİR), Undergraduate, 2013 - 2014, 2012 - 2013, 2010 - 2011
MAT 231 DİF. DENK. (BİLG. MÜH), Undergraduate, 2013 - 2014
MAT 211 DİF. DENK (KİMYA MÜH), Undergraduate, 2013 - 2014
MAT125 MATEMATİK (ZİR. A), Undergraduate, 2012 - 2013, 2011 - 2012
MAT 210 DİF. DENK (JEO MÜH), Undergraduate, 2012 - 2013
MAT131 MATEMATİK (GIDA), Undergraduate, 2012 - 2013
MAT125 MATEMATİK (ZİR. BK), Undergraduate, 2012 - 2013
MAT125 MATEMATİK (ZİR. TBBB), Undergraduate, 2012 - 2013
MAT 132 MATEMATİK (GIDA), Undergraduate, 2012 - 2013
MAT125 MATEMATİK (ZİR. TB), Undergraduate, 2012 - 2013, 2010 - 2011
MAT125 MATEMATİK (ZİR. BB), Undergraduate, 2012 - 2013, 2010 - 2011
MAT 108 MATEMATİK (ZİR. TE), Undergraduate, 2011 - 2012
MAT 108 MATEMATİK (ZİR. ZOO), Undergraduate, 2011 - 2012
MAT 125 DİFERENSİYEL DENK. (ZİR. TE), Undergraduate, 2011 - 2012
MAT 108 MATEMATİK (ZİR. SÜ-ST), Undergraduate, 2011 - 2012
MAT123 (ECZACILIK), Undergraduate, 2010 - 2011
MAT125 (ZİR. TYS), Undergraduate, 2010 - 2011
MAT 125 (ZİR-TM), Undergraduate, 2010 - 2011
MAT 108 MATEMATİK (ZİR. SÜT-ZOO), Undergraduate, 2010 - 2011

Advising Theses

ÜNAL A., Optimizasyonda genetik algoritma yaklaşımı, Postgraduate, E.BAĞCIOĞLU(Student), 2021
ÜNAL A., Parameter estimation for stochastic differential equations, Postgraduate, C.TOPUZ(Student), 2021

Published journal articles indexed by SCI, SSCI, and AHCI

- I. **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)
- II. **Predicting coral dynamics through climate change**
van Woesik R., Koksal S., ÜNAL A., Cacciapaglia C. W., Randall C. J.
SCIENTIFIC REPORTS, vol.8, 2018 (SCI-Expanded)
- III. **Oscillation of a nonlinear impulsive differential equation system with piecewise constant argument**
KARAKOÇ F., ÜNAL A., BERKETOĞLU H.
ADVANCES IN DIFFERENCE EQUATIONS, vol.2018, 2018 (SCI-Expanded)
- IV. **Oscillation of nonlinear impulsive differential equations with piecewise constant arguments**
KARAKOÇ F., Unal A., BERKETOĞLU H.
ELECTRONIC JOURNAL OF QUALITATIVE THEORY OF DIFFERENTIAL EQUATIONS, no.49, pp.1-12, 2013 (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)
- VI. **Advanced Impulsive Differential Equations with Piecewise Constant Arguments**
Bereketoglu H., Seyhan G., Ogun A.

Articles Published in Other Journals

- I. **EXACT SOLUTIONS OF SOME COMPLEX PARTIAL DIFFERENTIAL EQUATIONS OF FRACTIONAL ORDER**
ÜNAL A.
JOURNAL OF FRACTIONAL CALCULUS AND APPLICATIONS, vol.5, no.1, pp.209-217, 2014 (Peer-Reviewed Journal)
- II. **ON THE KOLMOGOROV-PETROVSKII-PISKUNOV EQUATION**
Unal A.
COMMUNICATIONS FACULTY OF SCIENCES UNIVERSITY OF ANKARA-SERIES A1 MATHEMATICS AND STATISTICS,
vol.62, no.1, pp.1-10, 2013 (ESCI)
- III. **EXACT SOLUTIONS OF THE ZAKHAROV EQUATIONS BY USING THE FIRST INTEGRAL METHOD**
Unal A.
COMMUNICATIONS FACULTY OF SCIENCES UNIVERSITY OF ANKARA-SERIES A1 MATHEMATICS AND STATISTICS,
vol.61, no.2, pp.9-16, 2012 (ESCI)
- IV. **Exact solutions of fisher and generalized fisher equations with variable coefficients**
Ogun A., Kart C.
Acta Mathematicae Applicatae Sinica, vol.23, no.4, pp.563-568, 2007 (Scopus)

Refereed Congress / Symposium Publications in Proceedings

- I. **Fitting A Stochastic Model to Data**
Ünal A., Najmuldeen M. S., Khudhur H. M.
International Eurasian Conference on Mathematical Sciences and Applications, 29 August - 01 September 2022,
pp.127
- 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. **Impulsive Differential Equations with Piecewise Continuous Arguments**
Karakoç F., Ünal A., Bereketoğlu H.
8. Ankara Mathematics Days, Ankara, Turkey, 13 - 14 June 2013, pp.52
- V. **Kesirli Basamaktan bir Epidemik Model**
ÖZALP N., ÜNAL A., DEMİRCİ HAMAMCIOĞLU E.
V. Ankara Matematik Günleri Sempozyumu, Ankara, Turkey, 3 - 04 June 2010
- VI. **Some Results on an Advanced Impulsive Differential Equation with Piecewise Constant Argument**
ÜNAL A., SEYHAN ÖZTEPE G., BEREKETOĞLU H.
International Conference of Mathematical Sciences, 4 - 10 August 2009

Supported Projects

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

ÜNAL A., Project Supported by Higher Education Institutions, İklim Değişikliğinin Mercan Popülasyonları Üzerindeki Etkisi Üzerine Bir Matematiksel Modelleme, 2016 - 2017

ÜNAL A., Other International Funding Programs, Climate Proxies, 2015 - 2016

Activities in Scientific Journals

COMMUNICATIONS FACULTY OF SCIENCES UNIVERSITY OF ANKARA-SERIES A1 MATHEMATICS AND STATISTICS,
Assistant Editor/Section Editor, 2022 - Continues

Scientific Refereeing

TUBITAK Project, 2209-A - Üniversite Öğrencileri Araştırma Projeleri Destekleme Programı, Ankara University, Turkey, August 2023

TUBITAK Project, 2204-A High School Students Research Projects Competition , Ankara University, Turkey, June 2023

TUBITAK Project, 2204-A High School Students Research Projects Competition , Ankara University, Turkey, December 2022

TUBITAK Project, 1001 - Program for Supporting Scientific and Technological Research Projects, Ankara University, Turkey, May 2022

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

TUBITAK Project, 2204-B Middleschool Students Research Projects Competition , Ankara University, Turkey, September 2021

Metrics

Publication: 16

Citation (WoS): 126

Citation (Scopus): 140

H-Index (WoS): 5

H-Index (Scopus): 6

Congress and Symposium Activities

IECMSA, Attendee, İstanbul, Turkey, 2022

IECMSA, Attendee, İstanbul, Turkey, 2022

IECMSA, Attendee, İstanbul, Turkey, 2022