

Assoc. Prof. HACER ÖZDEN AYNA

Personal Information

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International Researcher IDs

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Publons / Web Of Science ResearcherID: AAH-5090-2021

ScopusID: 23973633900

Yoksis Researcher ID: 122768

Education Information

Doctorate, Bursa Uludağ University, FEN BİLİMLERİ ENSTİTÜSÜ, Matematik (Dr), Turkey 2005 - 2009

Postgraduate, Bursa Uludağ University, FEN BİLİMLERİ ENSTİTÜSÜ, Matematik (Yl) (Tezli), Turkey 2002 - 2004

Undergraduate, Bursa Uludağ University, FEN-EDEBİYAT FAKÜLTESİ, Matematik Bölümü, Turkey 1998 - 2002

Foreign Languages

English, B2 Upper Intermediate

Certificates, Courses and Trainings

Innovation, EĞİTİMDE İNOVASYON VE ETKİLEŞİM, BURSA ULUDAĞ ÜNİVERSİTESİ, 2020

Dissertations

Doctorate, P-adik q-ölçüm ve uygulamaları, 2009

Postgraduate, Kuadratik formlar ve idealler, 2004

Research Areas

Mathematics, General Mathematics, Measure and Integration, Special Functions, Numerical Analysis, Natural Sciences

Academic Titles / Tasks

Assistant Professor, Bursa Uludağ University, FEN-EDEBİYAT FAKÜLTESİ, MATEMATİK, 2012 - Continues

Lecturer, Bursa Uludağ University, FEN-EDEBİYAT FAKÜLTESİ, MATEMATİK, 2009 - 2012

Research Assistant, Bursa Uludağ University, FEN-EDEBİYAT FAKÜLTESİ, MATEMATİK, 2002 - 2009

Courses

MATEMATİK II , Undergraduate, 2020 - 2021
GENEL MATEMATİK II, Undergraduate, 2020 - 2021, 2019 - 2020
MATEMATİK I, Undergraduate, 2021 - 2022, 2019 - 2020, 2018 - 2019, 2016 - 2017, 2015 - 2016, 2014 - 2015, 2013 - 2014, 2012 - 2013, 2011 - 2012, 2010 - 2011
GENEL MATEMATİK I , Undergraduate, 2021 - 2022, 2019 - 2020, 2018 - 2019
GENEL MATEMATİK I, Undergraduate, 2020 - 2021
MATEMATİK I , Undergraduate, 2020 - 2021
MATEMATİK II, Undergraduate, 2018 - 2019, 2015 - 2016, 2014 - 2015, 2012 - 2013, 2010 - 2011
GENEL MATEMATİK II, Undergraduate, 2018 - 2019
MÜHENDİSLİK MATEMATİĞİ, Undergraduate, 2017 - 2018
SOYUT CEBİR, Doctorate, 2016 - 2017
ANALİZ II, Undergraduate, 2015 - 2016, 2010 - 2011
SPEKTRAL GRAF TEORİ I, Doctorate, 2016 - 2017
UYGULAMALI GRAF TEORİ I , Doctorate, 2016 - 2017
ANALİZ I, Undergraduate, 2016 - 2017, 2015 - 2016, 2009 - 2010
TEMEL MATEMATİK I, Undergraduate, 2015 - 2016, 2014 - 2015, 2013 - 2014
TEMEL MATEMATİK II, Undergraduate, 2014 - 2015, 2010 - 2011
MATEMATİK, Undergraduate, 2015 - 2016, 2014 - 2015
MATEMATİK, Undergraduate, 2015 - 2016
MATEMATİK II, Undergraduate, 2014 - 2015
MESLEKİ MATEMATİK I, Associate Degree, 2014 - 2015, 2012 - 2013
MESLEKİ MATEMATİK I, Associate Degree, 2014 - 2015, 2012 - 2013, 2011 - 2012
MATEMATİK I, Undergraduate, 2014 - 2015, 2013 - 2014, 2012 - 2013
MESLEKİ MATEMATİK II, Associate Degree, 2011 - 2012
MESLEKİ MATEMATİK II, Associate Degree, 2011 - 2012
GENEL ANALİTİK FONKSİYONLAR, Doctorate, 2012 - 2013
TEMEL MATEMATİK I, Associate Degree, 2012 - 2013
MATEMATİK II, Associate Degree, 2010 - 2011
MATEMATİK II, Associate Degree, 2010 - 2011
ANALİZ II, Undergraduate, 2010 - 2011
TEMEL MATEMATİK, Associate Degree, 2010 - 2011, 2009 - 2010
METRİK UZAYLAR II, Undergraduate, 2010 - 2011
MATEMATİK I, Associate Degree, 2010 - 2011
GALOIS TEORİSİ, Undergraduate, 2010 - 2011
METRİK UZAYLAR II, Undergraduate, 2010 - 2011
GALOIS TEORİSİ, Undergraduate, 2010 - 2011
MATEMATİK I, Associate Degree, 2010 - 2011
GENEL MATEMATİK, Associate Degree, 2010 - 2011
GENEL MATEMATİK, Associate Degree, 2010 - 2011

Published journal articles indexed by SCI, SSCI, and AHCI

- I. **The Effect of Vertex and Edge Removal on Sombor Index**
YURTTAŞ GÜNEŞ A., ÖZDEN AYNA H., CANGÜL İ. N.
SYMMETRY-BASEL, vol.16, no.2, 2024 (SCI-Expanded)
- II. **Independence number of graphs and line graphs of trees by means of omega invariant**
ÖZDEN AYNA H., Zihni F. E., Erdogan F., CANGÜL İ. N., Srivastava G., Srivastava H. M.
REVISTA DE LA REAL ACADEMIA DE CIENCIAS EXACTAS FÍSICAS Y NATURALES SERIE A-MATEMATICAS, vol.114,

no.2, 2020 (SCI-Expanded)

- III. **New families of special numbers and polynomials arising from applications of p-adic q-integrals**
Kim D., ÖZDEN AYNA H., ŞİMŞEK Y., YARDIMCI A.
ADVANCES IN DIFFERENCE EQUATIONS, 2017 (SCI-Expanded)
- IV. **Modification and unification of the Apostol-type numbers and polynomials and their applications**
ÖZDEN AYNA H., ŞİMŞEK Y.
APPLIED MATHEMATICS AND COMPUTATION, vol.235, pp.338-351, 2014 (SCI-Expanded)
- V. **Unified representation of the family of L-functions**
ÖZDEN AYNA H., ŞİMŞEK Y.
JOURNAL OF INEQUALITIES AND APPLICATIONS, 2013 (SCI-Expanded)
- VI. **A unified presentation of certain meromorphic functions related to the families of the partial zeta type functions and the L-functions**
Srivastava H. M., ÖZDEN AYNA H., CANGÜL İ. N., ŞİMŞEK Y.
APPLIED MATHEMATICS AND COMPUTATION, vol.219, no.8, pp.3903-3913, 2012 (SCI-Expanded)
- VII. **A unified presentation of the generating functions of the generalized Bernoulli, Euler and Genocchi polynomials**
ÖZDEN AYNA H., ŞİMŞEK Y., Srivastava H. M.
COMPUTERS & MATHEMATICS WITH APPLICATIONS, vol.60, no.10, pp.2779-2787, 2010 (SCI-Expanded)
- VIII. **On the behavior of two variable twisted p-adic Euler q-l-functions**
ÖZDEN AYNA H., CANGÜL İ. N., ŞİMŞEK Y.
NONLINEAR ANALYSIS-THEORY METHODS & APPLICATIONS, vol.71, no.12, 2009 (SCI-Expanded)
- IX. **A new approach to q-Genocchi numbers and their interpolation functions**
CANGÜL İ. N., ÖZDEN AYNA H., ŞİMŞEK Y.
NONLINEAR ANALYSIS-THEORY METHODS & APPLICATIONS, vol.71, no.12, 2009 (SCI-Expanded)
- X. **A new extension of q-Euler numbers and polynomials related to their interpolation functions**
ÖZDEN AYNA H., ŞİMŞEK Y.
APPLIED MATHEMATICS LETTERS, vol.21, no.9, pp.934-939, 2008 (SCI-Expanded)
- XI. **Interpolation function of the (h, q)-extension of twisted Euler numbers**
ÖZDEN AYNA H., ŞİMŞEK Y.
COMPUTERS & MATHEMATICS WITH APPLICATIONS, vol.56, no.4, pp.898-908, 2008 (SCI-Expanded)
- XII. **Multivariate interpolation functions of higher-order q-euler numbers and their applications**
ÖZDEN AYNA H., CANGÜL İ. N., ŞİMŞEK Y.
ABSTRACT AND APPLIED ANALYSIS, 2008 (SCI-Expanded)
- XIII. **Remarks on sum of products of (h, q)-twisted Euler polynomials and numbers**
ÖZDEN AYNA H., CANGÜL İ. N., ŞİMŞEK Y.
JOURNAL OF INEQUALITIES AND APPLICATIONS, 2008 (SCI-Expanded)

Articles Published in Other Journals

- I. **Remarks on line graphs related to omega invariant**
ÖZDEN AYNA H., YURTTAŞ GÜNEŞ A., CANGÜL İ. N.
Proceedings book of the 13th symposium on generating functions of special numbers and polynomials and their applications, vol.13, pp.201-204, 2023 (Peer-Reviewed Journal)
- II. **Üç yüzlü grafların doğru graflarının omega invaryantı**
ÖZDEN AYNA H.
Balıkesir Üniversitesi Fen Bilimleri Enstitüsü Dergisi, vol.21, pp.657-665, 2019 (Peer-Reviewed Journal)
- III. **Modified Apostol Type Polynomials Arising From Umbral Calculus**
Mansour T., ÖZDEN H., ŞİMŞEK Y.
ADVANCED STUDIES IN CONTEMPORARY MATHEMATICS, vol.24, no.2, pp.175-182, 2014 (Scopus)
- IV. **Hurwitz type multiple Genocchi zeta function**

Özden Ayna H., Cangül İ. N., Şimşek Y.

Numerical Analysis and Applied Mathematics, Computational Methods in Science and Engineering, AIP Conference Proceedings, vol.1148, pp.781-784, 2009 (Peer-Reviewed Journal)

V. **Euler polynomials associated with p-adic q-Euler measure**

Özden Ayna H., Şimşek Y., Cangül İ. N.

General Mathematics, vol.15, no.23, pp.24-37, 2007 (Peer-Reviewed Journal)

VI. **A Note on p-adic q-Euler Measure**

Özden Ayna H., Şimşek Y., Hoon Rim S., Cangül İ. N.

Adv. Studies in Contemporary Maths., , vol.14, no.2, pp.233-239, 2007 (Peer-Reviewed Journal)

VII. **The Number of Rational Points on Elliptic Curves $y^2 = x^3 + b^2$ over Finite Fields**

GEZER B., ÖZDEN H., TEKCAN A., BİZİM O.

Int. Jour. of Comp. and Math. Sci, vol.1, no.3, pp.178-184, 2007 (Peer-Reviewed Journal)

VIII. **On the Quadratic Irrationals Quadratic Ideals and Indefinite Quadratic Forms**

TEKCAN A., ÖZDEN H.

Bulletin of the Irish Mathematical Society, vol.58, pp.69-79, 2006 (Peer-Reviewed Journal)

Books & Book Chapters

I. **EŞİTSİZLİKLER**

Özden Ayna H.

in: MESLEKİ MATEMATİK, BASRİ ÇELİK, Editor, Dora, Bursa, pp.139-162, 2016

II. **EŞİTSİZLİKLER**

BOZYOKUŞ H., ÇELİK B., ÇELİK N., EZENTAŞ R., ÖZDEN AYNA H.

in: Mesleki Matematik, ÇELİK BASRİ, Editor, Dora, pp.126-146, 2016

Refereed Congress / Symposium Publications in Proceedings

I. **Power Graphs of Some Graph Classes**

Özmen B., Balseven Y., Köse D., ÖZDEN AYNA H., YURTTAŞ GÜNEŞ A., CANGÜL İ. N.

2nd International E-Conference on Mathematical and Statistical Science: A Selcuk Meeting, Konya, Turkey, 05 June 2023

II. **Omega Invariant of Second and Third Power Graphs of Tadpole Graphs**

Köse D., Özmen B., Balseven Y., ÖZDEN AYNA H., YURTTAŞ GÜNEŞ A., CANGÜL İ. N.

2nd International E-Conference on Mathematical and Statistical Science: A Selcuk Meeting, Konya, Turkey, 05 June 2023

III. **Some New Properties of Line Graphs and Their Omega Invariants**

Balseven Y., Köse D., Özmen B., YURTTAŞ GÜNEŞ A., ÖZDEN AYNA H., CANGÜL İ. N.

2nd International E-Conference on Mathematical and Statistical Science: A Selcuk Meeting, Konya, Turkey, 05 June 2023

IV. **Remarks on Dirichlet type L functions**

ÖZDEN H.

26th International Conference of the Jangeon Mathematical Society, India, 1 - 04 August 2013

V. **Unification of partial zeta functions**

Srivastava H., Özden Ayna H., Cangül İ. N., Şimşek Y.

International Congress in Honour of Professor H. M. Srivastava, Bursa, Turkey, 23 - 26 August 2012

VI. **Remarks on Unification of Generating Functions for the Family of Some Special Numbers and Polynomials**

ÖZDEN H.

25th International Conference of the Jangeon Mathematical Society, South Korea, 25 - 28 July 2012

- VII. **On generating functions of special numbers and polynomials**
 ÖZDEN H.
 The 24th International Congress of The Jangjeon Mathematical Society, ICJMS'2011, Konya, Turkey, 20 - 23 July 2011
- VIII. **Unification of Generating Function of the Bernoulli, Euler and Genocchi Numbers and Polynomials**
 ÖZDEN AYNA H.
 International Conference on Numerical Analysis and Applied Mathematics, Rhodes, Greece, 19 - 25 September 2010, vol.1281, pp.1125-1128
- IX. **Hurwitz Type Multiple Genocchi Zeta Function**
 ÖZDEN AYNA H., CANGÜL İ. N., ŞİMŞEK Y.
 International Conference on Computational Methods in Science and Engineering, Hersonissos, Greece, 25 - 30 September 2008, vol.1148, pp.781-783
- X. **Remarks on Interpolation Functions of q-Bernoulli Numbers**
 Özden Ayna H., Cangül İ. N., Şimşek Y.
 The 20th Int. Congress of Jangjeon Math. Soc., , Bursa, Turkey, 21 August 2008, pp.1-12
- XI. **On the behaviour of two variable twisted p-adic Euler q-l-functions**
 Özden Ayna H., Cangül İ. N., Şimşek Y.
 World Congress of Nonlinear Analysts (WCNA), Florida, United States Of America, 01 July 2008, pp.1-13
- XII. **A new approach to q-Genocchi numbers and their interpolation functions**
 Cangül İ. N., Özden Ayna H., Şimşek Y.
 World Congress of Nonlinear Analysts (WCNA), Florida, United States Of America, 1 - 10 July 2008, pp.1-14
- XIII. **Recurrence formulae for some special numbers**
 Cangül İ. N., Özden Ayna H., Şimşek Y.
 Workshop on Mathematical Methods in Applied Sciences, Bursa, Turkey, 22 May 2008, pp.1-6
- XIV. **Euler polynomials associated with p-adic q-Euler measure**
 Özden Ayna H., Şimşek Y., Cangül İ. N.
 International Symposium on Complex Analysis, Sibiu, Romania, 25 August 2007, pp.1-11
- XV. **Generating functions and recurrence formulae for Bernoulli and Euler numbers**
 Cangül İ. N., Özden Ayna H., Şimşek Y.
 International Symposium on Geometric Function Theory and Applications, İstanbul Kültür University, İstanbul, Turkey, 20 August 2007, pp.1-16
- XVI. **A note on twisted Euler numbers and polynomials associated with basic l-functions**
 Özden Ayna H., Şimşek Y., Cangül İ. N.
 International Symposium on Geometric Function Theory and Applications, İstanbul Kültür University, İstanbul, Turkey, 20 August 2007, pp.1-6
- XVII. **İndefinite Kuadratik Formların Devirleri**
 TEKCAN A., BİZİM O., ÖZDEN H., İNAM İ.
 XIX. Ulusal Matematik Sempozyumu, Kütahya, Turkey, 22 - 25 August 2006, pp.42
- XVIII. **Sonlu Cisimler Üzerinde Tanımlı Frey Eliptik Eğrileri Üzerindeki Rasyonel Noktalar**
 İNAM İ., ÖZDEN H., TEKCAN A., BİZİM O.
 XIX. Ulusal Matematik Sempozyumu, Kütahya, Turkey, 22 - 25 August 2006, pp.43
- XIX. **Sonlu Cisimler Üzerinde Tanımlı $y^2 = x^3 + b^2$ Eliptik Eğrileri Üzerindeki Rasyonel Noktaların Sayısı**
 ÖZDEN H., İNAM İ., TEKCAN A., BİZİM O.
 XIX. Ulusal Matematik Sempozyumu, Kütahya, Turkey, 22 - 25 August 2006, pp.44

Expert Reports

- I. **BİLİRKİŞİ RAPORU**
 Özden Ayna H.

Supported Projects

ÖZDEN AYNA H., Project Supported by Higher Education Institutions, Üreteç Fonksiyonları, 2012 - 2014

ÖZDEN AYNA H., Project Supported by Higher Education Institutions, BAZI ÖZEL SAYI VE POLİNOMLAR VE BUNLARIN P
ADİK UYGULAMALARI, 2011 - 2013

CANGÜL İ. N., ÖZDEN AYNA H., Project Supported by Higher Education Institutions, Özel Sayı Teorik Fonksiyonlar, 2008 -
2011

ÖZDEN AYNA H., CANGÜL İ. N., Project Supported by Higher Education Institutions, Sayılar Teorisi, 2006 - 2009

Scientific Refereeing

TURKISH JOURNAL OF MATHEMATICS, SCI Journal, July 2014

APPLIED MATHEMATICS AND COMPUTATION, SCI Journal, July 2013

Metrics

Publication: 48

Citation (WoS): 369

Citation (Scopus): 442

H-Index (WoS): 9

H-Index (Scopus): 9

Scholarships

TÜBİTAK YURTIÇİ DOKTORA BURS PROGRAMI, TUBİTAK, 2005 - 2009

Awards

Özden Ayna H., 2008 yılı Fen Edebiyat Fakültesi Yayın Üçüncülük Ödülü, Bursa Uludağ Üniversitesi, January 2009