

## **Doç.Dr. ÖMER ÜNSAL**

### **Kişisel Bilgiler**

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### **Eğitim Bilgileri**

Doktora, Eskişehir Osmangazi Üniversitesi, Fen Bilimleri Enstitüsü, Matematik-Bilgisayar Bilimleri (Dr), Türkiye 2012 - 2016

Yüksek Lisans, Eskişehir Osmangazi Üniversitesi, Fen Bilimleri Enstitüsü, Matematik-Bilgisayar Bilimleri (Yl) (Tezli), Türkiye 2010 - 2012

Lisans, Anadolu Üniversitesi, İktisat Fakültesi, İktisat Bölümü, Türkiye 2008 - 2012

Lisans, Eskişehir Osmangazi Üniversitesi, Fen-Edebiyat Fakültesi, Matematik Bölümü, Türkiye 2006 - 2010

### **Yaptığı Tezler**

Doktora, Lineer olmayan denklemlerin integrallenebilirliği, Eskişehir Osmangazi Üniversitesi, Fen Bilimleri Enstitüsü, Matematik-Bilgisayar Bilimleri (Dr), 2016

Yüksek Lisans, Diskrit oluşum denklemlerinin integrallenebilirliği, Eskişehir Osmangazi Üniversitesi, Fen Bilimleri Enstitüsü, Matematik-Bilgisayar Bilimleri (Yl) (Tezli), 2012

### **Araştırma Alanları**

Temel Bilimler

### **Akademik Unvanlar / Görevler**

Doç.Dr., Eskişehir Osmangazi Üniversitesi, Fen Fakültesi, Matematik-Bilgisayar Bölümü, 2021 - Devam Ediyor

Dr.Öğr.Üyesi, Eskişehir Osmangazi Üniversitesi, Fen Fakültesi, Matematik-Bilgisayar Bölümü, 2016 - 2021

Araştırma Görevlisi, Eskişehir Osmangazi Üniversitesi, Fen Fakültesi, Matematik-Bilgisayar Bölümü, 2010 - 2016

### **Verdiği Dersler**

Oyun Teori, Lisans, 2017 - 2018

Diferensiyel Denklemler II, Lisans, 2017 - 2018

Diferensiyel Denklemler, Lisans, 2017 - 2018, 2016 - 2017

Biyomatematik, Lisans, 2017 - 2018

Fark Denklemleri I, Lisans, 2017 - 2018

Kısmi Türevli Diferensiyel Denklemlerin Sayısal Uygulamaları II, Lisans, 2017 - 2018, 2016 - 2017

Volterra-Fredholm İntegral Denklemleri, Yüksek Lisans, 2017 - 2018

Kompleks Analiz, Lisans, 2017 - 2018

İntegrallenebilirlik Teorisi, Doktora, 2017 - 2018

Diferensiyel Denklemlerin Kompleksiton Çözümleri, Doktora, 2017 - 2018

Matematik II, Lisans, 2017 - 2018

Diferensiyel Denklemler I, Lisans, 2017 - 2018

Genelleştirilmiş Bilinier Türevler Teorisi, Yüksek Lisans, 2017 - 2018

Matematik, Lisans, 2017 - 2018

Matematiksel Fizik, Lisans, 2017 - 2018

Genel Matematik II, Lisans, 2017 - 2018, 2016 - 2017

Analiz II, Lisans, 2016 - 2017

## **Yönetilen Tezler**

ÜNSAL Ö., Lineer Olmayan Oluşum Denklemlerinin Dalga Çözümleri ve Analizleri, Yüksek Lisans, S.KARA(Öğrenci), 2020

ÜNSAL Ö., Lineer olmayan kısmi diferensiyel denklemlerin kompleksiton çözümleri, Yüksek Lisans,

Z.SAKARTEPE(Öğrenci), 2020

## **SCI, SSCI ve AHCI İndekslerine Giren Dergilerde Yayınlanan Makaleler**

- I. **An useful procedure for finding exact solutions to new form of (2+1)-dimensional B-type Kadomtsev-Petviashvili (BKP) equation**

ÜNSAL Ö., Sakartepe Z.

EUROPEAN PHYSICAL JOURNAL PLUS, cilt.135, sa.8, 2020 (SCI-Expanded)

- II. **Complexiton solutions for (3+1) dimensional KdV-type equation**

ÜNSAL Ö.

COMPUTERS & MATHEMATICS WITH APPLICATIONS, cilt.75, sa.7, ss.2466-2472, 2018 (SCI-Expanded)

- III. **Multiple-Wave Solutions to Generalized Bilinear Equations in Terms of Hyperbolic and Trigonometric Solutions**

ÜNSAL Ö., Ma W., Zhang Y.

INTERNATIONAL JOURNAL OF NONLINEAR SCIENCES AND NUMERICAL SIMULATION, cilt.18, sa.5, ss.395-401, 2017 (SCI-Expanded)

- IV. **Conservation laws and double reduction of (2+1) dimensional Calogero-Bogoyavlenskii-Schiff equation**

SAN S., Akbulut A., ÜNSAL Ö., TAŞCAN F.

MATHEMATICAL METHODS IN THE APPLIED SCIENCES, cilt.40, sa.5, ss.1703-1710, 2017 (SCI-Expanded)

- V. **Complexiton solutions for two nonlinear partial differential equations via modification of simplified Hirota method**

ÜNSAL Ö., Bekir A., TAŞCAN F., ÖZER M. N.

WAVES IN RANDOM AND COMPLEX MEDIA, cilt.27, sa.1, ss.117-128, 2017 (SCI-Expanded)

- VI. **A novel kind of AKNS integrable couplings and their Hamiltonian structures**

Zhang Y., Ma W., ÜNSAL Ö.

TURKISH JOURNAL OF MATHEMATICS, cilt.41, sa.6, ss.1467-1476, 2017 (SCI-Expanded)

- VII. **Analytical approach for space-time fractional Klein-Gordon equation**

ÜNSAL Ö., GÜNER Ö., Bekir A.

OPTIK, cilt.135, ss.337-345, 2017 (SCI-Expanded)

- VIII. **Exact solutions of nonlinear Schrodinger equation by using symbolic computation**

Kaplan M., ÜNSAL Ö., Bekir A.

MATHEMATICAL METHODS IN THE APPLIED SCIENCES, cilt.39, sa.8, ss.2093-2099, 2016 (SCI-Expanded)

- IX. **Linear superposition principle of hyperbolic and trigonometric function solutions to generalized bilinear equations**

ÜNSAL Ö., Ma W.

- COMPUTERS & MATHEMATICS WITH APPLICATIONS, cilt.71, sa.6, ss.1242-1247, 2016 (SCI-Expanded)
- X. **APPLICATIONS OF FRACTIONAL COMPLEX TRANSFORM AND (G'/G)-EXPANSION METHOD FOR TIME-FRACTIONAL DIFFERENTIAL EQUATIONS**  
 Bekir A., GÜNER Ö., ÜNSAL Ö., Mirzazadeh M.  
 JOURNAL OF APPLIED ANALYSIS AND COMPUTATION, cilt.6, sa.1, ss.131-144, 2016 (SCI-Expanded)
- XI. **Two reliable methods for solving the time fractional Clannish Random Walker's Parabolic equation**  
 GÜNER Ö., Bekir A., ÜNSAL Ö.  
 OPTIK, cilt.127, sa.20, ss.9571-9577, 2016 (SCI-Expanded)
- XII. **Soliton Solutions, Backlund Transformation and Lax Pair for Coupled Burgers System via Bell Polynomials**  
 ÜNSAL Ö., TAŞCAN F.  
 ZEITSCHRIFT FUR NATURFORSCHUNG SECTION A-A JOURNAL OF PHYSICAL SCIENCES, cilt.70, sa.5, ss.359-363, 2015 (SCI-Expanded)
- XIII. **The First Integral Method for Exact Solutions of Nonlinear Fractional Differential Equations**  
 Bekir A., Guner O., ÜNSAL Ö.  
 JOURNAL OF COMPUTATIONAL AND NONLINEAR DYNAMICS, cilt.10, sa.2, 2015 (SCI-Expanded)
- XIV. **Multiscale expansions in discrete world**  
 ÜNSAL Ö., TAŞCAN F., ÖZER M. N.  
 PRAMANA-JOURNAL OF PHYSICS, cilt.83, sa.1, ss.21-28, 2014 (SCI-Expanded)
- XV. **New exact solutions for boussinesq type equations by using (G<sub>0</sub>=G; 1=G) and (1=G<sub>0</sub>)-expansion methods**  
 Demiray S., Unsal Ö., Bekir A.  
 Acta Physica Polonica A, cilt.125, sa.5, ss.1093-1098, 2014 (SCI-Expanded)
- XVI. **Analytic treatment of nonlinear evolution equations using first integral method**  
 Bekir A., ÜNSAL Ö.  
 PRAMANA-JOURNAL OF PHYSICS, cilt.79, sa.1, ss.3-17, 2012 (SCI-Expanded)
- XVII. **Periodic and solitary wave solutions of coupled nonlinear wave equations using the first integral method**  
 Bekir A., ÜNSAL Ö.  
 PHYSICA SCRIPTA, cilt.85, sa.6, 2012 (SCI-Expanded)

## Düzenlenen Dergilerde Yayınlanan Makaleler

- I. **Analytical solutions to new forms of two nonlinear partial differential equations via two variable expansion method**  
 Kara S., ÜNSAL Ö.  
 Partial Differential Equations in Applied Mathematics, cilt.5, 2022 (Scopus)
- II. **Complexiton solutions for new form of (3+1)-dimensional BKP-Boussinesq equation**  
 ÜNSAL Ö.  
 Journal of Ocean Engineering and Science, 2022 (Scopus)
- III. **Implementation of two variable expansion method for extended Jimbo-Miwa equations**  
 Kara S., ÜNSAL Ö.  
 Journal of Ocean Engineering and Science, 2022 (Scopus)
- IV. **Application of Extended Transformed Rational Function Method to Some (31) Dimensional Nonlinear Evolution Equations**  
 ÜNSAL Ö.  
 Karaelmas Science and Engineering Journal, cilt.8, sa.2, ss.433-437, 2018 (Hakemli Dergi)
- V. **NONLINEAR SELF ADJOINTNESS AND EXACT SOLUTION OF FOKAS-OLVER-ROSENAU-QIAO (FORQ) EQUATION**  
 TAŞCAN F., ÜNSAL Ö., Akbulut A., SAN S.

COMMUNICATIONS FACULTY OF SCIENCES UNIVERSITY OF ANKARA-SERIES A1 MATHEMATICS AND STATISTICS,  
cilt.67, sa.2, ss.317-326, 2018 (ESCI)

**VI. Exact solutions of nonlinear wave equations using (G'/G,1/G)-expansion method**

DEMİRAY S., ÜNSAL Ö., BEKİR A.

Journal of the Egyptian Mathematical Society, cilt.23, sa.1, ss.78-84, 2015 (Hakemli Dergi)

**VII. Exact solutions of the Zoomeron and Klein Gordon Zakharov equations**

BEKİR A., TAŞCAN GÜNEY F., ÜNSAL Ö.

Journal of the Association of Arab Universities for Basic and Applied Sciences, cilt.17, sa.1, ss.1-5, 2015 (Hakemli Dergi)

**VIII. Exact Solutions for a Class of Nonlinear Wave Equations By Using First Integral Method**

BEKİR A., ÜNSAL Ö.

International Journal of Nonlinear Science, cilt.15, sa.2, ss.99-110, 2013 (Hakemli Dergi)

### **Hakemli Kongre / Sempozyum Bildiri Kitaplarında Yer Alan Yayınlar**

**I. An Efficient Method for Finding Trigonometric, Hyperbolic and Mixed Type Exact Solutions to New Form of (21)-Dimensional BKP Equation**

ÜNSAL Ö.

International Symposium on Academic Studies in Science, Engineering and Architecture Sciences, Ankara, Türkiye, 15 - 17 Kasım 2019, ss.133

**II. Complexiton and Interaction solutions for (21)-Dimensional Sawada-Kotera equation**

ÜNSAL Ö.

Recent Advances in Mathematical and Engineering Sciences: International Mathematics and Engineering Conference, 24-26 July 2019 Lviv, Ukraine, Lviv, Ukrayna, 24 - 26 Temmuz 2019, ss.21

**III. New Exact Solutions for New Form of (31)-Dimensional BKP-Boussinesq Equation**

ÜNSAL Ö.

Recent Advances in Mathematical and Engineering Sciences: International Mathematics and Engineering Conference, 24-26 July 2019 Lviv, Ukraine, Lviv, Ukrayna, 24 - 26 Temmuz 2019, ss.19

**IV. On the Complexiton Solutions of Generalized Bilinear Equations via Extended Transformed Rational Function Method**

ÜNSAL Ö., TAŞCAN GÜNEY F.

INTERNATIONAL CONFERENCE ON MATHEMATICS "An Istanbul Meeting for World Mathematicians" Minisymposium on Approximation Theory Minisymposium on Math Education, İstanbul, Türkiye, 3 - 06 Temmuz 2018, ss.279

**V. Modified Double Sub-Equation Method for Solving Nonlinear Evolution Equations**

ÜNSAL Ö., KOPARAN M.

7th International Conference on Applied Analysis and Mathematical Modeling, İstanbul, Türkiye, 20 - 24 Haziran 2018, ss.219

**VI. Multiple Scales Method for Higher Order KdV Equation**

Çakır F., KOPARAN M., ÜNSAL Ö.

International Conference on Mathematical Advances and Application, İstanbul, Türkiye, 11 - 13 Mayıs 2018, ss.56

**VII. Construction of Exact Solutions to Partial Differential Equations with Trial Method**

TAŞCAN GÜNEY F., Pir L. B., ÜNSAL Ö.

3rd International Conference on Computational Mathematics and Engineering Sciences, Girne, Kıbrıs (Kktc), 4 - 06 Mayıs 2018

**VIII. Extended Transformed Rational Function Method for Some (31)Dimensional Nonlinear Partial Differential Equations**

ÜNSAL Ö., BEKİR A., KOPARAN M.

6th International Eurasian Conference on Mathematical Sciences and Applications, Budapest, Macaristan, 15 - 18 Ağustos 2017, ss.160-161

- IX. **Simplified Hirota Method for a Nonlinear Partial Differential Equation**  
ÜNSAL Ö., BEKİR A., KOPARAN M.  
6th International Eurasian Conference on Mathematical Sciences and Applications, Budapest, Macaristan, 15 - 18 Ağustos 2017, ss.158-159
- X. **Soliton solution and other solutions to a nonlinear fractional differential equation**  
GÜNER Ö., ÜNSAL Ö., Bekir A., Kadem A.  
11th International Conference on Mathematical Problems in Engineering, Aerospace and Sciences (ICNPAA), La Rochelle, Fransa, 4 - 08 Temmuz 2016, cilt.1798
- XI. **The (G'/G)-expansion method for the nonlinear time fractional differential equations**  
ÜNSAL Ö., GÜNER Ö., Bekir A., ÇEVİKEL A. C.  
11th International Conference on Mathematical Problems in Engineering, Aerospace and Sciences (ICNPAA), La Rochelle, Fransa, 4 - 08 Temmuz 2016, cilt.1798
- XII. **Singular 1-soliton solution of the nonlinear variable-coefficient diffusion reaction and mKdV equations**  
GÜNER Ö., Bekir A., ÜNSAL Ö., ÇEVİKEL A. C.  
11th International Conference on Mathematical Problems in Engineering, Aerospace and Sciences (ICNPAA), La Rochelle, Fransa, 4 - 08 Temmuz 2016, cilt.1798
- XIII. **Analytical approach for space time fractional Klein Gordon equation**  
ÜNSAL Ö., GÜNER Ö., BEKİR A.  
International Conference on Quantum Science and Applications, Eskişehir, Türkiye, 25 - 27 Mayıs 2016, ss.161
- XIV. **Complexiton solutions for some nonlinear partial differential equations**  
ÜNSAL Ö., BEKİR A., TAŞCAN GÜNEY F., ÖZER M. N.  
ICQSA-2016, 25 - 27 Mayıs 2016
- XV. **Exact solutions of some fractional differential equations by various expansion methods**  
Topsakal M., GÜNER Ö., Bekir A., ÜNSAL Ö.  
International Conference on Quantum Science and Applications (ICQSA), Eskişehir, Türkiye, 25 - 27 Mayıs 2016, cilt.766
- XVI. **Application of Binary Bell Polynomial Approach to a 2 1 Dimensional Nonlinear Evolution Equation**  
ÜNSAL Ö., TAŞCAN GÜNEY F., ÖZER M. N.  
IECMSA-2014, 3rd International Eurasian Conference on Mathematical Sciences and Applications, Viyana, Avusturya, 25 - 28 Ağustos 2014, ss.247-248
- XVII. **An efficient method for solving the nonlinear fractional Klein Gordon type equations**  
ÜNSAL Ö., BEKİR A., GÜNER Ö.  
Karatekin Mathematics Days-International Symposium on Mathematics, Çankırı, Türkiye, 11 - 13 Haziran 2014, ss.130
- XVIII. **Çok Ölçekli Açılmış Metodunun Diferensiyel Fark Denklemlerine Uygulamaları**  
ÜNSAL Ö., TAŞCAN GÜNEY F., ÖZER M. N.  
13. Matematik Sempozyumu, Türkiye, 15 - 17 Mayıs 2014
- XIX. **Lineer Olmayan Schrödinger Denkleminin Hareketli Dalga Çözümleri**  
KAPLAN M., ÜNSAL Ö., BEKİR A.  
8. Ankara Matematik Günleri, Ankara, Türkiye, 13 - 14 Haziran 2013, ss.50
- XX. **Travelling Wave Solutions of Nonlinear Equations Using the (G'/G, 1/G) Expansion Method**  
DEMİRAY S., ÜNSAL Ö., BEKİR A.  
International Conference on Applied Analysis and Mathematical Modeling (ICAAMM2013), İstanbul, Türkiye, 2 - 05 Haziran 2013, ss.428-429
- XXI. **Lineer Olmayan Oluşum Denklemlerinin (G'/G, 1/G) Metodu ile Hareketli Dalga Çözümleri**  
ÜNSAL Ö., DEMİRAY S., BEKİR A.  
12. Matematik Sempozyumu, Ankara, Türkiye, 23 - 25 Mayıs 2013, ss.311-313

## **Metrikler**

Yayın: 47

Atıf (WoS): 272

Atıf (Scopus): 317

H-İndeks (WoS): 9

H-İndeks (Scopus): 10