

# Prof. FİLİZ TAŞCAN

## Personal Information

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## Education Information

Doctorate, Eskisehir Osmangazi University, FEN BİLİMLERİ ENSTİTÜSÜ, Matematik (Dr), Turkey 1998 - 2002

Postgraduate, Eskisehir Osmangazi University, FEN BİLİMLERİ ENSTİTÜSÜ, Matematik (YI) (Tezli), Turkey 1995 - 1998

Undergraduate, Eskisehir Osmangazi University, Fen-Edebiyat Fakültesi, Matematik Bölümü, Turkey 1991 - 1995

## Foreign Languages

English, B2 Upper Intermediate

## Dissertations

Doctorate, İntegrallenebilirlik ve pertürbasyon teori, Eskisehir Osmangazi University, FEN BİLİMLERİ ENSTİTÜSÜ, Matematik (Dr), 2002

Postgraduate, Sonlu boyutlu integrallenebilen hamilton sistemler, Eskisehir Osmangazi University, FEN BİLİMLERİ ENSTİTÜSÜ, Matematik (YI) (Tezli), 1998

## Research Areas

Differential Equations

## Academic Titles / Tasks

Professor, Eskisehir Osmangazi University, Fen-Edebiyat Fakültesi, Matematik Ve Bilgisayar Bilimleri Bölümü, 2017 - Continues

Associate Professor, Eskisehir Osmangazi University, Fen-Edebiyat Fakültesi, Matematik Ve Bilgisayar Bilimleri Bölümü, 2012 - 2017

Assistant Professor, Eskisehir Osmangazi University, Fen-Edebiyat Fakültesi, Matematik Bölümü, 2003 - 2012

Research Assistant, Eskisehir Osmangazi University, Fen-Edebiyat Fakültesi, Matematik Bölümü, 1995 - 2003

## Advising Theses

TAŞCAN F., Lokal ve eş formulu kesir mertebeli diferensiyel denklemlerin çözümleri, Doctorate, M.TOPSAKAL(Student), 2019

TAŞCAN F., Lineer olmayan diferensiyel denklemlerin trial metot ile tam çözümleri, Postgraduate, L.BURÇİN(Student), 2019

TAŞCAN F., Kesir mertebeli diferensiyel denklemlerin simetri indirgemeleri ve korunumluluk kanunları, Doctorate, A.AKBULUT(Student), 2017  
TAŞCAN F., Kısmi diferensiyel denklemlerin Riemann Theta fonksiyonları ile periyodik çözümleri, Doctorate, S.DEMİRAY(Student), 2016  
TAŞCAN F., Kısmi diferensiyel denklemlerin q-koşullu simetrileri, Postgraduate, H.BOZDAĞ(Student), 2014  
TAŞCAN F., Matematiksel mantık, ispat teknikleri, fibonacci sayısı, pisagor teoremi ispatı, Postgraduate, H.TOPKAYA(Student), 2013  
TAŞCAN F., Kısmi diferensiyel denklemler için korunumluluk kanunları, Postgraduate, A.YAKUT(Student), 2012  
TAŞCAN F., Adi diferensiyel denklemlerin simetrileri ve çözümleri, Postgraduate, G.ÇELEBİ(Student), 2010  
TAŞCAN F., Lineer olmayan denklemlerin analitik ve yaklaşık çözümleri, Postgraduate, D.KIRMIZITOPRAK(Student), 2008

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

- I. **The (3 + 1)-dimensional Wazwaz-KdV equations: The conservation laws and exact solutions**  
Akbulut A., Rezazadeh H., Hashemi M. S., Taşcan F.  
International Journal of Nonlinear Sciences and Numerical Simulation, vol.24, no.2, pp.673-693, 2023 (SCI-Expanded)
- II. **A novel integration approach to study the perturbed Biswas-Milovic equation with Kudryashov's law of refractive index**  
Mirzazadeh M., Akbulut A., TAŞCAN F., Akinyemi L.  
Optik, vol.252, 2022 (SCI-Expanded)
- III. **Obtaining exact solutions of nonlinear partial differential equations via two different methods**  
Akbulut A., Islam S. M. R., Rezazadeh H., TAŞCAN F.  
International Journal of Modern Physics B, vol.36, 2022 (SCI-Expanded)
- IV. **The analysis of conservation laws, symmetries and solitary wave solutions of Burgers-Fisher equation**  
Akbulut A., Kaplan M., Kumar D., TAŞCAN F.  
International Journal of Modern Physics B, vol.35, no.22, 2021 (SCI-Expanded)
- V. **On symmetries, conservation laws and exact solutions of the nonlinear Schrodinger-Hirota equation**  
Akbulut A., TAŞCAN F.  
WAVES IN RANDOM AND COMPLEX MEDIA, vol.28, no.2, pp.389-398, 2018 (SCI-Expanded)
- VI. **Application of conservation theorem and modified extended tanh-function method to (1+1)-dimensional nonlinear coupled Klein-Gordon-Zakharov equation**  
Akbulut A., TAŞCAN F.  
CHAOS SOLITONS & FRACTALS, vol.104, pp.33-40, 2017 (SCI-Expanded)
- VII. **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, vol.40, no.5, pp.1703-1710, 2017 (SCI-Expanded)
- VIII. **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, vol.27, no.1, pp.117-128, 2017 (SCI-Expanded)
- IX. **The investigation of exact solutions of nonlinear partial differential equations by using  $\exp(-\Phi(\xi))$  method**  
Akbulut A., Kaplan M., TAŞCAN F.  
OPTİK, vol.132, pp.382-387, 2017 (SCI-Expanded)
- X. **Conservation laws and Exact Solutions of Phi-Four ( $\Phi$ -4) Equation via the  $(G'/G, 1/G)$ -Expansion Method**  
Akbulut A., Kaplan M., TAŞCAN F.

ZEITSCHRIFT FUR NATURFORSCHUNG SECTION A-A JOURNAL OF PHYSICAL SCIENCES, vol.71, no.5, pp.439-446, 2016 (SCI-Expanded)

- XI. **Quasi-periodic solutions of (3+1) generalized BKP equation by using Riemann theta functions**  
DEMİRAY S., TAŞCAN F.  
APPLIED MATHEMATICS AND COMPUTATION, vol.273, pp.131-141, 2016 (SCI-Expanded)
- XII. **Conservation Laws and Exact Solutions with Symmetry Reduction of Nonlinear Reaction Diffusion Equations**  
TAŞCAN F., Yakut A.  
INTERNATIONAL JOURNAL OF NONLINEAR SCIENCES AND NUMERICAL SIMULATION, vol.16, pp.191-196, 2015 (SCI-Expanded)
- XIII. **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, vol.70, no.5, pp.359-363, 2015 (SCI-Expanded)
- XIV. **Multiscale expansions in discrete world**  
ÜNSAL Ö., TAŞCAN F., ÖZER M. N.  
PRAMANA-JOURNAL OF PHYSICS, vol.83, no.1, pp.21-28, 2014 (SCI-Expanded)
- XV. **Periodic and Solitary Wave Solutions of Complex Nonlinear Evolution Equations by Using First Integral Method**  
TAŞCAN F., Bekir A.  
INTERNATIONAL JOURNAL OF NONLINEAR SCIENCES AND NUMERICAL SIMULATION, vol.14, no.5, pp.255-260, 2013 (SCI-Expanded)
- XVI. **The first-integral method applied to the Eckhaus equation**  
Taghizadeh N., Mirzazadeh M., TAŞCAN F.  
APPLIED MATHEMATICS LETTERS, vol.25, no.5, pp.798-802, 2012 (SCI-Expanded)
- XVII. **EXACT SOLUTIONS OF COUPLED KdV EQUATION DERIVED FROM THE COUPLED NLS EQUATION USING MULTIPLE SCALES METHOD**  
TAŞCAN F., Bekir A.  
INTERNATIONAL JOURNAL OF MODERN PHYSICS B, vol.25, no.29, pp.4021-4028, 2011 (SCI-Expanded)
- XVIII. **Application of Adapted Homotopy Perturbation Method for Approximate Solution of Henon-Heiles System**  
TAŞCAN F., ÖZER M. N.  
NUMERICAL METHODS FOR PARTIAL DIFFERENTIAL EQUATIONS, vol.26, no.6, pp.1522-1529, 2010 (SCI-Expanded)
- XIX. **Derivation of Korteweg-de Vries flow equations from modified nonlinear Schrodinger equation**  
ÖZER M. N., TAŞCAN F., KOPARAN M.  
NONLINEAR ANALYSIS-REAL WORLD APPLICATIONS, vol.11, no.4, pp.2619-2623, 2010 (SCI-Expanded)
- XX. **Applications of the first integral method to nonlinear evolution equations**  
TAŞCAN F., Bekir A.  
CHINESE PHYSICS B, vol.19, no.8, 2010 (SCI-Expanded)
- XXI. **Periodic and solitary wave solutions of the attractive and repulsive nonlinear Schrodinger equation**  
TAŞCAN F., Bekir A.  
INTERNATIONAL JOURNAL OF COMPUTER MATHEMATICS, vol.87, no.5, pp.1066-1071, 2010 (SCI-Expanded)
- XXII. **Analytic solutions of the (2+1)-dimensional nonlinear evolution equations using the sine-cosine method**  
TAŞCAN F., Bekir A.  
APPLIED MATHEMATICS AND COMPUTATION, vol.215, no.8, pp.3134-3139, 2009 (SCI-Expanded)
- XXIII. **Derivation of Korteweg-de Vries flow equations from nonlinear Schrodinger equation**  
ÖZER M. N., TAŞCAN F.  
CHAOS SOLITONS & FRACTALS, vol.40, no.5, pp.2265-2270, 2009 (SCI-Expanded)

- XXIV. **Travelling wave solutions of nonlinear evolution equations by using the first integral method**  
TAŞCAN F., Bekir A., KOPARAN M.  
COMMUNICATIONS IN NONLINEAR SCIENCE AND NUMERICAL SIMULATION, vol.14, no.5, pp.1810-1815, 2009 (SCI-Expanded)
- XXV. **Exact Solutions of Dispersive Water Wave Equation**  
ÖZER M. N., TAŞCAN F.  
INTERNATIONAL JOURNAL OF NONLINEAR SCIENCES AND NUMERICAL SIMULATION, vol.10, no.4, pp.539-545, 2009 (SCI-Expanded)
- XXVI. **Travelling wave solutions of the Cahn-Allen equation by using first integral method**  
TAŞCAN F., Bekir A.  
APPLIED MATHEMATICS AND COMPUTATION, vol.207, no.1, pp.279-282, 2009 (SCI-Expanded)
- XXVII. **Normal forms and the multiple-times expansion method for finite-dimensional integrable Hamiltonian systems**  
Nacioezer M., Tascan F.  
INTERNATIONAL JOURNAL OF COMPUTER MATHEMATICS, vol.84, no.12, pp.1819-1841, 2007 (SCI-Expanded)

### Articles Published in Other Journals

- I. **A novel scheme for SMCH equation with two different approaches**  
AKBULUT A., Islam S. M. R., Arafat S. M. Y., TAŞCAN F.  
COMPUTATIONAL METHODS FOR DIFFERENTIAL EQUATIONS, vol.11, no.2, pp.263-280, 2023 (ESCI)
- II. **Trivial conservation laws and solitary wave solution of the fifth order Lax equation**  
AKBULUT A., TAŞCAN F., ÖZEL E.  
Partial Differential Equations in Applied Mathematics, vol.4, no.100101, pp.1-5, 2021 (Peer-Reviewed Journal)
- III. **Exact Travelling Wave Solutions for Space-Time Fractional Klein-Gordon Equation and (21)-Dimensional Time-Fractional Zoomeron Equation via Auxiliary Equation Method**  
Topsakal M., TAŞCAN F.  
Applied Mathematics and Nonlinear Sciences, vol.5, no.1, pp.437-446, 2020 (Scopus)
- IV. **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, vol.67, no.2, pp.317-326, 2018 (ESCI)
- V. **IMPLEMENTATIONS OF CONSERVATION THEOREM AND THE EXPONENTIAL RATIONAL FUNCTION METHOD TO VISCOUS BURGERS EQUATION**  
TAŞCAN GÜNEY F., Akbulut A., KAPLAN M.  
ANADOLU UNIVERSITY JOURNAL OF SCIENCE AND TECHNOLOGY A - Applied Sciences and Engineering, vol.18, no.1, pp.31-38, 2017 (Peer-Reviewed Journal)
- VI. **Exact Solutions of Nonlinear Partial Differential Equations with  $\exp(-\varphi(\zeta))$ - Expansion Method**  
TAŞCAN GÜNEY F., Akbulut A.  
Afyon Kocatepe Üniversitesi Fen ve Mühendislik Bilimleri Dergisi, vol.17, pp.86-92, 2017 (Peer-Reviewed Journal)
- 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, vol.17, no.1, pp.1-5, 2015 (Peer-Reviewed Journal)
- VIII. **Derivation of Korteweg de Vries flow equations from derivative nonlinear Schrodinger equation**  
ÖZER M. N., TAŞCAN GÜNEY F., KOPARAN M.  
Journal of Advanced Research in Differential Equations, vol.3, no.2, pp.73-80, 2011 (Scopus)
- IX. **Derivation of Integrable Nonlinear Evolution Equations**  
ÖZER M. N., TAŞCAN GÜNEY F.

Hadronic Journal Supplement, vol.18, no.1, pp.89-98, 2003 (Scopus)

X. **KdV Equation and Fifth Order Integrable Nonlinear Evolution Equations from the famous NLS Equation**

ÖZER M. N., TAŞCAN GÜNEY F.

Hadronic Journal Supplement, vol.17, no.3, pp.495-506, 2002 (Scopus)

## Refereed Congress / Symposium Publications in Proceedings

- I. **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, Turkey, 3 - 06 July 2018, pp.279
- II. **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, Cyprus (Kktc), 4 - 06 May 2018
- III. **Exact solutions of the nonlinear differential equation via (w/g)-expansion method**  
TAŞCAN GÜNEY F., Akbulut A.  
Ukrainian Conference on Applied Mathematics - 2017, Lviv, Ukraine, 28 - 30 September 2017
- IV. **Construction of exact solutions to partial differential equations via CRE method**  
TAŞCAN GÜNEY F., Akbulut A.  
IECMSA, Budapest, Hungary, 15 - 18 August 2017
- V. **Conservation laws and exact solutions of the fifth order (11)-dimensional Kaup-Kupershmidt equation**  
KAPLAN M., AKBULUT A., TAŞCAN GÜNEY F.  
3 rd International Conference on Symmetry of Differential Equations and Applications, İstanbul, Turkey, 14 - 17 August 2017
- VI. **Conservation laws and exact solutions of the Wu-Zhang system**  
AKBULUT A., KAPLAN M., TAŞCAN GÜNEY F.  
3 rd International Conference on Symmetry of Differential Equations and Applications, İstanbul, Turkey, 14 - 17 August 2017
- VII. **Obtaining Three-Periodic Wave Solutions of (31) Dimensional BKP Equation Using Hirota-Riemann Method**  
DEMİRAY S., TAŞCAN GÜNEY F.  
ICMME-2017, Şanlıurfa, Turkey, 11 - 13 May 2017
- VIII. **Reduction of Nonlinear Partial Differential Equations via Optimal Systems**  
TAŞCAN GÜNEY F., KATIRCI U.  
ICMME-2017, Şanlıurfa, Turkey, 11 - 13 May 2017
- IX. **Conservation laws and exact solutions of system of Boussinesq-Burgers equations**  
Akbulut A., Kaplan M., TAŞCAN F.  
11th International Conference on Mathematical Problems in Engineering, Aerospace and Sciences (ICNPAA), La Rochelle, France, 4 - 08 July 2016, vol.1798
- X. **Quasi periodic wave solutions of 2 1 dimensional breaking wave solutions using Riemann theta functions**  
DEMİRAY S., TAŞCAN GÜNEY F.  
IECMSA-2016, Belgrade, Serbia, 16 - 19 August 2016
- XI. **Complexiton solutions for some nonlinear partial differential equations**  
ÜNSAL Ö., BEKİR A., TAŞCAN GÜNEY F., ÖZER M. N.

ICQSA-2016, 25 - 27 May 2016

- XII. **Conservation Laws of Partial Differential Equations Using Two Different Method**  
AKBULUT A., TAŞCAN GÜNEY F.

ICMME-2016, Elazığ, Turkey, 12 - 14 May 2016

- XIII. **Conservation Laws and Exact Solutions of Nonlinear partial Differential Equation**  
Akbulut A., KAPLAN M., TAŞCAN GÜNEY F.

ICMME-2016, Elazığ, Turkey, 12 - 14 May 2016

- XIV. **Conservation Laws and Exact Solution of Nonlinear Differential Equation**  
KAPLAN M., Akbulut A., TAŞCAN GÜNEY F.

4 th International Eurasian Conference on Mathematical Sciences and Application, 31 August - 03 September 2015

- XV. **Riemann Theta Fonksiyonları ile 3 1 BKP Denkleminin Quasi Peryodik Çözümleri**  
DEMİRAY S., TAŞCAN GÜNEY F.

14. Matematik Sempozyumu, Turkey, 14 - 16 May 2015

- XVI. **Kısmi Diferensiyel Denklemlerin Q Koşullu Simetrileri**  
Hacer B., TAŞCAN GÜNEY F.

14. Matematik Sempozyumu, Turkey, 14 - 16 May 2015

- XVII. **Conservation laws and symmetry reduction of nonlinear reaction diffusion equation**  
Akbulut A., TAŞCAN GÜNEY F.

International Conference on Applied Analysis and Matematical Modeling, 8 - 12 May 2015

- XVIII. **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, Austria, 25 - 28 August 2014, pp.247-248

- XIX. **Çok Ölçekli Açılım Metodunun Diferensiyel Fark Denklemlerine Uygulamaları**  
ÜNSAL Ö., TAŞCAN GÜNEY F., ÖZER M. N.

13. Matematik Sempozyumu, Turkey, 15 - 17 May 2014

- XX. **Kısmi Diferensiyel Denklemlerin Riemann Theta Fonksiyonları ile Periyodik Çözümleri**  
DEMİRAY S., TAŞCAN GÜNEY F.

13. Matematik Sempozyumu, Turkey, 15 - 17 May 2014

- XXI. **Lie Nokta Simetrileri ile Lineer Olmayan Kısmi Diferensiyel Denklemlerin Çözümleri**  
TAŞCAN GÜNEY F.

XXIII. Ulusal Matematik Sempozyumu, Kayseri, Turkey, 4 - 07 August 2010

## Supported Projects

TAŞCAN F., Project Supported by Higher Education Institutions, Kısmi Diferensiyel Denklemlerin Riemann Theta Fonksiyonları İle Periyodik Çözümleri, 2014 - 2016

## Metrics

Publication: 58

Citation (WoS): 268

Citation (Scopus): 305

H-Index (WoS): 8

H-Index (Scopus): 9

## Non Academic Experience

Eskişehir Osmangazi Üniversitesi  
Eskişehir Osmangazi Üniversitesi  
Eskişehir Devlet Hastanesi