MURAT KARAÇAYIR
ARŞ.GÖR.DR.



E-posta : mkaracayir@akdeniz.edu.tr
İş Telefonu : +90 242 227 4400 Dahili: 3814
Adres : Akdeniz Üniversitesi Fen Fakültesi B Blok A1-8 Kampus/ANTALYA
Uluslararası Araştırmacı ID'leri
ORCID: 0000-0001-6230-3638
Yoksis Araştırmacı ID: 121936

Ögrenim Bilgisi

Doktora 2013 - 2018	Akdeniz Üniversitesi, Fen Bilimleri Enstitüsü, Matematik, Türkiye
Yüksek Lisans 2007 - 2010	Orta Doğu Teknik Üniversitesi, Uygulamalı Matematik Enstitüsü, Kriptografi, Türkiye
Lisans 2003 - 2007	Orta Doğu Teknik Üniversitesi, Fen Fakültesi, Matematik, Türkiye

Yabancı Diller

İngilizce, B2 Orta Üstü

Yaptığı Tezler

Doktora, Diferansiyel, Fonksiyonel Diferansiyel ve İntegro-diferansiyel Denklemler ve Sistemleri için Galerkin-tipi bir Sayısal Yöntem, Akdeniz Üniversitesi, Fen Bilimleri Enstitüsü, Matematik, 2018

Akademik Unvanlar / Görevler

Araştırma Görevlisi 2013 - Devam Ediyor	Akdeniz Üniversitesi, Fen Fakültesi, Matematik

SCI, SSCI ve AHCI İndekslerine Giren Dergilerde Yayınlanan Makaleler

1. **A Galerkin-type approach to solve systems of linear Volterra-Fredholm integro-differential equations**
   KARAÇAYIR M., YÜZBAŞI Ş.
   Turkish Journal of Mathematics, cilt.46, sa.8, ss.3121-3138, 2022 (SCI-Expanded)
2. **An approximation technique for solutions of singularly perturbed one-dimensional convection-diffusion problem**
   YÜZBAŞI Ş., KARAÇAYIR M.
   International Journal of Numerical Modelling: Electronic Networks,INTERNATIONAL JOURNAL OF NUMERICAL MODELLING-ELECTRONIC NETWORKS DEVICES AND FIELDS, cilt.33, sa.1, 2020 (SCI-Expanded)
3. **A Galerkin-Type Fractional Approach for Solutions of Bagley-Torvik Equations**
   YÜZBAŞI Ş., KARAÇAYIR M.
   CMES-COMPUTER MODELING IN ENGINEERING & SCIENCES, cilt.123, sa.3, ss.941-956, 2020 (SCI-Expanded)
4. **A Galerkin-like method for solving linear functional differential equations under initial conditions**
   YÜZBAŞI Ş., KARAÇAYIR M.
   TURKISH JOURNAL OF MATHEMATICS, cilt.44, sa.1, ss.85-97, 2020 (SCI-Expanded)
5. **A Galerkin-Type Method for Solving a Delayed Model on HIV Infection of CD4(+) T-cells**
   YÜZBAŞI Ş., KARAÇAYIR M.
   IRANIAN JOURNAL OF SCIENCE AND TECHNOLOGY TRANSACTION A-SCIENCE, cilt.42, sa.A3, ss.1087-1095, 2018 (SCI-Expanded)
6. **A Galerkin-Type Method to Solve One-Dimensional Telegraph Equation Using Collocation Points in Initial and Boundary Conditions**
   YÜZBAŞI Ş., KARAÇAYIR M.
   INTERNATIONAL JOURNAL OF COMPUTATIONAL METHODS, cilt.15, sa.5, 2018 (SCI-Expanded)
7. **A Numerical Approach for Solving High-Order Linear Delay Volterra Integro-Differential Equations**
   YÜZBAŞI Ş., KARAÇAYIR M.
   INTERNATIONAL JOURNAL OF COMPUTATIONAL METHODS, cilt.15, sa.5, 2018 (SCI-Expanded)
8. **A numerical method for solutions of Lotka-Volterra predator-prey model with time-delay**
   YÜZBAŞI Ş., KARAÇAYIR M.
   INTERNATIONAL JOURNAL OF BIOMATHEMATICS, cilt.11, sa.2, 2018 (SCI-Expanded)
9. **A Galerkin-Like Approach to Solve Multi-Pantograph Type Delay Differential Equations**
   YÜZBAŞI Ş., KARAÇAYIR M.
   FILOMAT, cilt.32, sa.2, ss.409-422, 2018 (SCI-Expanded)
10. **A Galerkin-like scheme to solve two-dimensional telegraph equation using collocation points in initial and boundary conditions**
    YÜZBAŞI Ş., KARAÇAYIR M.
    COMPUTERS & MATHEMATICS WITH APPLICATIONS, cilt.74, sa.12, ss.3242-3249, 2017 (SCI-Expanded)
11. **Application of homotopy perturbation method to solve two models of delay differential equation systems**
    YÜZBAŞI Ş., KARAÇAYIR M.
    INTERNATIONAL JOURNAL OF BIOMATHEMATICS, cilt.10, sa.6, 2017 (SCI-Expanded)
12. **An exponential Galerkin method for solutions of HIV infection model of CD4+ T-cells**
    YÜZBAŞI Ş., KARAÇAYIR M.
    COMPUTATIONAL BIOLOGY AND CHEMISTRY, cilt.67, ss.205-212, 2017 (SCI-Expanded)
13. **A Galerkin-like approach to solve continuous population models for single and interacting species**
    YÜZBAŞI Ş., KARAÇAYIR M.
    KUWAIT JOURNAL OF SCIENCE, cilt.44, sa.2, ss.9-26, 2017 (SCI-Expanded)
14. **A Galerkin-like approach to solve high-order integro-differential equations with weakly singular kernel**
    YÜZBAŞI Ş., KARAÇAYIR M.
    KUWAIT JOURNAL OF SCIENCE, cilt.43, sa.2, ss.106-120, 2016 (SCI-Expanded)

Diğer Dergilerde Yayınlanan Makaleler

1. **A Galerkin-like scheme to determine curves of constant breadth in Euclidean 3-space**
   Yüzbaşı Ş., Karaçayır M.
   TWMS Journal of Applied and Engineering Mathematics, cilt.11, sa.3, ss.646-658, 2021 (ESCI)
2. **A GALERKIN-LIKE SCHEME TO DETERMINE CURVES OF CONSTANT BREADTH IN EUCLIDEAN 3-SPACE**
   YÜZBAŞI Ş., KARAÇAYIR M.
   Turkish World Mathematical Society Journal of Applied and Engineering Mathematics, cilt.11, sa.3, ss.646-658, 2021 (Scopus)
3. **A GALERKIN-TYPE METHOD FOR SOLUTIONS OF PANTOGRAPH-TYPE VOLTERRA-FREDHOLM INTEGRO-DIFFERENTIAL EQUATIONS WITH FUNCTIONAL UPPER LIMIT**
   YÜZBAŞI Ş., KARAÇAYIR M.
   SIGMA JOURNAL OF ENGINEERING AND NATURAL SCIENCES-SIGMA MUHENDISLIK VE FEN BILIMLERI DERGISI, cilt.38, sa.2, ss.995-1005, 2020 (ESCI)
4. **A numerical scheme to solve boundary value problems involving singular perturbation**
   YÜZBAŞI Ş., KARAÇAYIR M.
   EUROPEAN JOURNAL OF COMPUTATIONAL MECHANICS, cilt.27, sa.2, ss.109-122, 2018 (ESCI)
5. **A Galerkin-like scheme to solve Riccati equations encountered in quantum physics**
   YÜZBAŞI Ş., KARAÇAYIR M.
   Journal of Physics: Conference Series, cilt.766, 2016 (Scopus)

Hakemli Kongre / Sempozyum Bildiri Kitaplarında Yer Alan Yayınlar

1. **Numerical Solutions of One-Dimensional Convection-Diffusion Equation by a Galerkin-Like Method Using Polynomial Basis**
   YÜZBAŞI Ş., KARAÇAYIR M.
   International Conference of Mathematics, İstanbul, Türkiye, 3 - 06 Temmuz 2018, ss.246
2. **Numerical Solutions of Lotka-Volterra Equations by a Weighted Residual Scheme Using the Method of Least Squares**
   YÜZBAŞI Ş., KARAÇAYIR M.
   International Conference of Mathematics (ICOM), İstanbul, Türkiye, 3 - 06 Temmuz 2018, ss.245
3. **Numerical solution of initial value problems by a Galerkin-like method using multiple intervals**
   YÜZBAŞI Ş., KARAÇAYIR M.
   2nd International Conference on Advances in Science, İstanbul, Türkiye, 13 - 15 Eylül 2017, ss.282
4. **Application of Galerkin-like method to Lotka-Voletrra Predator-prey model**
   YÜZBAŞI Ş., KARAÇAYIR M.
   International Conference on Applied Analysis and Mathematical Modelling, İstanbul, Türkiye, 03 Temmuz 2017, ss.105
5. **An operational matrix approach for solutions of multi-pantograph equations**
   YÜZBAŞI Ş., KARAÇAYIR M., Ismailov N.
   2nd International Symposium on Multidisciplinary Studies, Roma, İtalya, 18 - 21 Mayıs 2017, ss.120
6. **A Numerical Approach to Obtain Approximate Solutions of Volterra's Population Model with Single Species**
   YÜZBAŞI Ş., KARAÇAYIR M.
   2nd International Symposium on Multidisciplinary Sciences, Roma, İtalya, 18 - 21 Mayıs 2017, ss.121
7. **A Numerical Scheme to Obtain Approximate Solutions of Two-dimensional Telegraph Equation**
   YÜZBAŞI Ş., KARAÇAYIR M.
   International Conference on Mathematics and Engineering, İstanbul, Türkiye, 10 - 12 Mayıs 2017, ss.63
8. **Approximate Solutions of Singularly Perturbed Differential Equations by a Numerical Scheme Based on Inner Product**

KARAÇAYIR M., YÜZBAŞI Ş.
International Conference on Mathematics and Engineering, İstanbul, Türkiye, 10 - 12 Mayıs 2017, ss.82

9. **Determination of the curves of constant breadth according to Bishop Frame in Euclidean 3-space by a Galerkin-like method**
KARAÇAYIR M.
14th International Geometry Symposium, Denizli, Türkiye, 25 - 28 Mayıs 2016, ss.186
10. **A Galerkin-like scheme to solve Riccati equations encountered in quantum physics**
YÜZBAŞI Ş., KARAÇAYIR M.
International Conference on Quantum Science and Applications, Eskişehir, Türkiye, 24 - 28 Mayıs 2016, ss.107
11. **A Numerical Method to Obtain Approximate Solutions of a Model on HIV Infection of CD4+ T-cells**
KARAÇAYIR M., YÜZBAŞI Ş.
International Conference On Advancements in Mathematical Sciences, Antalya, Türkiye, 5 - 07 Kasım 2015, ss.137
12. **Lotka-Volterra Nüfus Modelinin Galerkin Tipi Bir Yöntemle Yaklaşık Çözülmesi**
YÜZBAŞI Ş., KARAÇAYIR M.
28. Ulusal Matematik Sempozyumu, Antalya, Türkiye, 7 - 09 Eylül 2015, ss.202
13. **Application of the homotopy perturbation method for solving delay HIV infection model of CD4+ T-cells**
YÜZBAŞI Ş., KARAÇAYIR M.
Karatekin Mathematics Days, Çankırı, Türkiye, 11 - 13 Haziran 2014, ss.102

Kongre ve Sempozyum Katılımı Faaliyetleri

International Conference on Mathematics (ICOM), Katılımcı, İstanbul, Türkiye, 2018
2nd International Conference on Advances in Science, Katılımcı, Türkiye, 2017
International Conference on Applied Analysis and Mathematical Modelling, Katılımcı, İstanbul, Türkiye, 2017
International Conference on Mathematics and Engineering, Katılımcı, İstanbul, Türkiye, 2017
II. International Symposium on Multidisciplinary Studies, Katılımcı, Roma, İtalya, 2017
International Conference on Applied Mathematics and Analysis, Katılımcı, Ankara, Türkiye, 2016
14th International Geometry Symposium, Katılımcı, Denizli, Türkiye, 2016
International Conference on Quantum Science and Applications (ICQSA 2016), Katılımcı, Eskişehir, Türkiye, 2016
International Conference on Advancements in Mathematical Sciences, Katılımcı, Antalya, Türkiye, 2015
Ulusal Matematik Sempozyumu, Katılımcı, Antalya, Türkiye, 2015
Karatekin Mathematics Days 2014, Katılımcı, Çankırı, Türkiye, 2014

Araştırma Alanları

Matematik, Diferansiyel denklemler, Sayısal Analiz, Temel Bilimler