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Education Information

Doctorate, Van Yüzüncü Yil University, Fen Bilimleri Enstitüsü, Matematik, Turkey 2012 - 2018
Postgraduate, Erciyes University, Fen Bilimleri Enstitüsü, Matematik, Turkey 2010 - 2012
Undergraduate, Kahramanmaras Sutcu Imam University, Fen Edebiyat Fakültesi, Matematik, Turkey 2006 - 2010

Foreign Languages

English, B2 Upper Intermediate

Research Areas

Mathematics, Differential Equations, Numerical Analysis, Natural Sciences

Academic Titles / Tasks

Assistant Professor, Van Yüzüncü Yil University, Fen Fakültesi, Matematik Bölümü, 2019 - Continues
Research Assistant PhD, Van Yüzüncü Yil University, Fen Fakültesi, Matematik Bölümü, 2018 - 2019
Research Assistant, Van Yüzüncü Yil University, Fen Fakültesi, Matematik Bölümü, 2012 - 2018

Courses

Matematik, Associate Degree, 2018 - 2019
Matematik I, Associate Degree, 2018 - 2019

Published journal articles indexed by SCI, SSCI, and AHCI

I. **An effective approach for numerical solution of linear and nonlinear singular boundary value problems**
Saldır O., Sakar M. G.
MATHEMATICAL METHODS IN THE APPLIED SCIENCES, vol.46, no.1, pp.1395-1410, 2023 (SCI-Expanded)

II. **A New Reproducing Kernel Approach for Nonlinear Fractional Three-Point Boundary Value**

Problems
Sakar M. G., Saldır O.
FRACTAL AND FRACTIONAL, vol.4, no.4, 2020 (SCI-Expanded)

III. **A novel iterative solution for time-fractional Boussinesq equation by reproducing kernel method**
Sakar M. G., Saldır O.
JOURNAL OF APPLIED MATHEMATICS AND COMPUTING, vol.64, no.1-2, pp.227-254, 2020 (SCI-Expanded)

IV. **Numerical Solution of Fractional Order Burgers' Equation with Dirichlet and Neumann Boundary Conditions by Reproducing Kernel Method**
Saldır O., Sakar M. G., Erdoğan F.
FRACTAL AND FRACTIONAL, vol.4, no.2, 2020 (SCI-Expanded)

V. **Numerical solution of time-fractional Kawahara equation using reproducing kernel method with error estimate**
Saldır O., Sakar M. G., Erdoğan F.
COMPUTATIONAL & APPLIED MATHEMATICS, vol.38, no.4, 2019 (SCI-Expanded)

VI. **A Novel Technique for Fractional Bagley-Torvik Equation**
Sakar M. G., Saldır O., AKGÜL A.
PROCEEDINGS OF THE NATIONAL ACADEMY OF SCIENCES INDIA SECTION A-PHYSICAL SCIENCES, vol.89, no.3, pp.539-545, 2019 (SCI-Expanded)

VII. **An iterative approximation for time-fractional Cahn-Allen equation with reproducing kernel method**
Sakar M. G., Saldır O., Erdoğan F.
COMPUTATIONAL & APPLIED MATHEMATICS, vol.37, no.5, pp.5951-5964, 2018 (SCI-Expanded)

VIII. **Improving Variational Iteration Method with Auxiliary Parameter for Nonlinear Time-Fractional Partial Differential Equations**
Sakar M. G., Saldır O.
JOURNAL OF OPTIMIZATION THEORY AND APPLICATIONS, vol.174, no.2, pp.530-549, 2017 (SCI-Expanded)

Articles Published in Other Journals

I. **Numerical investigations to design a novel model based on the fifth order system of Emden-Fowler equations**
Zulqurnain S., Sakar M. G., Yeskindirova M., Saldir O.
THEORETICAL AND APPLIED MECHANICS LETTERS, vol.10, no.5, pp.333-342, 2020 (ESCI)

II. **A finite difference method on layer-adapted mesh for singularly perturbed delay differential equations**
Erdoğan F., Sakar M. G., Saldır O.
Applied Mathematics and Nonlinear Sciences , vol.5, no.1, pp.425-436, 2020 (Scopus)

III. **A Hybrid Method for Singularly Perturbed Convection–Diffusion Equation**
Sakar M. G., Saldır O., Erdoğan F.
International Journal of Applied and Computational Mathematics, vol.5, no.5, 2019 (Scopus)

IV. **Numerical Solution of Fractional Bratu Type Equations with Legendre Reproducing Kernel Method**
Sakar M. G., Saldır O., Akgül A.
International Journal of Applied and Computational Mathematics, vol.4, 2018 (Scopus)

Refereed Congress / Symposium Publications in Proceedings

I. **A NEW APPROACH FOR NUMERICAL SOLUTION OF FOURTH ORDER EMDEN-FOWLER EQUATION**
Saldır O.
6th International Conference on Computational Mathematics and Engineering Sciences, Ordu, Turkey, 20 - 22 May 2022, pp.278

II. **A NUMERICAL APPROACH FOR SINGULAR BOUNDARY VALUE PROBLEM**
Saldır O., Sakar M. G.
6th International Conference on Computational Mathematics and Engineering Sciences, Ordu, Turkey, 20 - 22 May 2022, pp.277

III. **Fitted Difference Schemes for Delay Convection-Diffusion Problems with Small Parameter**
Erdoğan F., SAKAR M. G., Saldır O.
9. International Youth Science Forum Litteris et Artibus, Lviv, Ukraine, 21 - 23 November 2019, pp.65-68

IV. **REPRODUCİNG KERNEL METHOD WİTH CHEBYSHEV POLYNOMİALS FOR FRACTİONAL TWO-POİNT BOUNDARY VALUE PROBLEM**
Sakar M. G., SALDIR O., Erdoğan F.
4th International Conference on Computational Mathematics and Engineering Sciences, Antalya, Turkey, 20 - 22 May 2019, pp.200

V. **LAYER ADAPTED MESHES FOR SINGULARLY PERTURBED CONVECTION-DIFFUSION PROBLEM WITH DELAY**
Erdoğan F., SAKAR M. G., SALDIR O.
4th International Conference on Computational Mathematics and Engineering Sciences, Antalya, Turkey, 20 - 22 May 2019, pp.148

VI. **A NEW NUMERİCAL SOLUTİON FOR SİNGULARLY PERTURBED BOUNDARY VALUE PROBLEMS**
SALDIR O., Sakar M. G., Erdoğan F.
4th International Conference on Computational Mathematics and Engineering Sciences, Antalya, Turkey, 20 - 22 May 2019, pp.56

VII. **Reproducing kernel method with Bernstein polynomials for fractional boundary value problems**
Sakar M. G., Saldır O., Erdoğan F.
2nd International Conference on Pure and Applied Mathematics (ICPAM-VAN 2018), Van, Turkey, 11 - 13 September 2018, pp.116

VIII. **A numerical approach for time-fractional Kawahara equation with reproducing kernel method**
Saldır O., Sakar M. G., Erdoğan F.
2nd International Conference on Pure and Applied Mathematics (ICPAM-VAN 2018), Van, Turkey, 11 - 13 September 2018, pp.117

IX. **An Iterative Approximation for Time-Fractional Clannish Random Walker's Parabolic Equation in Reproducing Kernel Space**
Sakar M. G., Erdoğan F., Saldır O.
7TH INTERNATIONAL EURASIAN CONFERENCE ON MATHEMATICAL SCIENCES AND APPLICATIONS, Kiev, Ukraine, 28 - 31 August 2018, pp.116

X. **Reproducing Kernel Method for Time Fractional Allen- Cahn Equation**
Saldır O., Sakar M. G., Erdoğan F.
3rd International Conference on Computational Mathematics and Engineering Sciences, Girne, Cyprus (Kktc), 4 - 06 May 2018, pp.2-3

XI. **Uniform Difference Schemes for Singularly Perturbed Delay Differential Equations with Delay**
Erdoğan F., Sakar M. G., Saldır O.
3rd International Conference on Computational Mathematics and Engineering Sciences, Girne, Cyprus (Kktc), 4 - 06 May 2018, pp.1-2

XII. **Reproducing Kernel Method for Time Fractional Advection equation**
SAKAR M. G., SALDIR O., Erdoğan F.
3rd International Conference on Computational Mathematics and Engineering Sciences, Girne, Cyprus (Kktc), 4 - 06 May 2018, pp.1-3

XIII. **Uniform Numerical Methods for Singularly Perturbed Integro-Differential Equations With Delay**
Erdoğan F., Sakar M. G., Saldır O.
Ukrainian Conference on Applied Mathematics, Lviv, Ukraine, 28 - 30 September 2017, pp.1

XIV. **A new numerical approach for fractional boundary value problems**
Saldır O., Sakar M. G.

Cucasian Mathematics Conference II (CMC II), Van, Turkey, 22 - 24 August 2017, pp.121-122

XV. **Non uniform haat wavelet method for singularly perturbed convection diffusion equations**
Sakar M. G., Saldır O., Erdoğan F.
The 2nd International Symposium on Computational Mathematics and Engineering Sciences, İstanbul, Turkey, 20 - 22 May 2017, pp.1

XVI. **Legendre Reproducing Kernel Method for Fractional Two Point Boundry Value Problem**
Saldır O., Sakar M. G., Erdoğan F.
The 2nd International Symposium on Computational Mathematics and Engineering Sciences, İstanbul, Turkey, 20 - 22 May 2017, pp.1

XVII. **Higher Order Difference Schemes for Singularly Perturbed Delay Differential Equations with Delay**
Erdoğan F., Sakar M. G., Saldır O.
, The 2st International Symposium on Computational Mathematics and Engineering Sciences, İstanbul, Turkey, 20 - 22 May 2017, pp.1

XVIII. **Numerical Solution of Fractional Bratu Type Equation by Legendre-Reproducing Kernel Method**
Sakar M. G., AKGÜL A., Saldır O.
International Workshop on Mathematical Methods in Engineering, Ankara, Turkey, 27 - 29 April 2017, pp.117

XIX. **A New Technique for Numerical Solution of Fractional BVP's**
Sakar M. G., AKGÜL A., Saldır O.
International Workshop on Mathematical Methods in Engineering, Ankara, Turkey, 27 - 29 April 2017, pp.117

XX. **An Iterative Reproducing Kernel Method for Time and Space Fractional Burgers Equation**
Saldır O., Sakar M. G.
International Workshop on Mathematical Methods in Engineering, Ankara, Turkey, 27 - 29 April 2017, pp.118

XXI. **HOMOTOPY PERTURBATION METHOD FOR TIME-FRACTIONAL PDEs WITH PROPORTIONAL DELAYS**
Saldır O., Sakar M. G.
Mathematical Analysis, Differential Equations and their Applications (MADEA 7), Baku, Azerbaijan, 8 - 13 September 2015, pp.147

XXII. **A fitted numerov method for singularly perturbed reaction-diffusion equations**
Erdoğan F., SAKAR M. G., SALDIR O.
International Conference on Pure and Applied, Van, Turkey, 25 - 28 August 2015, pp.1

XXIII. **An exponential fitted method for singularly perturbed reactin-diffusion equations**
SAKAR M. G., Erdoğan F., Saldır O.
International Conference on Pure and Applied, Van, Turkey, 25 - 28 August 2015, pp.10

XXIV. **A NEW NUMERICAL APPROACH FOR SOLVING TIME-FRACTIONAL PARTIAL DIFFERENTIAL EQUATIONS**
Sakar M. G., Saldır O.
INTERNATIONAL CONFERENCE ON PURE AND APPLIED MATHEMATICS (ICPAM 2015), Van, Turkey, 25 - 28 August 2015, pp.115

XXV. **A COMBINATION OF VIM AND ASYMPTOTIC EXPANSION FOR SINGULARLY PERTURBED CONVECTION-DIFFUSION PROBLEM**
Saldır O., Sakar M. G.
INTERNATIONAL CONFERENCE ON PURE AND APPLIED MATHEMATICS (ICPAM 2015), Van, Turkey, 25 - 28 August 2015, pp.116

XXVI. **On the numerical solution of singularly perturbed reaction-diffusion equations**
Saldır O., SAKAR M. G., Erdoğan F.
International Conference on Differential and Difference Equations & Applications, Lizbon, Portugal, 18 - 22 May 2015, pp.84

XXVII. **A novel approach to solution of singularly perturbed convection-diffusion problem**
Erdoğan F., Yamaç K., SAKAR M. G., Saldır O.
International Conference on Differential and Difference Equations & Applications, Lizbon, Portugal, 18 - 22 May 2015, pp.106-107

XXVIII. **Numerical Methods on a Shishkin Mesh for Singularly Perturbed Delay Differential Equations**

Erdoğan F., Sakar M. G., Saldır O.

3. INTERNATIONAL EURASIAN CONFERENCE ON MATHEMATICAL SCIENCES AND APPLICATIONS, Vienna, Austria, 25 - 28 August 2014, pp.187

XXIX. **A Finite Difference Analysis for Singularly Perturbed Differential Difference Equations with Delay and Advance**

Erdoğan F., Saldır O.

2. INTERNATIONAL EURASIAN CONFERENCE ON MATHEMATICAL SCIENCES AND APPLICATIONS (IECMSA-2013), Sarajevo, Bosnia And Herzegovina, 26 - 29 August 2013, pp.163

XXX. **An Iterative Scheme for the Solution of Singularly Perturbed Delay Differential Equation**

Erdoğan F., Saldır O.

2. INTERNATIONAL EURASIAN CONFERENCE ON MATHEMATICAL SCIENCES AND APPLICATIONS (IECMSA-2013), Sarajevo, Bosnia And Herzegovina, 26 - 29 August 2013, pp.162

XXXI. **Oscillation Theorems for Second-Order Nonlinear Dynamic Equation on Time Scales**

ŞENEL M. T., Saldır O., UTKU N.

INTERNATIONAL CONFERENCE ON APPLIED ANALYSIS AND ALGEBRA, İstanbul, Turkey, 29 June - 02 July 2011, pp.145

Scientific Refereeing

Fundamental Journal of Mathematics and Applications, Other Indexed Journal, November 2018

Journal of Advanced Physics, Other Indexed Journal, October 2018

Journal of Advanced Physics, Other Indexed Journal, September 2018

Journal of Advanced Physics, Other Indexed Journal, August 2018

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Congress and Symposium Activities

2nd International Conference on Pure and Applied Mathematics (ICPAM-VAN 2018), Session Moderator, Van, Turkey, 2018

Caucasian Mathematics Conference (CMC)-II, Attendee, Van, Turkey, 2017

2. International Conference on Computational Mathematics and Engineering Sciences, Attendee, İstanbul, Turkey, 2017

International Workshop on Mathematical Methods in Engineering, Attendee, Ankara, Turkey, 2017

Mathematical Analysis, Differential Equations and their Applications - MADEA7, Attendee, Baku, Azerbaijan, 2015

INTERNATIONAL CONFERENCE ON PURE AND APPLIED MATHEMATICS (ICPAM 2015), Attendee, Van, Turkey, 2015

INTERNATIONAL CONFERENCE ON DIFFERENTIAL AND DIFFERENCE EQUATIONS & APPLICATIONS 2015, Attendee, Lisboa, Portugal, 2015

3. INTERNATIONAL EURASIAN CONFERENCE ON MATHEMATICAL SCIENCES AND APPLICATIONS, Attendee, Wien, Austria, 2014

2. INTERNATIONAL EURASIAN CONFERENCE ON MATHEMATICAL SCIENCES AND APPLICATIONS, Attendee, Sarajevo, Bosnia And Herzegovina, 2013

INTERNATIONAL CONFERENCE ON APPLIED ANALYSIS AND ALGEBRA, Attendee, İstanbul, Turkey, 2011