

Prof. VİLDAN GÜLKAÇ

Personal Information

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Education Information

Doctorate, Inonu University, Turkey 1989 - 1994

Post Graduate, Inonu University, Turkey 1986 - 1989

Under Graduate, Inonu University, Turkey 1982 - 1986

Foreign Languages

English, B2 Upper Intermediate

Dissertations

Doctorate, Konvektif sınır koşullu erime (Fusion) problemlerinin ters(Boadways) dönüşümlerle sayısal çözümü, Kocaeli Üniversitesi, Fen-Edebiyat Fakültesi, Matematik Bölümü, 1994

Research Areas

Differential Equations, Functional Equations, Integral Transformations, Computational Calculation, Partial Differential Equations

Academic Titles / Tasks

Professor, Kocaeli University, Fen Edebiyat Fakültesi, Matematik, 2018 - Continues

Associate Professor, Kocaeli University, Fen Edebiyat Fakültesi, Matematik, 2012 - 2018

Assistant Professor, Kocaeli University, Fen Edebiyat Fakültesi, Matematik, 1995 - 2012

Assistant Professor, Inonu University, Matematik Bölümü, 1995 - 1995

Research Assistant, İnönü Üniversitesi, Fen-Edebiyat Fakültesi, Matematik Bölümü, 1987 - 1995

Advising Theses

Gülkaç V., Kesirli türev içeren difüzyon denkleminin Laplace dönüşümü metodu ile kaynak fonksiyonunun bulunması, Post Graduate, S.DEDEOĞLU(Student), 2019

Gülkaç V., Doğrusal olmayan dalga denklemlerinin chebyshev polinomu ile nümerik çözümü, Post Graduate, Ö.YANAZ(Student), 2002

Articles Published in Journals That Entered SCI, SSCI and AHCI Indexes

- I. **The New Approximate Analytic Solution for Oxygen Diffusion Problem with Time-Fractional Derivative**
GÜLKAÇ V.
MATHEMATICAL PROBLEMS IN ENGINEERING, 2016 (Journal Indexed in SCI)
- II. **A Method of Finding Source Function for Inverse Diffusion Problem with Time-Fractional Derivative**
GÜLKAÇ V.
ADVANCES IN MATHEMATICAL PHYSICS, 2016 (Journal Indexed in SCI)
- III. **Numerical Solutions of Two-Dimensional Burgers' Equations**
GÜLKAÇ V.
International Journal of Scientific and Engineering Research, vol.6, pp.215-218, 2015 (Journal Indexed in SCI)
- IV. **The homotopy perturbation method for the Black-Scholes equation**
Gulkac V.
JOURNAL OF STATISTICAL COMPUTATION AND SIMULATION, vol.80, pp.1349-1354, 2010 (Journal Indexed in SCI)
- V. **Comparative study between two numerical methods for oxygen diffusion problem**
Gulkac V.
COMMUNICATIONS IN NUMERICAL METHODS IN ENGINEERING, vol.25, pp.855-863, 2009 (Journal Indexed in SCI)
- VI. **On the finite differences schemes for the numerical solution of two-dimensional moving boundary problem**
Gulkac V.
APPLIED MATHEMATICS AND COMPUTATION, vol.168, pp.549-556, 2005 (Journal Indexed in SCI)
- VII. **On a LOD method for solution of two dimensional fusion problem with convective boundary conditions**
Gulkac V., Ozis T.
INTERNATIONAL COMMUNICATIONS IN HEAT AND MASS TRANSFER, vol.31, pp.597-606, 2004 (Journal Indexed in SCI)
- VIII. **Numerical solution of two-dimensional Schrodinger equation by Boadway's transformation**
Gulkac V.
INTERNATIONAL JOURNAL OF COMPUTER MATHEMATICS, vol.80, pp.1543-1548, 2003 (Journal Indexed in SCI)
- IX. **Application of variable interchange method for solution of two-dimensional fusion problem with convective boundary conditions**
Ozis T., Gulkac V.
NUMERICAL HEAT TRANSFER PART A-APPLICATIONS, vol.44, pp.85-95, 2003 (Journal Indexed in SCI)

Articles Published in Other Journals

- I. **ANALYSIS OF TWO DIMENSIONAL PARABOLIC EQUATION WITH PERIODIC BOUNDARY CONDITIONS**
GÜLKAÇ V., BAĞLAN İ.
COMMUNICATIONS FACULTY OF SCIENCES UNIVERSITY OF ANKARA-SERIES A1 MATHEMATICS AND STATISTICS, vol.67, pp.328-334, 2018 (Refereed Journals of Other Institutions)
- II. **Application of Variable Interchange Method for Solution of Two-Dimensional Burgers'xx Equations**
GÜLKAÇ V.
New Trends in Mathematical Science, vol.1, pp.158-163, 2017 (Refereed Journals of Other Institutions)
- III. **A Linearized Iterative Method for Solving Two-Dimensional Non-Linear Burgers' Equations**
GÜLKAÇ V.
Asian Journal of Mathematics and Computer Research, vol.19, pp.1-8, 2017 (Refereed Journals of Other Institutions)
- IV. **Numerical Approach for the Two-Dimensional Heat Equation Problemwith Convective Boundary Conditions**
GÜLKAÇ V.
Sakarya University Journal of Science (SAUJS), vol.21, pp.343-349, 2017 (Refereed Journals of Other Institutions)

- V. **An Extrapolation Method for Oxygen Diffusion Problem**
GÜLKAÇ V.
International Journal of Scientific and Engineering Research, vol.6, pp.222-226, 2015 (Refereed Journals of Other Institutions)
- VI. **An Implicit Finite-Difference Method for Solving the Heat Transfer Equation**
GÜLKAÇ V.
International Journal of Scientific and Innovative Mathematical Research, vol.3, pp.39-44, 2015 (Refereed Journals of Other Institutions)
- VII. **Comparative Study Analytic and Numerical Methods for Solving Non Linear Black Scholes Equation with European Call Option**
GÜLKAÇ V.
International Journal of Scientific and Innovative Mathematical Research, vol.3, pp.66-78, 2015 (Refereed Journals of Other Institutions)
- VIII. **A numerical solution of the two-dimensional fusion problem with convective boundary conditions**
GÜLKAÇ V.
International Journal of Computational Methods in Engineering Science and Mechanics, vol.11, no.1, pp.20-26, 2010 (Refereed Journals of Other Institutions)
- IX. **Numerical Solution of One-Dimensional Stefan-Like Problems Using Three Time-Level Method**
GÜLKAÇ V.
Ozean Journal of Applied Sciences, vol.2, pp.19-24, 2009 (Refereed Journals of Other Institutions)
- X. **A Numerical Application of the Semi-Implicit Pseudo-Spectral Method for the Korteweg-de Vries Equation**
GÜLKAÇ V., ÖZİŞ T.
Ozean Journal of Applied Sciences, vol.2, pp.25-31, 2009 (Refereed Journals of Other Institutions)
- XI. **Treatment of Two-Dimensional Moving Boundary Problem by Boadway's Transformation**
GÜLKAÇ V., ÖZİŞ T.
Bulletin Calcutta Math. Soc., vol.88, pp.253-260, 1996 (Refereed Journals of Other Institutions)

Refereed Congress / Symposium Publications in Proceedings

- I. **Analytic Method of Finding Source Function for Diffusion Problem With Time-Fractional Derivative**
DEDEOĞLU S., GÜLKAÇ V.
ICAAMM 2017, İstanbul, Turkey, 3 - 07 July 2017
- II. **Explicit Finite Difference Method For Solution of Heat Diffusion Wave Equation with Mix Fractional Derivatives**
GÜLKAÇ V.
5th International Eurasian Conference on Mathematical Sciences and Applications, Belgrade, Serbia And Montenegro, 16 - 19 August 2016
- III. **Numerical Approach for The Two Dimensional Fusion Problem with Convective Boundary Conditions**
GÜLKAÇ V.
International Conference on Mathematics and Mathematics Education, Elazığ, Turkey, 12 - 14 May 2016
- IV. **KdV Denklemi için Chebyshev Seri Çözümü**
GÜLKAÇ V., YANAZ ÇINAR Ö.
XIV. Ulusal Matematik Sempozyumu, Eskişehir, Turkey, 19 - 21 September 2001, pp.100

Citations

Total Citations (WOS):55

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