Prof. Dr. SERDAL PAMUK

Kişisel Bilgiler

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Eğitim Bilgileri

Doktora, Iowa State University of Science and Technology, Faculty Of Science And Arts , Applied Mathematics, Amerika Birleşik Devletleri 1997 - 2000
Yüksek Lisans, University of Nebraska-Lincoln, Faculty Of Science And Arts, Mathematics, Amerika Birleşik Devletleri 1994 - 1997
Yüksek Lisans, Marmara Üniversitesi, Fen - Edebiyat Fakültesi, Matematik Bölümü, Türkiye 1990 - 1992
Lisans, İstanbul Üniversitesi, Fen Fakültesi, Matematik Bölümü, Türkiye 1984 - 1988

Yabancı Diller

İngilizce, C1 İleri

Yaptığı Tezler

Doktora, Two Dimensional Models of Tumor Angiogenesis, Iowa State University Of Science And Technology, Faculty Of Science And Arts, Applied Mathematics, 2000
Yüksek Lisans, Yarıklı Tasvirlerin Parametrik Gösterilişi, Marmara Üniversitesi, Fen Edebiyat Fakültesi, Matematik, 1992

Araştırma Alanları

Matematik, Diferansiyel denklemler, Sayısal Analiz, Temel Bilimler

Akademik Unvanlar / Görevler

Prof. Dr., Kocaeli Üniversitesi, Fen Edebiyat Fakültesi, Matematik, 2010 - Devam Ediyor
Doç. Dr., Kocaeli Üniversitesi, Fen Edebiyat Fakültesi, Matematik, 2005 - 2010
Yrd. Doç. Dr., Kocaeli Üniversitesi, Fen Edebiyat Fakültesi, Matematik, 2000 - 2005

Akademik İdari Deneyim

Anabilim/Bilim Dalı Başkanı, Kocaeli Üniversitesi, Fen Edebiyat Fakültesi, Matematik, 2020 - Devam Ediyor
Fakülte Yönetim Kurulu Üyesi, Kocaeli Üniversitesi, Fen Edebiyat Fakültesi, Matematik, 2018 - Devam Ediyor
Fakülte Kurulu Üyesi, Kocaeli Üniversitesi, Fen Edebiyat Fakültesi, Matematik, 2018 - Devam Ediyor
Bölüm Başkanı, Kocaeli Üniversitesi, Fen Edebiyat Fakültesi, Matematik, 2021 - 2024
Bölüm Başkanı, Kocaeli Üniversitesi, Matematik, 2018 - 2021
Kocaeli Üniversitesi, REKTÖRLÜK, 2009 - 2014
Kocaeli Üniversitesi, Fen-Edebiyat Fakültesi, Matematik Bölümü, 2006 - 2009

Verdiği Dersler

Yüksek Lisans
Dinamik Sistemler, Yüksek Lisans, 2023 - 2024
İleri Diferensiyel Denklemler I , Yüksek Lisans, 2023 - 2024
Lisans
Integral Equations, Lisans, 2023 - 2024
Bilim Tarihi, Lisans, 2023 - 2024

Yönetilen Tezler

Pamuk S., Covid-19 Hastalığının Matematiksel Modellemesi ve Sayısal Çözümleri, Yüksek Lisans, S.Saldıroğlu(Öğrenci), 2022
Pamuk S., Bazı İntegral Dönüşümler ve Uygulamaları, Yüksek Lisans, R.Subaşı(Öğrenci), 2022
Pamuk S., Pertürbasyon yöntemiyle diferansiyel denklemlerin çözümü, Yüksek Lisans, M.KELEŞ(Öğrenci), 2019
Pamuk S., BAZI LİNEER OLMAYAN KISMİ DİFERANSİYEL DENKLEMLERİN ÇÖZÜM YÖNTEMLERİ, Yüksek Lisans, G.MAVİTUNA(Öğrenci), 2018
Pamuk S., Tümör Anjiyogenezinde İki Boyutlu Matematiksel Modelin Analizi ve Sayısal Çözümü, Doktora, İ.ÇAY(Öğrenci), 2018
Pamuk S., Diferansiyel denklemler ve matematiksel biyoloji, Yüksek Lisans, B.BAJJAH(Öğrenci), 2016
Pamuk S., Tümör Anjiyogenezinde Bir Boyutlu Matematiksel Modelin Sayısal Çözümleri, Yüksek Lisans, İ.ÇAY(Öğrenci), 2012
Pamuk S., Bir Boyutlu Tümör Modelinin Matematiksel Analizi ve Sayısal Çözümü, Yüksek Lisans, E.ALTUNTAÇ(Öğrenci), 2009
Pamuk S., Matematik Modellerin Zamandan Bağımsız Çözümleri ve Uzun Zaman Davranışları, Yüksek Lisans, A.GÜVEN(Öğrenci), 2004

SCI, SSCI ve AHCI İndekslerine Giren Dergilerde Yayınlanan Makaleler

I. **A NUMERICAL PROOF THAT CERTAIN CELLS FOLLOW the TRAILS of the DIFFUSIONS of SOME CHEMICALS in the EXTRACELLULAR MATRIX**
ÇAY İ., PAMUK S.
Journal of Mechanics in Medicine and Biology, cilt.21, 2021 (SCI-Expanded)

II. **A 2D mathematical model for tumor angiogenesis: The roles of certain cells in the extra cellular matrix**
PAMUK S., ÇAY İ., SAZCI A.
MATHEMATICAL BIOSCIENCES, cilt.306, ss.32-48, 2018 (SCI-Expanded)

III. **Solutions of a Linearized Mathematical Model for Capillary Formation in Tumor Angiogenesis: An Initial Data Perturbation Approximation**
Pamuk S.

COMPUTATIONAL AND MATHEMATICAL METHODS IN MEDICINE, 2013 (SCI-Expanded)

IV. **He's homotopy perturbation method for continuous population models for single and interacting species**
PAMUK S., PAMUK N.
COMPUTERS & MATHEMATICS WITH APPLICATIONS, cilt.59, sa.2, ss.612-621, 2010 (SCI-Expanded)

V. **On the qualitative analysis of the uniqueness of the movement of endothelial cells**
ALTUNTAC E., PAMUK S.
TURKISH JOURNAL OF MATHEMATICS, cilt.34, sa.3, ss.367-375, 2010 (SCI-Expanded)

VI. **A Review of Some Recent Results for the Approximate Analytical Solutions of Nonlinear Differential Equations**
Pamuk S.
MATHEMATICAL PROBLEMS IN ENGINEERING, 2009 (SCI-Expanded)

VII. **The method of lines for the numerical solution of a mathematical model for capillary formation: The role of endothelial cells in the capillary**
Pamuk S., ERDEM A.
APPLIED MATHEMATICS AND COMPUTATION, cilt.186, sa.1, ss.831-835, 2007 (SCI-Expanded)

VIII. **The method of lines for the numerical solution of a mathematical model for capillary formation: The role of tumor angiogenic factor in the extra-cellular matrix**
ERDEM A., Pamuk S.
APPLIED MATHEMATICS AND COMPUTATION, cilt.186, sa.1, ss.891-897, 2007 (SCI-Expanded)

IX. **A mathematical model for capillary formation and development in tumor angiogenesis: A review**
Pamuk S.
CHEMOTHERAPY, cilt.52, sa.1, ss.35-37, 2006 (SCI-Expanded)

X. **Solution of the porous media equation by Adomian's decomposition method**
Pamuk S.
PHYSICS LETTERS A, cilt.344, ss.184-188, 2005 (SCI-Expanded)

XI. **An application for linear and nonlinear heat equations by Adomian's decomposition method**
Pamuk S.
APPLIED MATHEMATICS AND COMPUTATION, cilt.163, sa.1, ss.89-96, 2005 (SCI-Expanded)

XII. **The decomposition method for continuous population models for single and interacting species**
Pamuk S.
APPLIED MATHEMATICS AND COMPUTATION, cilt.163, sa.1, ss.79-88, 2005 (SCI-Expanded)

XIII. **Steady-state analysis of a mathematical model for capillary network formation in the absence of tumor source**
Pamuk S.
MATHEMATICAL BIOSCIENCES, cilt.189, sa.1, ss.21-38, 2004 (SCI-Expanded)

XIV. **Qualitative analysis of a mathematical model for capillary formation in tumor angiogenesis**
Pamuk S.
MATHEMATICAL MODELS & METHODS IN APPLIED SCIENCES, cilt.13, sa.1, ss.19-33, 2003 (SCI-Expanded)

XV. **Mathematical modeling of capillary formation and development in tumor angiogenesis: Penetration into the stroma**
LEVINE H., Pamuk S., SLEEMAN B., NILSEN-HAMILTON M.
BULLETIN OF MATHEMATICAL BIOLOGY, cilt.63, sa.5, ss.801-863, 2001 (SCI-Expanded)

Diğer Dergilerde Yayınlanan Makaleler

I. **Mathematical Analysis and Numerical Solution of a Boundary Value Problem for the Covid-19 SIR Model**
Saldiroğlu S., Pamuk S.
PROOF, cilt.4, ss.11-17, 2024 (Hakemli Dergi)

II. **On the Stability Analysis of the Steady-State Solution of a Tumor Angiogenesis Model**
Pamuk S.
New Trends in Mathematical Sciences, cilt.11, sa.4, ss.37-43, 2023 (Hakemli Dergi)

III. **Decomposition Solution of a Mathematical Model for Capillary Formation**
Pamuk S.
New Trends in Mathematical Sciences, cilt.11, sa.4, ss.44-49, 2023 (Hakemli Dergi)

IV. **A Numerical Comparison of Solutions of Non-Linear Initial Value Problems of First Order**
Pamuk S.
Communication in Mathematical Modeling and Applications, cilt.6, sa.3, ss.1-8, 2021 (Hakemli Dergi)

V. **Antireduction Method for the Exact Solutions of the Porous Media Equation**
Pamuk S.
Communication in Mathematical Modeling and Applications, cilt.6, sa.1, ss.1-8, 2021 (Hakemli Dergi)

VI. **Laplace transform method for logistic growth in a population and predator models**
Pamuk S., Soylu N.
New Trends in Mathematical Sciences, cilt.8, sa.3, ss.9-17, 2020 (Hakemli Dergi)

VII. **Perturbation solutions of a mathematical model for determining the roles of Endothelial, pericyte and macrophage cells in the capillary**
Pamuk S., Keleş M.
New Trends in Mathematical Sciences, cilt.8, sa.1, ss.58-70, 2020 (Hakemli Dergi)

VIII. **Perturbation Solutions of a Mathematical Model in Tumor Angiogenesis**
KELEŞ M., PAMUK S.
Kocaeli Journal of Science and Engineering, cilt.2, sa.2, ss.45-48, 2019 (Hakemli Dergi)

IX. **A mathematical analysis of a 2D model for tumorangiogenesis: An initial data perturbation approximation**
PAMUK S., çay i.
Communication in Mathematical Modeling and Applications, cilt.3, sa.1, ss.13-27, 2018 (Hakemli Dergi)

X. **STABILITY AND HOPF BIFURCATION ANALYSIS OF A MATHEMATICALMODEL IN TUMOR ANGIOGENESIS**
PAMUK S., çay i.
Anadolu University Journal of Science and Technology A- Applied Sciences and Engineering, cilt.19, sa.1, ss.50-57, 2018 (Hakemli Dergi)

XI. **Turing Analysis of a Mathematical Model for Interaction between Tumor Cell and Its Inhibitor**
PAMUK S., ÇAY İ.
Academic Journal of Applied Mathematical Sciences, 2017 (Hakemli Dergi)

XII. **NUMERICAL SOLUTION OF A 2D-DIFFUSION REACTION PROBLEM MODELLING THE DENSITY OF DI-VACANCIES AND VACANCIES IN A METAL**
PAMUK S.
TWMS JOURNAL OF APPLIED AND ENGINEERING MATHEMATICS, cilt.7, sa.1, ss.165-172, 2017 (ESCI)

XIII. **Steady State Analysis of a Two Dimensional Model for Tumor Angiogenesis in the Absence of Endothelial Cell Proliferation**
PAMUK S., BAJJAH b.
academic jornal of applied mathematical sciences, cilt.2, ss.102-108, 2016 (Hakemli Dergi)

XIV. **Self Similar Asymptotics for Linear and Nonlinear Mathematical Models of Tumor Angiogenesis: A Review**
PAMUK S., ÇAY İ.
COMMUNICATIONS FACULTY OF SCIENCES UNIVERSITY OF ANKARA-SERIES A1 MATHEMATICS AND STATISTICS, 2014 (Hakemli Dergi)

XV. **Solution of two-dimensional heat and mass transfer equation with power-law temperature-dependent thermal conductivity**
PAMUK S., PAMUK N.
TWMS J. App. Eng. Math, cilt.4, 2014 (Hakemli Dergi)

XVI. **The method of lines for the numerical solution of a mathematical model in the initiation of angiogenesis**
PAMUK S., çay i.
TWMS J. App. Eng, cilt.3, 2013 (Hakemli Dergi)

XVII. **On the Stability of the Steady-State Solutions of Cell Equations in a Tumor Growth Model**
ÇAY İ., PAMUK S.
AIP Conference Proceedings, 2012 (Hakemli Dergi)

XVIII. **Mathematical Modeling of Tumor Angiogenesis and the Action of Angiostatin as a Protease Inhibitor**
A LEVİNE H., D SLEEMAN B., N HAMİLTON M., PAMUK S.
Journal of Theoretical Medicine, cilt.2, ss.133-145, 2002 (Hakemli Dergi)

Hakemli Bilimsel Toplantılarda Yayımlanmış Bildiriler

I. **PERTURBATION SOLUTIONS OF A MATHEMATICAL MODEL IN TUMOR ANGIOGENESIS**
KELEŞ M., PAMUK S.
2nd INTERNATIONAL CONFERENCE ON MATHEMATICAL ADVANCES AND ITS APPLICATIONS, İstanbul, Türkiye, 3 - 05 Mayıs 2019

II. **A Mathematical Analysis of a Model in Capillary Formation: The Roles of Endothelial, Pericyte and Macrophages in the Initiation of Angiogenesis**
Pamuk S., Çay I.
20th World Academy of Science, Engineering and Technology Conference, Paris, Fransa, 19 - 20 Şubat 2018, cilt.20, ss.1600

III. **A Mathematical Analysis of a 2D Model for Tumor Angiogenesis: An Initial Data Perturbation Approximation**
PAMUK S., ÇAY İ.
International Conference on Applied Analysis and Mathematical Modelling, 3 - 07 Temmuz 2017

IV. **Exact Solutions of Some Non-Linear Partial Differential Equations**
MAVİTUNA g., PAMUK S.
International Conference on Applied Analysis and Mathematical Modelling (ICAAMM 2017), İstanbul, Türkiye, 3 - 07 Temmuz 2017, ss.45

V. **A 2D Mathematical Model for Tumor Angiogenesis: The Roles of Endothelials, Pericytes and Macrophages in the ECM**
Pamuk S., Çay İ., Sazcı A.
BIT's 10th Annual World Cancer Congress-2017, Barcelona, İspanya, 19 - 21 Mayıs 2017

VI. **Stability and Hopf Bifurcation Analysis of a Mathematical Model in Tumor Angiogenesis**
ÇAY İ., PAMUK S.
INTERNATIONAL CONFERENCE ON MATHEMATICS AND ENGINEERING, 10 - 12 Mayıs 2017

VII. **Turing analysis of a mathematical model for interaction between tumor cells and inhibitor**
İrem C., PAMUK S.
International Congress on Fundamental and Applied Sciences, İstanbul, Türkiye, 22 - 26 Ağustos 2016

VIII. **Self Similar Asymptotics for Linear and Nonlinear Mathematical Models of Tumor Angiogenesis: A Review**
PAMUK S., ÇAY İ.
International Conference on Nonlinear Differential and Difference Equations: Recent Developments and Applications, 27 - 30 Mayıs 2014

IX. **On the Stability of the Steady-State Solutions of Cell Equations in a Tumor Growth Model**
Atac I., PAMUK S.
1st International Conference on Analysis and Applied Mathematics (ICAAM), Gümüşhane, Türkiye, 18 - 21 Ekim 2012, cilt.1470, ss.172-175

X. **The Method of Lines for the Numerical Solutions of a Mathematical Model for Capillary Formation**

The Roles of Endothelial Pericytes and Macrophage Cells in the Capillary
PAMUK S., çay i.
5th Annual International Conference on Mathematics, Statistics Mathematical Education, Atina, Yunanistan, 13 - 16 Haziran 2011

XI. **Stability analysis of the steady-state solution of a mathematical model in tumor angiogenesis**
Pamuk S., GURBUZ A.
International Workshop on Global Analysis, Ankara, Türkiye, 15 - 17 Nisan 2004, cilt.729, ss.369-373

Desteklenen Projeler

PAMUK S., TÜBİTAK Projesi, Tümör Anjiyogenezinde İki Boyutlu Matematiksel Modelin Analizi Ve Sayisal Çözümü, 2016 - 2018
Pamuk S., Yükseköğretim Kurumları Destekli Proje, Adomian Ayrıştırma Yöntemi ile Lineer ve Lineer Olmayan Kısmi Türevli Diferensiyel Denklemlerin Çözümü, 2003 - 2005

Bilimsel Dergilerdeki Faaliyetler

Edelweiss Applied Science and Technology, Editör, 2022 - Devam Ediyor

Metrikler

Yayın: 44
Atıf (WoS): 396
Atıf (Scopus): 403
H-İndeks (WoS): 8
H-İndeks (Scopus): 8

Ödüller

Pamuk S., En iyi Sunum Ödülü, World Academy Of Science Engineering And Technology, Fransa, Paris, Şubat 2018

Akademi Dışı Deneyim

Kocaeli Üniversitesi, Arş.Gör.
Marmara Üniversitesi, Arş.Gör.