

Prof. SERDAL PAMUK

Personal Information

Email: spamuk@kocaeli.edu.tr

Address: Kocaeli Üniv. FEF A blok Matematik Böl. Umuttepe, İzmit, Kocaeli, 41380

Education Information

Doctorate, Iowa State University Of Science And Technology, Faculty Of Science And Arts , Applied Mathematics, United States Of America 1997 - 2000

Postgraduate, University of Nebraska-Lincoln, Faculty Of Science And Arts, Mathematics, United States Of America 1994 - 1997

Postgraduate, Marmara University, Faculty Of Arts And Sciences, Mathematics, Turkey 1990 - 1992

Undergraduate, Istanbul University, Faculty Of Science, Department Of Mathematics, Turkey 1984 - 1988

Foreign Languages

English, C1 Advanced

Dissertations

Doctorate, Two Dimensional Models of Tumor Angiogenesis, Iowa State University Of Science And Technology, Faculty Of Science And Arts, Applied Mathematics, 2000

Post Graduate, Yarıklı Tasvirlerin Parametrik Gösterilişi, Marmara Üniversitesi, Fen Edebiyat Fakültesi, Matematik, 1992

Research Areas

Mathematics, Differential Equations, Numerical Analysis, Natural Sciences

Academic Titles / Tasks

Professor, Kocaeli University, Fen Edebiyat Fakültesi, Matematik, 2010 - Continues

Associate Professor, Kocaeli University, Fen Edebiyat Fakültesi, Matematik, 2005 - 2010

Assistant Professor, Kocaeli University, Fen Edebiyat Fakültesi, Matematik, 2000 - 2005

Academic and Administrative Experience

Head of Department, Kocaeli University, Fen Edebiyat Fakültesi, Matematik, 2021 - Continues

Head of Department, Kocaeli University, Fen Edebiyat Fakültesi, Matematik, 2020 - Continues

Fakülte Kurulu Üyesi, Kocaeli University, Fen Edebiyat Fakültesi, Matematik, 2018 - Continues

Fakülte Yönetim Kurulu Üyesi, Kocaeli University, Fen Edebiyat Fakültesi, Matematik, 2018 - Continues

Head of Department, Kocaeli University, Matematik, 2018 - 2021

Kocaeli Üniversitesi, REKTÖRLÜK, 2009 - 2014

Advising Theses

- Pamuk S., Pertürbasyon yöntemiyle diferansiyel denklemlerin çözümü, Post Graduate, M.KELEŞ(Student), 2019
- Pamuk S., BAZI LİNEER OLMAYAN KISMİ DİFERANSİYEL DENKLEMLERİN ÇÖZÜM YÖNTEMLERİ, Post Graduate, G.MAVİTUNA(Student), 2018
- Pamuk S., Tümör Anjiyogenezinde İki Boyutlu Matematiksel Modelin Analizi ve Sayısal Çözümü, Doctorate, İ.ÇAY(Student), 2018
- Pamuk S., Diferansiyel denklemler ve matematiksel biyoloji, Post Graduate, B.BAJJAH(Student), 2016
- Pamuk S., Tümör Anjiyogenezinde Bir Boyutlu Matematiksel Modelin Sayısal Çözümleri, Post Graduate, İ.ÇAY(Student), 2012
- Pamuk S., Bir Boyutlu Tümör Modelinin Matematiksel Analizi ve Sayısal Çözümü, Post Graduate, E.ALTUNTAÇ(Student), 2009
- Pamuk S., Matematik Modellerin Zamandan Bağımsız Çözümleri ve Uzun Zaman Davranışları, Post Graduate, A.GÜVEN(Student), 2004

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

- 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, vol.21, 2021 (Journal Indexed in SCI)
- 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, vol.306, pp.32-48, 2018 (Journal Indexed in SCI)
- 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 (Journal Indexed in SCI)
- IV. **He's homotopy perturbation method for continuous population models for single and interacting species**
PAMUK S., PAMUK N.
COMPUTERS & MATHEMATICS WITH APPLICATIONS, vol.59, no.2, pp.612-621, 2010 (Journal Indexed in SCI)
- V. **On the qualitative analysis of the uniqueness of the movement of endothelial cells**
ALTUNTAC E., PAMUK S.
TURKISH JOURNAL OF MATHEMATICS, vol.34, no.3, pp.367-375, 2010 (Journal Indexed in SCI)
- VI. **A Review of Some Recent Results for the Approximate Analytical Solutions of Nonlinear Differential Equations**
Pamuk S.
MATHEMATICAL PROBLEMS IN ENGINEERING, 2009 (Journal Indexed in SCI)
- 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, vol.186, pp.831-835, 2007 (Journal Indexed in SCI)
- 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, vol.186, pp.891-897, 2007 (Journal Indexed in SCI)
- IX. **A mathematical model for capillary formation and development in tumor angiogenesis: A review**
Pamuk S.
CHEMOTHERAPY, vol.52, pp.35-37, 2006 (Journal Indexed in SCI)
- X. **Solution of the porous media equation by Adomian's decomposition method**
Pamuk S.
PHYSICS LETTERS A, vol.344, pp.184-188, 2005 (Journal Indexed in SCI)
- XI. **An application for linear and nonlinear heat equations by Adomian's decomposition method**
Pamuk S.
APPLIED MATHEMATICS AND COMPUTATION, vol.163, pp.89-96, 2005 (Journal Indexed in SCI)
- XII. **The decomposition method for continuous population models for single and interacting species**
Pamuk S.
APPLIED MATHEMATICS AND COMPUTATION, vol.163, pp.79-88, 2005 (Journal Indexed in SCI)
- XIII. **Steady-state analysis of a mathematical model for capillary network formation in the absence of tumor source**
Pamuk S.
MATHEMATICAL BIOSCIENCES, vol.189, pp.21-38, 2004 (Journal Indexed in SCI)
- XIV. **Qualitative analysis of a mathematical model for capillary formation in tumor angiogenesis**
Pamuk S.
MATHEMATICAL MODELS & METHODS IN APPLIED SCIENCES, vol.13, pp.19-33, 2003 (Journal Indexed in SCI)
- 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, vol.63, pp.801-863, 2001 (Journal Indexed in SCI)

Articles Published in Other Journals

- I. **Antiredution Method for the Exact Solutions of the Porous Media Equation**
Pamuk S.
Communication in Mathematical Modeling and Applications, vol.6, no.1, pp.1-8, 2021 (Refereed Journals of Other Institutions)
- II. **Laplace transform method for logistic growth in a population and predator models**
Pamuk S., Soylu N.
New Trends in Mathematical Sciences, vol.8, no.3, pp.9-17, 2020 (Refereed Journals of Other Institutions)
- III. **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, vol.8, no.1, pp.58-70, 2020 (Refereed Journals of Other Institutions)
- IV. **Perturbation Solutions of a Mathematical Model in Tumor Angiogenesis**
KELEŞ M., PAMUK S.
Kocaeli Journal of Science and Engineering, vol.2, pp.45-48, 2019 (Refereed Journals of Other Institutions)
- V. **A mathematical analysis of a 2D model for tumorangiogenesis: An initial data perturbation approximation**
PAMUK S., çay i.
Communication in Mathematical Modeling and Applications, vol.3, no.1, pp.13-27, 2018 (Refereed Journals of Other Institutions)
- VI. **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, vol.19, no.1, pp.50-57,

2018 (Refereed Journals of Other Institutions)

- VII. **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 (Refereed Journals of Other Institutions)
- VIII. **NUMERICAL SOLUTION OF A 2D-DIFFUSION REACTION PROBLEM MODELLING THE DENSITY OF DIVACANCIES AND VACANCIES IN A METAL**
PAMUK S.
TWMS JOURNAL OF APPLIED AND ENGINEERING MATHEMATICS, vol.7, no.1, pp.165-172, 2017 (Journal Indexed in ESCI)
- IX. **Steady State Analysis of a Two Dimensional Model for Tumor Angiogenesis in the Absence of Endothelial Cell Proliferation**
PAMUK S., BAJJAH b.
academic journal of applied mathematical sciences, vol.2, pp.102-108, 2016 (Refereed Journals of Other Institutions)
- X. **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 (Refereed Journals of Other Institutions)
- XI. **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, vol.4, 2014 (Refereed Journals of Other Institutions)
- XII. **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, vol.3, 2013 (Refereed Journals of Other Institutions)
- XIII. **On the Stability of the Steady-State Solutions of Cell Equations in a Tumor Growth Model**
ÇAY İ., PAMUK S.
AIP Conference Proceedings, 2012 (Refereed Journals of Other Institutions)
- XIV. **Mathematical Modeling of Tumor Angiogenesis and the Action of Angiostatin as a Protease Inhibitor**
A LEVİNE H., D SLEEMAN B., N HAMILTON M., PAMUK S.
Journal of Theoretical Medicine, vol.2, pp.133-145, 2002 (Refereed Journals of Other Institutions)

Refereed Congress / Symposium Publications in Proceedings

- I. **PERTURBATION SOLUTIONS OF A MATHEMATICAL MODEL IN TUMOR ANGIOGENESIS**
KELEŞ M., PAMUK S.
2nd INTERNATIONAL CONFERENCE ON MATHEMATICAL ADVANCES AND ITS APPLICATIONS, İstanbul, Turkey, 3 - 05 May 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, France, 19 - 20 February 2018, vol.20, pp.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 July 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, Turkey, 3 - 07 July 2017, pp.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, Spain, 19 - 21 May 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 May 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, Turkey, 22 - 26 August 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 May 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, Turkey, 18 - 21 October 2012, vol.1470, pp.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, Greece, 13 - 16 June 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, Turkey, 15 - 17 April 2004, vol.729, pp.369-373

Supported Projects

PAMUK S., TUBITAK Project, Tumor Anjiyogenezinde İki Boyutlu Matematiksel Modelin Analizi Ve Sayisal Çözümü, 2016 - 2018

Pamuk S., Project Supported by Higher Education Institutions, Solution Of Linear and Non-Linear Partial Differential Equations By Adomian's Decomposition Method, 2003 - 2005

Citations

Total Citations (WOS):335

h-index (WOS):8

Awards

Pamuk S., Best Presentation Award, World Academy Of Science Engineering And Technology, Fransa, Paris, February 2018