Res. Asst. PhD İREM ÇAY

Personal Information

Email: irem.atac@kocaeli.edu.tr
Web: https://avesis.kocaeli.edu.tr/irem.atac

International Researcher IDs
ORCID: 0000-0001-9234-2523
Yoksis Researcher ID: 168635

Education Information

Doctorate, Kocaeli University, Fen Bilimleri Enstitüsü, Matematik, Turkey 2012 - 2018
Postgraduate, Kocaeli University, Fen Bilimleri Enstitüsü, Matematik Anabilim Dalı, Turkey 2009 - 2012
Undergraduate, Kocaeli University, Fen-Edebiyat Fakültesi, Matematik, Turkey 2005 - 2009

Foreign Languages

English, B2 Upper Intermediate

Academic Titles / Tasks

Research Assistant PhD, Kocaeli University, Fen Edebiyat Fakültesi, Matematik, 2010 - Continues

Courses

Lİneer Cebir, Undergraduate, 2023 - 2024
Sayısal Analiz, Undergraduate, 2022 - 2023
Diferansiyel Denklemler II, Undergraduate, 2022 - 2023
Statistics I, Undergraduate, 2023 - 2024
Öğretmenlik Uygulaması, Undergraduate, 2023 - 2024
Sayısal Yöntemler, Undergraduate, 2023 - 2024, 2022 - 2023
Statistics I, Undergraduate, 2023 - 2024
Lineer Cebir, Undergraduate, 2023 - 2024
İstatistik ve Olasılık, Undergraduate, 2023 - 2024
Matematik, Undergraduate, 2023 - 2024
Mesleki İngilizce IV, Undergraduate, 2022 - 2023
İstatistik, Undergraduate, 2022 - 2023

Published journal articles indexed by SCI, SSCI, and AHCI

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 (SCI-Expanded)

II. **On the local and global stability of an sirs epidemic model with logistic growth and information intervention**
ÇAY İ.
TURKISH JOURNAL OF MATHEMATICS, vol.45, no.4, pp.1668-1677, 2021 (SCI-Expanded)

III. **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 (SCI-Expanded)

Articles Published in Other Journals

I. **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 (Peer-Reviewed Journal)

II. **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 (Peer-Reviewed Journal)

III. **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 (Peer-Reviewed Journal)

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

Refereed Congress / Symposium Publications in Proceedings

I. **Bifurcation Analysis of an Epidemic Model with Logistic Growth and Saturated Treatment**
Çay İ.
6. INTERNATIONAL CONFERENCE ON LIFE AND ENGINEERING SCIENCES, ICOLES 2023, Antalya, Turkey, 02 November 2023, pp.88

II. **Stability of an SIRS Epidemic Model with Saturated Incidence Rate and Saturated Treatment Function**
Çay İ.
4. International Conference on Life and Engineering Sciences, ICOLES 2021, İstanbul, Turkey, 23 September 2021, pp.44

III. **Stability and Hopf Bifurcation Analysis for a Predator-Prey Model**
ÇAY İ.
3. International Conference on Life and Engineering Sciences (ICOLES), 11 - 13 December 2020

IV. **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

V. **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

VI. **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

VII. **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

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

Scientific Refereeing

TURKISH JOURNAL OF MATHEMATICS, Journal Indexed in SCI-E, December 2022

Metrics

Publication: 17
Citation (WoS): 6
Citation (Scopus): 7
H-Index (WoS): 2
H-Index (Scopus): 2

Non Academic Experience

Kocaeli Üniversitesi