

Prof. Dr. Bengisen Pekmen

Kişisel Bilgiler

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Uluslararası Araştırmacı ID'leri

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Yoksis Araştırmacı ID: 18796

Biyografi

Bengisen PEKMEN, Orta Doğu Teknik Üniversitesi (ODTÜ)'den mezun olmuştur. Lisans derecesini, anadal olarak matematik bölümünden, yandal olarak da fizik bölümünden almıştır. Yüksek lisans ve doktorasını, ODTÜ Uygulamalı Matematik Enstitüsü'nün Bilimsel Hesaplama bölümünde tamamlamıştır. Çalışmaları, farklı akışkanlar dinamiği ve ısı transferi problemlerinin sayısal simülasyonu üzerinedir.

Sertifika, Kurs ve Eğitimler

Diğer, Physics, Minor Program, Orta Doğu Teknik Üniversitesi, 2005

Araştırma Alanları

Sayısal Analiz

Akademik Unvanlar / Görevler

Prof. Dr., TED Üniversitesi, Fen Edebiyat Fakültesi, Matematik Bölümü, 2024 - Devam Ediyor

Doç. Dr., TED Üniversitesi, Fen Edebiyat Fakültesi, Matematik Bölümü, 2019 - 2024

Yrd. Doç. Dr., TED Üniversitesi, Fen Edebiyat Fakültesi, Matematik Bölümü, 2017 - 2019

Öğretim Görevlisi, 2014 - 2017

Araştırma Görevlisi, Atılım Üniversitesi, Fen-Edebiyat Fakültesi, Matematik Bölümü, 2009 - 2014

Akademik İdari Deneyim

Head of the Applied Data Science Program, 2021 - 2021

BAP-LAD Commission, 2021 - 2021

Verdiği Dersler

Yüksek Lisans

Sayısal Optimizasyon, Yüksek Lisans, 2021 - 2022, 2020 - 2021, 2019 - 2020

Yüksek Lisans Tezi I, Yüksek Lisans, 2021 - 2022

Teze Hazırlık Semineri, Yüksek Lisans, 2021 - 2022

Bitirme Projesi, Yüksek Lisans, 2021 - 2022

Yüksek Lisans Tezi II, Yüksek Lisans, 2021 - 2022

Lisans

Analiz I, Lisans, 2022 - 2023

Analiz I, Lisans, 2022 - 2023, 2021 - 2022

Sayısal Yöntemler, Lisans, 2023 - 2024, 2021 - 2022

Kısmi Türevli Denklemler, Lisans, 2023 - 2024, 2022 - 2023

Doğrusal Cebir ve Türevsel Denklemler, Lisans, 2023 - 2024, 2022 - 2023, 2020 - 2021, 2019 - 2020, 2017 - 2018

Bitirme Projesi, Lisans, 2023 - 2024, 2022 - 2023

Çok Değişkenli Analiz, Lisans, 2023 - 2024, 2022 - 2023, 2021 - 2022, 2020 - 2021

Diferansiyel Denklemler, Lisans, 2020 - 2021

Lineer Cebir I, Lisans, 2020 - 2021

Tek Değişkenli Analiz, Lisans, 2019 - 2020, 2018 - 2019, 2017 - 2018, 2016 - 2017, 2015 - 2016, 2014 - 2015

Vektör ve Kompleks Analiz, Lisans, 2017 - 2018

Tek Değişkenli Analize Giriş, Lisans, 2017 - 2018

Tek Değişkenli Analiz, Lisans, 2016 - 2017

Çok Değişkenli Analize Giriş, Lisans, 2015 - 2016, 2014 - 2015

Çok Değişkenli Analiz, Lisans, 2015 - 2016

Jüri Üyelikleri

Ocak, 2020

Eylül, 2019

Ağustos, 2019

SCI, SSCI ve AHCI İndekslerine Giren Dergilerde Yayınlanan Makaleler

- I. **Modeling on magnetohydrodynamic Stokes flow using machine learning and curve fitting**
Gürbüz Çaldağ M., Pekmen B.
Neural Computing and Applications, 2025 (SCI-Expanded)
- II. **Magnetotactic bacteria and Fe₃O₄-water in a wavy walled cavity**
Geridönmez B., Oztop H.
International Journal of Numerical Methods for Heat and Fluid Flow, cilt.34, sa.4, ss.1609-1630, 2024 (SCI-Expanded)
- III. **A machine learning approach for entropy due to natural convection flow of a nanofluid under the uniform inclined magnetic field**
Geridönmez B., Oztop H.
Numerical Heat Transfer, Part B: Fundamentals, 2024 (SCI-Expanded)
- IV. **Numerical and machine learning approaches in nanofluid natural convection flow in a wavy cavity**
Geridönmez B., Atilgan M. A.
Engineering Analysis with Boundary Elements, cilt.155, ss.297-306, 2023 (SCI-Expanded)
- V. **Natural convection in a sinusoidally heated cavity filled with ferrofluid in the presence of partial variable magnetic field**
Geridonmez P., Oztop H.
INTERNATIONAL JOURNAL OF NUMERICAL METHODS FOR HEAT & FLUID FLOW, cilt.33, sa.1, ss.411-435, 2023 (SCI-Expanded)

- VI. **Impact of wavy porous layer on mixed convection flow of a hybrid nanofluid in an enclosure under the effect of partial magnetic field**
Hussain S., Qureshi M. A., Geridönmez B.
Numerical Heat Transfer; Part A: Applications, 2023 (SCI-Expanded)
- VII. **Conjugate natural convection flow of a nanofluid with oxytactic bacteria under the effect of a periodic magnetic field**
Pekmen Geridonmez B., Oztop H.
Journal of Magnetism and Magnetic Materials, cilt.564, 2022 (SCI-Expanded)
- VIII. **Entropy Generation Due to Magneto-Convection of a Hybrid Nanofluid in the Presence of a Wavy Conducting Wall**
Geridonmez B., Oztop H. F.
MATHEMATICS, cilt.10, ss.4663, 2022 (SCI-Expanded)
- IX. **Natural convection of hybrid nanofluid flow in the presence of multiple vertical partial magnetic fields in a trapezoidal shaped cavity**
Geridönmez B., Oztop H. F.
EUROPEAN PHYSICAL JOURNAL-SPECIAL TOPICS, cilt.231, sa.13-14, ss.2761-2771, 2022 (SCI-Expanded)
- X. **The effect of inclined periodic magnetic field on natural convection flow of Al₂O₃-Cu/water nanofluid inside right isosceles triangular closed spaces**
Geridönmez B., Oztop H. F.
ENGINEERING ANALYSIS WITH BOUNDARY ELEMENTS, cilt.141, ss.222-234, 2022 (SCI-Expanded)
- XI. **Mixed bioconvection flow of Ag-MgO/water in the presence of oxytactic bacteria and inclined periodic magnetic field**
Hussain S., Geridönmez B.
International Communications in Heat and Mass Transfer, cilt.134, 2022 (SCI-Expanded)
- XII. **Effects of partial magnetic field in a vented square cavity with aiding and opposing of MWCNT-water nanofluid flows**
Geridönmez B., Oztop H. F.
ENGINEERING ANALYSIS WITH BOUNDARY ELEMENTS, cilt.133, ss.84-94, 2021 (SCI-Expanded)
- XIII. **Mixed Convection Heat Transfer in a Lid-Driven Cavity under the Effect of a Partial Magnetic Field**
Geridönmez B., Oztop H. F.
HEAT TRANSFER ENGINEERING, cilt.42, sa.10, ss.875-887, 2021 (SCI-Expanded)
- XIV. **Natural convection in an open ended nanofluid filled cavity with fins in the presence of partial magnetic field and thermal radiation**
Geridönmez B., Oztop H. F.
MATHEMATICAL METHODS IN THE APPLIED SCIENCES, cilt.44, sa.8, ss.6931-6949, 2021 (SCI-Expanded)
- XV. **Impact of fins and inclined magnetic field in double lid-driven cavity with Cu-water nanofluid**
Hussain S., Jamal M., Geridönmez B.
INTERNATIONAL JOURNAL OF THERMAL SCIENCES, cilt.161, 2021 (SCI-Expanded)
- XVI. **Impact of power law fluid and magnetic field on double diffusive mixed convection in staggered porous cavity considering Dufour and Soret effects**
Hussain S., Jamal M., Geridönmez B.
INTERNATIONAL COMMUNICATIONS IN HEAT AND MASS TRANSFER, cilt.121, 2021 (SCI-Expanded)
- XVII. **Effects of inlet velocity profiles of hybrid nanofluid flow on mixed convection through a backward facing step channel under partial magnetic field**
Geridönmez B., Oztop H. F.
CHEMICAL PHYSICS, cilt.540, 2021 (SCI-Expanded)
- XVIII. **MHD natural convection in a cavity in the presence of cross partial magnetic fields and Al₂O₃-water nanofluid**
Geridönmez B., Oztop H. F.
COMPUTERS & MATHEMATICS WITH APPLICATIONS, cilt.80, sa.12, ss.2796-2810, 2020 (SCI-Expanded)
- XIX. **Natural convection in a cavity under partial magnetic field applied from different corners**

- Geridönmez B., Oztop H. F.
INTERNATIONAL COMMUNICATIONS IN HEAT AND MASS TRANSFER, cilt.114, 2020 (SCI-Expanded)
- XX. **A New Regression-Based Approach to Estimate the Shape Parameter of MQ-RBFs in a Free Convection Problem**
Geridönmez B.
JOURNAL OF COMPUTING AND INFORMATION SCIENCE IN ENGINEERING, cilt.20, sa.1, 2020 (SCI-Expanded)
- XXI. **Natural convection in a cavity filled with porous medium under the effect of a partial magnetic field**
Geridönmez B., Oztop H. F.
INTERNATIONAL JOURNAL OF MECHANICAL SCIENCES, cilt.161, 2019 (SCI-Expanded)
- XXII. **Free Convection in a Wavy Walled Cavity With a Magnetic Source Using Radial Basis Functions**
Geridönmez B.
JOURNAL OF HEAT TRANSFER-TRANSACTIONS OF THE ASME, cilt.141, sa.4, 2019 (SCI-Expanded)
- XXIII. **Numerical investigation of ferrofluid convection with Kelvin forces and non-Darcy effects**
Geridönmez B.
AIMS MATHEMATICS, cilt.3, sa.1, ss.195-210, 2018 (SCI-Expanded)
- XXIV. **NUMERICAL INVESTIGATION OF NATURAL CONVECTION IN AN ENCLOSURE WITH A CONDUCTING SOLID BODY**
Geridönmez B.
HEAT TRANSFER RESEARCH, cilt.49, sa.2, ss.157-172, 2018 (SCI-Expanded)
- XXV. **RBF-DQ solution of natural convection under the effect of a magnetic field in a tilted cavity**
Geridönmez B.
Journal of Applied Fluid Mechanics, cilt.10, sa.2, ss.499-507, 2017 (SCI-Expanded)
- XXVI. **RADIAL BASIS FUNCTION PSEUDO-SPECTRAL SOLUTION OF THE NON-DARCY MODEL IN A POROUS MEDIUM**
Geridönmez B.
JOURNAL OF POROUS MEDIA, cilt.20, sa.6, ss.479-490, 2017 (SCI-Expanded)
- XXVII. **RBF simulation of natural convection in a nanofluid-filled cavity**
Geridönmez B.
AIMS MATHEMATICS, cilt.1, sa.3, ss.195-207, 2016 (SCI-Expanded)
- XXVIII. **DRBEM solution of natural convective heat transfer with a non-Darcy model in a porous medium**
Geridönmez B., TEZER M.
JOURNAL OF MATHEMATICAL CHEMISTRY, cilt.53, sa.3, ss.911-924, 2015 (SCI-Expanded)
- XXIX. **DRBEM Solution of MHD flow with magnetic induction and heat transfer**
Geridönmez B., TEZER M.
CMES - Computer Modeling in Engineering and Sciences, cilt.105, sa.3, ss.183-207, 2015 (SCI-Expanded)
- XXX. **Numerical solution of buoyancy MHD flow with magnetic potential**
Geridönmez B., TEZER M.
INTERNATIONAL JOURNAL OF HEAT AND MASS TRANSFER, cilt.71, ss.172-182, 2014 (SCI-Expanded)
- XXXI. **MHD flow and heat transfer in a lid-driven porous enclosure**
Geridönmez B., TEZER M.
COMPUTERS & FLUIDS, cilt.89, ss.191-199, 2014 (SCI-Expanded)
- XXXII. **Drbem solution of incompressible mhd flow with magnetic potential**
Geridönmez B., TEZER M.
CMES - Computer Modeling in Engineering and Sciences, cilt.96, sa.4, ss.275-292, 2013 (SCI-Expanded)
- XXXIII. **DRBEM solution of free convection in porous enclosures under the effect of a magnetic field**
Geridönmez B., TEZER M.
INTERNATIONAL JOURNAL OF HEAT AND MASS TRANSFER, cilt.56, sa.1-2, ss.454-468, 2013 (SCI-Expanded)
- XXXIV. **Differential Quadrature Solution of Hyperbolic Telegraph Equation**
Geridönmez B., TEZER M.
JOURNAL OF APPLIED MATHEMATICS, cilt.2012, 2012 (SCI-Expanded)
- XXXV. **Differential quadrature solution of nonlinear Klein-Gordon and sine-Gordon equations**

Geridönmez B., TEZER M.

COMPUTER PHYSICS COMMUNICATIONS, cilt.183, sa.8, ss.1702-1713, 2012 (SCI-Expanded)

Diğer Dergilerde Yayınlanan Makaleler

- I. **A machine learning investigation on MHD duct flow**
Gürbüz Çaldağ M., Pekmen B.
International Journal of Dynamics and Control, cilt.13, sa.2, 2025 (Scopus)
- II. **Modeling of Average Nusselt Number by Machine Learning and Interpolation Techniques**
Geridönmez B.
ASME Journal of Heat and Mass Transfer, cilt.146, sa.4, 2024 (Scopus)
- III. **Numerical and statistical approach on chemotaxis-haptotaxis model for cancer cell invasion of tissue**
Pekmen B., Yirmili U.
Mathematical Modelling and Control, cilt.4, sa.2, ss.195-207, 2024 (Scopus)
- IV. **Magnetic source effect on EG-CuO nanofluid in a semi-annulus using RBFs**
Geridönmez B.
INTERNATIONAL JOURNAL FOR COMPUTATIONAL METHODS IN ENGINEERING SCIENCE & MECHANICS, cilt.20, sa.3, ss.201-211, 2019 (ESCI)
- V. **NUMERICAL SIMULATION OF NATURAL CONVECTION IN A POROUS CAVITY FILLED WITH FERROFLUID IN PRESENCE OF MAGNETIC SOURCE**
Geridönmez B.
JOURNAL OF THERMAL ENGINEERING, cilt.4, sa.2, ss.1756-1769, 2018 (ESCI)
- VI. **Steady mixed convection in a heated lid-driven square cavity filled with a fluid-saturated porous medium**
Geridönmez B., TEZER M.
Lecture Notes in Computational Science and Engineering, cilt.103, ss.689-697, 2015 (Scopus)
- VII. **Steady mixed convection in a heated lid-driven square cavity filled with a fluid-saturated porous medium**
Geridönmez B., TEZER M.
Lecture Notes in Computational Science and Engineering, cilt.103, ss.689-697, 2015 (Scopus)

Hakemli Bilimsel Toplantılarda Yayımlanmış Bildiriler

- I. **Machine Learning Modeling for Shape Parameter c in MQ-RBF Applied to Burgers' Equations**
Pekmen B., Kayabasi M.
International Conference on Intelligent and Fuzzy Systems, INFUS 2024, Çanakkale, Türkiye, 16 - 18 Temmuz 2024, cilt.1088 LNNS, ss.294-301
- II. **Natural Convection Flow in an Inclined Wavy Porous Medium in the Presence of an Inclined Periodic Magnetic Field**
Hussain S., Pekmen B.
12th International Conference on Mathematical Modeling in Physical Sciences, ICMSQUARE 2023, Belgrade, Sirbistan, 28 - 31 Ağustos 2023, cilt.446, ss.377-388
- III. **RBF-FD Solution of Natural Convection Flow of a Nanofluid in a Right Isosceles Triangle Under the Effect of Inclined Periodic Magnetic Field**
Geridönmez B.
International Conference on Mathematics and its Applications in Science and Engineering, ICMASE 2022, Salamanca, İspanya, 4 - 07 Temmuz 2022, ss.13-21
- IV. **Machine learning approach to the temperature gradient in the case of discontinuous temperature boundary conditions in a triangular cavity**

Geridönmez B.

2nd International Workshop on Mathematical Modeling and Scientific Computing: Focus on Complex Processes and Systems, MMSC 2022, Virtual, Online, 4 - 07 Ekim 2022, cilt.2514

V. Statistical treatment to temperature gradient in case of discontinuous temperature boundary conditions in a triangular cavity

Geridönmez B.

Workshop on Mathematical Modeling and Scientific Computing (dedicated to the memory of Nikolai Botkin) October 4-7, 2022, Munich, Munich, Almanya, 4 - 07 Ekim 2022, ss.13-14

VI. Rbf-Pum solution of magnetoconvection in a triangular cavity exposed to a uniform magnetic field

Geridönmez B.

International Conference on Applied Analysis and Mathematical Modeling-Abstracts and Proceeding Book (ICAAMM22), İstanbul, Türkiye, 1 - 03 Temmuz 2022, ss.78-83

VII. Different Time Schemes with Differential Quadrature Method in Convection-Diffusion-Reaction Equations

Geridönmez B.

2nd International Conference on Mathematics and its Applications in Science and Engineering, ICMASE 2021, Salamanca, İspanya, 1 - 02 Temmuz 2021, cilt.384, ss.103-111

VIII. A new regression based approach to solve a heat transfer problem

Geridönmez B.

Hırvatistan

IX. DRBEM Solution of Natural Convection in an Enclosure with a Conducting Solid Body

Geridönmez B.

International Conference on Numerical Analysis and Applied Mathematics (ICNAAM), Rhodes, Yunanistan, 23 - 29 Eylül 2015, cilt.1738

Bilimsel Yayınlarda Hakemlikler

NUMERICAL HEAT TRANSFER; PART A: APPLICATIONS, SCI-E Kapsamındaki Dergi, Aralık 2022

SN APPLIED SCIENCES, ESCI Kapsamındaki Dergi, Kasım 2022

INTERNATIONAL JOURNAL OF MECHANICAL SCIENCES, SCI-E Kapsamındaki Dergi, Temmuz 2022

INTERNATIONAL JOURNAL OF MECHANICAL SCIENCES, SCI-E Kapsamındaki Dergi, Ocak 2022

THERMAL SCIENCE, Eylül 2021

KOREAN JOURNAL OF CHEMICAL ENGINEERING, Ağustos 2021

JOURNAL OF THERMAL SCIENCE AND ENGINEERING APPLICATIONS, Ağustos 2021

INTERNATIONAL JOURNAL OF MECHANICAL SCIENCES, Şubat 2021

JOURNAL OF THERMAL SCIENCE AND ENGINEERING APPLICATIONS, Aralık 2020

Zeitschrift fur Naturforschung - Section A Journal of Physical Sciences, Aralık 2020

INTERNATIONAL JOURNAL OF MECHANICAL SCIENCES, Temmuz 2020

AEJ - ALEXANDRIA ENGINEERING JOURNAL, Temmuz 2020

AEJ - ALEXANDRIA ENGINEERING JOURNAL, Temmuz 2020

JOURNAL OF THERMAL SCIENCE AND ENGINEERING APPLICATIONS, Haziran 2020

INTERNATIONAL JOURNAL OF MECHANICAL SCIENCES, Mayıs 2020

INTERNATIONAL JOURNAL OF MECHANICAL SCIENCES, Nisan 2020

INTERNATIONAL JOURNAL OF MECHANICAL SCIENCES, Mart 2020

JOURNAL OF THERMAL SCIENCE AND ENGINEERING APPLICATIONS, Ocak 2020

Journal of Thermal Analysis and Calorimetry, Ocak 2020

Journal of Thermal Engineering, Ocak 2020

INTERNATIONAL JOURNAL OF MECHANICAL SCIENCES, Kasım 2019

Journal of Thermal Engineering, Ekim 2019

AEJ - ALEXANDRIA ENGINEERING JOURNAL, Eylül 2019

INTERNATIONAL JOURNAL OF MECHANICAL SCIENCES, Ağustos 2019

INTERNATIONAL COMMUNICATIONS IN HEAT AND MASS TRANSFER, Haziran 2019

Journal of Thermal Engineering, Şubat 2019

INTERNATIONAL JOURNAL OF MECHANICAL SCIENCES, Şubat 2019

Metrikler

Yayın: 56

Atıf (WoS): 250

Atıf (Scopus): 493

H-İndeks (WoS): 10

H-İndeks (Scopus): 14