

Dr. Öğr. Üyesi Merve Gürbüz Çaldağ

Kişisel Bilgiler

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Publons / Web Of Science ResearcherID: HLG-7277-2023

Yoksis Araştırmacı ID: 283206

Eğitim Bilgileri

Bütünleşik Doktora, Orta Doğu Teknik Üniversitesi, Fen Bilimleri Enstitüsü, Fen Bilimleri Enstitüsü, Türkiye 2012 - 2017

Lisans, Orta Doğu Teknik Üniversitesi, Fen Edebiyat Fakültesi, Matematik Bölümü, Türkiye 2007 - 2012

Araştırma Alanları

Matematik, Sayısal Analiz

Akademik Unvanlar / Görevler

Dr. Öğr. Üyesi, TED Üniversitesi, Fen Edebiyat Fakültesi, Matematik Bölümü, 2022 - Devam Ediyor

Dr. Öğr. Üyesi, Başkent Üniversitesi, İktisadi ve İdari Bilimler Fakültesi, İşletme bölümü, 2018 - 2023

Akademik İdari Deneyim

Bölüm Başkan Yardımcısı, Başkent Üniversitesi, İktisadi ve İdari Bilimler Fakültesi, İşletme bölümü, 2020 - 2022

Verdiği Dersler

Lisans

İleri Analiz II, Lisans, 2022 - 2023

Olasılık Teorisine Giriş, Lisans, 2022 - 2023

İleri Analiz II, Lisans, 2023 - 2024, 2022 - 2023

Diferansiyel Denklemler, Lisans, 2023 - 2024, 2021 - 2022

Lineer Cebir I, Lisans, 2022 - 2023

SCI, SSCI ve AHCI İndekslerine Giren Dergilerde Yayınlanan Makaleler

1. **Modeling on magnetohydrodynamic Stokes flow using machine learning and curve fitting**
Gürbüz Çaldağ M., Pekmen B.

Neural Computing and Applications, 2025 (SCI-Expanded)

- II. **Solution of MHD-stokes flow in an L-shaped cavity with a local RBF-supported finite difference**
Çelik E., Gürbüz Çaldağ M.
Engineering Analysis with Boundary Elements, cilt.158, ss.356-363, 2024 (SCI-Expanded)
- III. **Streamline analysis of MHD flow in a double lid-driven cavity**
ÇELİK E., Gürbüz Çaldağ M.
Proceedings of the Institution of Mechanical Engineers, Part C: Journal of Mechanical Engineering Science, cilt.238, sa.1, ss.64-74, 2024 (SCI-Expanded)
- IV. **Stokes flow in lid-driven cavity under inclined magnetic field**
Gurbuz-Caldag M., Celik E.
ARCHIVES OF MECHANICS, cilt.74, sa.6, ss.549-564, 2022 (SCI-Expanded)
- V. **NUMERICAL STABILITY OF RBF APPROXIMATION FOR UNSTEADY MHD FLOW EQUATIONS**
Gurbuz M., Tezer-Sezgin M.
APPLIED AND COMPUTATIONAL MATHEMATICS, cilt.18, sa.2, ss.123-134, 2019 (SCI-Expanded)
- VI. **MHD Stokes flow and heat transfer in a lid-driven square cavity under horizontal magnetic field**
Gürbüz M., TEZER M.
Mathematical Methods in the Applied Sciences, cilt.41, sa.6, ss.2350-2359, 2018 (SCI-Expanded)
- VII. **MHD convection flow in a constricted channel**
TEZER M., Gürbüz M.
Analele Stiintifice ale Universitatii Ovidius Constanta, Seria Matematica, cilt.26, sa.2, ss.267-283, 2018 (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. **The Impact of Inclined Magnetic Field on Streamlines in a Constricted Lid-Driven Cavity**
Çaldağ M., Çelik E.
SAKARYA UNIVERSITY JOURNAL OF SCIENCE, cilt.28, sa.1, ss.108-116, 2024 (Hakemli Dergi)
- III. **RBF SOLUTION OF MHD STOKES FLOW AND MHD FLOW IN A CONSTRICTED ENCLOSURE**
GÜRBÜZ M., TEZER M.
Turkish World Mathematical Society Journal of Applied and Engineering Mathematics, cilt.11, sa.1, ss.203-215, 2021 (Scopus)
- IV. **Numerical Solution of MHD Incompressible Convection Flow in Channels**
GÜRBÜZ M., TEZER M.
European Journal of Computational Mechanics, cilt.28, sa.5, ss.411-432, 2019 (Scopus)
- V. **Numerical solution and stability analysis of transient MHD duct flow**
TEZER M., GÜRBÜZ M.
Balıkesir Üniversitesi Fen Bilimleri Enstitüsü Dergisi, cilt.20, sa.3, ss.53-61, 2018 (Hakemli Dergi)
- VI. **MHD Stokes flow in lid-driven cavity and backward-facing step channel**
GÜRBÜZ M., TEZER M.
European Journal of Computational Mechanics, cilt.24, sa.6, ss.279-301, 2015 (ESCI)

Kitaplar

- I. **Biological and Medical Models and Applications / Solution of MHD Flow with BEM Using Direct Radial Basis Function Interpolation**
GÜRBÜZ M., TEZER M.

Hakemli Bilimsel Toplantılarda Yayımlanmış Bildiriler

- I. **A Machine Learning Approach of MHD Stokes Flow in a Lid-Driven Cavity**
Gürbüz Çaldağ M., Pekmen B.
10th International Conference on Control, Decision and Information Technologies CoDIT 2024, Valletta, Malta, 1 - 04 Temmuz 2024, ss.1-4
- II. **RBF Approximation of Fe₃O₄-Water Nanofluid containing Magnetotactic Bacteria**
Gürbüz Çaldağ M., Pekmen B.
The Third International Conference on Applied Mathematics in Engineering ICAME'24, Balıkesir, Türkiye, 26 - 28 Haziran 2024, ss.58
- III. **RBF Solution of MHD Flow and Heat Transfer with Hall and Viscosity Parameters**
GÜRBÜZ ÇALDAĞ M.
6th International Conferences on Science and Technology Natural Science and Technology ICONST-NST 2023, Budva, Karadağ, 30 Ağustos - 01 Eylül 2023, ss.8
- IV. **RBF SOLUTIONS OF STEADY FLOW IN A DOUBLE LID-DRIVEN CAVITY EXPOSED TO MAGNETIC FIELD**
ÇELİK E., GÜRBÜZ ÇALDAĞ M.
10th International Congress on Fundamental and Applied Sciences, İstanbul, Türkiye, 6 - 08 Haziran 2023
- V. **MHD Flow in a Constricted Lid-driven Cavity**
GÜRBÜZ ÇALDAĞ M., ÇELİK E.
5th International E-Conference on Mathematical Advances and Applications ICOMAA 2022, İstanbul, Türkiye, 11 Mayıs 2022, ss.131
- VI. **IMPACTS OF INCLINED MAGNETIC FIELD ON STOKES FLOW**
GÜRBÜZ ÇALDAĞ M., ÇELİK E.
8th International Congress on Fundamental and Applied Sciences 2021 (ICFAS2021), Antalya, Türkiye, 19 Ekim 2021, ss.1143
- VII. **RBF Solution of MHD FLOW in a Square Duct**
GÜRBÜZ M.
International Conference on Applied Mathematics in Engineering ICAME'21, Balıkesir, Türkiye, 01 Eylül 2021, ss.33
- VIII. **RBF Solution of the Natural Convection Flow of Micropolar Fluids**
GÜRBÜZ M., TEZER M.
International Conference on Boundary Element and Meshless Techniques BeTeq 2019, 22 - 24 Temmuz 2019
- IX. **RBF Solution of MHD Convection Flow in a Lid-driven Cavity with an Obstacle**
GÜRBÜZ M., TEZER M.
Numerical Analysis and Computational Fluid Dynamics: Workshop in Honor of Münevver Tezer-Sezgin'xxs 67th Birthday, Ankara, Türkiye, 19 - 20 Nisan 2019
- X. **Stability Analysis of Time Dependent MHD Flow Equations in a Rectangular Duct**
GÜRBÜZ M., TEZER M.
BEYOND: Workshop on Computational Science and Engineering, Ankara, Türkiye, 20 - 21 Ekim 2018
- XI. **Stability of Unsteady MHD Flow in a Rectangular Duct**
TEZER M., GÜRBÜZ M.
International Conference on Applied Mathematics in Engineering ICAME 2018, Balıkesir, Türkiye, 27 - 29 Haziran 2018, ss.35
- XII. **Numerical Modelling of MHD Convection Flow in Cavities**
GÜRBÜZ M., TEZER M.
International Conference on Applied Mathematics in Engineering ICAME 2018, Balıkesir, Türkiye, 27 - 29 Haziran 2018, ss.34
- XIII. **Solution of MHD Flow with BEM Using Direct Radial Basis Function Interpolation**

GÜRBÜZ M., TEZER M.

20th European Conference on Mathematics for Industry ECMI 2018, Budapest, Macaristan, 18 - 22 Haziran 2018, ss.370

XIV. Numerical Stability of RBF Approximation for Unsteady MHD Flow Equations

GÜRBÜZ M., TEZER M.

International Conference on Applied Analysis and Mathematical Modeling ICAAMM 2017, İstanbul, Türkiye, 3 - 07 Temmuz 2017, ss.135

XV. Numerical stability of RBF solution for unsteady full MHD flow equations

GÜRBÜZ M., TEZER M.

International Workshop on Mathematical Methods in Engineering MME 2017, Ankara, Türkiye, 27 - 29 Nisan 2017, ss.77

XVI. MHD Convection Flow in a Constricted Channel

TEZER M., GÜRBÜZ M.

Eleventh Workshop On Mathematical Modelling of Environmental and Life Sciences Problems MMELSP 2016, Köstence, Romanya, 12 - 16 Ekim 2016, ss.28-29

XVII. RBF solution of incompressible MHD convection flow in a pipe

GÜRBÜZ M., TEZER M.

Eleventh Workshop On Mathematical Modelling of Environmental and Life Sciences Problems MMELSP 2016, Köstence, Romanya, 12 - 16 Ekim 2016, ss.16

XVIII. MHD Stokes flow in a smoothly constricted rectangular enclosure

GÜRBÜZ M., TEZER M.

International Conference on Boundary Element and Meshless Techniques BETEQ 2016, Ankara, Türkiye, 11 - 13 Temmuz 2016, ss.73-78

XIX. Natural convection MHD Stokes flow in a square cavity

GÜRBÜZ M., TEZER M.

the 16th International Conference on Computational and Mathematical Methods in Science and Engineering CMMSE 2016, Cadiz, İspanya, 4 - 09 Temmuz 2016, ss.615-623

XX. RBF solution of convective heat transfer MHD flow

GÜRBÜZ M.

III. Kadın Matematikçiler Derneği Çalıştayı, İzmir, Türkiye, 27 - 29 Mayıs 2016, ss.39

XXI. Lid-driven cavity and backward-facing step Stokes flow under an applied magnetic field

GÜRBÜZ M., TEZER M.

Tenth UK Conference On Boundary Integral Methods UKBIM 2015, Brighton, İngiltere, 13 - 14 Temmuz 2015, ss.66-75

XXII. Two-dimensional Stokes flow of an electrically conducting fluid in a channel under uniform magnetic field

GÜRBÜZ M., TEZER M.

International Conference on Boundary Element and Meshless Techniques BETEQ 2015, Valencia, İspanya, 6 - 08 Temmuz 2015, ss.126-131