

Prof. Dr. CANAN BOZKAYA

Kişisel Bilgiler

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Eğitim Bilgileri

Bütünleşik Doktora, Orta Doğu Teknik Üniversitesi, Fen Bilimleri Enstitüsü, Matematik (Dr), Türkiye 2003 - 2008

Lisans, Orta Doğu Teknik Üniversitesi, Fen Edebiyat Fakültesi, Matematik Bölümü, Türkiye 1998 - 2002

Yabancı Diller

İngilizce, C1 İleri

Araştırma Alanları

Matematik, Sayısal Analiz, Temel Bilimler

Akademik Unvanlar / Görevler

Prof. Dr., Orta Doğu Teknik Üniversitesi, Fen Edebiyat Fakültesi, Matematik Bölümü, 2019 - Devam Ediyor

Doç. Dr., Orta Doğu Teknik Üniversitesi, Fen Edebiyat Fakültesi, Matematik Bölümü, 2015 - 2019

Yrd. Doç. Dr., Orta Doğu Teknik Üniversitesi, Fen Edebiyat Fakültesi, Matematik Bölümü, 2011 - 2015

Araştırma Görevlisi, Orta Doğu Teknik Üniversitesi, Fen Edebiyat Fakültesi, Matematik Bölümü, 2002 - 2008

Akademik İdari Deneyim

Bölüm Başkan Yardımcısı, Orta Doğu Teknik Üniversitesi, Fen Edebiyat Fakültesi, Matematik Bölümü, 2014 - 2024

Yönetilen Tezler

Bozkaya C., A new finite difference approach for MHD flow, Yüksek Lisans, G.ÖĞÜTCÜ(Öğrenci), 2023

Bozkaya C., Türk Ö., Finite Difference Approximations of Various Steklov Eigenvalue Problems, Yüksek Lisans,

M.ÖZALP(Öğrenci), 2022

Bozkaya C., Tezer M., BEM solution of unsteady convection-diffusion type fluid flow problems, Doktora, H.FENDOĞLU(Öğrenci), 2020

BOZKAYA C., A numerical approach for the solutions of fluid dynamics problems in the presence of magnetic field, Doktora, F.SİDRE(Öğrenci), 2018

SCI, SSCI ve AHCI İndekslerine Giren Dergilerde Yayınlanan Makaleler

- I. **MHD forced convection flow in an infinite channel with a rotating cylinder**
Oğlakkaya F., Bozkaya C.
ENGINEERING ANALYSIS WITH BOUNDARY ELEMENTS, cilt.156, ss.189-198, 2023 (SCI-Expanded)
- II. **Chebyshev spectral collocation method for MHD duct flow under slip condition**
BOZKAYA C., TÜRK Ö.
PROGRESS IN COMPUTATIONAL FLUID DYNAMICS, cilt.22, sa.2, ss.118-129, 2022 (SCI-Expanded)
- III. **Semi-analytical solution of MHD flow through boundary integrals on the pipe wall**
Tezer-Sezgin M., Bozkaya C.
MATHEMATICAL METHODS IN THE APPLIED SCIENCES, cilt.42, sa.7, ss.2404-2416, 2019 (SCI-Expanded)
- IV. **MHD flow in a rectangular duct with a perturbed boundary**
Fendoglu H., Bozkaya C., Tezer-Sezgin M.
COMPUTERS & MATHEMATICS WITH APPLICATIONS, cilt.77, sa.2, ss.374-388, 2019 (SCI-Expanded)
- V. **Unsteady MHD mixed convection flow in a lid-driven cavity with a heated wavy wall**
OGLAKKAYA F. S., BOZKAYA C.
INTERNATIONAL JOURNAL OF MECHANICAL SCIENCES, cilt.148, ss.231-245, 2018 (SCI-Expanded)
- VI. **MHD natural convection in a semi-annulus enclosure filled with water-based nanofluid using DRBEM**
Oglakkaya F. S., Bozkaya C.
ENGINEERING ANALYSIS WITH BOUNDARY ELEMENTS, cilt.71, ss.151-163, 2016 (SCI-Expanded)
- VII. **Streamwise oscillations of a cylinder beneath a free surface: Free surface effects on fluid forces**
Kocabiyik S., BOZKAYA C.
JOURNAL OF FLUIDS AND STRUCTURES, cilt.59, ss.394-405, 2015 (SCI-Expanded)
- VIII. **Free surface flow simulation with application to bluff body flow control**
Kocabiyik S., BOZKAYA C.
EUROPEAN PHYSICAL JOURNAL-SPECIAL TOPICS, cilt.224, sa.2, ss.341-354, 2015 (SCI-Expanded)
- IX. **A FEM approach to biomagnetic fluid flow in multiple stenosed channels**
Turk Ö., Bozkaya C., Tezer M.
COMPUTERS & FLUIDS, cilt.97, ss.40-51, 2014 (SCI-Expanded)
- X. **Finite element study of biomagnetic fluid flow in a symmetrically stenosed channel**
Turk Ö., Tezer M., Bozkaya C.
JOURNAL OF COMPUTATIONAL AND APPLIED MATHEMATICS, cilt.259, ss.760-770, 2014 (SCI-Expanded)
- XI. **Free surface wave interaction with an oscillating cylinder**
BOZKAYA C., Kocabiyik S.
APPLIED MATHEMATICS LETTERS, cilt.27, ss.79-84, 2014 (SCI-Expanded)
- XII. **BEM and FEM based numerical simulations for biomagnetic fluid flow**
Tezer M., Bozkaya C., Turk Ö.
ENGINEERING ANALYSIS WITH BOUNDARY ELEMENTS, cilt.37, sa.9, ss.1127-1135, 2013 (SCI-Expanded)
- XIII. **A direct BEM solution to MHD flow in electrodynamically coupled rectangular channels**
BOZKAYA C., TEZER M.
COMPUTERS & FLUIDS, cilt.66, ss.177-182, 2012 (SCI-Expanded)
- XIV. **Streamwise oscillations of a cylinder beneath a free surface: Free surface effects on vortex formation modes**
Bozkaya C., Kocabiyik S., Mironova L. A., Gubanov O. I.
JOURNAL OF COMPUTATIONAL AND APPLIED MATHEMATICS, cilt.235, sa.16, ss.4780-4795, 2011 (SCI-Expanded)

- XV. **A coupled numerical scheme of dual reciprocity BEM with DQM for the transient elastodynamic problems**
Bozkaya C.
INTERNATIONAL JOURNAL FOR NUMERICAL METHODS IN ENGINEERING, cilt.76, sa.7, ss.1108-1122, 2008 (SCI-Expanded)
- XVI. **Boundary element method solution of magnetohydrodynamic flow in a rectangular duct with conducting walls parallel to applied magnetic field**
Tezer-Sezgin M., BOZKAYA C.
COMPUTATIONAL MECHANICS, cilt.41, sa.6, ss.769-775, 2008 (SCI-Expanded)
- XVII. **Fundamental solution for coupled magnetohydrodynamic flow equations**
Bozkaya C., Tezer-Sezgin M.
JOURNAL OF COMPUTATIONAL AND APPLIED MATHEMATICS, cilt.203, sa.1, ss.125-144, 2007 (SCI-Expanded)

Kitap & Kitap Bölümleri

- I. **Boundary Element Method for Magnetohydrodynamic Flow**
Tezer M., Bozkaya C.
Springer Nature Switzerland Ag, Zürich, 2024
- II. **Numerical Analysis**
Tezer M., Bozkaya C.
ODTÜ Basım İşliđi, Ankara, 2018
- III. **DRBEM solution of MHD flow and electric potential in arectangular pipe with a moving Lid**
TEZER M., BOZKAYA C.
Lecture Notes in Computational Science and Engineering Numerical Mathematics and Advanced Applications ENUMATH 2015, Bülent Karasözen, Murat Manguoglu, Münevver Tezer-Sezgin, Serdar Göktepe, Ömür Ugur, Editör, Springer, ss.3-11, 2016
- IV. **DRBEM Solution of the Double Diffusive Convective Flow**
BOZKAYA C., TEZER M.
Numerical Mathematics and Advanced Applications, Bülent Karasözen, Murat Manguođlu, Münevver Tezer, Serdar Göktepe, Ömür Uđur, Editör, Springer, ss.13-21, 2016
- V. **DRBEM Solution of MHD Flow and Electric Potential in a Rectangular Pipe with a Moving Lid**
TEZER M., BOZKAYA C.
Numerical Mathematics and Advanced Applications ENUMATH 2015, Bülent Karasözen, Murat Manguođlu, Münevver Tezer, Serdar Göktepe, Ömür Uđur, Editör, Springer, ss.3-11, 2016
- VI. **DRBEM solution of the double diffusive convective flow**
BOZKAYA C., TEZER M.
Lecture Notes in Computational Science and Engineering Numerical Mathematics and Advanced Applications ENUMATH 2015, Bülent Karasözen, Murat Manguoglu, Münevver Tezer-Sezgin, Serdar Göktepe, Ömür Ugur, Editör, Springer, ss.13-21, 2016

Hakemli Kongre / Sempozyum Bildiri Kitaplarında Yer Alan Yayınlar

- I. **Approximation of Steklov Eigenvalue Problems by Finite Difference Methods**
Özalp M., Bozkaya C., Türk Ö.
11th INTERNATIONAL EURASIAN CONFERENCE ON MATHEMATICAL SCIENCES AND APPLICATIONS, İstanbul, Türkiye, 29 Ağustos - 01 Eylül 2022, ss.128
- II. **A Comparison of Boundary Element and Spectral Collocation Approaches to the Thermally Coupled MHD Problem**
Bozkaya C., Türk Ö.

Numerical Mathematics and Advanced Applications ENUMATH 2019, Eindhoven, Hollanda, 30 Eylül - 04 Ekim 2019, ss.185-194

- III. **DRBEM solution of the MHD forced convection in a channel with sinusoidal walls**
OĞLAKKAYA F. S., BOZKAYA C.
International Conference on Boundary Element Techniques-BETEQ2019, Palermo, İtalya, 22 - 24 Temmuz 2019, ss.186-191
- IV. **A BEM approach for convection-diffusion type equations with variable coefficients**
Fendoğlu H., BOZKAYA C., TEZER M.
International Conference on Boundary Element Techniques-BETEQ2019, Palermo, İtalya, 22 - 24 Temmuz 2019, ss.39-45
- V. **MHD natural convection flow in a porous cavity**
Bozkaya C.
International Conference on Pure and Applied Mathematics ICPAM-VAN 2018, Van, Türkiye, 11 - 13 Eylül 2018
- VI. **MHD Natural Convection Ferrofluid Flow in Semi-Annulus Enclosures**
Sidre Oğlakkaya F., Bozkaya C.
7th International Conference on Mathematical Modeling in Physical Sciences, IC-MSQUARE 2018, Moscow, Rusya, 27 - 31 Ağustos 2018, cilt.1141
- VII. **MHD mixed convection flow in a lid-driven cavity involving a solid body**
Bozkaya C.
International Congress of Mathematicians-ICM 2018, Rio-De-Janeiro, Brezilya, 1 - 09 Ağustos 2018
- VIII. **MHD flow in a rectangular duct with a perturbed boundary**
Fendoğlu H., Bozkaya C., Tezer M.
Symposium of the International Association for Boundary Element Methods- IABEM 2018, Paris, Fransa, 26 - 28 Haziran 2018, ss.44
- IX. **Magnetohydrodynamic Flow in a Rectangular Duct**
BOZKAYA C.
International conference on Applied Mathematics, Modeling and Computational Science, AMMCS 2017, Waterloo, Kanada, 20 - 25 Ağustos 2017, cilt.259, ss.171-181
- X. **Free convection inside a porous enclosure**
BOZKAYA C.
4 th International Conference on Recent Advances in Pure and Applied Mathematics-ICRAPAM 2017, Aydın, Türkiye, 11 - 15 Mayıs 2017, ss.57
- XI. **Magnetohydrodynamic convection of Cu water nanofluid in a square cavity with a circular cylinder**
BOZKAYA C.
The 2016 International Conference on Mathematical Models and Methods in Applied Sciences-MMMAS 2016, 5 - 07 Kasım 2016
- XII. **DRBEM solution to ferrofluid flow and heat transfer in semi annulus enclosure in the presence of magnetic field**
OĞLAKKAYA F. S., BOZKAYA C.
Advances in Boundary Element & Meshless Techniques XVII-BETEQ 2016, Ankara, Türkiye, 11 - 13 Temmuz 2016
- XIII. **Numerical Simulation of MHD Duct flow problems using BEM and DGFEM approaches**
Yücel H., BOZKAYA C., TEZER M.
International Conference on Boundary Element and Meshless Techniques XVII, Ankara, Türkiye, 11 - 13 Temmuz 2016, ss.167-173
- XIV. **Numerical Solution to MHD pipe flow in annular like domains**
BOZKAYA C., TEZER M.
International Conference on Boundary Element and Meshless Techniques XVII, Ankara, Türkiye, 11 - 13 Temmuz 2016, ss.29-34
- XV. **Boundary integral solution of MHD pipe flow**
TEZER M., BOZKAYA C.
International Conference on Boundary Element and Meshless Techniques XVII, Ankara, Türkiye, 11 - 13 Temmuz

2016, ss.155-160

- XVI. Interaction of laminar near wake with a free surface**
Kocabiyik S., BOZKAYA C., Liverman E.
8th Conference of the International Marangoni Association-Interfacial Fluid Dynamics and Processes-IMA8, Bad Honnef, Almanya, 12 - 16 Haziran 2016
- XVII. BEM Solution of MHD Flow in a Semi Infinite Channel with Variable Wall Conductivity**
TEZER M., BOZKAYA C.
ICRAPAM 2016, Bodrum-Turgutreis, Türkiye, 19 - 23 Mayıs 2016, ss.192
- XVIII. BEM Solution of MHD flow in a semi infinite channel with variable wall conductivity**
TEZER M., BOZKAYA C.
International Conference on Recent Advances in Pure and Applied Mathematics (ICRAPAM 2016), Muğla, Türkiye, 19 - 23 Mayıs 2016
- XIX. DRBEM solution of the double diffusive donvective flow**
BOZKAYA C., TEZER M.
European Conference on Numerical Mathematics and Advanced Applications-ENUMATH-2015, Ankara, Türkiye, 14 - 18 Eylül 2015
- XX. Natural Convection of Nanofluid Flows in a Semicircular Annulus Using DRBEM**
OĞLAKKAYA F. S., BOZKAYA C.
European Conference on Numerical Mathematics and Advanced Applications-ENUMATH-2015, Ankara, Türkiye, 14 - 18 Eylül 2015
- XXI. Effect of a heated solid body on mixed convection flow in an open cavity**
BOZKAYA C.
The Tenth UK Conference on Boundary Integral Methods-UKBIM 2015, Brighton, Birleşik Krallık, 13 - 15 Temmuz 2015, ss.210-220
- XXII. Natural Convection Flow of a nanofluid in an Enclosure under a uniform magnetic field**
TEZER M., BOZKAYA C., TÜRK Ö.
Advances in Boundary Element & and Meshless Techniques XVI, Valencia, İspanya, 6 - 08 Temmuz 2015, cilt.16, ss.138-143
- XXIII. Numerical investigation of unsteady natural convection from a heated cylinder in a square enclosure**
BOZKAYA C.
Advances in Boundary Element & Meshless Techniques XIV-BETEQ 2015, Valencia, İspanya, 6 - 08 Temmuz 2015, ss.248-253
- XXIV. Mixed convection flow in a lid driven cavity with hydromagnetic effect using DRBEM**
OĞLAKKAYA F. S., BOZKAYA C.
Advances in Boundary Element & Meshless Techniques XIV-BETEQ 2015, Valencia, İspanya, 6 - 08 Temmuz 2015, ss.44-49
- XXV. DRBEM simulation on mixed convection with hydromagnetic effect**
BOZKAYA C.
The 13th International Conference on Integral Methods in Science and Engineering-IMSE2014, Karlsruhe, Almanya, 21 - 25 Eylül 2014
- XXVI. A numerical study on MHD mixed convection flow**
BOZKAYA C.
The Twelfth International Conference on Computational Structures Technology CST2014, Napoli, İtalya, 2 - 05 Eylül 2014
- XXVII. Free surface flow past a circular cylinder under forced rotary oscillations**
KOCABIYIK S., BOZKAYA C., Liverman E.
IACM and ECCOMAS joint organization of 11th World congress on Computational Mechanics (WCCM XI)-5th. European Conference on Computational Mechanics (ECCM V)-6th European Conference on Computational Fluid Dynamics (ECFD VI), Barcelona, İspanya, 20 - 25 Temmuz 2014
- XXVIII. MHD flow in rectangular ducts of partly conducting walls under an inclined magnetic field**
BOZKAYA C., TEZER M.

- Advances in Boundary Element & Meshless Techniques XV-BETEQ 2014, Floransa, İtalya, 15 - 17 Temmuz 2014, ss.115-120
- XXIX. **Biomagnetic fluid flow in a channel under the effect of a uniform localized magnetic field**
TÜRK Ö., BOZKAYA C., TEZER M.
Advances in Boundary Element and Meshless Techniques XV, İtalya, 15 - 17 Temmuz 2014, ss.81-86
- XXX. **Free surface flow simulation with application to bluff body flow control**
KOCABIYIK S., BOZKAYA C.
7th Conference of the International Marangoni Association-Interfacial Fluid Dynamics and Processes-IMA7, Viyana, Avusturya, 23 - 26 Haziran 2014
- XXXI. **Biofluidflow in a channel with stenosis**
TÜRK Ö., TEZER M., BOZKAYA C.
International Conference on Applied and Computational Mathematics, Ankara, Türkiye, 3 - 06 Ekim 2012, ss.87-88
- XXXII. **FEM solution to unsteady biomagnetic fluid flow in a channel**
TEZER M., TÜRK Ö., BOZKAYA C.
Mathematical Modeling and Computational Topics in Biosciences, Vietri sul Mare, İtalya, 4 - 08 Haziran 2012, ss.163-164
- XXXIII. **THE EFFECT OF NON-LINEAR FREE SURFACE ON BLUFF BODY VORTEX DYNAMICS AND CONTROL**
Kocabiyik S., BOZKAYA C., Reid G.
4th International Conference on Computational Methods in Marine Engineering (MARINE), Lisbon, Portekiz, 28 - 30 Eylül 2011, ss.230-241

Desteklenen Projeler

- BOZKAYA C., TEZER M., FENDOĞLU H., Yükseköğretim Kurumları Destekli Proje, Zamana bağlı magnetohidrokinamik akış probleminin pertürbe edilmiş sınıra sahip dikdörtgen kanal kesitinde sınır elemanları metodu ile çözümü, 2018 - 2019
- TEZER M., BOZKAYA C., Yükseköğretim Kurumları Destekli Proje, Silindirik kanal içerisinde magnetohidrokinamik akış probleminin teorik çözümü ve nümerik simülasyonu, 2016 - 2016
- BOZKAYA C., OĞLAKKAYA F. S., Yükseköğretim Kurumları Destekli Proje, Magnetohydrodynamic nanofluid and convective heat transfer, 2015 - 2016
- BOZKAYA C., Yükseköğretim Kurumları Destekli Proje, A numerical study on MHD mixed convection flow with a solid body, 2014 - 2014
- BOZKAYA C., TÜBİTAK Projesi, Daralma gösteren damar boyunca akan biyomanyetik akışkan kan modelinin sonlu ve sınır elemanları yöntemleri ile çözümü, 2011 - 2013
- BOZKAYA C., Yükseköğretim Kurumları Destekli Proje, Bem Solution Of Mhd Flows İn Coupled Ducts, 2012 - 2012

Etkinlik Organizasyonlarındaki Görevler

- Bozkaya C., Küçüksakallı Ö., Türk Ö., Numerical Analysis and Computational Fluid Dynamics: Workshop in Honor of MÜNEVVER TEZER-SEZGİN's 67th Birthday, Çalıştay Organizasyonu, Ankara, Türkiye, Nisan 2019

Metrikler

- Yayın: 87
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Atıf (Scopus): 387
H-İndeks (WoS): 11
H-İndeks (Scopus): 11