

Assoc. Prof. Nagehan Akgün

Personal Information

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International Researcher IDs

ORCID: 0000-0001-6967-0625

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Education Information

Doctorate, Middle East Technical University, Graduate School Of Natural And Applied Sciences, Matematik, Turkey 2005 - 2013

Masters (Non-Thesis), Eskisehir Osmangazi University, Eğitim Bilimleri Enstitüsü, Matematik Öğretmenliği, Turkey 2003 - 2004

Undergraduate, Eskisehir Osmangazi University, Fen Fakültesi, Matematik, Turkey 1999 - 2003

Foreign Languages

English, C1 Advanced

Dissertations

Doctorate, The Dual Reciprocity Boundary Element Solution of Helmholtz-Type Equations in Fluid Dynamics, Middle East Technical University, Fen Bilimleri Enstitüsü, Matematik, 2013

Research Areas

Fluid Mechanics, Finite Element Methods, Mathematics, Differential Equations, Numerical Analysis, Natural Sciences

Academic Titles / Tasks

Associate Professor, Van Yüzüncü Yıl University, Fen Fakültesi, Matematik Bölümü, 2021 - Continues

Assistant Professor, Van Yüzüncü Yıl University, Fen Fakültesi, Matematik Bölümü, 2014 - 2021

Research Assistant PhD, Van Yüzüncü Yıl University, Fen Fakültesi, Matematik Bölümü, 2014 - 2014

Research Assistant, Middle East Technical University, Fen Edebiyat Fakültesi, Matematik, 2005 - 2013

Courses

Linear Algebra , Undergraduate, 2021 - 2022

Genel Matematik II, Undergraduate, 2018 - 2019, 2017 - 2018, 2016 - 2017, 2015 - 2016
Bilgisayar ve Programlama II, Undergraduate, 2018 - 2019
Kısmi Türevli Diferansiyel Denklemlerin Nümerik Çözümleri, Postgraduate, 2018 - 2019
Lineer Cebir II, Undergraduate, 2018 - 2019
İleri Lineer Cebir, Postgraduate, 2018 - 2019
İleri Lineer Cebir, Postgraduate, 2018 - 2019
Genel Matematik I, Undergraduate, 2018 - 2019, 2017 - 2018, 2016 - 2017, 2015 - 2016
Lineer Cebir I, Undergraduate, 2018 - 2019, 2017 - 2018
Lineer Cebir II, Undergraduate, 2017 - 2018
Analitik Geometri II, Undergraduate, 2016 - 2017, 2015 - 2016
Analitik Geometri I, Undergraduate, 2016 - 2017, 2015 - 2016
Genel Matematik I, Undergraduate, 2015 - 2016
Kısmi Türevli Denklemlerin Nümerik Çözümleri , Postgraduate, 2015 - 2016, 2014 - 2015
Genel Matematik II, Undergraduate, 2014 - 2015
Genel Matematik I, Undergraduate, 2014 - 2015

Advising Theses

Akgün N., KİSMİ TÜREVLİ DİFERANSİYEL DENKLEMLERİN KARŞILIKLI SINIR ELEMANLARI YÖNTEMİ İLE ÇÖZÜMLERİ, Postgraduate, İZIRAPLI(Student), 2021
Akgün N., DIFFERENTIAL QUADRATURE METHOD FOR PARTIAL DIFFERENTIAL EQUATIONS, Postgraduate, S.KAREEM(Student), 2017

Jury Memberships

Competition, TÜBİTAK - 2204 - B ORTAOKUL ÖĞRENCİLERİ ARASTIRMA PROJELERİ YARISMASI, Tübitak, February, 2022
Post Graduate, Post Graduate, Van Yüzüncü Yıl Üniversitesi, June, 2021
Doctoral Examination, Doctoral Examination, Van Yüzüncü Yıl Üniversitesi, June, 2021
Competition, Tübitak Lise Öğrencileri Araştırma Projeleri Yarışması, Tübitak, February, 2019
Competition, Tübitak Lise Öğrencileri Araştırma Projeleri Yarışması, Tübitak, February, 2018
Competition, Tübitak Lise Öğrencileri Araştırma Projeleri Yarışması, Tübitak, February, 2017

Published journal articles indexed by SCI, SSCI, and AHCI

- I. **Implementation of DRBEM for coupled sine-Gordon equations**
Alsoy-Akgün N.
Engineering Analysis with Boundary Elements, vol.156, pp.407-431, 2023 (SCI-Expanded)
- II. **Application of DRBEM for 2D sine-Gordon equation**
Alsoy-Akgun N.
JOURNAL OF TAIBAH UNIVERSITY FOR SCIENCE, vol.15, no.1, pp.225-238, 2021 (SCI-Expanded)
- III. **Effect of an uniform magnetic field on unsteady natural convection of nanofluid**
Alsoy-Akgun N.
JOURNAL OF TAIBAH UNIVERSITY FOR SCIENCE, vol.13, no.1, pp.1073-1086, 2019 (SCI-Expanded)
- IV. **Numerical simulation of unsteady mixed convection of nanofluid in a lid-driven square cavity**
Alsoy-Akgun N.
HACETTEPE JOURNAL OF MATHEMATICS AND STATISTICS, vol.48, no.4, pp.1057-1078, 2019 (SCI-Expanded)
- V. **DRBEM solution of the thermo-solutal buoyancy induced mixed convection flow problems**
Alsoy-Akgun N., Tezer-Sezgin M.

- ENGINEERING ANALYSIS WITH BOUNDARY ELEMENTS, vol.37, no.3, pp.513-526, 2013 (SCI-Expanded)
- VI. **A Numerical Solution for an Inverse Natural Magneto-Convection Problem**
 Alsoy-Akgun N., Lesnic D.
 NUMERICAL HEAT TRANSFER PART B-FUNDAMENTALS, vol.63, no.2, pp.115-138, 2013 (SCI-Expanded)
- VII. **DRBEM and DQM solutions of natural convection flow in a cavity under a magnetic field**
 Alsoy-Akgun N., Tezer-Sezgin M.
 PROGRESS IN COMPUTATIONAL FLUID DYNAMICS, vol.13, no.5, pp.270-284, 2013 (SCI-Expanded)

Articles Published in Other Journals

- I. **Implementation of DRBEM for the determination of the heat flux in an inverse problem**
 Akgün N.
 Communications Faculty of Sciences University of Ankara Series A1 Mathematics and Statistics, vol.70, no.1, pp.397-425, 2021 (ESCI)
- II. **DQM SOLUTION OF NATURAL CONVECTION FLOW OF WATER-BASED NANOFLUIDS**
 Akgün N.
 NEURAL, PARALLEL AND SCIENTIFIC COMPUTATIONS, vol.24, pp.393-408, 2016 (Scopus)

Refereed Congress / Symposium Publications in Proceedings

- I. **The use of dual reciprocity boundary element method for solving the coupled nonlinear Sine-Gordon equations**
 Akgün N.
 4th International Conference on Pure and Applied Mathematics (ICPAM - VAN 2022), Van, Turkey, 22 - 23 June 2022, pp.46
- II. **Numerical simulation of two-dimensional sine-Gordon equation using the dual reciprocity boundary element method**
 Akgün N.
 3rd International Conference on Pure and Applied Mathematics, Van, Turkey, 3 - 05 September 2020, pp.34
- III. **Inverse Unsteady Natural Convection of Nanofluid**
 Akgün N.
 6. Kadın Matematikçiler Derneği Çalıştayı, Konya, Turkey, 26 - 28 April 2019, pp.12
- IV. **DRBEM Solution for an Inverse Natural Conference Problem with the Various Types of Boundary Conditions**
 Akgün N.
 4th International Conference on Computational Mathematics and Engineering Sciences, (CMES-2019), Antalya, Turkey, 20 - 22 April 2019, pp.105
- V. **DRBEM Solution of Nanofluids under DDMC in a Lid Driven Cavity**
 Akgün N.
 Numerical Analysis and Computational Fluid Dynamics: Workshop in Honor of Münevver Tezer-Sezgin's 67th Birthday, Ankara, Turkey, 19 - 20 April 2019, pp.13
- VI. **Numerical Study of nanofluids under DDMC in a Lid Driven Cavity**
 Akgün N.
 2nd International Conference on Pure and Applied Mathematics, Van, Turkey, 11 - 13 September 2018, pp.40
- VII. **Numerical Study of Unsteady Mixed Convection of Nanofluid in a Lid-driven Square Cavity**
 Akgün N.
 Caucasian Mathematics Conference II, Van, Turkey, 22 - 24 August 2017, pp.29
- VIII. **DRBEM Solution of Natural convection Flow of Nanofluid Under a Uniform Magnetic Field**
 Akgün N.

International Workshop on Mathematical Methods in Engineering, Ankara, Turkey, 27 - 29 April 2017, pp.40-41

IX. DRBEM for Solving Natural Convection in a Nanofluid-Filled Enclosure

Akgün N.

17 th International Conference on Boundary Element and Meshless Technique 2016, Ankara, Turkey, 11 - 13 July 2016, pp.1-7

X. A Numerical Solution of Natural Convection Flow of Water-Based Nanofluids with DRBEM

Akgün N.

European Conference on Numerical Mathematics and Advanced Application, Ankara, Turkey, 14 - 18 September 2015, pp.142

XI. DRBEM Solution of Natural Convection Flow of Water-Based Nanofluids in an Inclined Angle

Akgün N.

International Conference on Pure and Applied Mathematics, Van, Turkey, 25 - 28 August 2015, pp.21

XII. DQM Solution of Natural Convection Flow of Water-Based Nanofluid

Akgün N.

International Conference on Pure and Applied Mathematics, Van, Turkey, 25 - 28 August 2015, pp.20

XIII. DRBEM Solution of the Double Diffusive Mixed Convection in a Lid-Driven Square Cavity with a Square Blockage Placed at the Bottom Wall

Akgün N.

World Congress on Engineering 2012, Londra, United Kingdom, 4 - 06 July 2012, pp.252-257

XIV. Dual Reciprocity Boundary Element Solution of Mixed Convective Heat and Solutal Transport

Akgün N.

3rd European Seminar on Computing, Pilsen, Czech Republic, 25 - 29 June 2012, pp.26

XV. DRBEM Solution of Natural Convection and Lid-Driven Flow Problems in Cavities

Akgün N.

Eight UK Conference on Boundary Integral Methods, Leeds, United Kingdom, 4 - 05 July 2011, pp.65-72

XVI. DRBEM and DQM solution of Natural Convection Flow in a Cavity Under a Magnetic Field

Akgün N.

24th Biennial Conference on Numerical Analysis, Glasgow, United Kingdom, 28 June - 01 July 2011, pp.26-27

Memberships / Tasks in Scientific Organizations

Türk Kadın Matematikçiler Derneği, Member, 2019 - Continues, Turkey

Scientific Refereeing

Yüzüncü Yıl Üniversitesi Fen Bilimleri Enstitüsü Dergisi, National Scientific Refreed Journal, September 2022

Yüzüncü Yıl Üniversitesi Fen Bilimleri Enstitüsü Dergisi, National Scientific Refreed Journal, September 2022

JOURNAL OF TAIBAH UNIVERSITY FOR SCIENCE, Journal Indexed in SCI-E, August 2022

JOURNAL OF TAIBAH UNIVERSITY FOR SCIENCE, Journal Indexed in SCI-E, June 2022

Communications Faculty of Sciences University of Ankara Series A1 Mathematics and Statistics , Journal Indexed in ESCI, June 2022

JOURNAL OF TAIBAH UNIVERSITY FOR SCIENCE, Journal Indexed in SCI-E, April 2022

Journal of the Egyptian Mathematical Society, Other Indexed Journal, November 2021

Communications Faculty of Sciences University of Ankara Series A1 Mathematics and Statistics , Journal Indexed in ESCI, October 2021

International Journal of Mathematics and Computer Science, Journal Indexed in ESCI, October 2021

JOURNAL OF TAIBAH UNIVERSITY FOR SCIENCE, SCI Journal, December 2020

journal of mathematical Analysis, Journal Indexed in ESCI, November 2020

journal of mathematical Analysis, Journal Indexed in ESCI, November 2020

JOURNAL OF TAIBAH UNIVERSITY FOR SCIENCE, Journal Indexed in SCI-E, July 2020

ISI BILIMI VE TEKNIGI DERGISI-JOURNAL OF THERMAL SCIENCE AND TECHNOLOGY, Journal Indexed in SCI-E, June 2020

JOURNAL OF TAIBAH UNIVERSITY FOR SCIENCE, Journal Indexed in SCI-E, April 2020

JOURNAL OF TAIBAH UNIVERSITY FOR SCIENCE, Journal Indexed in SCI-E, March 2020

Arab Journal of Basic and Applied Sciences, Other Indexed Journal, January 2019

A New Proof of the Binomial Theorem, Other Indexed Journal, December 2017

Tasks In Event Organizations

Akgün N., Kayar Z., 4th International Conference on Pure and Applied Mathematics ICPAM-VAN 2022, Scientific Congress, Van, Turkey, Haziran 2022

Kayar Z., Akgün N., 3rd International Conference on Pure and Applied Mathematics ICPAM-VAN 2020, Scientific Congress, Van, Turkey, Eylül 2020

Kayar Z., Akgün N., 2nd International Conference on Pure and Applied Mathematics, ICPAM - VAN 2018, Scientific Congress, Van, Turkey, Eylül 2018

Kayar Z., Akgün N., International Conference on Pure and Applied Mathematics (ICPAM 2015), Scientific Congress, Van, Turkey, Ağustos 2015

Metrics

Publication: 25

Citation (WoS): 29

Citation (Scopus): 23

H-Index (WoS): 3

H-Index (Scopus): 3

Congress and Symposium Activities

6. Kadın Matematikçiler Derneği Çalıştayı, Attendee, Konya, Turkey, 2019

Numerical Analysis and Computational Fluid Dynamics: Workshop in Honor of Münevver Tezer-Sezgin's 67th Birthday, Attendee, Ankara, Turkey, 2019

4th International Conference on Computational Mathematics and Engineering Sciencei CMES 2019, Attendee, Antalya, Turkey, 2019

2nd International Conference on Pure and Applied Mathematics, Session Moderator, Van, Turkey, 2018

2nd International Conference on Pure and Applied Mathematics, Attendee, Van, Turkey, 2018

Caucasian Mathemtics Conference II, Session Moderator, Van, Turkey, 2017

Caucasian Mathematics Conference II, Attendee, Van, Turkey, 2017

International Workshop on Mathematical Methods in Engineering, Attendee, Ankara, Turkey, 2017

17th International Conference on Boundary Element and Meshless Techniques 2016, Attendee, Ankara, Turkey, 2016

European Numerical Mathematics and Advanced Applications, Attendee, Ankara, Turkey, 2015

International Conference on Pure and Applied Mathematics, Attendee, Turkey, 2015

International Conference on Pure and Applied Mathematics, Attendee, Van, Turkey, 2015

International Conference on Pure and Applied Mathematics, Session Moderator, Van, Turkey, 2015

DRBEM Solution of Double Diffusive Mixed Convection in a Lid-Driven Square Cavity with a Square Blockage Placed at the Bottom Wall, Attendee, London, United Kingdom, 2012

Dual Reciprocity Boundary element Solution of Mixed Convective Heat and Solutal Transport, Attendee, Plzen, Czech Republic, 2012

DRBEM Solution of Natural Convection and Lid driven Flow Problems in Cavities, Attendee, Leeds, United Kingdom, 2011
DRBEM and DQM Solutions of Natural Convection Flow in a Cavity Under a Magnetic Field, Attendee, Glasgow, United Kingdom, 2011

Scholarships

Doktora Bursu, TUBITAK, 2005 - 2010

Awards

Akgün N., Certificate of Merit (Student) for the 2012 International Conference of Applied and engineering Mathematics, International Association of Engineers (IAENG), July 2012

Non Academic Experience

University of Leeds