

## Prof.Dr. SELÇUK HAN AYDIN

### Kişisel Bilgiler

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### Eğitim Bilgileri

Doktora, Orta Doğu Teknik Üniversitesi, Uygulamalı Matematik Enstitüsü, Bilimsel Hesaplamalar, Türkiye 2004 - 2008

Yüksek Lisans, Orta Doğu Teknik Üniversitesi, Fen Bilimleri Enstitüsü, Matematik, Türkiye 1997 - 2000

Lisans, Orta Doğu Teknik Üniversitesi, Fen Edebiyat Fakültesi, Matematik, Türkiye 1992 - 1997

### Yabancı Diller

İngilizce, B2 Orta Üstü

### Yaptığı Tezler

Doktora, The finite element method over a simple stabilizing grid applied to fluid flow problems, Orta Doğu Teknik Üniversitesi, Uygulamalı Matematik Enstitüsü, Bilimsel Hesaplamalar, 2008

Yüksek Lisans, Dual reciprocity boundary element method for Poisson's equations using osculatory radial basis functions, Orta Doğu Teknik Üniversitesi, Fen Bilimleri Enstitüsü, Matematik, 2000

### Araştırma Alanları

Matematik, Diferansiyel denklemler, Kısmi diferansiyel eşitlikler, Sayısal Analiz, Temel Bilimler

### Akademik Unvanlar / Görevler

Prof.Dr., Karadeniz Teknik Üniversitesi, Fen Fakültesi, Matematik, 2018 - Devam Ediyor

Doç.Dr., Karadeniz Teknik Üniversitesi, Fen Fakültesi, Matematik, 2013 - 2018

Yrd.Doç.Dr., Karadeniz Teknik Üniversitesi, Fen-Edebiyat Fakültesi, Matematik, 2009 - 2013

### Yönetilen Tezler

AYDIN S. H. , Stabilize Sonlu Elemanlar Yöntemi İle Adaptif Ağ Oluşturma, Yüksek Lisans, M.Ceylan(Öğrenci), 2014

AYDIN S. H. , Değişken Difüzyon Katsayılı Konveksiyon-Difüzyon Denklemlerinin Sonlu Elemanlar Yöntemi ile Çözümü, Yüksek Lisans, C.ÇİFTÇİ(Öğrenci), 2012

### SCI, SSCI ve AHCI İndekslerine Giren Dergilerde Yayınlanan Makaleler

- I. **Accretive growth kinematics in Minkowski 3-space**  
TUĞ G., Ozdemir Z., AYDIN S. H. , EKMEKÇİ F. N.  
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- II. **Free-Space Fundamental Solution of a 2D Steady Slow Viscous MHD Flow**  
AYDIN S. H. , Sellier A., Tezer-Sugin M.  
CMES-COMPUTER MODELING IN ENGINEERING, cilt.102, sa.5, ss.393-406, 2014 (SCI Expanded İndekslerine Giren Dergi)
- III. **A DRBEM solution for MHD pipe flow in a conducting medium**  
AYDIN S. H. , Tezer-Sezgin M.  
JOURNAL OF COMPUTATIONAL AND APPLIED MATHEMATICS, cilt.259, ss.720-729, 2014 (SCI İndekslerine Giren Dergi)
- IV. **Topological flow structures in an L-shaped cavity with horizontal motion of the upper lid**  
DELİCEOĞLU A., AYDIN S. H.  
JOURNAL OF COMPUTATIONAL AND APPLIED MATHEMATICS, cilt.259, ss.937-943, 2014 (SCI İndekslerine Giren Dergi)
- V. **BEM solution of MHD flow in a pipe coupled with magnetic induction of exterior region**  
Tezer-Sezgin M., AYDIN S. H.  
COMPUTING, cilt.95, sa.1, 2013 (SCI İndekslerine Giren Dergi)
- VI. **Flow bifurcation and eddy genesis in an L-shaped cavity**  
DELİCEOĞLU A., AYDIN S. H.  
COMPUTERS & FLUIDS, cilt.73, ss.24-46, 2013 (SCI İndekslerine Giren Dergi)
- VII. **gVS gamma coupling constant in light cone QCD**  
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PHYSICAL REVIEW D, cilt.84, sa.9, 2011 (SCI İndekslerine Giren Dergi)
- VIII. **Two-Level Finite Element Method with a Stabilizing Subgrid for the Natural Convection Flow Simulation in Different Geometries**  
Aydin S. H.  
NUMERICAL HEAT TRANSFER PART A-APPLICATIONS, cilt.59, sa.10, ss.799-813, 2011 (SCI İndekslerine Giren Dergi)
- IX. **Two-level finite element method with a stabilizing subgrid for the incompressible MHD equations**  
Aydin S. H. , Nesliturk A. I. , Tezer-Sezgin M.  
INTERNATIONAL JOURNAL FOR NUMERICAL METHODS IN FLUIDS, cilt.62, sa.2, ss.188-210, 2010 (SCI İndekslerine Giren Dergi)
- X. **Two-level finite element method with a stabilizing subgrid for the incompressible Navier-Stokes equations**  
Nesliturk A. I. , Aydin S. H. , Tezer-Suzgin M.  
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- XI. **Solution of magnetohydrodynamic flow problems using the boundary element method**  
Tezer-Sugin M., Aydin S. H.  
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- XII. **Dual reciprocity boundary element method for magnetohydrodynamic flow using radial basis functions**  
Tezer-Sezgin M., Aydin S. H.  
INTERNATIONAL JOURNAL OF COMPUTATIONAL FLUID DYNAMICS, cilt.16, sa.1, ss.49-63, 2002 (SCI İndekslerine Giren Dergi)

- I. **Stabilized FEM Solution of Variable Coefficient Convection Diffusion Equation**  
AYDIN S. H.  
International Journal of Applied Mathematics, cilt.29, sa.3, ss.371-380, 2016 (Diğer Kurumların Hakemli Dergileri)
- II. **FEM-BEM Coupling for the MHD Pipe Flow in an Exterior Region**  
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- III. **Numerical Solutions of Grad-Shafranov equation for the distribution of magnetic flux in nuclear fusion devices**  
AYDIN S. H. , TEZER SEZGİN M.  
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WIT Transaction on Modeling and Simulation, cilt.39, ss.31-39, 2005 (Diğer Kurumların Hakemli Dergileri)

### **Hakemli Kongre / Sempozyum Bildiri Kitaplarında Yer Alan Yayınlar**

- I. **Particle-wall interactions axisymmetric MHD viscous**  
sellier a., AYDIN S. H.  
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- II. **Particle-particle interactions in axisymmetric MHD creeping flow**  
AYDIN S. H. , sellier a.  
IABEM 2018, 26 - 28 Haziran 2018
- III. **Fundamental three-dimensional MHD creeping flow bounded by a plane motionless wall normal to a uniform ambient magnetic field**  
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- IV. **Particle-particle interactions in axisymmetric MHD viscous flow**  
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- V. **Viscous axisymmetric MHD flow about a solid sphere translating in a circular solid tube**  
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- VI. **FEM solution of MHD flow in rectangular ducts with different wall conductivities and slip conditions**  
TEZER M., AYDIN S. H.  
2017 EMI International Conference, 19 - 22 Mart 2017
- VII. **A boundary formulation for the axisymmetric MHD slow viscous flow about a sphere translating parallel with a uniform ambient magnetic field**  
SELLIER A., AYDIN S. H.  
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- VIII. **Particle particle interactions in 2D MHD viscous flow**  
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- IX. **Creeping axisymmetric MHD flow about a sphere translating parallel with a uniform ambient magnetic field**  
SELLIER A., AYDIN S. H.  
PAMIR 2016, 10th PAMIR International Conference Fundamental and Applied MHD, 20 - 24 Haziran 2016
- X. **FEM BEM Coupled Solution of MHD Pipe Flow**  
AYDIN S. H. , SELVİTOPI H.  
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- XI. **Stabilized FEM Solution of 2D Steady Slow Viscous MHD Flow of an Unbounded Conducting Liquid**

## **About Solid Particles**

TEZER M., AYDIN S. H. , SELLIER A.

PAMIR 2016, 10th PAMIR International Conference Fundamental and Applied MHD, 20 - 24 Haziran 2016

- XII. **Adaptive Mesh Generation Using Stabilized Finite Element Method**  
AYDIN S. H. , Erdoğan M. C.  
ENUMATH 2015 European Conference on Numerical Mathematics and Advanced Applications, Ankara, Türkiye, 14 - 18 Eylül 2015, ss.95
- XIII. **A New Boundary Approach for the 2D Viscous MHD Flow About a Solid Particle**  
Sellier A., AYDIN S. H. , TEZER SEZGİN M.  
ENUMATH 2015 European Conference on Numerical Mathematics and Advanced Applications, Ankara, Türkiye, 14 - 18 Eylül 2015, ss.114
- XIV. **A new BEM approach for the slow 2D MHD flow about interacting solid particles**  
Sellier A., AYDIN S. H. , Tezer-Sezgin M.  
BETEQ 2015, International Conference on Boundary Element and Meshless Techniques, Valencia, İspanya, 6 - 08 Temmuz 2015, ss.126-132
- XV. **BEM Solution of MHD Pipe Flow Around a Conducting Cylindrical Solid and Inside an Insulating or Conducting Medium**  
AYDIN S. H. , TEZER SEZGİN M.  
BETEQ 2014, International Conference on Boundary Element and Meshless Techniques, Floransa, İtalya, 15 - 17 Temmuz 2014, ss.67-70
- XVI. **A New Boundary Approach for the 2D Slow Viscous MHD Flow of a Conducting Liquid About a Solid Particle**  
AYDIN S. H. , TEZER SEZGİN M., Sellier A.  
BETEQ 2014, International Conference on Boundary Element and Meshless Techniques, Floransa, İtalya, 15 - 17 Temmuz 2014, ss.98-101
- XVII. **Stabilized FEM-BEM Solutions of MHD Flow in an Annular Pipe**  
AYDIN S. H.  
BETEQ 2014, International Conference on Boundary Element and Meshless Techniques, Floransa, İtalya, 15 - 17 Temmuz 2014, ss.10-12
- XVIII. **FEM Solution of MHD Flow Equations Coupled on a Pipe Wall in a Conducting Medium**  
AYDIN S. H. , TEZER SEZGİN M.  
PAMIR 2014, International Conference Fundamental and Applied MHD, Uppsala, Litvanya, 16 - 20 Haziran 2014, ss.98-101
- XIX. **Upwind Finite Difference Solution of MHD Pipe Flow in an Exterior Conducting Region using Shishkin and Bakhvalov Typed Layer Adapted Grids**  
AYDIN S. H.  
PAMIR 2014, International Conference Fundamental and Applied MHD, Riga, Litvanya, 16 - 20 Haziran 2014, ss.90-94
- XX. **The Method of Fundamental Solutions of MHD Pipe Flow in an Exterior Region**  
AYDIN S. H.  
BETEQ 2013, International Conference on Boundary Element and Meshless Techniques, Paris, Fransa, 16 - 18 Temmuz 2013, ss.67-70
- XXI. **DRBEM Solution of MHD Pipe Flow in a Conducting Medium**  
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ICACM International Conference on Applied and Computational Mathematics, Ankara, Türkiye, 3 - 06 Ekim 2012, ss.67
- XXII. **Flow structures in an L-shaped cavity with the vertical motion of the upper lid**  
AYDIN S. H. , Deliceoglu A.  
ICACM International Conference on Applied and Computational Mathematics, Ankara, Türkiye, 3 - 06 Ekim 2012, ss.46
- XXIII. **The Finite Element Method Solution of Variable Diffusion Coefficient Convection-Diffusion Equations**

AYDIN S. H. , Ciftci C.

1st International Conference on Analysis and Applied Mathematics (ICAAM), Gümüşhane, Türkiye, 18 - 21 Ekim 2012, cilt.1470, ss.228-231

**XXIV. Flow simulation around obstacles of different geometries**

AYDIN S. H.

ICAAA 2011 International Conference on Applied Analysis and Algebra, İstanbul, Türkiye, 29 Haziran - 02 Temmuz 2011, ss.45

**XXV. Stabilized FEM Solution of Steady Natural Convection Flow in a Square Cavity**

AYDIN S. H.

CCAM 2010, The 15th edition of the International Congress on Computational and Applied Mathematics, Leuven, Belçika, 5 - 09 Temmuz 2010, ss.1

**XXVI. Solution of Navier-Stokes Equations Using FEM with Stabilizing Subgrid**

AYDIN S. H. , Neslitürk A. I. , TEZER SEZGİN M.

ENUMATH 2009, The 8th European Conference on Numerical Mathematics and Advanced ApplicationsENUMATH 2009, The 8th European Conference on Numerical Mathematics and Advanced Applications, Uppsala, İsveç, 29 Haziran - 03 Temmuz 2009, ss.42-47

**XXVII. Flow bifurcation and eddy genesis in a L-shape cavity**

AYDIN S. H. , Deliceoglu A.

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**XXVIII. BEM Solution of MHD Flow in Ducts with Arbitrarily Conducting Walls**

AYDIN S. H.

UKBIM 6 Proceedings of the 6th UK Conference on Boundary Integral Methods, Durham, İngiltere, 17 - 18 Eylül 2007, ss.1-4

**XXIX. Dual Reciprocity BEM Solution of Grad-Shafranov Equation for the Distribution of Magnetic Flux in Nuclear Fusion Devices**

AYDIN S. H.

IABEM-2006 International Association for Boundary Element Methods 2006, Graz, Avusturya, 10 - 12 Temmuz 2006, ss.10-12

**XXX. Numerical Solution of MHD Flow Problems Using Boundary Element Method**

AYDIN S. H. , TEZER SEZGİN M.

BEM/MRM 27 World Conf. On Boundary Elements and Other Mesh Reduction Methods, Orlando, Amerika Birleşik Devletleri, 15 - 17 Mart 2005, ss.31-39

## **Atıflar**

Toplam Atıf Sayısı (WOS):142

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