



# HAKAN ERSOY

## PROF.

Email : [hakanersoy@akdeniz.edu.tr](mailto:hakanersoy@akdeniz.edu.tr)

Office Phone : [+90 242 310 6339](tel:+902423106339)

Fax Phone : [+90 242 310 6306](tel:+902423106306)

Address : Akdeniz Üniversitesi Mühendislik Fakültesi Makina Mühendisliği Bölümü Kampüs , 07058; ANTALYA

### International Researcher IDs

ORCID: 0000-0001-8770-6150

ScopusID: 57050745000

Yoksis Researcher ID: 128963



## Learning Knowledge

Doctorate 1999 - 2003	Istanbul Technical University, Fen Bilimleri Ens., Makina Mühendisliği Bölümü, Turkey
Postgraduate 1989 - 1991	Yildiz Technical University, Fen Bilimleri Ens., Makina Mühendisliği Bölümü, Turkey
Undergraduate 1982 - 1987	Istanbul Technical University, Makina Fakültesi, Makina Mühendisliği Bölümü, Turkey

## Foreign Languages

English, B2 Upper Intermediate

## Certificates, Courses and Trainings

Education Management and Planning, Temel ve İleri Elektropnömatik, Festo Didactic, 1999

Other, Paraşütçülük sertifikası, Türk Hava Kurumu, 1996

Education Management and Planning, BMW-ZKE-DIS-DIYAGNOZ, BMW-Borusan Oto Eğitim Merkezi, 1995

Education Management and Planning, Statistical Process Control, Bureau Veritas, 1994

Education Management and Planning, Language Course, Eurocentre Cambridge, 1989

Education Management and Planning, AutoCAD, Saniva AŞ, 1988

Education Management and Planning, Kaynakçılık Kursu, Böhler Elektrod Sanayi, 1987

## Dissertations

Doctorate, Yapısal Sistemlerin Tasarım Duyarlılığı Analizlerinin Tekil Değerlere Ayrıştırma (TDA) Metoduna Dayalı Olarak Yapılması, Istanbul Technical University, Fen Bilimleri Enstitüsü, Makina Mühendisliği Bölümü / Konstrüksiyon Ve İmalat, 2003

Postgraduate, Otomat Tornalar ve Kam Profillerinin Bilgisayarda Tasarlanması, Yıldız Technical University, Fen Bilimleri Enstitüsü, Makina Mühendisliği Bölümü / Konstrüksiyon Bilim Dalı, 1991

## Academic Titles / Tasks

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Professor 2022 - Continues	Akdeniz University, Faculty of Engineering, Department of Mechanical Engineering
Associate Professor 2014 - 2022	Akdeniz University, Faculty of Engineering, Department of Mechanical Engineering
Assistant Professor 2004 - 2014	Akdeniz University, Faculty of Engineering, Department of Mechanical Engineering
Lecturer PhD 2004 - 2004	Akdeniz University, Faculty of Engineering, Department of Mechanical Engineering
Research Assistant 1999 - 2003	Istanbul Technical University, Makina Fakültesi, Makina Mühendisliği Bölümü

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## Supported Projects

- ERSOY H., KURŞUN K., Project Supported by Higher Education Institutions, Yapısal Sistemlerde Titreşim ve Akustik Dalgaların Tekil Değerlere Ayrıştırma Yöntemi ile Adaptif Kontrolü, 2021 - 2022
- ERSOY H., TÜBİTAK Project, Formula G güneş aracı tasarımı ve üretimi, 2010 - 2010

## Awards

- ERSOY H., Kristal Ağaç, ODTÜ Girişimcilik Topluluğu, December 2015
- ERSOY H., Çevre Hizmet Ödülü, Akdeniz Üniversitesi, September 2012

## Published journal articles indexed by SCI, SSCI, and AHCI

- Dynamics of a FG porous microbeam with metal foam under deformable boundaries**  
CİVALEK Ö., ERSOY H., UZUN B., YAYLI M. Ö.  
Acta Mechanica, vol.234, no.11, pp.5385-5404, 2023 (SCI-Expanded)
- Performance Identification of a Steam Boiler Burner via Acoustic Analysis**  
Kurşun K., Özdemir L., Ersoy H.  
Processes, vol.10, no.6, pp.1-11, 2022 (SCI-Expanded)
- Utilizing Piezo Acoustic Sensors for the Identification of Surface Roughness and Textures**  
Kurşun K., Güven F., Ersoy H.  
Sensors, vol.22, no.12, 2022 (SCI-Expanded)

4. **A new eigenvalue problem solver for thermo-mechanical vibration of Timoshenko nanobeams by an innovative nonlocal finite element method**  
Numanoglu H. M., ERSOY H., AKGÖZ B., Civalek O.  
Mathematical Methods in the Applied Sciences, vol.45, no.5, pp.2592-2614, 2022 (SCI-Expanded)
5. **A new heat conduction model for viscoelastic micro beams considering the magnetic field and thermal effects**  
Abouelregal A. E., ERSOY H., CİVALEK Ö.  
WAVES IN RANDOM AND COMPLEX MEDIA, 2021 (SCI-Expanded)
6. **Derivation of nonlocal FEM formulation for thermo-elastic Timoshenko beams on elastic matrix**  
Numanoglu H. M., Ersoy H., Civalek O., Ferreira A. J. M.  
COMPOSITE STRUCTURES, vol.273, 2021 (SCI-Expanded)
7. **Solution of Moore-Gibson-Thompson Equation of an Unbounded Medium with a Cylindrical Hole**  
Abouelregal A. E., ERSOY H., CİVALEK Ö.  
MATHEMATICS, vol.9, no.13, 2021 (SCI-Expanded)
8. **Dynamic Analysis of a Fiber-Reinforced Composite Beam under a Moving Load by the Ritz Method**  
Albas S. D., ERSOY H., AKGÖZ B., CİVALEK Ö.  
MATHEMATICS, vol.9, no.9, 2021 (SCI-Expanded)
9. **Frequencies of FGM shells and annular plates by the methods of discrete singular convolution and differential quadrature methods**  
ERSOY H., Mercan K., CİVALEK Ö.  
COMPOSITE STRUCTURES, vol.183, pp.7-20, 2018 (SCI-Expanded)
10. **AN EXPERIMENTAL STUDY ON THE IMPROVEMENT OF SAVONIUS TURBINE PERFORMANCE USING FLEXIBLE SAILS**  
ERSOY H., Yalçındağ S.  
INTERNATIONAL JOURNAL OF GREEN ENERGY, vol.11, no.8, pp.796-807, 2014 (SCI-Expanded)
11. **Static analysis of laminated conical shells by Discrete Singular Convolution (DSC) approach**  
ERSOY H., AKGÖZ B., CİVALEK Ö.  
KSCE JOURNAL OF CIVIL ENGINEERING, vol.18, no.5, pp.1455-1463, 2014 (SCI-Expanded)
12. **Optimum laminate design by using singular value decomposition**  
Ersoy H.  
COMPOSITES PART B-ENGINEERING, vol.52, pp.144-154, 2013 (SCI-Expanded)
13. **Differential quadrature method for frequency analysis of membranes having irregular domains using an eight-node curvilinear element**  
ERSOY H., ÖZPOLAT L., CİVALEK Ö., ÖZTÜRK B.  
SMART STRUCTURES AND SYSTEMS, vol.5, no.5, pp.587-590, 2009 (SCI-Expanded)
14. **Analysis of shear deformable laminated composite trapezoidal plates**  
GÜRSES M., CİVALEK Ö., ERSOY H., Kiracıoğlu O.  
MATERIALS & DESIGN, vol.30, no.8, pp.3030-3035, 2009 (SCI-Expanded)
15. **Free vibration and bending analysis of circular Mindlin plates using singular convolution method**  
Civalek O., ERSOY H.  
COMMUNICATIONS IN NUMERICAL METHODS IN ENGINEERING, vol.25, no.8, pp.907-922, 2009 (SCI-Expanded)
16. **Free vibration of circular and annular membranes with varying density by the method of discrete singular convolution**  
ERSOY H., ÖZPOLAT L., Civalek O.  
STRUCTURAL ENGINEERING AND MECHANICS, vol.32, no.5, pp.621-634, 2009 (SCI-Expanded)
17. **Free vibration analysis of symmetric laminated skew plates by discrete singular convolution technique based on first-order shear deformation theory**  
GÜRSES M., CİVALEK Ö., KORKMAZ A., ERSOY H.  
INTERNATIONAL JOURNAL FOR NUMERICAL METHODS IN ENGINEERING, vol.79, no.3, pp.290-313, 2009 (SCI-Expanded)
18. **Frequency analysis of moderately thick uniform isotropic annular plates by discrete singular**

### **convolution method**

CIVALEK O., ERSOY H.

STRUCTURAL ENGINEERING AND MECHANICS, vol.29, no.4, pp.411-422, 2008 (SCI-Expanded)

19. **Vibration analysis of new Galata Bridge - experimental and numerical results**

Bozdağ S. E., Sünbüloğlu E., Ersoy H.

COMPUTERS & STRUCTURES, vol.84, no.5-6, pp.283-292, 2006 (SCI-Expanded)

20. **Design sensitivity analysis of structures based upon the singular value decomposition**

ERSOY H., Muğan A.

COMPUTER METHODS IN APPLIED MECHANICS AND ENGINEERING, vol.191, no.32, pp.3459-3476, 2002 (SCI-Expanded)

### **Articles Published in Other Journals**

1. **Modeling and Solution of Reaction–Diffusion Equations by Using the Quadrature and Singular Convolution Methods**

Ragb O., Salah M., Matbuly M., ERSOY H., CIVALEK Ö.

Arabian Journal for Science and Engineering, vol.48, no.3, pp.4045-4065, 2023 (Scopus)

2. **Strength-Based Design Analysis of a Damaged Engine Mounting Bracket Designed for a Commercial Electric Vehicle**

Celik H. K., ERSOY H., DOĞAN A., Eravci G., Rennie A. E. W., AKINCI İ.

JOURNAL OF FAILURE ANALYSIS AND PREVENTION, vol.21, no.4, pp.1315-1322, 2021 (ESCI)

3. **Small size and rotary inertia effects on the natural frequencies of carbon nanotubes**

ERSOY H., Numanoglu H. M., AKGÖZ B., CIVALEK Ö.

CURVED AND LAYERED STRUCTURES, vol.5, no.1, pp.273-279, 2018 (ESCI)

4. **Free vibration analysis of annular sector plates via conical shell equations**

Demir C., ERSOY H., Mercan K., CIVALEK Ö.

CURVED AND LAYERED STRUCTURES, vol.4, no.1, pp.146-157, 2017 (ESCI)

5. **Vibration analysis of graphene sheets using membrane model**

Demir C., Mercan K., ERSOY H., CIVALEK Ö.

PAMUKKALE UNIVERSITY JOURNAL OF ENGINEERING SCIENCES-PAMUKKALE UNIVERSITESI MUHENDISLIK BILIMLERI DERGISI, vol.23, no.6, pp.652-658, 2017 (ESCI)

6. **Computational design optimization of road speed bumps**

ERSOY H., Kurşun K.

The online journal of Science and Technology, vol.6, no.4, pp.36-41, 2016 (Peer-Reviewed Journal)

7. **Vida-Somun mekanizmalarının dikey taşıma platformlarında kullanımına yönelik tasarım parametrelerinin incelenmesi**

BİLİCİ O., ERSOY H.

Mühendis ve Makina, vol.57, no.680, pp.59-71, 2016 (Peer-Reviewed Journal)

8. **The Effects of Thickness On Frequency Values for Rotating Circular Shells**

MERCAN K., IŞIK Ç., ERSOY H., CIVALEK Ö.

International Journal of Engineering & Applied Sciences, vol.8, no.1, pp.26-37, 2016 (Peer-Reviewed Journal)

9. **Free Vibration of Annular Plates by Discrete Singular Convolution and Differential Quadrature Methods**

Mercan K., ERSOY H., CIVALEK Ö.

JOURNAL OF APPLIED AND COMPUTATIONAL MECHANICS, vol.2, no.3, pp.128-133, 2016 (ESCI)

10. **Dynamic Behaviors of a Two-Cylinder Four-Stroke**

Karabulut H., ERSOY H.

GAZI UNIVERSITY JOURNAL OF SCIENCE, vol.25, no.2, pp.519-532, 2012 (Scopus)

11. **İklimlendirme Sistemlerine Ait Performans Tespitlerinin Akustik Analizlere Göre Yapılması**

ÖZDEMİR L., Ersoy H.

Mühendis Ve Makina Dergisi, vol.52, no.623, pp.50-59, 2011 (Peer-Reviewed Journal)

12. **Free vibration analysis of rectangular membranes with variable density using the discrete singular convolution approach**  
ERSOY H., CİVALEK Ö., Özpolat L.  
Asian Journal of Civil Engineering (Building and Housing), vol.11, no.1, pp.83-94, 2010 (Peer-Reviewed Journal)
13. **Dairesel ve boşluklu dairesel zarların serbest titreşim hesabı**  
ERSOY H., Özpolat L., DEMİR IŞIK Ç., CİVALEK Ö.  
Mühendis Makina, vol.50, no.594, pp.25-32, 2009 (Peer-Reviewed Journal)
14. **Discrete singular convolution method for buckling analysis of rectangular Mindlin plates**  
ERSOY H., CİVALEK Ö., Gürses M.  
The IES Journal Part A: Civil and Structural Engineering, vol.2, no.2, pp.143-152, 2009 (Peer-Reviewed Journal)
15. **Mekân İçi hava hareketlerinin sonlu farklar yöntemi ile modellenmesi**  
Karaoğlu E., ERSOY H.  
Tesisat Mühendisliği Dergisi, no.89, pp.5-11, 2005 (Peer-Reviewed Journal)

## Books & Book Chapters

1. **Cisimlerin Mukavemeti**  
ERSOY H.  
in: Makina Mühendisliğine Giriş, Necdet Geren, Editor, Papatya Bilim Kitabevi, İstanbul, pp.345-368, 2017

## Refereed Congress / Symposium Publications in Proceedings

1. **Large deflection analysis of carbon nanotubes (CNTs) reinforced composite plates using the differential quadrature methods**  
CİVALEK Ö., ERSOY H., MERCAN K.  
5th International Conference on Mechanics of Composites, Lisbon, Portugal, 1 - 04 July 2019, pp.13
2. **Strength and stiffness design of laminates via Singular Values**  
ERSOY H., KURŞUN K.  
3rd International Conference on Mechanics of Composites, Bologna, Italy, 4 - 07 July 2017, pp.66
3. **COMPUTATIONAL DESIGN OPTIMIZATION OF ROAD SPEED BUMPS**  
ERSOY H., KURŞUN K.  
International Science and Technology Conference, St. Petersburg, Russia, 2 - 04 September 2015, pp.747-752
4. **Free vibration analysis of carbon nanotubes based on nonlocal continuum and gradient elasticity theories**  
CİVALEK Ö., AKGÖZ B., ERSOY H.  
6th Nanoscience and Nanotechnology Conference, İzmir, Turkey, pp.705
5. **Mekân İçi hava hareketlerinin sonlu farklar yöntemi ile modellenmesi**  
ERSOY H., Karaoğlu E.  
İklim 2005, Birinci ulusal iklimlendirme kongresi Antalya, Antalya, Turkey, 15 - 18 February 2005, pp.278-284

## Other Publications

1. **Taksim-Bostancı otobüsündeki kadın, (yerli malı kullanımının önemi üzerine bir yazı)**  
ERSOY H.  
Other, pp.15-16, 2006
2. **Sonlu elemanlar metodunun mühendislikteki yeri**  
ERSOY H.

Presentation, pp.12-15, 2002

## Expert Reports

1. **Antalya Havalimanının Gürültü ölçümü**  
ÇETİNKAYA N., PERENDECİ N. A., ERSOY H.  
Havalimanı, pp.5, Antalya, 2016
2. **Antalya Havalimanının Gürültü ölçümü**  
ÇETİNKAYA N., PERENDECİ N. A., ERSOY H.  
Havalimanı, pp.5, Antalya, 2016

## Academic and Administrative Experience

2022 - Continues	<b>Head of Department</b>	Akdeniz University, Faculty Of Engineering, Department of Mechanical Engineering
2004 - 2019	<b>Head of Department</b>	Akdeniz University, Faculty of Engineering, Makina Mühendisliği Bölümü
2008 - 2011	<b>Assistant Director of the Institute</b>	Akdeniz University, Institute of Science, Fen Bilimleri
2004 - 2007	<b>Vice Dean</b>	Akdeniz University, Faculty of Engineering, Makina Mühendisliği Bölümü
2004 - 2007	<b>Deputy Head of Department</b>	Akdeniz University, Faculty of Engineering, Makina Mühendisliği Bölümü

## Courses

Bitirme Çalışması, Undergraduate, 2021 - 2022, 2005 - 2006  
Mühendislik Akustiğine Giriş, Undergraduate, 2021 - 2022, 2020 - 2021  
TDP-Yapay Zeka Uygulamaları, Undergraduate, 2020 - 2021  
Statik, Undergraduate, 2020 - 2021, 2019 - 2020  
Taşıt Tekniği, Undergraduate, 2020 - 2021  
Otomatik Kontrol, Undergraduate, 2021 - 2022, 2020 - 2021  
Dinamik Sistemlerin Bilgisayarda Modellenmesi, Postgraduate, 2019 - 2020  
Sonlu Elemanlar Yöntemi ve Uygulamaları, Postgraduate, 2019 - 2020  
Mukavemet 2, Undergraduate, 2018 - 2019, 2005 - 2006  
Mukavemet 1, Undergraduate, 2018 - 2019, 2004 - 2005  
Cisimlerin Dayanımında Enerji Yöntemleri, Doctorate, 2017 - 2018  
Makina Laboratuvarı, Undergraduate, 2014 - 2015  
Dinamik, Undergraduate, 2014 - 2015  
Seminer, Undergraduate, 2013 - 2014  
Makina Proje, Undergraduate, 2005 - 2006  
Sonlu Elemanlar Yöntemine Giriş , Undergraduate, 2004 - 2005

## Advising Theses

ERSOY H., Vida-Somun Mekanizmalarının, Taşıma Sistemlerinde Kullanımına Yönelik Olarak Optimize Edilmesi Ve Sistemin Dinamik Analizi, Postgraduate, O.Bilici(Student), 2017

ERSOY H., Araç Hızlarının Kontrol Edilmesine Yönelik Olarak Optimum Forma Sahip Hız Banketlerinin Geliştirilmesi, Postgraduate, K.Kurşun(Student), 2015

ERSOY H., Buharlı ısıtma sistemlerinde kullanılan elemanların performans tespitlerinin akustik analizlere göre yapılması, Postgraduate, L.Özdemir(Student), 2013

ERSOY H., Savonius Tipi Rüzgar Çarklarının Verimliliğinin Arttırılması Yollarının Araştırılması, Postgraduate, S.Yalçındağ(Student), 2008

## Metrics

Publication: 48

Citation (WoS): 244

Citation (Scopus): 423

H-Index (WoS): 10

H-Index (Scopus): 10

## Research Areas

Mechanical Engineering, Mechanical, Solid Mechanics, Finite Element Methods, Continuous Mechanics, Engineering and Technology

## Non Academic Experience

Güney Yıldızı ltd.

Business Establishment Private, York-Hsk İklimlendirme Sistemleri

BMW-Kosifler AŞ

Business Establishment Private, BMW Kosifler Oto, Satış sonrası

Business Establishment Private, İstanbul Motor Piston (İMP) ,İzmit, Kalite Kontrol

IMP (Mahle Piston)

Business Establishment Private, Goodyear Lastik Fabrikası İzmit, Arka Traktör Lastiği

Goodyear İzmit Fabrikası

Other Public Institution, 7Nci Kolordu Komutanlığı, Diyarbakır

7 nci Kolordu Komutanlığı, Diyarbakır

Other Public Institution, 2. Hava İkmal Ve Bakım Merkezi , F16 ürün düzeltme

Kayseri Hava İkmal Merkezi