

Prof. OSMAN ERGÜVEN VATANDAŞ

Personal Information

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International Researcher IDs

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Education Information

Doctorate, İstanbul Technical University, Uçak Ve Uzay Bilimleri Fakültesi, Uçak Mühendisliği Bölümü, Turkey 1999 - 2006

Postgraduate, Middle East Technical University, Mühendislik Fakültesi, Havacılık Ve Uzay Mühendisliği Bölümü, Turkey 1996 - 1998

Undergraduate, İstanbul Technical University, Uçak Ve Uzay Bilimleri Fakültesi, Uçak Mühendisliği Bölümü, Turkey 1985 - 1990

Foreign Languages

English, C1 Advanced

Dissertations

Doctorate, Three dimensional shape optimization of bodies subjected to air flow by heuristic algorithms, İstanbul Technical University, Uçak Ve Uzay Bilimleri Fakültesi, Uçak Mühendisliği Bölümü, 2006

Postgraduate, Aerodynamic performance predictions of two and three dimensional configurations by using a finite element package, Middle East Technical University, Mühendislik Fakültesi, Havacılık Ve Uzay Mühendisliği Bölümü, 1998

Research Areas

Aeronautical and Space Engineering, Aeronautical Engineering, Flight Sciences, Aircraft System Technologies, Aerodynamics, Flight Dynamics and Stability, Performance, Vehicle Dynamics and Modeling

Academic Titles / Tasks

Professor, İstanbul Gelisim University, FACULTY OF ENGINEERING AND ARCHITECTURE, AERONAUTICAL ENGINEERING, 2019 - Continues

Professor, İstanbul Gelisim University, Mühendislik-Mimarlık Fakültesi, Mekatronik Mühendisliği Bölümü, 2017 - 2019

Associate Professor, Air War Academy Command, Hava Harp Okulu (Dekanlık), Havacılık Ve Uzay Mühendisliği Bölümü, 2012 - 2017

Assistant Professor, Air War Academy Command, Hava Harp Okulu (Dekanlık), Havacılık Ve Uzay Mühendisliği Bölümü,

2007 - 2012

Lecturer PhD, Air War Academy Command, Hava Harp Okulu (Dekanlık), Havacılık Ve Uzay Mühendisliği Bölümü, 2006 - 2007

Lecturer, Air War Academy Command, Hava Harp Okulu (Dekanlık), Havacılık Ve Uzay Mühendisliği Bölümü, 2001 - 2006

Lecturer, Air War Academy Command, Hava Harp Okulu (Dekanlık), Havacılık Ve Uzay Mühendisliği Bölümü, 1999 - 2000

Academic and Administrative Experience

Head of Department, İstanbul Gelisim University, FACULTY OF ENGINEERING AND ARCHITECTURE, AERONAUTICAL ENGINEERING, 2020 - 2022

Head of Department, İstanbul Gelisim University, SCHOOL OF APPLIED SCIENCES, AIRCRAFT MECHANIC-ENGINE MAINTENANCE, 2018 - 2020

Head of Department, İstanbul Gelisim University, SCHOOL OF APPLIED SCIENCES, AVIATION MANAGEMENT, 2017 - 2020

Director of The Institution, National Defense University, Hezarfen Institute Of Aeronautics And Astronautics, 2016 - 2017

Courses

UÇAK MÜHENDİSLİĞİNE GİRİŞ VE ETİK, Undergraduate, 2021 - 2022, 2019 - 2020

Mühendislikte Sayısal Yöntemler, Postgraduate, 2021 - 2022

Uçuş Mekaniği, Undergraduate, 2021 - 2022

Computational Methods in Engineering, Postgraduate, 2020 - 2021, 2019 - 2020

SİVİL HAVACILIĞA GİRİŞ, Undergraduate, 2019 - 2020

AERODİNAMİK-1, Undergraduate, 2019 - 2020

UÇAK MÜHENDİSLİĞİ VE TASARIM, Undergraduate, 2019 - 2020

HAVACILIK EMNİYETİ, Undergraduate, 2019 - 2020

AERODİNAMİK-2, Undergraduate, 2019 - 2020

AERODİNAMİK-1, Undergraduate, 2018 - 2019, 2017 - 2018

AERODİNAMİK-2, Undergraduate, 2018 - 2019, 2017 - 2018

SİVİL HAVACILIĞA GİRİŞ, Undergraduate, 2018 - 2019, 2017 - 2018

BİLGİSAYAR DESTEKLİ MATEMATİKSEL HESAPLAMA, Undergraduate, 2017 - 2018

AKIŞKANLAR MEKANIĞI, Undergraduate, 2017 - 2018

HAVA ARACI TEMEL BİLGİSİ, Undergraduate, 2017 - 2018

HAVACILIK EMNİYETİ, Undergraduate, 2017 - 2018

Makine Mühendisliğinde Sayısal Yöntemler, Postgraduate, 2016 - 2017, 2015 - 2016, 2014 - 2015

İleri Akışkanlar Mekanığı, Postgraduate, 2016 - 2017, 2015 - 2016

Aerodinamik-I, Undergraduate, 2016 - 2017, 2015 - 2016, 2014 - 2015, 2013 - 2014, 2012 - 2013, 2011 - 2012, 2010 - 2011, 2009 - 2010, 2008 - 2009, 2007 - 2008, 2006 - 2007

AERODİNAMİK-1, Undergraduate, 2016 - 2017

İnsansız Hava Aracı Tasarımı, Postgraduate, 2015 - 2016, 2014 - 2015, 2013 - 2014, 2011 - 2012, 2009 - 2010, 2008 - 2009

Aerodinamik-II, Undergraduate, 2015 - 2016, 2014 - 2015, 2013 - 2014, 2012 - 2013, 2011 - 2012, 2010 - 2011, 2009 - 2010, 2008 - 2009, 2007 - 2008, 2006 - 2007

Sıkıştırılabilir Akış, Postgraduate, 2015 - 2016, 2014 - 2015

Statik, Undergraduate, 2008 - 2009, 2007 - 2008, 2006 - 2007, 2005 - 2006, 2004 - 2005, 2003 - 2004, 2002 - 2003, 2001 - 2002

Advising Theses

- Vatandaş O. E., HİBRİT BİR İNSANSIZ HAVA ARACININ MODELLENMESİ VE KONTROLÜ, Postgraduate, A.CAN(Student), 2023
- Vatandaş O. E., Yeni nesil elektrikli kuyruk rotoru performans incelenmesi, Postgraduate, O.AÇAR(Student), 2023
- OSMAN ERGÜVEN V., Hibrit yakıtlı roket motoru ateşleme ve test düzeneği tasarımı ve üretimi, Postgraduate, M.BURAK(Student), 2019
- OSMAN ERGÜVEN V., İBRAHİM K., CN-235 Casa uçağı kıvrık kanat tasarımının hesaplamalı akışkanlar dinamiği ile incelenmesi, Postgraduate, İ.KARAOĞLU(Student), 2015
- OSMAN ERGÜVEN V., İBRAHİM K., Çeşitli kanat ucu modelleri için sürükleme kuvvetinin azaltılmasının hesaplamalı akışkanlar dinamiği yöntemleri ile incelenmesi, Postgraduate, E.YILDIZ(Student), 2015
- ABDURRAHMAN H., OSMAN ERGÜVEN V., Stewart platform mekanizması çalışma uzay analizi, Doctorate, S.AY(Student), 2013
- OSMAN ERGÜVEN V., Mini insansız hava aracı tasarımı ve üretimi, Postgraduate, Ö.KARAGÖZ(Student), 2011

Published journal articles indexed by SCI, SSCI, and AHCI

- I. **Coupling dynamic mesh technique and heuristic algorithms in 3-D-tapered wing design**
Vatandas E., Özkol İ.
International Journal for Numerical Methods in Engineering, vol.74, no.12, pp.1771-1794, 2008 (SCI-Expanded)
- II. **Vibrational genetic algorithm (VGA) and dynamic mesh in the optimization of 3D wing geometries**
Vatandas E., Hacioglu A., Özkol İ.
Inverse Problems in Science and Engineering, vol.15, no.6, pp.643-657, 2007 (SCI-Expanded)

Articles Published in Other Journals

- I. **On Novel Usage of a Hybrid Method (ANN and GA) for Faster 3-D Aerodynamic Optimization**
VATANDAŞ O. E.
Journal of Aeronautics and Space Technologies, vol.10, no.2, pp.1-6, 2017 (Peer-Reviewed Journal)
- II. **Geometrical and positional optimization of the forward swept lift producing surfaces in 3D flow domains**
Vatandas E.
Aircraft Engineering and Aerospace Technology, vol.79, no.6, pp.635-645, 2007 (Scopus)
- III. **Kanat dizaynında genetik algoritma ve dinamik ağ yöntemlerinin birleştirilmesi**
VATANDAŞ O. E., ÖZKOL İ.
İTÜ DERGİSİ D : Mühendislik, vol.5, no.6, pp.39-48, 2006 (Peer-Reviewed Journal)
- IV. **Dynamic mesh and heuristic algorithms for the design of a transonic wing**
Vatandaş E., Özkol İ.
Aircraft Engineering and Aerospace Technology, vol.78, no.1, pp.39-44, 2006 (Scopus)
- V. **Using the dynamic mesh method for genetically obtained wing structures**
Vatandaş E., Özkol İ., Kaya M. O.
Aircraft Engineering and Aerospace Technology, vol.76, no.3, pp.314-319, 2004 (Scopus)

Books & Book Chapters

- I. **1-7**
Yükselen M. A., Vatandaş O. E.
in: AERODİNAMİKİN ESASLARI (Fundamentals of Aerodynamics çevirisi), Yükselen,M. Adil, Editor, Nobel Yayın

Dağıtım, İstanbul, pp.1-560, 2024

II. **Uluslararası Havacılığın Temelleri**

DÜZGÜN M., KUL R. H., TEZER G., UYANIK H., VATANDAŞ O. E., AYDOĞAN S., ÇOTUKSÖKEN B.

Nobel Akademik Yayıncılık, Ankara, 2019

Refereed Congress / Symposium Publications in Proceedings

- I. **The Proposal to establish the infrastructure of space tourism in Turkey in terms of social sciences and the 'Shel-Uz' model**
GÜNAL Z., VATANDAŞ O. E.
3rd International Congress of New Generations and New Trends in Tourism, Sapanca, Sakarya, 26-28 Ekim 2023.,
Sakarya, Turkey, 26 October 2023
- II. **New Generation Electric Tail Rotor Performance Analyses**
ACAR O., ÖZDEMİR Ö., VATANDAŞ O. E.
10th International Conference on Recent Advances in Space Technologies RAST 2023, İstanbul, 07-09 Haziran
2023., 7 - 09 June 2023
- III. **Aerodynamic performance comparison of V-tail and conventional tail for an unmanned vehicle**
Vatandas O. E., Anteplioglu A.
7th International Conference on Recent Advances in Space Technologies, RAST 2015, İstanbul, Turkey, 16 - 19 June
2015, pp.655-658
- IV. **Improvement of forward swept wing optimization in the compressible flow by using a hybrid method**
Vatandas O. E., Altuntas Y., Celebi M.
7th International Conference on Recent Advances in Space Technologies, RAST 2015, İstanbul, Turkey, 16 - 19 June
2015, pp.21-25
- V. **A Novel Geometrical Method for the Determination of Reachable Workspace of a Planar Stewart platform**
AY S., HACIOĞLU A., VATANDAŞ O. E.
2ND INTERNATIONAL CONFERENCE AND EXHIBITION ON MECHANICAL AND AEROSPACE ENGINEERING 2014,
PHILADELPHIA, United States Of America, 8 September - 10 August 2014, vol.3, pp.76
- VI. **Genetik Algoritma İle Elde Edilen 3 Boyutlu Kanat Modelleri İçin Yeni Ağ Yapılarının Dinamik Ağ Yöntemiyle Bulunması**
VATANDAŞ O. E., ÖZKOL İ.
Kayseri V Havacılık Sempozyumu, Turkey, 14 - 16 May 2014
- VII. **Determination of the Reachable Workspace of 6-3 Stewart Platform Mechanism**
AY S., VATANDAŞ O. E., HACIOĞLU A.
The World Congress on Engineering 2012, Londrina, Brazil, 4 - 06 July 2012
- VIII. **A novel geometrical approach to determining the workspace of 6-3 Stewart Platform Mechanism**
Ay S., Hacioglu A., Vatandas E.
5th International Conference on Recent Advances in Space Technologies, RAST 2011, İstanbul, Turkey, 9 - 11 June
2011, pp.95-100
- IX. **Yeni Bir Geometrik Yaklaşımıla Stewart Platform Mekanizmasının Kinematik İncelemesi**
VATANDAŞ O. E., HACIOĞLU A., AY S.
15. Ulusal Makina Teorisi Sempozyumu, Niğde Üniversitesi, Niğde, 16-18 Haziran 2011, Turkey, 16 - 18 June 2011
- X. **Hybridizing genetic algorithm with artificial neural network in the aerodynamic optimization of the forward swept wing**
Vatandas E.
51st AIAA/ASME/ASCE/AHS/ASC Structures, Structural Dynamics and Materials Conference, Orlando, FL, United
States Of America, 12 - 15 April 2010
- XI. **The effect of radius of joint location on workspace analysis of the 6-6 stewart platform mechanism**

Ay S., Vatandaş O. E., Hacıoğlu A.

4th International Conference on Recent Advances in Space Technologies 2009, RAST '09, İstanbul, Turkey, 11 - 13 June 2009, pp.728-731

XII. Forward Swept Wing Optimization by Using Recent Favorable Numerical Techniques

VATANDAŞ O. E.

49th AIAA/ASME/ASCE/AHS/ASC Structures, Structural Dynamics, and Materials Conference
 16th AIAA/ASME/AHS Adaptive Structures Conference
 10t, Schaumburg, IL, 7 - 10 April 2008

XIII. Combined parallel computing, dynamic mesh and heuristic algorithms in tapered wings

Vatandaş E., Özkol İ.

47th AIAA/ASME/ASCE/AHS/ASC Structures, Structural Dynamics and Materials Conference, Newport, RI, United States Of America, 1 - 04 May 2006, vol.4, pp.2832-2842

XIV. Aerodynamic Optimization of a Transonic Wing by Merging the Dynamic Mesh and Non Gradient Techniques

VATANDAŞ O. E., ÖZKOL İ.

14th CFD Conference, Queen's University, Kingston, Ontario, Canada, 16-18 July 2006, 16 - 18 July 2006

XV. Wing shape optimization by using the dynamic mesh and genetic algorithm

VATANDAŞ O. E., ÖZKOL İ.

Abstract for Third M.I.T. Conference on Computational Fluid and Solid Mechanics, Massachusetts Institute of Technology Cambridge, MA 02139 U.S.A., june 14-17, 2005, 14 - 17 June 2005

XVI. Combining Vibrational Genetic Algorithm VGA and Dynamic Mesh in the Optimization of 3 D Wing Geometries

VATANDAŞ O. E., HACIOĞLU A., ÖZKOL İ.

Finite Element for Flow Problems FEF05 IACM Special Interest Conference supported by ECCOMAS, April 4-6, 2005, Swansea, Wales, UK, 4 - 06 April 2005

XVII. Implementation of Genetic Algorithm on the Design of a Transonic Wing by Using Parallel Processing

VATANDAŞ O. E., NAS S., ÖZKOL İ.

International Conference of Signal Processing, December 15-17, 2004, İstanbul, Turkey, 15 - 17 December 2004

XVIII. Genetik Algoritma ve Dinamik Ağ Yöntemleriyle Kanat Optimizasyonu

VATANDAŞ O. E., ÖZKOL İ.

Havacılıkta İleri Teknolojiler ve Uygulamaları Sempozyumu (HİTEK) 9-10 Aralık 2004, Hava Harp Okulu, İstanbul., Turkey, 9 - 10 December 2004

XIX. On effective combination of heuristic algorithms and dynamic meshes in CFD applications

Vatandaş E., Özkol İ.

2004 ASME/JSME Pressure Vessels and Piping Conference, San Diego, CA, United States Of America, 25 - 29 July 2004, vol.491, pp.17-22

XX. Implementation of the Dynamic Mesh Methods on Genetically Obtained Mesh Structures for 3 D Geometries

VATANDAŞ O. E., KAYA M. O., İBRAHİM Ö.

Geometries" Proceedings of International Congress on Evolutionary Methods for Design, Optimization and Control with Applications to Industrial Problems, EUROGEN'03, Barcelona, Spain 2003, 19 - 22 May 2003