

Lect. PhD MUSTAFA ŞAHİN

Personal Information

Email: musahin@metu.edu.tr

Other Email: musahin33@gmail.com

Web: <https://avesis.metu.edu.tr/musahin>

Address: Orta Doğu Teknik Üniversitesi, Rüzgar Enerjisi Teknolojileri Araştırma ve Uygulama Merkezi (RÜZGEM) Üniversitele Mahallesi, Dumlupınar Bulvarı No:1 06800 Çankaya Ankara/TÜRKİYE

International Researcher IDs

ScholarID: L917lw8AAAAJ

ORCID: 0000-0002-3670-5796

Publons / Web Of Science ResearcherID: AGG-6902-2022

ScopusID: 57222620321

Yoksis Researcher ID: 143397

Education Information

Doctorate, Middle East Technical University, Graduate School of Natural and Applied Sciences, Havacılık ve Uzak Mühendisliği ABD, Turkey 2012 - 2018

Undergraduate, Middle East Technical University, Faculty of Engineering, Department of Aerospace Engineering, Turkey 2011 - 2012

Postgraduate, Erciyes University, Fen Bilimleri Enstitüsü, Sivil Havacılık ABD, Turkey 2009 - 2011

Undergraduate, Erciyes University, Havacılık Ve Uzak Bilimleri Fakültesi, Havacılık Elektrik-Elektronik Bölümü, Turkey 2005 - 2009

Foreign Languages

English, C1 Advanced

Certificates, Courses and Trainings

Vocational Training, Programlanabilir Lojik Kontrol (PLC) SIMATIC S71200 İleri ve Analog Programlama Sertifikası, Siemens, 2015

Vocational Training, Programlanabilir Lojik Kontrol (PLC) SIMATIC S71200 Temel Seviye, Siemens , 2015

Quality Management, Kuruluş İçi Kalite Denetimi Semineri Başarı Belgesi (ISO 9001:2008 Standardı), Makina Mühendisleri Odası, 2012

Quality Management, Kalite Yönetim Sistemleri Temel Bilgilendirme Semineri, Makina Mühendisleri Odası, 2012

Vocational Course, Model Uçak Pilotluk Sertifikası (R/C), Türk Hava Kurumu, 2011

Vocational Course, Serbest Uçuş Rehber Öğretmenlik Sertifikası, Türk Hava Kurumu, 2010

Vocational Training, Company Procedures and Forms, My Teknik Aircraft MRO Services, 2009

Vocational Training, Aircraft Fuel Tank Safety, My Technic Aircraft MRO Services, 2009

Vocational Training, Aircraft Maintenance Human Factor, My Technic Aircraft MRO Services, 2009

Vocational Training, Introduction to Civil Aviation, My Technic Aircraft MRO Services, 2009

Vocational Training, My Technic Orientation , My Technic Aircraft MRO Services, 2009

Security, Sivil Havacılık Güvenliđi Eđitimi, Devlet Hava Meydanları İřletmesi, 2009
Vocational Course, THY Staj Tamamlama Belgesi, Trk Hava Yolları Teknik AŐ, 2007
Vocational Training, İřyeri Ama Belgesi, Erdemli Mesleki Eđitim Merkezi, 2004

Dissertations

Doctorate, Dynamic modeling, control and adaptive envelope protection system for horizontal axis wind turbines, Middle East Technical University, Graduate School of Natural and Applied Sciences, Graduate School of Natural and Applied Sciences, 2018
Postgraduate, Sabit kanatlı mini insansız hava aracının geliřtirilmesi ve ađaçlandırma alıřmalarında kullanımı, Erciyes University, Fen Bilimleri Enstits, Sivil Havacılık Anabilim Dalı, 2011

Research Areas

Aeronautical and Space Engineering, Engineering and Technology

Academic Titles / Tasks

Lecturer PhD, Middle East Technical University, Presidency Office, Presidency Office, 2018 - Continues
Research Assistant, Middle East Technical University, Faculty of Engineering, Department of Aerospace Engineering, 2013 - 2018
Lecturer, University Of Turkish Aeronautical Association, İzmır Aviation Vocational School, Department Of Motor Vehicles And Transportation Technologies, 2012 - 2013
Lecturer, Erzincan Binalı Yıldırım University, Ali Cavit elebiođlu Sivil Havacılık Yksekokulu, Havacılık Ynetimi Blm, 2009 - 2012

Academic and Administrative Experience

Head of Department, University Of Turkish Aeronautical Association, İzmır Aviation Vocational School, Department Of Motor Vehicles And Transportation Technologies, 2012 - 2013

Courses

Temel Elektrik, Associate Degree, 2012 - 2013
Havacılık Kanunları, Associate Degree, 2012 - 2013
Flight Theory and Fundamentals of Aircraft, Undergraduate, 2011 - 2012
Elektromekanik, Associate Degree, 2010 - 2011
Introduction to Civil Aviation, Undergraduate, 2011 - 2012

Taught Courses And Trainings

Őahin M., THY Teknik A.Ő.-İŐKUR-THK niversitesi İřbirliđi-Uak Gvde Motor Teknik Personeli Yetiřtirme Kursu (6 ay), 2012 - 2013

Designed Programs

Şahin M., Associate Degree, Uçak Teknolojisi Programı, 2012 - 2012
Şahin M., Associate Degree, Uçak Teknolojisi Programı, 2011 - 2011
Şahin M., Undergraduate, Havacılık Elektrik Elektronik Bölümü, 2011 - 2011
Şahin M., Undergraduate, Uçak Gövde Motor Bölümü, 2011 - 2011

Published journal articles indexed by SCI, SSCI, and AHCI

- I. **The impacts of atmospheric icing on performance and behavior of a controlled large-scale wind turbine**
ŞAHİN M., Farsadi T.
Journal of Renewable and Sustainable Energy, vol.15, no.6, 2023 (SCI-Expanded)
- II. **Adaptive envelope protection control of wind turbines under varying operational conditions**
ŞAHİN M., YAVRUCUK İ.
Energy, vol.247, 2022 (SCI-Expanded)

Articles Published in Other Journals

- I. **Yenilikçi Uyarlanabilir Bir Zarf Koruma Sisteminin Farklı Rüzgar Türbinleri Üzerindeki Etkinliğinin İncelenmesi**
Şahin M., Yavrucuk I.
Mühendis ve Makina, vol.64, no.710, pp.153-174, 2023 (Peer-Reviewed Journal)
- II. **MS (Mustafa Sahin) Bladed Rüzgar Türbin Simülasyon Modeli ve Bazı Önemli Yetenekleri**
Şahin M.
EMO Bilimsel Dergi, vol.2021, pp.1-12, 2021 (Peer-Reviewed Journal)
- III. **Adaptive Envelope Protection Control for the below and above Rated Regions of Wind Turbines**
Şahin M., Yavrucuk İ.
International Journal of Energy and Power Engineering, vol.14, no.10, pp.275-283, 2020 (Peer-Reviewed Journal)
- IV. **Toros Sedirinin İnsansız Hava Aracıyla Ekilmesi**
ŞAHİN M., YILDIRIM M. T.
Doğa Bilimleri Dergisi, pp.205-246, 2012 (Peer-Reviewed Journal)
- V. **Uçaklar Neden 400 Hz Elektrik Enerjisi Kullanır?**
ŞAHİN M.
SIWEP HAVACILIK DERGISI, no.37, pp.15-17, 2010 (Non Peer-Reviewed Journal)

Books & Book Chapters

- I. **Wind Turbine Controller Design**
Şahin M., Yavrucuk I.
in: Wind Turbines; Technology, Applications and Efficiency, David Borge-Diez, Daniel Icaza, Editor, NOVA Science Publishers Inc. , New York, pp.35-66, 2022
- II. **Mathematical Modeling of Wind Turbines**
Şahin M., Yavrucuk I.
in: Wind Turbines; Technology, Applications and Efficiency, David Borge-Diez, Daniel Icaza, Editor, NOVA Science Publishers Inc. , New York, pp.1-33, 2022

Refereed Congress / Symposium Publications in Proceedings

- I. **Operation of Turbine Blade Pitch Controller under Different Icing Conditions and Wind Speeds**
Şahin M.
9th International Conference on Renewable Energy and Conservation, Rome, Italy, 22 - 24 November 2024, pp.1-8
- II. **Effects of Atmospheric Icing on Performance of Controlled Wind Turbine**
Şahin M.
IOP Conference Series: Earth and Environmental Science, Volume 1121, 2022 8th International Conference on Environment and Renewable Energy 25/02/2022 - 27/02/2022 Hanoi, Vietnam, Ha-Noi, Vietnam, 25 - 27 February 2022, vol.1121, pp.1-9
- III. **Wind Turbine Modeling and Challenges**
Şahin M.
2nd International Conference and Exhibition on Aerospace and Aeronautical Engineering , 27 - 29 September 2021, pp.1
- IV. **Rüzgar Türbinleri için Yenilikçi Uyarlanabilir bir Zarf Koruma Sisteminin Geliştirilmesi ve Farklı Rotor Çaplarındaki Türbinler Üzerinde Simülasyon Testleri**
ŞAHİN M., YAVRUCUK İ.
6. İzmir Rüzgar Sempozyumu, İzmir, Turkey, 23 September 2021
- V. **An Algorithm for Wind Turbine Protection under Iced Rotor Blades**
ŞAHİN M., YAVRUCUK İ.
11th Ankara International Aerospace Conference, Ankara, Turkey, 08 September 2021
- VI. **Adaptive Envelope Protection Control for the Below and Above Rated Regions of Wind Turbines, BEST PAPER AWARD**
ŞAHİN M., YAVRUCUK İ.
XIV International Conference on Wind Energy Engineering and Applications, Paris, France, 27 - 28 August 2020
- VII. **MS Bladed Rüzgar Türbin Simülasyon Modeli ve Bazı Örnek Uygulamalar**
ŞAHİN M.
10. Yenilenebilir Enerji Sempozyumu ve Sergisi (YEKSEM 2019), Antalya, Turkey, 12 - 14 December 2019
- VIII. **Rüzgar Türbinini Kanat Yunuslama Açısı Kontrolcüsü Tasarımı Ve Performans Analizi**
ŞAHİN M., YAVRUCUK İ.
5. İzmir Rüzgar Sempozyumu, İzmir, Turkey, 3 - 05 October 2019
- IX. **Performance Comparison of two turbine blade pitch controller design methods based on equilibrium and frozen wake assumption,**
ŞAHİN M., YAVRUCUK İ.
10th ANKARA INTERNATIONAL AEROSPACE CONFERENCE (AIAC 2019), Ankara, Turkey, 18 - 20 September 2019
- X. **Rüzgar Türbinlerinin Dinamik Modellenmesinde Belirli Parametrelerin Güç Eğrisi Tahminine Etkilerinin İncelenmesi**
ŞAHİN M., YAVRUCUK İ.
9. Yenilenebilir Enerji Kaynakları Sempozyumu ve Sergisi, Antalya, Turkey, 03 November 2017
- XI. **Dynamical Modeling of a Horizontal Axis Wind Turbine System with Precone and Tilt Angles**
ŞAHİN M., YAVRUCUK İ.
9TH ANKARA INTERNATIONAL AEROSPACE CONFERENCE (AIAC 2017), Ankara, Turkey, 20 - 22 September 2017
- XII. **Değişken Hızlı Rüzgar Türbinlerinin Kısmı ve Tam Yük Bölgeleri için Kontrolcü Tasarımı**
ŞAHİN M., YAVRUCUK İ.
9. YENİLENEBİLİR ENERJİ KAYNAKLARI SEMPOZYUMU VE SERGİSİ, Antalya, Turkey, 3 - 05 November 2017
- XIII. **Performance Analysis of a Micro-scale Model Helicopter Rotor in Hover Flight**
ŞAHİN M., KURTULUŞ D. F.
8TH ANKARA INTERNATIONAL AEROSPACE CONFERENCE (AIAC 2015), Ankara, Turkey, 10 - 12 September 2015
- XIV. **An Extensive Structural Maintenance Problem caused by Corrosion on an Aircraft'**
ŞAHİN M., EKİCİ M.
7TH ANKARA INTERNATIONAL AEROSPACE CONFERENCE (AIAC 2011), Ankara, Turkey, 11 - 13 September 2013
- XV. **Boeing 737-300 Tipi Yolcu Uçağında Gerçekleştirilen Korozyon Kaynaklı Büyük Çaplı Yapısal Tamir**

Örneği

ŞAHİN M., EKİCİ M.

ULUSAL HAVACILIK VE UZAY KONFERANSI (UHUK 2012), İstanbul, Turkey, 12 - 14 September 2012

XVI. **Toros Sedirinin İnsansız Hava Aracıyla Ekilmesi" I. Akdeniz Orman ve Çevre Sempozyumu**

ŞAHİN M., YILDIRIM M. T.

I. AKDENİZ ORMAN VE ÇEVRE SEMPOZYUMU, Kahramanmaraş, Turkey, 26 - 28 October 2011

XVII. **Application of a Fixed-Wing Unmanned Aerial Vehicle (UAV) in Reforestation of Lebanon Cedar (Cedrus Libani A. Rich)**

ŞAHİN M., YILDIRIM M. T.

6TH ANKARA INTERNATIONAL AEROSPACE CONFERENCE, 14 - 16 September 2011

Scientific Refereeing

Journal of Energy Research and Reviews, Other Indexed Journal, June 2023

Düzce Üniversitesi Bilim ve Teknoloji Dergisi, National Scientific Refreed Journal, March 2023

JOURNAL OF RENEWABLE AND SUSTAINABLE ENERGY, Journal Indexed in SCI-E, December 2022

International Journal of Engineering and Technology Innovation, Journal Indexed in ESCI, April 2022

International Journal of Aeronautics and Astronautics, Other Indexed Journal, December 2021

TURKISH JOURNAL OF ENGINEERING, National Scientific Refreed Journal, January 2021

Journal of Aviation, Other Indexed Journal, August 2020

JOURNAL OF AEROSPACE ENGINEERING, Journal Indexed in SCI-E, October 2019

Tasks In Event Organizations

Şahin M., 9th International Conference on Renewable Energy and Conservation (ICREC 2024), Scientific Congress, Rome, Italy, Kasım 2024

Şahin M., 8th International Conference on Environment and Renewable Energy, ICERE 2022, Scientific Congress, Ha-Noi, Vietnam, Şubat 2022

Şahin M., 10th Symposium and Exhibition on Renewable Energy , Scientific Congress, Antalya, Turkey, Aralık 2019

Metrics

Publication: 26

Citation (WoS): 7

Citation (Scopus): 9

H-Index (WoS): 1

H-Index (Scopus): 1

Congress and Symposium Activities

2th International Conference on Aerospace and Aeronautical Engineering, AEROSPACE 2021, Invited Speaker, Lyon, France, 2021

6. İzmir Rüzgar Sempozyumu, Panelists, İzmir, Turkey, 2021

11th Ankara International Aerospace Conference, AIAC 2021, Panelists, Ankara, Turkey, 2021

14th International Conference on Wind Energy Engineering and Applications, ICWEEA 2020, Panelists, Paris, France, 2020

10. Yenilenebilir Enerji Sempozyumu ve Sergisi, YEKSEM 2019, Panelists, Antalya, Turkey, 2019

10. Yenilenebilir Enerji Sempozyumu ve Sergisi, YEKSEM 2019, Working Group, Antalya, Turkey, 2019

5. İzmir Rüzgar Sempozyumu, Panelists, İzmir, Turkey, 2019
10th Ankara International Aerospace Conference, AIAC 2019, Panelists, Ankara, Turkey, 2019
9. Yenilenebilir Enerji Kaynakları Sempozyumu ve Sergisi, YEKSEM 2017, Panelists, Antalya, Turkey, 2017
9. Yenilenebilir Enerji Kaynakları Sempozyumu ve Sergisi, YEKSEM 2017, Panelists, Antalya, Turkey, 2017
9th Ankara International Aerospace Conference, AIAC 2017, Panelists, Ankara, Turkey, 2017
8th Ankara International Aerospace Conference, AIAC 2015, Panelists, Ankara, Turkey, 2015
7. Savunma Teknolojileri Kongresi, SAVTEK 2014, Attendee, Ankara, Turkey, 2014
7th Ankara International Aerospace Conference, AIAC 2013, Panelists, Ankara, Turkey, 2013
1. Ulusal Akdeniz Orman ve Çevre Sempozyumu, Panelists, Kahramanmaraş, Turkey, 2011
6th Ankara International Aerospace Conference, AIAC 2011, Panelists, Ankara, Turkey, 2011
Eastern Anatolia Conference on EFL, Working Group, Erzincan, Turkey, 2011

Invited Talks

2nd International Conference on Aerospace and Aeronautical Engineering, Conference, Olcinternational, France, September 2021

Awards

Şahin M., Yavrucuk İ., Best Paper Award, Committee Of Xiv International Conference On Wind Energy Engineering And Applications, August 2020

Representation and Promotion Activities

Institutional Promotion, Erzincan Üniversitesi, Turkey, Erzincan, 2010 - 2010

Non Academic Experience

My Technic Aircraft MRO Services

Arven Endüstri AŞ

Yıldırım Elektrik

Özen Elektrik

Yıldırım Elektrik