

Prof. SERKAN ÖZGEN

Personal Information

Office Phone: [+90 312 210 2472](tel:+903122102472)

Email: sozgen@metu.edu.tr

Other Email: serkan.ozgen@ae.metu.edu.tr

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

Address: Middle East Technical University, Dept. Aerospace Eng.
Üniversiteler Mahallesi, Dumlupınar Bulvarı No:1 06800, Çankaya, Ankara,
Turkey

International Researcher IDs

ScholarID: YmdDxfIAAAAJ

ORCID: 0000-0002-2373-132X

Publons / Web Of Science ResearcherID: ABA-6234-2020

ScopusID: 7004707578

Yoksis Researcher ID: 100529



Education Information

1995 - 1999	Doctorate, Universite Libre de Bruxelles, Faculté Des Sciences Appliquées, Aerospace, Belgium
1994 - 1995	Postgraduate, Von Karman Institute, Aerospace, Belgium
1992 - 1994	Postgraduate, Middle East Technical University, Graduate School of Natural and Applied Sciences, Department of Aerospace Engineering, Turkey
1987 - 1992	Undergraduate, Middle East Technical University, Faculty of Engineering, Department of Aerospace Engineering, Turkey

Foreign Languages

French, B2 Upper Intermediate English, C1 Advanced

Certificates, Courses and Trainings

2015	CS-29 Large Rotorcraft Certification - Introduction, Vocational Training, Joint Aviation Authorities Training Organisation
2014	Basic Annex Part 21 Training Course, Vocational Training, Joint Aviation Authorities Training Organisation

Dissertations

1999	Two-layer flow stability in Newtonian and non-Newtonian fluids, Université Libre De Bruxelles, Faculté Des Sciences Appliquées, Doctorate
1995	Stability of parallel non-Newtonian flows, Von Karman Institute, Aerospace Department, Postgraduate

1994 Interactive boundary layer calculation over and airfoil and its resulting wake, Middle East Technical University, Graduate School of Natural and Applied Sciences, Havacılık Mühendisliği (Y) (Tezli), Postgraduate

Research Areas

Atmospheric Dynamics and Thermodynamics, Cloud Physics, Aeronautical Engineering, Aerodynamics, Flight Dynamics and Stability, Performance, Engineering and Technology

Academic Titles / Tasks

2009 - Continues	Professor, Middle East Technical University, Faculty of Engineering, Department of Aerospace Engineering
2007 - 2009	Associate Professor, Middle East Technical University, Faculty of Engineering, Department of Aerospace Engineering
2000 - 2007	Assistant Professor, Middle East Technical University, Faculty of Engineering, Department of Aerospace Engineering
2000 - 2000	Lecturer, Middle East Technical University, Faculty of Engineering, Department of Aerospace Engineering
1992 - 1994	Research Assistant, Middle East Technical University, Faculty of Engineering, Department of Aerospace Engineering

Academic and Administrative Experience

2021 - Continues	Head of Department, Middle East Technical University, Faculty of Engineering, Department of Aerospace Engineering
2009 - 2012	Vice Dean, Middle East Technical University, Faculty of Engineering
2003 - 2006	University Executive Board Member, Middle East Technical University, Faculty of Engineering
2001 - 2006	Deputy Head of Department, Middle East Technical University, Faculty of Engineering, Department of Aerospace Engineering

Published journal articles indexed by SCI, SSCI, and AHCI

- I. **Improvement in the spring analogy mesh deformation method through the cell-center concept**
Yang Y., Özgen S., Kim H.
Aerospace Science and Technology, vol.115, 2021 (SCI-Expanded)
- II. **Aerodynamic validation studies on the performance analysis of iced wind turbine blades**
YIRTICI Ö., Cengiz K., ÖZGEN S., TUNCER İ. H.
COMPUTERS & FLUIDS, vol.192, 2019 (SCI-Expanded)
- III. **Predictions of ice formations on wind turbine blades and power production losses due to icing**
YIRTICI Ö., ÖZGEN S., TUNCER İ. H.
WIND ENERGY, vol.22, no.7, pp.945-958, 2019 (SCI-Expanded)
- IV. **In-flight ice accretion simulation in mixed-phase conditions**
Ayan E., ÖZGEN S.
AERONAUTICAL JOURNAL, vol.122, no.1249, pp.409-441, 2018 (SCI-Expanded)
- V. **Morphing wing optimization for steady level flight**
Korpe D. S., ÖZGEN S.
PROCEEDINGS OF THE INSTITUTION OF MECHANICAL ENGINEERS PART G-JOURNAL OF AEROSPACE

ENGINEERING, vol.231, no.13, pp.2317-2330, 2017 (SCI-Expanded)

- VI. **Structural and aerodynamic analyses of a hybrid trailing edge control surface of a fully morphing wing**
Gürses E., Tunçöz I. O., Yang Y., Arslan P., Kalkan U., Tıraş H., Şahin M., Özgen S., Yaman Y.
JOURNAL OF INTELLIGENT MATERIAL SYSTEMS AND STRUCTURES, vol.28, pp.979-991, 2017 (SCI-Expanded)
- VII. **Investigation of the Linear Stability Problem of Electrified Jets, Inviscid Analysis**
ÖZGEN S., UZOL O.
JOURNAL OF FLUIDS ENGINEERING-TRANSACTIONS OF THE ASME, vol.134, no.9, 2012 (SCI-Expanded)
- VIII. **In-flight Ice formation simulation on finite wings and air intakes**
ÖZGEN S., Canibek M.
AERONAUTICAL JOURNAL, vol.116, no.1178, pp.337-362, 2012 (SCI-Expanded)
- IX. **Crosslinked DADMAC polymers as cationic super absorbents**
Korpe S., Erdogan B., BAYRAM G., ÖZGEN S., ULUDAĞ Y., Bıcağ N.
REACTIVE & FUNCTIONAL POLYMERS, vol.69, no.9, pp.660-665, 2009 (SCI-Expanded)
- X. **Ice accretion simulation on multi-element airfoils using extended Messinger model**
ÖZGEN S., Canibek M.
HEAT AND MASS TRANSFER, vol.45, no.3, pp.305-322, 2009 (SCI-Expanded)
- XI. **Coalescence of Tollmien-Schlichting and interfacial modes of instability in two-fluid flows**
Ozgen S.
PHYSICS OF FLUIDS, vol.20, no.4, 2008 (SCI-Expanded)
- XII. **Linear stability analysis in compressible, flat-plate boundary-layers**
ÖZGEN S., Kircali S. A.
THEORETICAL AND COMPUTATIONAL FLUID DYNAMICS, vol.22, no.1, pp.1-20, 2008 (SCI-Expanded)
- XIII. **Heat transfer effects on the stability of low speed plane Couette-Poiseuille flow**
Oezgen S., Dursunkaya Z., Ebrinc A. A.
HEAT AND MASS TRANSFER, vol.43, no.12, pp.1317-1328, 2007 (SCI-Expanded)
- XIV. **Effect of heat transfer on stability and transition characteristics of boundary-layers**
Ozgen S.
INTERNATIONAL JOURNAL OF HEAT AND MASS TRANSFER, vol.47, no.22, pp.4697-4712, 2004 (SCI-Expanded)
- XV. **Experimental study of wave characteristics on a thin layer of de/anti-icing fluid**
Ozgen S., Carbonaro M., Sarma G.
PHYSICS OF FLUIDS, vol.14, no.10, pp.3391-3402, 2002 (SCI-Expanded)
- XVI. **Two-fluid boundary layer stability**
Ozgen S., Degrez G., Sarma G.
PHYSICS OF FLUIDS, vol.10, no.11, pp.2746-2757, 1998 (SCI-Expanded)
- XVII. **Stability of parallel non-newtonian flows**
Ozgen S., Sarma G.
ZEITSCHRIFT FUR ANGEWANDTE MATHEMATIK UND MECHANIK, vol.77, 1997 (SCI-Expanded)

Articles Published in Other Journals

- I. **Effect of blade contamination on power production of wind turbines**
Özgen S., Sarıbel E. B., Yaman A. R.
JOURNAL OF PHYSICS: CONFERENCE SERIES, vol.2265, pp.1-10, 2022 (Peer-Reviewed Journal)
- II. **PREDICTION OF ICE ACCRETION SHAPES ON AIRCRAFT WINGS USING OPEN-SOURCE SOFTWARE**
Edeeb S., Akay H. U., ÖZGEN S.
ARPN Journal of Engineering and Applied Sciences, vol.16, no.20, pp.2043-2053, 2021 (Scopus)
- III. **Decamber Morphing Concepts by Using a Hybrid Trailing Edge Control Surface**
Yaman Y., Tuncoz I. O., Yang Y., Arslan P., Kalkan U., Tıraş H., Gürses E., Şahin M., Özgen S.
AEROSPACE, vol.2, pp.482-504, 2015 (ESCI)

Books & Book Chapters

- I. **Comparison of Various Spring Analogy Related Mesh Deformation Techniques in Two-Dimensional Airfoil Design Optimization**
ÖZGEN S., Yang Y.
in: EUCASS Progress in Flight Physics Vol. 9, Doyle Knight, Yevgeniy Bondar, Igor Lipatov, Phillippe Reijasse, Editor, EDP Sciences , Moskva, pp.337-352, 2017
- II. **In-flight Icing Simulations on Airfoils**
UĞUR N., ÖZGEN S., GÖRGÜLÜ İ., TATAR V.
in: Sustainable Aviation, T. Hikmet Karakoç, Can Özgür Çolpan, M. barış Özerdem, Önder Altuntaş, M. Ziya Söğüt, Emin Açikkalp , Editor, Springer, pp.279-289, 2016

Expert Reports

- I. **Expert Report submitted to Arbitration ICC Case No. 27103/PAR**
Özgen S., Kayran A.
International Court of Arbitration, pp.151, Geneve, 2023

Non Academic Experience

2018 - 2021	Company, Turkish Aerospace, Turkish National Fighter Project
2007 - 2008	Company, Turkish Aerospace, Basic and Advanced Training Aircraft