

## Res. Asst. KEMAL KOCA

### Personal Information

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### International Researcher IDs

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Publons / Web Of Science ResearcherID: C-1506-2018

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### Education Information

Doctorate, Universitaet der Bundeswehr München, Institut für Strömungsmechanik und Aerodynamik, Fakultät für Luft- und Raumfahrttechnik, Germany 2021 - Continues

Doctorate, Erciyes University, Fen Bilimleri Enstitüsü, --, Turkey 2017 - Continues

Postgraduate, Erciyes University, Mühendislik Fakültesi, Enerji Sistemleri Mühendisliği Abd, Turkey 2014 - 2016

Undergraduate, Yildiz Technical University, Faculty Of Mechanical Engineering, Department Of Mechanical Engineering, Turkey 2007 - 2012

### Foreign Languages

English, B2 Upper Intermediate

Spanish, B2 Upper Intermediate

### Certificates, Courses and Trainings

Education Management and Planning, The Training Course of Introduction to ANSYS Dynamic Analyze and ANSYS ACP (CFD), Anova-Ankara/Turkey, 2016

Education Management and Planning, The Training Course of Introduction to ANSYS Thermal and FSI Analysis (CFD), Anova-Ankara/Turkey, 2016

Education Management and Planning, Intensive Course on Installation, Operation and Maintenance of Particle Image Velocimetry (PIV), The Dantec Dynamics-Denmark, 2016

Education Management and Planning, The Training Course of Introduction to ANSYS MECHANICAL (CFD), Anova-Ankara/Turkey, 2016

Education Management and Planning, The Training Course of Introduction to ANSYS FLUENT (CFD), Anova-Ankara/Turkey, 2016

Foreign Language, Formación Inicial de Profesores de Español/ Lengua Extranjera., Instituto Cervantes de Estambul, 2009

### Dissertations

Postgraduate, Rüzgar Türbini Kanadı Etrafındaki Akışın Pürüzlülük Elemanları ile Kontrolü, Erciyes Üniversitesi, Enerji Sistemleri Mühendisliği, Enerji Sistemleri Mühendisliği Abd, 2016

## Research Areas

Technical Sciences, Mechanical Engineering, Energy, Fluid Mechanics, Solar energy, Geothermal energy, Wind power

## Academic Titles / Tasks

Research Assistant, Universitaet der Bundeswehr München, Universitaet der Bundeswehr München, Institut für Strömungsmechanik und Aerodynamik, Fakultät für Luft-und Raumfahrttechnik, 2021 - Continues

Research Assistant, Erciyes University, Mühendislik Fakültesi, Enerji Sistemleri Mühendisliği, 2014 - Continues

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

- I. **Passive Flow Control Application Using Single and Double Vortex Generator on S809 Wind Turbine Airfoil**  
Özden M., GENÇ M. S., KOCA K.  
Energies, vol.16, no.14, 2023 (SCI-Expanded)
- II. **Experimental flow control investigation over suction surface of turbine blade with local surface passive oscillation**  
Koca K., Genç M. S., Veerasamy D., Ozden M.  
OCEAN ENGINEERING, vol.266, 2022 (SCI-Expanded)
- III. **Evaluating environmental commitments to COP21 and the role of economic complexity, renewable energy, financial development, urbanization, and energy innovation: Empirical evidence from the RCEP countries**  
Bashir M. F., Ma B., Hussain H. I., Shahbaz M., KOCA K., Shahzadi I.  
RENEWABLE ENERGY, vol.184, 2022 (SCI-Expanded)
- IV. **Experimental study of the wind turbine airfoil with the local flexibility at different locations for more energy output**  
Koca K., GENÇ M. S., Bayir E., Soguksu F. K.  
ENERGY, vol.239, 2022 (SCI-Expanded)
- V. **Suitable site selection for offshore wind farms in Turkey's seas: GIS-MCDM based approach**  
Genç M. S., Karipoglu F., Koca K., Azgın Ş. T.  
EARTH SCIENCE INFORMATICS, vol.14, no.3, pp.1213-1225, 2021 (SCI-Expanded)
- VI. **Effect of partial flexibility over both upper and lower surfaces to flow over wind turbine airfoil**  
Genç M. S., Açikel H. H., Koca K.  
Energy Conversion and Management, vol.219, 2020 (SCI-Expanded)
- VII. **A review of the legal framework in shallow geothermal energy in selected European countries: Need for guidelines**  
Tsagarakis K. P., Efthymiou L., Michopoulos A., Mavragani A., Anđelković A. S., Antolini F., Bacic M., Bajare D., Baralis M., Bogusz W., et al.  
Renewable Energy, vol.147, pp.2556-2571, 2020 (SCI-Expanded)
- VIII. **Investigation of pre-stall flow control on wind turbine blade airfoil using roughness element**  
Genç M. S., Koca K., Açikel H. H.  
Energy, vol.176, pp.320-334, 2019 (SCI-Expanded)
- IX. **Identification of flow phenomena over NACA 4412 wind turbine airfoil at low Reynolds numbers and role of laminar separation bubble on flow evolution**  
KOCA K., GENÇ M. S., AÇIKEL H. H., ÇAĞDAŞ M., BODUR T. M.  
ENERGY, vol.144, pp.750-764, 2018 (SCI-Expanded)

## Articles Published in Other Journals

- I. **ELECTRICITY PRODUCTION FROM PIEZOELECTRIC PATCHES MOUNTED OVER FLEXIBLE MEMBRANE WING AT LOW REYNOLDS NUMBERS**  
Bayramoglu N., GENÇ M. S., Koca K., Altunal A.  
SIGMA JOURNAL OF ENGINEERING AND NATURAL SCIENCES-SIGMA MUHENDISLIK VE FEN BILIMLERI DERGISI, vol.39, no.1, pp.70-79, 2021 (ESCI)
- II. **IMPROVEMENT OF MECHANICAL BEHAVIOUR OF WIND TURBINE BLADE USING NANOFUID-GRAPHENE AND/OR GLASS FIBER IN EPOXY RESIN**  
Erguner A., Ozkan R., Koca K., GENÇ M. S.  
SIGMA JOURNAL OF ENGINEERING AND NATURAL SCIENCES-SIGMA MUHENDISLIK VE FEN BILIMLERI DERGISI, vol.39, no.1, pp.58-69, 2021 (ESCI)
- III. **Determination of the most appropriate site selection of wind power plants based geographic information system and multi-criteria decision-making approach in develi, Turkey**  
Karipoğlu F., GENÇ M. S., KOCA K.  
International Journal of Sustainable Energy Planning and Management, vol.30, pp.97-114, 2021 (Scopus)
- IV. **EFFECTS OF 2019 NOVEL CORONAVIRUS (COVID-19) OUTBREAK ON GLOBAL ENERGY DEMAND AND THE ELECTRICITY PRODUCTION WITH RENEWABLES: A COMPREHENSIVE SURVEY**  
KOCA K., GENÇ M. S.  
SIGMA JOURNAL OF ENGINEERING AND NATURAL SCIENCES-SIGMA MUHENDISLIK VE FEN BILIMLERI DERGISI, vol.38, no.3, pp.1369-1380, 2020 (ESCI)
- V. **Effects of thickness and camber ratio on flow characteristics over airfoils**  
Karasu I., AÇIKEL H. H., KOCA K., GENÇ M. S.  
Journal of Thermal Engineering, vol.6, no.3, pp.242-252, 2020 (ESCI)
- VI. **Experimental Investigation of Surface Roughness Effect over Wind Turbine Airfoil**  
Koca K., Genç M. S., Açikel H. H.  
Çukurova Üniversitesi Mühendislik Mimarlık Fakültesi Dergisi, vol.31, pp.127-133, 2016 (Peer-Reviewed Journal)

## Refereed Congress / Symposium Publications in Proceedings

- I. **A Numerical Study on Flow Control at Bumpy Airfoils**  
DEMİR H., KOCA K., ÖZDEN M., GENÇ M. S., KARASU İ., ÖZKAN R.  
First International Conference on Energy Systems Engineering, Karabük, Turkey, 2 - 04 November 2017, pp.1-4
- II. **Optimization of Length of Support Rods in Vertical Axis Wind Turbine**  
DEMİR H., KOCA K., ÖZKAN R., AÇIKEL H. H., KARAKAYA B., GENÇ M. S.  
First International Conference on Energy Systems Engineering, Karabük, Turkey, 2 - 04 November 2017, pp.5-10
- III. **Numerical Investigation of Aeroelastic Behavior of Airfoil**  
GENÇ G., DEMİR H., AÇIKEL H. H., ÖZDEN M., KOCA K., GENÇ M. S.  
2nd International Mediterranean Science and Engineering Congress (IMSEC 2017), Adana, Turkey, 25 - 27 October 2017, pp.1-9
- IV. **The Investigation of Various Airfoil Models on Effect of Aerodynamic Performance at Savonius Wind Turbines**  
KOCA K., AKÇA U., AÇIKEL H. H., ÖZDEN M., GENÇ M. S., ÖZKAN R.  
1.International Scientific and Vocational Studies Congress, Nevşehir, Turkey, 5 - 08 October 2017, pp.5-11
- V. **NUMERICAL INVESTIGATION OF AERODYNAMICS PERFORMANCE OF NACA4412 AIRFOIL WITH TRAILING-EDGE FLAP**  
KARASU İ., Sekhoune K., ÖZDEN M., GENÇ M. S., KOCA K., ERTÜRK S.  
2nd INTERNATIONAL CONFERENCE ON ADVANCES IN SCIENCE, ICAS 2017, İstanbul, Turkey, 13 - 15 September 2017, pp.1-5
- VI. **THE IDENTIFICATION OF LAMINAR SEPARATION BUBBLE AND TRANSITION ONSET ON WIND**

## **TURBINE BLADE AT LOW REYNOLDS NUMBER**

DEMİR H., KARASU İ., AÇIKEL H. H., ÖZDEN M., KOCA K., GENÇ M. S.

2nd INTERNATIONAL CONFERENCE ON ADVANCES IN SCIENCE, ICAS 2017, İstanbul, Turkey, 13 - 15 September 2017, pp.1-5

### **VII. Experimental Investigation of Surface Roughness Effect over Wind Turbine Airfoil**

KOCA K., GENÇ M. S., AÇIKEL H. H.

1th International Mediterranean Science and Engineering Congress, Adana, Turkey, 26 - 28 October 2016, vol.1, no.1, pp.1908-1912

### **VIII. Roughness Effect on Flow over Wind Turbine Airfoil**

KOCA K., GENÇ M. S., AÇIKEL H. H.

The International Symposium on Sustainable Aviation (ISSA-2016), İstanbul, Turkey, 29 May - 01 June 2016, vol.1, no.1, pp.231-234

### **IX. Elimination Of Tip Vortex Using Air Holes At Wind Turbine Blade**

BODUR T. M., GENÇ M. S., KOCA K.

The International Symposium on Sustainable Aviation (ISSA-2016), İstanbul, Turkey, 29 May - 01 June 2016, pp.262-265

### **X. Flow characteristics over NACA4412 airfoil at low Reynolds number**

GENÇ M. S., KOCA K., AÇIKEL H. H., Özkan G., Kiriş M. S., Yildiz R.

10th International Conference on Experimental Fluid Mechanics, EFM 2015, Prague, Czech Republic, 17 - 20 November 2015, vol.114, no.1

## **Supported Projects**

GENÇ M. S., AÇIKEL H. H., DEMİR H., KOCA K., Project Supported by Higher Education Institutions, ESNEK KANATLARIN ANLIK DEĞİŞİMLERİNİN ÜÇ BOYUTLU İNCELENMESİ, 2014 - 2017

## **Scientific Refereeing**

JOURNAL OF CLEANER PRODUCTION, SCI Journal, November 2019

ENERGY, SCI Journal, October 2019

JOURNAL OF CLEANER PRODUCTION, SCI Journal, October 2019

ENERGY, SCI Journal, October 2019

JOURNAL OF CLEANER PRODUCTION, SCI Journal, August 2019

JOURNAL OF CLEANER PRODUCTION, SCI Journal, July 2019

ENERGY, SCI Journal, July 2019

ENERGY, SCI Journal, June 2019

ENERGY, SCI Journal, May 2019

ENERGY, SCI Journal, May 2019

ENERGY, SCI Journal, April 2019

Energy, ISSN: 0360-5442, Elsevier Sci., SCI Journal, March 2019

Journal of Cleaner Production, ISSN: 0959-6526, Elsevier Sci., SCI Journal, March 2019

Energy Conversion and Management, ISSN: 0196-8904, Elsevier Sci., SCI Journal, March 2019

Energy Conversion and Management, ISSN: 0196-8904, Elsevier Sci., SCI Journal, February 2019

Energy, ISSN: 0360-5442, Elsevier Sci., SCI Journal, February 2019

Energy, ISSN: 0360-5442, Elsevier Sci., SCI Journal, February 2019

Energy, ISSN: 0360-5442, Elsevier Sci., SCI Journal, January 2019

Energy, ISSN: 0360-5442, Elsevier Sci., SCI Journal, January 2019

Journal of Materials Science and Nanotechnology, Journal Indexed in SSCI, October 2018

Journal of Thermal Engineering Yildiz Technical University Press, Journal Indexed in SSCI, May 2018

International Journal of Advances on Automotive and Technology, Journal Indexed in AHCI, March 2018  
International Journal of Advances on Automotive and Technology, Journal Indexed in AHCI, August 2016  
International Journal of Advances on Automotive and Technology, Journal Indexed in AHCI, August 2016  
International Journal of Advances on Automotive and Technology, Journal Indexed in AHCI, July 2016

## **Metrics**

Publication: 25  
Citation (WoS): 368  
Citation (Scopus): 449  
H-Index (WoS): 8  
H-Index (Scopus): 10

## **Congress and Symposium Activities**

14th Experimental Fluid Mechanics, Working Group, Karlovy-Vary, Czech Republic, 2019  
2nd International Mediterranean Science and Engineering Congress, Attendee, Adana, Turkey, 2017  
International Conference on Advances in Science, Attendee, İstanbul, Turkey, 2017  
1st International Mediterranean Science and Engineering Congress, Attendee, Adana, Turkey, 2016  
Experimental Fluid Mechanics, Attendee, Praha, Czech Republic, 2015

## **Scholarships**

2211-C Öncelikli Alanlara Yönelik Yurt İçi Doktora Bursu, TUBITAK, 2019 - Continues  
2224-A Yurt Dışı Bilimsel Etkinliklere Katılma Desteği Programı 2019 / 5, TUBITAK, 2019 - 2019  
2210-C Öncelikli Alanlara Yönelik Yurt İçi Yüksek Lisans Bursu, TUBITAK, 2015 - 2017

## **Awards**

KOCA K., Akademik Teşvik, YÖK, January 2018  
KOCA K., Best Presentation Award, International Conference on Advances in Science (ICAS 2017), September 2017