

## Asst. Prof. Fatma KESKİN ARABUL

### Personal Information

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### International Researcher IDs

ScholarID: Ud-YHPQAAAAJ

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Publons / Web Of Science ResearcherID: AAZ-6244-2020

ScopusID: 57196248309

Yoksis Researcher ID: 23580

### Education Information

Doctorate, Yildiz Technical University, Graduate School Of Natural And Applied Sciences, Elektrik Mühendisliği, Turkey  
2014 - 2020

Postgraduate, Yildiz Technical University, Graduate School Of Natural And Applied Sciences, Elektrik Mühendisliği, Turkey  
2011 - 2014

Undergraduate, Yildiz Technical University, Faculty Of Electrical & Electronics, Elektrik Mühendisliği, Turkey 2007 - 2011

### Foreign Languages

English, C1 Advanced

### Dissertations

Doctorate, Düşük Moment Dalgalanmasına Sahip Yüksek Verimli Tek Stator Tek Rotorlu Eksenel Aklı Asenkron Motor Tasarımı, Yildiz Technical University, Faculty Of Electrical & Electronics, Electrical Engineering Department, 2020

Postgraduate, Yakıt pilli-bataryalı hibrid bir elektrikli araçta enerji yönetiminin sağlanması, Yıldız Teknik Üniversitesi, Faculty of Electrical & Electronics, Elektrik Mühendisliği, 2014

### Research Areas

Electrical and Electronics Engineering, Electrical Machine Theory and Design, Power Apparatus (transformers,reactors,switchgear,etc.), Engineering and Technology

### Academic Titles / Tasks

Assistant Professor, Yildiz Technical University, Faculty Of Electrical & Electronics, Electrical Engineering Department, 2021 - Continues

Assistant Professor, University of Waterloo, Faculty of Engineering, Electrical & Computer Engineering, 2022 - 2023

Research Assistant, Yildiz Technical University, Faculty Of Electrical & Electronics, Electrical Engineering Department,

2013 - 2020

## Academic and Administrative Experience

Deputy Head of Department, Yildiz Technical University, Faculty Of Electrical & Electronics, Electrical Engineering Department, 2023 - Continues

Deputy Head of Department, Yildiz Technical University, Faculty Of Electrical & Electronics, Electrical Engineering Department, 2021 - 2022

## Courses

### Postgraduate

Özel Elektrik Makinaları, Postgraduate, 2024 - 2025, 2023 - 2024

Seminer, Postgraduate, 2021 - 2022

### Undergraduate

Elektrik Makinaları 2, Undergraduate, 2024 - 2025, 2023 - 2024, 2021 - 2022

Bitirme Çalışması, Undergraduate, 2024 - 2025, 2023 - 2024, 2021 - 2022

Electric Machinery Laboratory 2 , Undergraduate, 2024 - 2025, 2023 - 2024, 2021 - 2022, 2020 - 2021

Elektrik Makinaları Laboratuvarı 1 , Undergraduate, 2024 - 2025, 2023 - 2024, 2021 - 2022, 2020 - 2021

Çok Disiplinli Tasarım Projesi, Undergraduate, 2024 - 2025, 2023 - 2024, 2021 - 2022

Electric Machinery and Applications, Undergraduate, 2024 - 2025, 2023 - 2024, 2021 - 2022

Mühendislik Tasarımı, Undergraduate, 2024 - 2025, 2023 - 2024

Elektrik Makinaları 1, Undergraduate, 2024 - 2025, 2023 - 2024, 2021 - 2022

## Supervised Theses

Keskin Arabul F., Elektrikli Araç Uygulamalarında Kullanılan Asenkron Motor ile Aynı Stator Geometrisine Sahip Sürekli Mıknatıslı Senkron Motorun Tasarımı, Analizi ve Karşılaştırılması, Postgraduate, E.Tarık(Student), 2022

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

- I. **Electric Machine Design and Integration for an Electric Propulsion System in Medium-Altitude Long-Endurance Unmanned Aerial Vehicles**  
Kurt E., Arabul A. Y., Keskin Arabul F., Şenol İ.  
APPLIED SCIENCES, vol.15, no.7, pp.3438, 2025 (SCI-Expanded)
- II. **Parallel hybrid propulsion system with integration of designed electric machine for medium altitude long endurance UAV**  
Kurt E., ARABUL A. Y., KESKİN ARABUL F., ŞENOL İ.  
Heliyon, vol.11, no.4, 2025 (SCI-Expanded)
- III. **Effects of air gap eccentricity on different rotor structures for PMSM in electric vehicles**  
Kartal E. T., Keskin Arabul F.  
Scientific Reports, vol.14, no.1, 2024 (SCI-Expanded)
- IV. **A Multi-Phase Brushless Direct Current Motor Design and Its Implementation in Medium-Altitude Long-Endurance Unmanned Aerial Vehicles**  
Kurt E., Arabul A. Y., Keskin Arabul F., Şenol İ.  
APPLIED SCIENCES, vol.14, no.14, pp.11550-11563, 2024 (SCI-Expanded)
- V. **Comprehensive Multidisciplinary Electric Vehicle Modeling: Investigating the Effect of Vehicle Design on Energy Consumption and Efficiency**

Aslan E., Yaşa Y., Meseci Y., Keskin Arabul F., Arabul A. Y.

SUSTAINABILITY, vol.16, no.12, pp.4928, 2024 (SCI-Expanded)

- VI. **Perspectives and Development of Electrical Systems in More Electric Aircraft**  
ARABUL A. Y., Kurt E., Arabul F. K., ŞENOL İ., Schrotter M., Breda R., Megyesi D.  
INTERNATIONAL JOURNAL OF AEROSPACE ENGINEERING, vol.2021, 2021 (SCI-Expanded)
- VII. **Experimental investigation on creep characteristic of the spacer between winding turns of power transformers**  
Arabul A. Y., Kumru C. F., Keskin Arabul F., Şenol İ.  
TRANSACTIONS OF THE INSTITUTE OF MEASUREMENT AND CONTROL, vol.43, no.5, pp.1019-1027, 2021 (SCI-Expanded)
- VIII. **Determination of transformer board creep parameters under high-mechanical and thermal stresses**  
ARABUL A. Y., KUMRU C. F., KESKİN ARABUL F.  
IET SCIENCE MEASUREMENT & TECHNOLOGY, vol.15, no.1, pp.94-100, 2021 (SCI-Expanded)
- IX. **Performance Analysis of Axial-Flux Induction Motor with Skewed Rotor**  
KESKİN ARABUL F., ŞENOL İ., ÖNER Y.  
ENERGIES, vol.13, no.19, 2020 (SCI-Expanded)
- X. **Experimental thermal investigation of an ONAN distribution transformer by fiber optic sensors**  
Arabul A. Y., Keskin Arabul F., Şenol İ.  
ELECTRIC POWER SYSTEMS RESEARCH, vol.155, pp.320-330, 2018 (SCI-Expanded)
- XI. **Providing energy management of a fuel cell-battery-wind turbine-solar panel hybrid off grid smart home system**  
Keskin Arabul F., Arabul A. Y., Kumru C. F., Boynueğri A. R.  
INTERNATIONAL JOURNAL OF HYDROGEN ENERGY, vol.42, no.43, pp.26906-26913, 2017 (SCI-Expanded)

## Articles Published in Other Journals

- I. **PERFORMANCE COMPARISON OF WINDING TYPES AND ROTOR STRUCTURE IN SYNCHRONOUS RELUCTANCE MOTOR**  
Kartal E. T., Keskin Arabul F.  
Mühendislik Bilimleri ve Tasarım Dergisi, vol.12, no.4, pp.835-847, 2024 (Peer-Reviewed Journal)
- II. **EFFECTS OF ASYMMETRICAL STATOR STRUCTURE ON BLDC MOTOR PERFORMANCE FOR HOUSEHOLD APPLIANCES**  
Kartal E. T., Keskin Arabul F.  
Mühendislik Bilimleri ve Tasarım Dergisi, vol.12, no.4, pp.663-675, 2024 (Peer-Reviewed Journal)
- III. **A Comparison between IM and IPMSM with Same Stator Core for EV and Performance Analysis of IPMSM**  
Kartal E. T., Keskin Arabul F.  
Avrupa Bilim ve Teknoloji Dergisi, no.38, pp.165-172, 2022 (Peer-Reviewed Journal)
- IV. **Design Improvements for Upgrading an IE3 Efficiency Class 5.5 kW Induction Motor to IE4 Efficiency Class**  
AYBENİZ Y., BEKİROĞLU K. N., KESKİN ARABUL F., OBDAN A. H., ARABUL A. Y.  
Avrupa Bilim ve Teknoloji Dergisi, no.35, pp.133-141, 2022 (Peer-Reviewed Journal)
- V. **Induction Traction Motor Design and Performance Analysis for Railways**  
Ulu E., Bekiroğlu K. N., Keskin Arabul F., Arabul A. Y.  
Avrupa Bilim ve Teknoloji Dergisi, no.35, pp.243-251, 2022 (Peer-Reviewed Journal)
- VI. **Modelling of the equally distributed air gapped shunt reactor**  
Arabul A. Y., Kurt E., Keskin Arabul F., Şenol İ.  
PAMUKKALE UNIVERSITY JOURNAL OF ENGINEERING SCIENCES-PAMUKKALE UNIVERSITESI MUHENDISLIK BILIMLERI DERGISI, vol.26, no.2, pp.286-294, 2020 (ESCI)

## Books

### I. Electric Machinery Experiments

Şenol İ., Bekiroğlu K. N., Zorlu Partal S., Aydeniz M. G., Ayçiçek E., Özçira S., Öner Y., Arabul A. Y., Ağçal A., Keskin Arabul F.

Birsen Yayınevi, İstanbul, 2016

## Papers Published in Refereed Scientific Meetings

- I. **Şubat 2023 Depremlerinin Bölgede Oluşturduğu Etkiler ve Yapay Zeka ile Afet Yönetim Planlaması**  
Doğan U., Yüzer N., Acar U., Akbaba M. F., Akbulut M. T., Akgün C., Akın O., Akkaya H. C., Akpınar B., Aktaş Z., et al.  
Türkiye Ulusal Jeodezi Komisyonu (TUJK) XXII. Sempozyumu 2023, Trabzon, Turkey, 29 November - 01 December 2023, pp.5-6
- II. **A study on the use of zinc oxide micro-varistor based field grading materials for composite line insulators**  
Keskin Arabul F., Arabul A. Y., Cherney E., Jayaram S.  
2023 IEEE Electrical Insulation Conference (EIC), Quebec, Canada, 18 - 21 June 2023, pp.117-120
- III. **Investigation of temperature effects on the ageing of paper-oil insulation under repetitive transient voltages**  
Arabul A. Y., Keskin Arabul F., Jayaram S.  
2023 IEEE Electrical Insulation Conference (EIC), Quebec, Canada, 18 - 21 June 2023, pp.183-186
- IV. **Evaluation of the Stress Grading System of Medium Voltage Motors Fed by Adjustable Speed Drives under Elevated Ambient Temperatures**  
KESKİN ARABUL F., ARABUL A. Y., Naeini A., Jayaram S., Cherney E.  
2023 IEEE Conference on Electrical Insulation and Dielectric Phenomena, CEIDP 2023, New Jersey, United States Of America, 15 - 19 October 2023
- V. **EFFECTS OF STATOR WINDING TYPES AND ROTOR SLOT GEOMETRIES ON MOTOR PERFORMANCE OF AN INDUCTION MOTOR FOR AN ELECTRIC VEHICLE**  
Kartal E. T., Keskin Arabul F.  
9th International Congress on Engineering, Architecture and Design, İstanbul, Turkey, 14 - 16 May 2022, pp.269-276
- VI. **SÜREKLİ MIKNATISLI SENKRON GENERATÖRÜN RÜZGAR TÜRBİNLERİNDE KULLANILAN DİĞER GENERATÖR TİPLERİYLE KARŞILAŞTIRILMASI VE VERİMİNİN İYİLEŞTİRİLMESİ**  
Arıncı B., Bekiroğlu K. N., Keskin Arabul F.  
8. ULUSLARARASI MÜHENDİSLİK MİMARLIK VE TASARIM KONGRESİ, İstanbul, Turkey, 6 - 07 December 2021, pp.360-367
- VII. **ASENKRON CER MOTORLARINDA KULLANILAN ÇELİK SACLARIN MOTOR VERİM DEĞERİNE OLAN ETKİLERİ**  
Ulu E., Bekiroğlu K. N., Keskin Arabul F.  
7. ULUSLARARASI MÜHENDİSLİK MİMARLIK VE TASARIM KONGRESİ, İstanbul, Turkey, 21 - 22 May 2021, pp.189-198
- VIII. **Electrode Design to Simulate Electrical Stress on Spacer Used In Creep Test Set-Up**  
Arabul A. Y., Kumru C. F., Keskin Arabul F., Şenol İ.  
Euroasia 5th. International Congress on Applied Sciences, Adana, Turkey, 15 - 17 November 2019, pp.712-718
- IX. **An experimental test set-up design for acquiring creep curve of the spacer between the winding turns of power transformers**  
ARABUL A. Y., KESKİN ARABUL F., KUMRU C. F., ŞENOL İ.  
6th International Conference on Control Engineering and Information Technology, CEIT 2018, İstanbul, Turkey, 25 - 27 October 2018
- X. **Providing Energy Management of a Fuel Cell-Battery-Wind Turbine-Solar Panel Hybrid Grid Independent Smart Home System**

Keskin Arabul F., Arabul A. Y., Kumru C. F., Boynueđri A. R.

International Green Energy Conference & Euro-Mediterranean Hydrogen Technologies Conference 2016. ETRERA 2020, Tunis, Tunisia, 10 May 2016, pp.1

- XI. **An Investigation On Flux Density Of Three Phase Distrubuted Air-Gap 3-5 Legged Shunt Reactor**  
Kurt E., ARABUL A. Y., ŐENOL İ., KESKİN ARABUL F.  
Proceedings of The IRES 21st International Conference, Amsterdam, Netherlands, 23 December 2015, pp.91-95
- XII. **An Investigation on Hot-Spot Temperature Calculation Methods of Power Transformers**  
Arabul A. Y., Őenol İ., Keskin Arabul F., Aydeniz M. G., Öner Y., Kalkan G.  
ICPCE 2015 : 17th International Conference on Power and Control Engineering, Paris, France, 27 - 28 August 2015, vol.9, no.8, pp.1036-1040
- XIII. **Providing Energy Management of a Fuel Cell-Battery Hybrid Electric Vehicle**  
Keskin Arabul F., Őenol İ., Arabul A. Y., Boynueđri A. R.  
ICPCE 2015 : 17th International Conference on Power and Control Engineering, Paris, France, 27 - 28 August 2015, vol.9, no.8, pp.975-979
- XIV. **An Experimental Study For Comparing The Effect Of The Magnetic Field On Human Health Around Transformers In Sinusoidal And Non-Sinusoidal Current Conditions**  
Arabul A. Y., Senol I., Kumru C. F., Boynueđri A. R., Keskin Arabul F.  
The 5th International Symposium on Sustainable Development (ISSD2014), Sarajevo, Bosnia And Herzegovina, 15 May 2014, pp.129-136

## Other Publications

- I. **Yakıt Pilli-Bataryalı Hibrid Bir Elektrikli Araçta Enerji Yönetiminin Sağlanması**  
KESKİN ARABUL F.  
Other, 2014

## Supported Projects

KESKİN ARABUL F., KARTAL E. T., YAŞA Y., ARABUL A. Y., BEKİROđLU K. N., Project Supported by Higher Education Institutions, Elektrikli Araçlar için Sürekli Mıknatis Destekli Senkron Relüktans Motor Tasarımı ve Uygulaması, 2024 - Continues

Yüzer N., Yardım M. S., Turgut S., Yılmaz Genç S., Dikçınar Sel B., Erdem Okumuş D., Kılıç B., Özarpacı S., Bayrak O. C., Sakarya A., et al., Project Supported by Higher Education Institutions, Şubat 2023 Depremlerinin Bölgede Oluşturduğu Etkiler ve Yapay Zeka ile Afet Yönetim Planlaması, 2023 - 2024

YAVUZ S., ARABUL A. Y., BEKİROđLU K. N., KESKİN ARABUL F., OBDAN A. H., Kaya Ö. F., ÖZÇİRA ÖZKILIÇ S., Güzel S., USLU E., Arıtürk M., et al., Project Supported by Higher Education Institutions, Otonom Karşılama ve Güvenlik Robotu, 2022 - 2024

Aksu M., Keskin Arabul F., Gürses Y. Ç., Kahraman B., Tezcan A., TUBITAK Project, Yenilenebilir Enerji Santralleri ve Enerji Dağıtım Şebekelerinde Termal Kamera ile Arıza Tespiti ve Giderilmesi, 2022 - 2024

Keskin Arabul F., TUBITAK Project, Alana Bağlı Doğrusal Olmayan Stres Derecelendirme Malzemeleri Kullanılan Orta Gerilim Motorları için Yalıtım Sistemi İyileştirilmesi, 2022 - 2023

Arabul A. Y., Őenol İ., Kumru C. F., TUBITAK Project, Experimental Investigation of Creep Characteristic of Spacer Insulation Component between Winding Turns in Power Transformers under Different Operating Conditions, 2019 - 2020

## Activities in Scientific Journals

Power System Engineering Research, Assistant Editor/Section Editor, 2023 - Continues

## Memberships / Tasks in Scientific Organizations

IEEE, Member, 2023 - Continues, Turkey

## Peer Reviews in Scientific Publications

IEEE TRANSACTIONS ON DIELECTRICS AND ELECTRICAL INSULATION, Journal Indexed in SCI-E, January 2025  
Seventh International Conference on Electric Power and Energy Conversion Systems (EPECS 2024) , Conference Paper (Full Text), September 2024  
POWER SYSTEM ENGINEERING RESEARCH, Other journals, November 2023  
ELECTRICAL ENGINEERING, Journal Indexed in SCI-E, July 2023  
ELECTRICAL ENGINEERING, Journal Indexed in SCI-E, December 2022  
ELECTRICAL ENGINEERING, Journal Indexed in SCI-E, April 2022  
IEEE ACCESS, Journal Indexed in SCI-E, August 2021  
ELECTRICAL ENGINEERING, Journal Indexed in SCI-E, June 2021  
ELECTRICAL ENGINEERING, Journal Indexed in SCI-E, May 2021  
ELECTRICAL ENGINEERING, Journal Indexed in SCI-E, May 2021  
ELECTRICAL ENGINEERING, Journal Indexed in SCI-E, May 2021  
ELECTRICAL ENGINEERING, Journal Indexed in SCI-E, April 2021  
ELECTRICAL ENGINEERING, Journal Indexed in SCI-E, December 2020  
ELECTRICAL ENGINEERING, Journal Indexed in SCI-E, December 2020  
ELECTRICAL ENGINEERING, Journal Indexed in SCI-E, December 2020  
ELECTRICAL ENGINEERING, Journal Indexed in SCI-E, December 2020  
ELECTRICAL ENGINEERING, Journal Indexed in SCI-E, December 2020  
ELECTRICAL ENGINEERING, Journal Indexed in SCI-E, August 2020  
ELECTRICAL ENGINEERING, Journal Indexed in SCI-E, May 2020  
ELECTRICAL ENGINEERING, Journal Indexed in SCI-E, May 2020  
ELECTRICAL ENGINEERING, Journal Indexed in SCI-E, April 2020  
ELECTRICAL ENGINEERING, Journal Indexed in SCI-E, March 2020  
ELECTRICAL ENGINEERING, Journal Indexed in SCI-E, February 2020  
TURKISH JOURNAL OF ELECTRICAL ENGINEERING AND COMPUTER SCIENCES, SCI Journal, January 2018  
TURKISH JOURNAL OF ELECTRICAL ENGINEERING & COMPUTER SCIENCES, SCI Journal, December 2017  
TURKISH JOURNAL OF ELECTRICAL ENGINEERING & COMPUTER SCIENCES, SCI Journal, October 2017

## Metrics

Publication: 39  
Citation (WoS): 125  
Citation (Scopus): 155  
H-Index (WoS): 4  
H-Index (Scopus): 4

## Congress and Symposium Activities

IV International Symposium on Applied Geoinformatics , Attendee, Wroclaw, Poland, 2024  
2023 IEEE Electrical Insulation Conference (EIC), Attendee, Quebec, Canada, 2023  
The IRES-27th International Conference on Innovative Engineering Technologies (ICIET), Session Moderator, Amsterdam, Netherlands, 2015

ICPCE 2015 : 17th International Conference on Power and Control Engineering, Attendee, Paris, France, 2015

## **Awards**

KESKİN ARABUL F., Elektrik Mühendisliği Bölüm İkinciliği, YILDIZ TEKNİK ÜNİVERSİTESİ, June 2011