

## Res. Asst. Musa TERKEŞ

### Personal Information

**Office Phone:** [+90 212 383 5852](tel:+902123835852)

**Email:** [musa.terkes@yildiz.edu.tr](mailto:musa.terkes@yildiz.edu.tr)

**Web:** <https://avesis.yildiz.edu.tr/musa.terkes>

**Address:** [musa.terkes@yildiz.edu.tr](mailto:musa.terkes@yildiz.edu.tr)

### International Researcher IDs

ScholarID: u3767M0AAAAJ

ORCID: 0000-0002-4411-411X

Publons / Web Of Science ResearcherID: HII-6047-2022

ScopusID: 57796709200

Yoksis Researcher ID: 382077

### Education Information

Doctorate, Yildiz Technical University, Faculty Of Electrical & Electronics, Electrical Engineering Department, Turkey 2023 - Continues

Postgraduate, Yildiz Technical University, Faculty Of Electrical & Electronics, Electrical Engineering Department, Turkey 2021 - 2022

Undergraduate, Yildiz Technical University, Faculty Of Electrical & Electronics, Electrical Engineering Department, Turkey 2014 - 2019

### Foreign Languages

English, B1 Intermediate

### Research Areas

Direct Energy Conversion and Energy Storage, Power System Analysis, Electric Power Transmission, Distribution and Protection, Renewable energy

### Academic Titles / Tasks

Research Assistant, Yildiz Technical University, Faculty Of Electrical & Electronics, Electrical Engineering Department, 2023 - Continues

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

I. **Can electric vehicle charging stations be carbon neutral with solar renewables?**

Demirci A., Ozturk Z., Terkes M., Tercan S. M., Yumurtaci R., Cali U.  
IEEE ACCESS, no.Early Access, pp.1-18, 2025 (SCI-Expanded)

II. **Assessing energy savings and visual comfort with PDLC-based smart window in an Istanbul office**

### **building: A case study**

Gundogdu H., Terkes M., Demirci A., Cali U.

Energy Reports, vol.12, pp.4252-4265, 2024 (SCI-Expanded)

- III. **Optimal planning of hybrid power systems under economic variables and different climatic regions: A case study of Türkiye**  
Ozturk Z., Terkes M., Demirci A.  
Renewable Energy, vol.232, 2024 (SCI-Expanded)
- IV. **The effect of electric vehicle charging demand variability on optimal hybrid power systems with second-life lithium-ion or fresh Na-S batteries considering power quality**  
Terkes M., Arikan O., Gokalp E.  
Energy, vol.288, 2024 (SCI-Expanded)
- V. **Strategic Integration of Second-Life Batteries: Incentive Mechanisms for Boosting Community Energy Self-Consumption**  
Terkes M., Demirci A., Ozturk Z., Cali U.  
IEEE Access, vol.12, pp.125768-125785, 2024 (SCI-Expanded)
- VI. **Battery Passport for Second-Life Batteries: Potential Applications and Challenges**  
Terkes M., Demirci A., Gokalp E., Cali U.  
IEEE Access, vol.12, pp.128424-128467, 2024 (SCI-Expanded)
- VII. **Multi-Stage and Multi-Objective Feed-in Damping-Based Battery Aging-Aware Energy Management Strategy for Renewable Energy Integration**  
Terkes M., Demirci A., Gokalp E., Cali U.  
IEEE Access, vol.12, pp.161401-161416, 2024 (SCI-Expanded)
- VIII. **Optimal sizing and feasibility analysis of second-life battery energy storage systems for community microgrids considering carbon reduction**  
Terkeş M., Öztürk Z., Demirci A., Tercan S. M.  
Journal of Cleaner Production, vol.421, 2023 (SCI-Expanded)
- IX. **An evaluation of optimal sized second-life electric vehicle batteries improving technical, economic, and environmental effects of hybrid power systems**  
Terkeş M., Demirci A., Gokalp E.  
Energy Conversion and Management, vol.291, 2023 (SCI-Expanded)

### **Articles Published in Other Journals**

- I. **A comprehensive review of the aging mechanism and degradation costs of fresh and second-life batteries based on analytical and deterministic methods**  
Terkes M., Demirci A., Gokalp E.  
ENERGY STORAGE, vol.6, no.e661, pp.1-32, 2024 (ESCI)
- II. **Optimal Energy Management in Microgrids Considering Supply Demand Rate and Battery Discharge Depth**  
TERKEŞ M., DEMİRCİ A.  
INTERNATIONAL JOURNAL OF RESEARCH - GRANTHAALAYAH, vol.11, no.10, pp.64-79, 2023 (Peer-Reviewed Journal)
- III. **Optimal Sizing and Operation of Hybrid Power Systems Considering the Battery Capacity Degradation Limitations**  
Terkeş M., Demirci A.  
International Journal of Engineering Technologies and Management Research, vol.10, no.9, pp.52-69, 2023 (Peer-Reviewed Journal)
- IV. **Comparative Feasibility and Aging Analysis of Battery Technologies in Hybrid Power Systems Considering Demand Variability and Carbon Tax**  
Terkeş M., Demirci A.

International Journal of Advanced Research and Review, vol.8, no.9, pp.33-48, 2023 (Peer-Reviewed Journal)

- V. **Evaluation of technical and financial benefits of battery energy storage system control strategies**  
Oğuzalp F., Terkes M., Demirci A.

International journal of energy studies (Online), vol.9, no.1, pp.1-20, 2023 (Peer-Reviewed Journal)

- VI. **Feasibility Analysis of Solar-Powered Electric Vehicle Charging Stations Considering Demand Profiles**

TERKEŞ M., DEMİRCİ A.

International Journal of Research and Analytical Reviews, vol.10, no.3, pp.906-917, 2023 (Peer-Reviewed Journal)

## **Refereed Congress / Symposium Publications in Proceedings**

- I. **Rüzgar Türbini Yükseklik Değişiminin Hibrit Güç Sistemi Fizibilitesine Yansıması**  
Öztürk Z., Terkeş M., Andiç C., Öztürk A., Türkay B.  
Elektrik-Elektronik ve Biyomedikal Mühendisliği Konferansı, Bursa, Turkey, 28 - 30 November 2024, pp.1-5
- II. **A Review on Cyber Attack Detection and Defense Strategies in Cyber-Physical Power Systems**  
Koca E., Terkeş M., Demirci A.  
10th Virtual International Conference on Science, Technology and Management in Energy, Belgrade, Serbia, 25 November 2024, pp.1-14
- III. **Attack Evaluation of Cyber Security Analysis in Cyber-Physical Power Systems: A Review Concept**  
Koca E., Terkeş M., Demirci A.  
10th Virtual International Conference on Science, Technology and Management in Energy, Belgrade, Serbia, 25 November 2024, pp.1-10
- IV. **Optimal Planning and Design of Inverter Loading Ratio on Solar Photovoltaic Systems for Prosumers**  
Ozturk Z., Terkeş M., Demirci A.  
9TH INTERNATIONAL ARTEMIS SCIENTIFIC RESEARCH CONGRESS, Bucuresti, Romania, 30 - 31 August 2024, pp.1-11
- V. **Design of an Efficient and Low-Cost Buck-Converter by Optimizing Frequency and Inductance Values**  
Alseraji A., Terkeş M., Demirci A.  
International 7th USBILIM Health, Engineering and Applied Sciences Congress, Cairo, Egypt, 29 - 31 May 2024, pp.41-49
- VI. **Lighting Energy Savings Potential and Visual Comfort of Integrating Electrochromic Smart Windows in An Office Building: A Case Study in İstanbul, Türkiye**  
Gündoğdu H., Terkeş M., Demirci A.  
International 7th USBILIM Health, Engineering and Applied Sciences Congress, Cairo, Egypt, 29 - 31 May 2024, pp.50-57
- VII. **The Effect of Economic Conditions on Optimal Sizing and Feasibility of Hybrid Power System**  
Terkeş M., Demirci A., Öztürk Z., Öztürk A., Tosun S., Andiç C.  
14th International Conference on Electrical and Electronics Engineering, Bursa, Turkey, 30 November - 02 December 2023, vol.1, pp.1-5
- VIII. **Batarya Teknolojilerinin Teknik, Ekonomik ve Çevresel Performanslarının Hibrit Güç Sistemlerinde Karşılaştırılması**  
TERKEŞ M., DEMİRCİ A.  
CUMHURİYET 9 th INTERNATIONAL CONFERENCE ON APPLIED SCIENCES, Afyonkarahisar, Turkey, 30 August 2023, no.1, pp.196-204
- IX. **Evaluation of Hybrid Power System Feasibility Considering Battery Degradation**  
TERKEŞ M., DEMİRCİ A.  
The 17th International Scientific Research Congress - Science and Engineering Sciences - (UBAK), Ankara, Turkey, 19 - 20 August 2023, pp.95-105
- X. **Feasibility analysis of solar-powered electric vehicle charging stations considering peak demand periods and renewable energy potential**

TERKEŞ M., DEMİRCİ A.

11. Uluslararası Akademik Araştırmalar Kongresi (ICAR), Ankara, Turkey, 25 - 26 July 2023, no.1, pp.461-471

**XI. Integration of the Electric Vehicle Charging Station for Campus Parking Lot with Renewable Energy Sources**

Terkeş M., Tercan S. M., Demirci A., Gökalp E.

4 th International Engineering Research Symposium, Düzce, Turkey, 4 - 06 March 2022, vol.1, no.1, pp.84

**XII. An Evaluation of Renewable Fraction Using Energy Storage for Electric Vehicle Charging Station**

Terkes M., Tercan S. M., Demirci A., Gokalp E.

4th International Congress on Human-Computer Interaction, Optimization and Robotic Applications, HORA 2022, Ankara, Turkey, 9 - 11 June 2022

## Supported Projects

Demirci A., Gökalp E., TUBITAK Project, İkincil Kullanım Bataryaların Enerji Yönetimi Ve Performans Optimizasyonu: Akıllı Enerji Yönetim Sistemleri İle Yaşlanma Modellerinin Geliştirilmesi, 2024 - 2025

## Awards

Terkeş M., Yüksek Onur Öğrencisi, Yıldız Teknik Üniversitesi, October 2022

Terkeş M., Yüksek Onur Öğrencisi, Yıldız Teknik Üniversitesi, October 2019

Terkeş M., Okul Birinciliği, Zeytinburnu Teknik Ve Endüstri Meslek Lisesi, July 2014