

**ALI AJDER**  
**ASSOC. PROF.**

Email : [aliajder@yildiz.edu.tr](mailto:aliajder@yildiz.edu.tr)

Office Phone : [+90 212 383  
5828](tel:+902123835828)

Fax Phone : [+90 212 383  
5858](tel:+902123835858)

Address : Yıldız Teknik  
Üniversitesi, Elektrik  
Elektronik Fakültesi Elektrik  
Mühendisliği Bölümü C Blok  
Davutpaşa Mah., Davutpaşa  
Caddesi 34220 Esenler-  
İstanbul



**International Researcher  
IDs**

ScholarID: [qBnLPf0AAAAJ](https://orcid.org/0000-0001-9411-4452)

ORCID: 0000-0001-9411-  
4452

ScopusID: 56367301100

Yoksis Researcher ID: 190071

**Learning Knowledge**

Post Doctorate 2024 - Continues	University of Durham, Department of Engineering, England
Doctorate 2011 - 2017	Yildiz Technical University, Graduate School Of Natural And Applied Sciences, Elektrik Mühendisliği Bölümü, Turkey
Postgraduate 2008 - 2011	Yildiz Technical University, Graduate School Of Natural And Applied Sciences, Elektrik Mühendisliği Bölümü, Turkey
Undergraduate Double Major 2002 - 2009	Yildiz Technical University, Faculty Of Economic And Administrative Sciences, Department Of Administration, Turkey
Undergraduate 2002 - 2008	Yildiz Technical University, Elektrik Elektronik Fakültesi, Elektrik Mühendisliği, Turkey

## Foreign Languages

English, B2 Upper Intermediate

## Dissertations

Doctorate, Yenilenebilir Enerji Kaynaklarına Dayalı Üretim Tesislerini İçeren Güç Sistemlerinde Optimum Yedek Rezerv Miktarının Belirlenmesi, Yıldız Teknik Üniversitesi, Elektrik Mühendisliği, Elektrik Tesisleri, 2017

Postgraduate, Fotovoltaik güneş enerjisi sistemleri için optimum eğim açısının hesaplanması, Yıldız Teknik Üniversitesi, Fen Bilimleri, Elektrik Mühendisliği Anabilim Dalı/ Elektrik Tesisleri Yüksek Lisans Programı, 2011

## Academic Titles / Tasks

Research Assistant PhD  
2018 - Continues

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

Research Assistant  
2009 - 2018

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

## Supported Projects

1. Turan A., Ajder A., Köroğlu Ö., TÜBİTAK Project, Yakıt Hücreli Hibrit Araçlar İçin Uzun Ömürlü Ve Yüksek Verimli Talep Odaklı Enerji Yönetim Sistemi Algoritması Geliştirilmesi, 2024 - 2025
2. Meriç M. Y., Ajder A., TÜBİTAK Project, İHA'ar için Model Tabanlı Adaptif Kontrol İmkânı Sunan Yerli Otopilot Kartı Geliştirilmesi, 2023 - 2024
3. Bakırdemir E. H., Kayıkcı Ö. S., Yağbasan S., Ajder A., TÜBİTAK Project, Dalga Enerjisi ve Hidrojen Üretimi: Entegre Yenilenebilir Enerji Sistemleri için İnovatif Yaklaşımlar, 2023 - 2024
4. Ajder A., Ay S., Project Supported by Higher Education Institutions, Marmara Bölgesindeki 154-400 kV'luk Enerji İletim Hava Hatlarının Coğrafi Bilgi Sistemi Yardımıyla Sismik Risk Endekslerinin Belirlenmesi, 2023 - 2024
5. AJDER A., Project Supported by Higher Education Institutions, COVID-19 Salgınının Gün Öncesi Piyasası Elektrik Talep Tahminine Etkisinin İncelenmesi, 2021 - 2022

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

1. **Development of an Industrial Partial Discharge Calibrator and its Performance Tests**  
Karaman I., AJDER A., NAKİR İ.  
IEEE Access, vol.12, pp.42096-42104, 2024 (SCI-Expanded)
2. **Performance investigation of different headlights used in vehicles under foggy conditions**  
Sefer T., AYAZ R., AJDER A., NAKİR İ.  
Scientific Reports, vol.13, no.1, 2023 (SCI-Expanded)
3. **Analysis of Non-Uniform Accreted Ice in Overhead Power Lines using SAP2000**  
Ajder A.  
IEEE ACCESS, vol.10, pp.128951-128958, 2022 (SCI-Expanded)
4. **Analytical voltage drop calculations during direct on line motor starting: Solutions for industrial plants**  
Kucuk S., AJDER A.

- Ain Shams Engineering Journal, vol.13, no.4, 2022 (SCI-Expanded)
5. **A New MPPT Algorithm for Vehicle Integrated Solar Energy System**  
Nakir İ., Durusu A., Akca H., Ajder A., Ayaz R., Ugur E., Tanrioven M.  
JOURNAL OF ENERGY RESOURCES TECHNOLOGY-TRANSACTIONS OF THE ASME, vol.138, 2016 (SCI-Expanded)
  6. **Performance Comparison of Widely-Used Maximum Power Point Tracker Algorithms under Real Environmental Conditions**  
Durusu A., Nakir İ., Ajder A., Ayaz R., Akca H., Tanrioven M.  
ADVANCES IN ELECTRICAL AND COMPUTER ENGINEERING, vol.14, pp.89-94, 2014 (SCI-Expanded)

## Articles Published in Other Journals

1. **Investigation of the Parameters of Non-Cylindrical Ice Load on Power Transmission Lines**  
AJDER A.  
International Journal of Computational and Experimental Science and Engineering, vol.9, no.1, pp.29-35, 2023 (Scopus)
2. **Pandeminin Elektrik Enerji Sistemlerinin İşletilmesi Üzerindeki Etkilerinin İncelenmesi**  
AJDER A.  
Avrupa Bilim ve Teknoloji Dergisi, no.43, pp.121-125, 2022 (Peer-Reviewed Journal)
3. **İklim Koşullarının PV Panel Optimum Eğim Açısına Etkisi**  
AJDER A., DURUSU A., NAKİR İ.  
Avrupa Bilim ve Teknoloji Dergisi, no.13, pp.84-90, 2018 (Peer-Reviewed Journal)
4. **Comparison of Road Lighting Luminaires for M2 Road Lighting Class Considering Energy Efficiency**  
AYAZ R., Kaymaz A., AKÇA H., AJDER A., ÜNAL A., TANRIÖVEN M.  
International Journal of Advances in Electronics Engineering- IJAEE, vol.6, no.1, pp.103-107, 2016 (Peer-Reviewed Journal)
5. **Sizing of PV Based LED Lighting System Considering Minimum Solar Radiation Level**  
AJDER A., AKÇA H., AKDEMİR H., AYAZ R., NAKİR İ., TANRIÖVEN M.  
International Journal of Advancements in Mechanical and Aeronautical Engineering, vol.3, no.1, pp.27-31, 2016 (Peer-Reviewed Journal)
6. **The Effect of LED Chip Connection Type on Lighting and Thermal Performance of A Luminaire**  
AKÇA H., AKDEMİR H., AYAZ R., AJDER A., NAKİR İ., TANRIÖVEN M.  
International Journal of Advances in Electronics Engineering- IJAEE, vol.6, no.1, pp.98-102, 2016 (Peer-Reviewed Journal)
7. **Online Load Shifting of Electricity Production Consumption for Reducing Environmental Hazard**  
Toros H., Ayaz R., Ajder A., Durusu A., Yıldırım H.  
European Journal of Science and Technology, vol.1, pp.39-42, 2014 (Peer-Reviewed Journal)

## Books & Book Chapters

1. **Geleneksel Yaklaşımlar: Parçacık Sürü Optimizasyonu Algoritması**  
AJDER A.  
in: Teknobilim-2023 Yapay Zeka ve Mühendislik, Andiç Cenk, Editor, Efe Akademi Yayınları, İstanbul, pp.21-34, 2023
2. **Yenilenebilir Enerjinin Küresel Enerji Dönüşümündeki Rolü**  
AJDER A.  
in: Teknobilim-2022 Enerji Krizi ve Yenilenebilir Enerji-II, KARAMAN CEREN, Editor, Efe Yayınevi, İstanbul, pp.29-46, 2022

## Refereed Congress / Symposium Publications in Proceedings

1. **Comparison of Deep Learning Architectures to Evaluate the Effect of COVID-19 on Electricity Consumption**  
Hamza H. A., Ajder A., Ayaz R.  
3rd International Conference on Contemporary Academic Research, Konya, Turkey, 10 - 11 November 2024, pp.988-995
2. **Application of Inflation Adjustment to the Depreciation Records of the Electrical Substation Components**  
AJDER A., AY S.  
Ege 10th International Conference on Applied Sciences, İzmir, Turkey, 22 - 24 December 2023, pp.1317-1324
3. **Calculation of the Weighted Average Cost of Capital for Renewable Energy Power Plants**  
AJDER A., AY S.  
Ege 10th International Conference on Applied Sciences, İzmir, Turkey, 22 - 24 December 2023, pp.1325-1337
4. **Inventory-Based Fuel Cost of Imported Coal-Fired Thermal Power Plants**  
AJDER A., AY S.  
Avrasya 9th International Conference on Applied Sciences, Tiflis, Georgia, 24 - 26 November 2023, pp.480-488
5. **Assessment of Turkey's Electricity Installed Power Capacity Based on Renewable Energy using Index Numbers**  
AJDER A., AY S.  
Avrasya 9th International Conference on Applied Sciences, Tiflis, Georgia, 24 - 26 November 2023, pp.489-494
6. **Economic Analysis of Increasing Seismic Acceleration in Energy Transmission System Technical Requirements**  
AJDER A., AY S.  
6th International Hasankeyf Scientific Studies and Innovation Congress, Batman, Turkey, 18 - 19 November 2023, pp.220-226
7. **Scientific Machine Learning and its Impact on Power Systems**  
AJDER A., AY S.  
6th International Hasankeyf Scientific Studies and Innovation Congress, Batman, Turkey, 18 - 19 November 2023, pp.213-219
8. **Investigation of Energy Storage Systems in terms of Power System Reliability and Spinning Reserve**  
AJDER A., AY S.  
Cumhuriyet 10th International Conference on Applied Sciences, Ankara, Turkey, 29 October 2023, pp.33-43
9. **Analysis of Earthquake Damage Cost in Power Transmission Lines with the Help of Index Numbers**  
AJDER A., AY S.  
Cumhuriyet 10th International Conference on Applied Sciences, Ankara, Turkey, 29 October 2023, pp.24-32
10. **Investigation of Electric Power Systems Flexibility Improvements**  
AJDER A.  
1st International Conference on Scientific and Academic Research, ICSAR 2022, Konya, Turkey, 10 December 2022, pp.1043-1050
11. **Investigation of the Impact of the Pandemic on the Power System Operations**  
AJDER A.  
4th International Conference on Applied Engineering and Natural Sciences, Konya, Turkey, 10 November 2022
12. **Network Reduction Methods on DG Planning Studies**  
DOĞANŞAHİN K., KEKEZOĞLU B., AJDER A., YUMURTACI R.  
International Conference on Engineering Technologies, Konya, Turkey, 07 December 2017, pp.501-505
13. **Review of Reduction and Simplification Methods for Transmission Systems Studies**  
AJDER A., DOĞANŞAHİN K., AY S.  
International Conference on Advance Technology Science, 9 - 12 May 2017
14. **A Comparative Study Of Isotropic And Anisotropic Sky Models To Determine Of Optimum Orientation Angles For PV Arrays**

AKDEMİR H., AJDER A., AKÇA H., TANRIÖVEN M.

2nd International Conference on Engineering and Natural Sciences(ICENS2016), Saraybosna, Bosnia And Herzegovina, 24 May 2016, vol.10, pp.2550-2557

15. **Impact of Renewable Energy Systems on Spinning Reserves**

AJDER A., Akdemir H., Tanrıöven M.

The 2nd International Conference on Engineering and Natural Sciences (ICENS 2016), 01 May 2016

16. **Sizing of PV Based LED Lighting System Considering Minimum Solar Radiation Level**

AJDER A., AKÇA H., AKDEMİR H., AYAZ R., NAKİR İ., TANRIÖVEN M.

Advances in Mechanical and Automation Engineering (MAE), Roma, Italy, 10 - 11 December 2015, pp.6-10

17. **Comparison of Road Lighting Luminaires for M2 Road Lighting Class Considering Energy Efficiency**

AYAZ R., KAYMAZ A., AKÇA H., AJDER A., ÜNAL A., TANRIÖVEN M.

3rd International Conference on Advances in Computing, Electronics and Communication (ACEC), 10 - 11 October 2015

18. **The Effect of LED Chip Connection Type on Lighting and Thermal Performance of A Luminaire**

AKÇA H., AKDEMİR H., AYAZ R., AJDER A., NAKİR İ., TANRIÖVEN M.

3rd International Conference on Advances in Computing, Electronics and Communication (ACEC), Zürich, Switzerland, 10 - 11 October 2015

19. **A new approach for relationship between daylight and indoor illumination level**

AYAZ R., NAKİR İ., AKÇA H., AJDER A., TANRIÖVEN M.

2014 International Conference on Renewable Energy Research and Application (ICRERA), Milwaukee, WI, USA, 19 - 22 October 2014, pp.833-836

20. **Thermal management of power LED system**

Akca H., Yasa Y., Ayaz R., Durusu A., Ajder A., Nakir İ., Tanrioven M.

3rd International Conference on Renewable Energy Research and Applications, ICRERA 2014, Wisconsin, United States Of America, 19 - 22 October 2014, pp.760-764

## Academic and Administrative Experience

---

2022 - Continues	<b>Bölüm Kalite Komisyonu Üyesi</b>	Yildiz Technical University, Faculty Of Electrical & Electronics, Electrical Engineering Department
2022 - Continues	<b>Exam Program Preparation Commission Member</b>	Yildiz Technical University, Faculty Of Electrical & Electronics, Electrical Engineering Department

---

## Courses

Probability and Biostatistics, Undergraduate, 2019 - 2020, 2018 - 2019

Probability and Statistics, Undergraduate, 2019 - 2020, 2018 - 2019

Örnekleme ve Veri Analizi, Undergraduate, 2017 - 2018

Engineering Mathematics, Undergraduate, 2018 - 2019

## Memberships / Tasks in Scientific Organizations

IEEE- The Institute of Electrical and Electronics Engineers, Member, 2013 - Continues

IAEE- International Association for Energy Economics, Member, 2013 - Continues

EED- Enerji Ekonomisi Derneği, Member, 2013 - Continues

## Scientific Refereeing

ELECTRIC POWER SYSTEMS RESEARCH, Journal Indexed in SCI-E, November 2022  
TURKISH JOURNAL OF ELECTRICAL ENGINEERING AND COMPUTER SCIENCES, Journal Indexed in SCI-E, October 2022  
ELECTRIC POWER SYSTEMS RESEARCH, Journal Indexed in SCI-E, September 2021  
ELECTRIC POWER SYSTEMS RESEARCH, Journal Indexed in SCI-E, June 2021  
ELECTRIC POWER SYSTEMS RESEARCH, Journal Indexed in SCI-E, June 2021  
RENEWABLE ENERGY, Journal Indexed in SCI-E, June 2021  
ELECTRIC POWER SYSTEMS RESEARCH, Journal Indexed in SCI-E, May 2021  
RENEWABLE ENERGY, Journal Indexed in SCI-E, November 2020  
ELECTRIC POWER SYSTEMS RESEARCH, Journal Indexed in SCI-E, October 2020  
ELECTRIC POWER SYSTEMS RESEARCH, Journal Indexed in SCI-E, July 2020  
APPLIED ENERGY, Journal Indexed in SCI-E, March 2020  
RENEWABLE ENERGY, Journal Indexed in SCI-E, February 2020  
ELECTRIC POWER SYSTEMS RESEARCH, Journal Indexed in SCI-E, January 2020  
VSI:PSCC 2020, Conference Paper (Full Text), November 2019  
RENEWABLE ENERGY, Journal Indexed in SCI-E, November 2019  
RENEWABLE ENERGY, Journal Indexed in SCI-E, April 2019  
VSI:PVCon2018, Conference Paper (Full Text), December 2018  
APPLIED ENERGY, Journal Indexed in SCI-E, November 2018  
RENEWABLE ENERGY, Journal Indexed in SCI-E, August 2018  
RENEWABLE ENERGY, Journal Indexed in SCI-E, July 2018  
RENEWABLE ENERGY, Journal Indexed in SCI-E, July 2018  
IEEE JOURNAL OF PHOTOVOLTAICS, Journal Indexed in SCI-E, June 2018  
RENEWABLE ENERGY, Journal Indexed in SCI-E, May 2018  
VSI:DEM 2018, Conference Paper (Full Text), April 2018  
VSI:DEM 2018, Conference Paper (Full Text), April 2018  
IEEE JOURNAL OF PHOTOVOLTAICS, Journal Indexed in SCI-E, February 2018  
APPLIED ENERGY, Journal Indexed in SCI-E, January 2018  
APPLIED ENERGY, Journal Indexed in SCI-E, January 2018  
IEEE JOURNAL OF PHOTOVOLTAICS, Journal Indexed in SCI-E, August 2017  
APPLIED ENERGY, Journal Indexed in SCI-E, May 2017  
SI:ICAE2016, Conference Paper (Full Text), May 2017  
APPLIED ENERGY, Journal Indexed in SCI-E, May 2017  
APPLIED ENERGY, Journal Indexed in SCI-E, April 2017  
APPLIED ENERGY, Journal Indexed in SCI-E, April 2017  
JOURNAL OF CLEANER PRODUCTION, Journal Indexed in SCI-E, April 2017  
APPLIED ENERGY, Journal Indexed in SCI-E, March 2017  
JOURNAL OF CLEANER PRODUCTION, Journal Indexed in SCI-E, March 2017  
APPLIED ENERGY, Journal Indexed in SCI-E, March 2017  
JOURNAL OF CLEANER PRODUCTION, Journal Indexed in SCI-E, February 2017  
APPLIED ENERGY, Journal Indexed in SCI-E, February 2017  
APPLIED ENERGY, Journal Indexed in SCI-E, January 2017  
SI:ICAE2016, Conference Paper (Full Text), January 2017

## Metrics

Publication: 35

Citation (WoS): 21

Citation (Scopus): 39

H-Index (WoS): 3

H-Index (Scopus): 4

### **Invited Talks**

Turkey Academic Forum, Seminar, The Mathworks, Turkey, October 2021

### **Research Areas**

Electrical and Electronics Engineering, Energy, Power System Analysis, Renewable energy, Engineering and Technology