

RAMAZAN AYAZ

ASST. PROF.

Email : ayaz@yildiz.edu.tr

Office Phone : [+90 212 383 5856](tel:+902123835856)

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

Address : Yıldız Teknik Üniversitesi Elektrik Elektronik

Fakültesi Elektrik Mühendisliği Bölümü 34220

Esenler/İstanbul

International Researcher IDs

ScholarID: [yyknT1gAAAAJ](https://orcid.org/0000-0002-6201-1181)

ORCID: 0000-0002-6201-1181

Publons / Web Of Science ResearcherID: B-8563-2019

ScopusID: 55943595400

Yoksis Researcher ID: 142965



Learning Knowledge

Doctorate 2012 - 2018	Yildiz Technical University, Graduate School Of Natural And Applied Sciences, Elektrik Mühendisliği, Turkey
Postgraduate 2010 - 2012	Yildiz Technical University, Graduate School Of Natural And Applied Sciences, Elektrik Mühendisliği, Turkey
Undergraduate 2005 - 2010	Yildiz Technical University, Faculty Of Electrical & Electronics, Electrical Engineering Department, Turkey

Foreign Languages

English, B2 Upper Intermediate

Dissertations

Doctorate, LED VE KONVANSİYONEL IŞIK KAYNAKLI YOL AYDINLATMA ARMATÜRLERİNİN IŞIKSAL, ELEKTRİKSEL VE EKONOMİK AÇIDAN İNCELENMESİ, Yıldiz Technical University, Graduate School of Natural and Applied Sciences, 2018

Postgraduate, FARKLI PV TEKNOLOJİLERİNİN GERÇEK ORTAM VERİLERİ KULLANILARAK MODELLENMESİ VE İSTANBUL ŞARTLARINDA OPTİMUM EĞİM AÇILARININ BELİRLENMESİ, Yıldiz Technical University, Graduate School of Natural and Applied Sciences, Elektrik Mühendisliği, 2012

Academic Titles / Tasks

Assistant Professor 2022 - Continues	Yildiz Technical University, Faculty Of Electrical & Electronics, Electrical Engineering Department
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Research Assistant PhD
2018 - 2022

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

Research Assistant
2010 - 2018

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

Research Assistant
2015 - 2016

Helsinki University of Technology, School Of Electrical Engineering, Department Of
Electrical Engineering And Automation

Supported Projects

1. AYAZ R., Sarıbiyık O., Project Supported by Higher Education Institutions, DOĞRUDAN AYDINLATMALI LED ARKA IŞIK SİSTEMİ TASARIMLARINA SAHİP TELEVİZYONLARIN ENERJİ VERİMLİLİĞİ VE FAYDA-MALİYET AÇISINDAN İNCELENMESİ, 2023 - Continues
2. Akça H., Durusu A., Ayaz R., Şengör İ., Sis S. A., Aktaş A., Selamoğulları U. S., TUBITAK Project, Development of FV Based Electric Vehicle Wireless Charging and Dynamic Energy Management System, 2021 - 2024
3. Ayaz R., Erduman A., Durusu A., Yüzer E. Ö., Project Supported by Higher Education Institutions, Aydınlatma Sistemlerinde Güneş Enerjisi Kullanılarak Enerji Tasarrufu ve Sürdürülebilirliği, 2018 - 2018
4. NAKİR İ., AYAZ R., Project Supported by Higher Education Institutions, LED, Metal Halide ve Sodyum Buharlı Işık Kaynaklı M1, M2 ve M3 Tipi Yol Aydınlatma Armatürlerinin Elektriksel, Işıksal ve Ekonomik Analizleri, 2015 - 2018
5. Ayaz R., Selamoğulları U. S., Nakir İ., Taşcıkaraoğlu A., Tanrıöven M., Project Supported by Other Official Institutions, Binalarda Enerji Performansı Yazılımı Ulusal Hesaplama Metodolojisi'nin İyileştirilmesi, 2013 - 2014
6. Ayaz R., Tanrıöven M., Project Supported by Higher Education Institutions, Farklı PV Teknolojilerinin Gerçek Ortam Verileri Kullanılarak Modellenmesi ve İstanbul Şartlarında Optimum Eğim Açılarının Belirlenmesi, 2012 - 2013

Scholarships

- 2224-A Yurt Dışı Bilimsel Etkinliklere Katılma Desteği Programı, TUBITAK, 2019 - 2019
2211-A Genel Yurt İçi Doktora Burs Programı, TUBITAK, 2013 - 2017
2214-A Yurt Dışı Araştırma Burs Programı, TUBITAK, 2015 - 2016

Published journal articles indexed by SCI, SSCI, and AHCI

1. **Effect of Sb doping on the structural, microstructural, and magnetic properties of TiO₂ thin films for sensor applications using evaporation technique**
Hafs T., Hafs A., Berdjane D., Ayaz R., Bendjama A., Hasnaoui N.
Journal of Materials Science: Materials in Electronics, vol.35, no.35, 2024 (SCI-Expanded)
2. **Self-tuning parameters of the proposed fuzzy immune integral controller to improve the performance of the standard P&O-MPPT strategy**
Ayaz R.
IEEE ACCESS, vol.12, pp.192396-192414, 2024 (SCI-Expanded)
3. **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)
4. **Assessment of photometric and electrical measurements of residential light sources**

Doğanşahin K., AYAZ R., BOZKURT A., KEKEZOĞLU B.

Electrical Engineering, vol.103, pp.2075-2086, 2021 (SCI-Expanded)

5. **Life cycle cost analysis on M1 and M2 road class luminaires installed in Turkey**
AYAZ R., Ozcanli A. K., NAKİR İ., Bhusal P., ÜNAL A.
Light and Engineering, vol.27, no.1, pp.61-70, 2019 (SCI-Expanded)
6. **Lifetime analysis of semiconductor switch of MPPT for different photovoltaic technologies considering ambient conditions**
Akça H., Ayaz R., Durusu A.
ELECTRICAL ENGINEERING, vol.100, pp.1881-1889, 2018 (SCI-Expanded)
7. **Determination of Optimum Tilt Angle for Different Photovoltaic Technologies Considering Ambient Conditions: A Case Study for Burdur, Turkey**
Ayaz R., Durusu A., Akça H.
JOURNAL OF SOLAR ENERGY ENGINEERING-TRANSACTIONS OF THE ASME, vol.139, 2017 (SCI-Expanded)
8. **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)
9. **An Improved Matlab-Simulink Model of PV Module considering Ambient Conditions**
AYAZ R., NAKİR İ., Tanrioven M.
INTERNATIONAL JOURNAL OF PHOTOENERGY, 2014 (SCI-Expanded)
10. **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. **An assessment of general road illumination system simulation methods and comparison of simulation outcomes with photometric measurements conducted on a public road with anthropogenic sources of peripheral illumination**
AYAZ R., Roy S., Bhattacharya S.
Journal of Optics (India), vol.53, no.5, pp.4405-4422, 2024 (ESCI)
2. **Televizyonların Arka Işık Sistemlerinde Kullanılan LED Fosfor Teknolojilerinin Güvenirlik ve Renk Doğruluğu Üzerine Etkileri**
Saribiyik O., Ayaz R.
Mühendislik bilimleri ve araştırmaları dergisi (Online), vol.6, no.2, pp.236-245, 2024 (Peer-Reviewed Journal)
3. **Fotovoltaik Sistem Entegreli Elektrikli Araç Şarj Sistemlerinde Optimum Kapasitenin Belirlenmesi**
Akça H., Ayaz R.
Mühendislik Bilimleri ve Tasarım Dergisi, vol.12, no.3, pp.476-487, 2024 (Peer-Reviewed Journal)
4. **Ofislerde LED Tüp Retrofit Uygulamalarının Tekno-Ekonomik Analizi**
CANOL B., DEMİRCİ A., AYAZ R.
Fırat Üniversitesi Mühendislik Bilimleri Dergisi, vol.35, no.2, pp.837-846, 2023 (Peer-Reviewed Journal)
5. **Farklı Tip LED Sürücülerin Güç Kalitesi Performanslarının Belirlenmesi**
Türkmen E., Ayaz R., Doğanşahin K., Kekezoğlu B.
Mühendislik Bilimleri ve Araştırmaları Dergisi, vol.2, no.1, pp.21-27, 2020 (Peer-Reviewed Journal)
6. **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)
7. **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)
8. **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)
9. **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)

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. **Endüstriyel Tesislerde Güneş Enerjisi Santrallerinin Kurulumu ve Etkinliğinin Analizi: Teknik, Ekonomik ve Çevresel Perspektifler**
CANPOLAT H., AYAZ R., DEMİRCİ A.
13th INTERNATIONAL CONGRESS ON ENGINEERING, ARCHITECTURE AND DESIGN, İstanbul, Turkey, 8 - 09 June 2024
3. **Optimization-Based Intelligent Energy Management Strategy for Photovoltaic System Integrated Electric Vehicle Wireless Charging System**
Akça H., Aktaş A., Sis S. A., Ayaz R., Durusu A., Şengör İ., Selamoğulları U. S.
3rd International Conference on Applied Mathematics in Engineering (ICAME'24), Balıkesir, Turkey, 26 - 28 June 2024, pp.92
4. **Bir Endüstri Tesisinde Kullanılan Elektrikli İş Makinaları için Güneş Enerji Santrali Fizibilitesi**
CANPOLAT H., AYAZ R., DEMİRCİ A.
4th International Graduate Studies Congress (IGSCONG'24), İstanbul, Turkey, 5 - 08 June 2024
5. **A Networked Multi-Source Energy System Modelling and Stability Analysis**
Sofiane G., Ayoub A., AYAZ R., Moussa S.
Conférence Internationale sur les Energies Vertes et le Traitement des Eaux (EVE-2023), Sousse, Tunisia, 4 - 05 November 2023, vol.79, pp.30-35
6. **Assessment of Electrical and Photometric Measurements of Driver on Board LED Floodlights under Different Grid Conditions**
Akn H. C., Ayaz R., Nakir İ.
International Graduate Research Symposium - IGRS'22, İstanbul, Turkey, 1 - 03 June 2022, pp.1
7. **Analysis and sizing of rooftop photovoltaic based electric vehicle charging system**
Durusu A., Ayaz R., Aktaş A., Akça H.
4th International Engineering Research Symposium, Düzce, Turkey, 04 March 2022, pp.4
8. **LED Tabanlı Akıllı Aydınlatma Sistemlerinin Güç Kalitesine Etkilerinin İncelenmesi**
DOĞANŞAHİN K., AYAZ R., BOZKURT A.
21. Otomatik Kontrol Ulusal Toplantısı TOK 2019, Muğla, Turkey, 11 - 14 September 2019
9. **Harmonic Behaviour of RGB WLED**
DOĞANŞAHİN K., AYAZ R., BOZKURT A., KEKEZOĞLU B.
54th International Universities Power Engineering Conference (UPEC 2019), Bucharest, Romania, 3 - 06 September 2019
10. **Power Quality Assessment of Indoor LED Luminaires**
Ayaz R., Doğanşahin K., Bozkurt A., Kekezoğlu B.

- 2019 Electric Power Quality and Supply Reliability Conference, Hiiu, Estonia, 12 - 15 June 2019
11. **Energy Saving And Sustainability by Using Solar Energy in Indoor Lighting: Case Study**
Erduman A., Durusu A., Yüzer E. Ö., Ayaz R.
4TH INTERNATIONAL CONFERENCE ON ADVANCES IN MECHANICAL ENGINEERING, İstanbul, Turkey, 19 - 21 December 2018, pp.1-6
 12. **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
 13. **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
 14. **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
 15. **Mono-Kristal PV Panelin Matlab/Simulink'te Modellenmesi ve Deneysel Verilerle Doğrulanması**
Develi M. K., Çalımlı E., DURUSU A., AYAZ R., TANRIÖVEN M.
Elektrik – Elektronik – Bilgisayar ve Biyomedikal Mühendisliği Sempozyumu, Bursa, Turkey, 29 November 2014, pp.62-65
 16. **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
 17. **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
 18. **Breakdown Strength Analysis of the Transformer Insulation Oil Due to Different Standards**
AKÇA H., KOCATEPE C., ARIKAN O., KUMRU C. F., AYAZ R.
18th International Symposium on High Voltage Engineering, 25 - 30 August 2013, pp.1343-1347
 19. **The Influence of Voltage and Frequency Variations on Insulation Quality of a High Voltage Cable**
KOCATEPE C., KUMRU C. F., AYAZ R., ARIKAN O., AKÇA H.
IEEE EUROCON, 1 - 04 July 2013, pp.964-968
 20. **A Comparison of Metrobus System and Trolleybus System Considering Energy Costs and CO2 Emission A Case Study for Istanbul**
Ayaz R., Nakir İ., Durusu A., Akça H., Tanriöven M.
10th International Conference on Sustainable Energy Technologies, İstanbul, Turkey, 4 - 07 September 2011, pp.1-7

Patent

Ayaz R., Nakir İ., Bakan A. F., Akça H., BİR IŞIKLI İKAZ KÜRESİ, Patent, CHAPTER F Mechanical engineering; Lighting; Heating; Weaponry; Destroyed Materials, The Invention Registration Number: 2021 018328 , Standard Registration, 2023

Scientific Refereeing

Mühendislik Bilimleri ve Tasarım Dergisi, Other Indexed Journal, October 2021

Mugla Journal of Science and Technology, National Scientific Refreed Journal, July 2020

AVRUPA BİLİM VE TEKNOLOJİ DERGİSİ, National Scientific Refreed Journal, July 2019

Journal Of Cleaner Production, Journal Indexed in SCI-E, July 2018

APPLIED ENERGY, SCI Journal, June 2018

EPECS 2013, International Conference on Electric Power and Energy Conversion Systems, Conference Paper (Full Text), October 2013

Metrics

Publication: 39

Citation (WoS): 66

Citation (Scopus): 98

H-Index (WoS): 5

H-Index (Scopus): 5

Research Areas

Electrical and Electronics Engineering, Energy, Lighting Technology, Renewable energy, Engineering and Technology