

## Assoc. Prof. İsmail NAKİR

### Personal Information

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### International Researcher IDs

ScholarID: ismail

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### Education Information

Doctorate, Yıldız Technical University, Graduate School Of Natural And Applied Sciences, Elektrik Mühendisliği, Turkey  
2007 - 2012

Postgraduate, Yıldız Technical University, Graduate School Of Natural And Applied Sciences, Elektrik Mühendisliği, Turkey  
2005 - 2007

Undergraduate, Yıldız Technical University, Faculty Of Electrical & Electronics, Elektrik Mühendisliği, Turkey 2000 - 2004

### Dissertations

Doctorate, Ulaşım araçlarında fotovoltaik yapılar için uygun bir maksimum güç takip algoritması ile verimliliğin artırılması, Yıldız Teknik Üniversitesi, Graduate School of Natural and Applied Sciences, Elektrik Mühendisliği Anabilim Dalı, 2012

Postgraduate, Fotovoltaik güneş panellerinde GTS ve MGTS kullanarak verimliliğin artırılması, Yıldız Teknik Üniversitesi, Graduate School of Natural and Applied Sciences, Elektrik Mühendisliği Anabilim Dalı, 2007

### Research Areas

Electrical and Electronics Engineering, Engineering and Technology

### Academic Titles / Tasks

Assistant Professor, Yıldız Technical University, Faculty Of Electrical & Electronics, Electrical Engineering Department,  
2013 - Continues

### Academic and Administrative Experience

Yıldız Teknik Üniversitesi, 2018 - Continues

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

- I. **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)
- II. **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)
- III. **A Comprehensive Data Analysis of Electric Vehicle User Behaviors Toward Unlocking Vehicle-to-Grid Potential**  
Demirci A., Tercan S. M., Cali U., Nakir İ.  
IEEE Access, vol.11, pp.9149-9165, 2023 (SCI-Expanded)
- IV. **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)
- V. **Total Cost of Ownership Based Economic Analysis of Diesel, CNG and Electric Bus Concepts for the Public Transport in Istanbul City**  
TOPAL O., NAKİR İ.  
ENERGIES, vol.11, no.9, 2018 (SCI-Expanded)
- VI. **Effect of Energy Management of a Grid Connected PV/Battery/Load System on the Optimal PV Placement on a National Scale: The Case of Turkey**  
Akdemir H., Durusu A., Erduman A., Nakir İ.  
Journal Of Solar Energy Engineering-Transactions Of The Asme, vol.140, no.3, pp.1-11, 2018 (SCI-Expanded)
- VII. **Effect of energy management of a grid connected photovoltaic/ battery/load system on the optimal photovoltaic placement on a national scale: The case of Turkey**  
Akdemir H., Durusu A., Erduman A., Nakir İ.  
Journal of Solar Energy Engineering, Transactions of the ASME, vol.140, no.2, 2018 (SCI-Expanded)
- VIII. **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)
- IX. **An Improved Matlab-Simulink Model of PV Module considering Ambient Conditions**  
AYAZ R., NAKİR İ., Tanrioven M.  
INTERNATIONAL JOURNAL OF PHOTOENERGY, 2014 (SCI-Expanded)
- X. **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)
- XI. **Fuel cell and ultra-capacitor hybridization: A prototype test bench based analysis of different energy management strategies for vehicular applications**  
Vural B., BOYNUEĞRİ A. R., NAKİR İ., ERDINC I., Balıkcı A., UZUNOĞLU M., GORGUN H., DUSMEZ S.  
INTERNATIONAL JOURNAL OF HYDROGEN ENERGY, vol.35, no.20, pp.11161-11171, 2010 (SCI-Expanded)

## Articles Published in Other Journals

- I. **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)
- II. **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)

- III. **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)
- IV. **Matlab Stateflow Based Modeling of MPPT Algorithms**  
Durusu A., Nakir İ., Tanrıöven M.  
International Journal Of Advancements In Electronics And Electrical Engineering, vol.3, pp.117-120, 2014 (Peer-Reviewed Journal)
- V. **Dali ile Aydınlatma Otomasyonu ve Enerji Tasarrufu**  
Ünal A., NAKİR İ.  
LightWorld, no.13, pp.74-77, 2008 (Non Peer-Reviewed Journal)

## Books & Book Chapters

- I. **Photovoltaic System: Case Studies**  
Durusu A., Nakir İ., Tanrıöven M.  
in: Energy Harvesting and Energy Efficiency: Technology, Methods and Applications, Bizon N., Blabjerg F., Tabatabaei N.M., Kurt E., Editor, Springer, London/Berlin , Zürich, pp.235-260, 2017

## Refereed Congress / Symposium Publications in Proceedings

- I. **YÜKSEK YENİLENEBİLİR ENERJİ PENETRASYONUNA SAHİP ÜRETEN-TÜKETİCİ TOPLULUKLARI İÇİN ELEKTRİKLİ ARAÇ ŞARJ GÜÇLERİNİN ETKİ ANALİZİ**  
DEMİRCİ A., NAKİR İ.  
ICHEAS 5th INTERNATIONAL CONFERENCE ON HEALTH, ENGINEERING AND APPLIED SCIENCES, Antalya, Turkey, 18 - 20 August 2023, pp.66-73
- II. **ÜRETEN TÜKETİCİ TOPLULUKLARI İÇİN ELEKTRİKLİ ARAÇLARIN ARAÇTAN ŞEBEKEYE TEKNOLOJİSİNİN PERFORMANS DEĞERLENDİRMESİ**  
DEMİRCİ A., NAKİR İ.  
TOKAT 2nd INTERNATIONAL CONFERENCE ON SCIENTIFIC RESEARCHES, Tokat, Turkey, 1 - 03 September 2023, pp.109-115
- III. **IMPACT ANALYSIS OF INCREASED BATTERY CAPACITIES OF ELECTRIC VEHICLES IN DISTRIBUTION SYSTEMS WITH HIGH RENEWABLE ENERGY PENETRATION**  
DEMİRCİ A., NAKİR İ.  
6. INTERNATIONAL SCIENTIFIC RESEARCHES AND INNOVATION CONGRESS, Ankara, Turkey, 2 - 03 September 2023, pp.336-343
- IV. **Assessment of Electrical and Photometric Measurements of Driver on Board LED Floodlights under Different Grid Conditions**  
Akın H. C., Ayaz R., Nakir İ.  
International Graduate Research Symposium - IGRS'22, İstanbul, Turkey, 1 - 03 June 2022, pp.1
- V. **Determination of photovoltaic inverter ratio minimizing energy clipping for electric vehicle charging station under different solar radiations**  
Demirci A., Ozturk Z., Tercan S. M., Nakir İ.  
4th International Congress on Human-Computer Interaction, Optimization and Robotic Applications, HORA 2022, Ankara, Turkey, 9 - 11 June 2022
- VI. **The Experimental Assessment of Different PV Cell Temperature Models Under The Actual Climatic Conditions for Cd-Te PV Modules**  
Akdemir H., Bocu M., NAKİR İ.  
IEEE PES Innovative Smart Grid Technologies - Asia (ISGT Asia) Conference, Brisbane, Australia, 5 - 08 December

2021

- VII. **Comparison and validation of different models of PV cell temperature from PV output power view**  
Dhaker S. A., NAKİR İ.  
International Students Science Congress, İzmir, Turkey, 04 May 2018, pp.1-11
- VIII. **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
- IX. **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
- X. **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
- XI. **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
- XII. **Performance assessment of MPPT algorithms for vehicle integrated solar systems**  
Nakir İ., Durusu A., Ugur E., Tanrioven M.  
2012 IEEE International Energy Conference and Exhibition, ENERGYCON 2012, Florence, Italy, 9 - 12 September 2012, pp.1034-1038
- XIII. **PV&EV (Photovoltaic&Electrical Vehicles)**  
Tanrıöven M., Nakir İ., Durusu A.  
When China Meets Turkey:Energy Matter Conference, İstanbul, Turkey, 7 - 08 November 2012, pp.1
- XIV. **Yeşil Binalar için Net Sıfır Enerjili Aydınlatma Sistemi Tasarımı ve Ekonomik Analizi**  
Elma O., Selamoğulları U. S., Nakir İ.  
Çevre ve Tasarım Kongresi, İstanbul, Turkey, 8 - 09 December 2011, pp.1-9
- XV. **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., Tanrıöven M.  
10th International Conference on Sustainable Energy Technologies, İstanbul, Turkey, 4 - 07 September 2011, pp.1-7
- XVI. **Reliability Assessment of Wind Energy System Considering Turbine Dimensions**  
Kekezoğlu B., Erduman A., Durusu A., Nakir İ., Tanrıöven M.  
International Conference on Sustainable Energy Technologies, İstanbul, Turkey, 4 - 07 September 2011, pp.1-6
- XVII. **A Comparison of Metrobus System and Trolleybus System**  
Nakir İ., AKÇA H., Tanrıöven M.  
Sustainable Energy Technologies, 01 September 2011
- XVIII. **Fotovoltaik Sistemler için Elektrik Enerjisi Depolamada Batarya/ Ultra-kapasitör Hibrit Sisteminin Kullanılması**  
NAKİR İ., Tanrıöven M., Uzunoglu M.  
II. Ulusal Güneş ve Hidrojen Enerjisi Kongresi, 01 June 2008
- XIX. **The Analysis of Magnetic Fields in Nonlinear Load Conditions by Using Matlab/Simulink**  
İZGİ E., İNAN A., ARIKAN O., BOZKURT A., NAKİR İ.  
4th International Conference on Electrical and Power Engineering (EPE-2006), Iasi, Romania, 12 October 2006, pp.653-660

## Supported Projects

NAKİR İ., AKDEMİR H., Project Supported by Higher Education Institutions, Fotovoltaik Güç Santrallerinde Kullanılan Farklı Fotovoltaik Teknolojilerinin Saha Performanslarının Çok Yönlü Analizi, 2019 - Continues

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

NAKİR İ., Other International Funding Programs, Şehiriçi Kullanımlar İçin Yüksek Verimli Elektrikli Araç Prototip Tasarımı Ve Gerçekleştirilmesi, 2014 - 2017

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

GÖRGÜN H., ATEŞ Y., NAKİR İ., ERDİNÇ O., TUBITAK Project, Yakıt Hücreli ve Ultra-Kapasitörlü Hibrit Taşıtlar için Enerji Yönetim Sisteminin Tasarım ve Uygulaması, 2007 - 2010

NAKİR İ., KEKEZOĞLU B., Fotovoltaik Güneş Panellerinin GTS, MGİS ve Ultra kondansatörler kullanarak şebeke ile paralel ve bağımsız çalışması durumlarında verimliliğinin artırılması, 2007 - 2009

## 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 Consultations

Fusion Aydınlatma, Project Consultancy, Yıldız Technical University, Faculty Of Electrical & Electronics, Electrical Engineering Department, Turkey, 2017 - 2017

## Metrics

Publication: 36

Citation (WoS): 145

Citation (Scopus): 241

H-Index (WoS): 5

H-Index (Scopus): 7

## Entrepreneurship Activities

Limited, Alas Elektrik Aydınlatma Arge San. Tic. Ltd. Şti, 15 December 2021, Co-Founder

## Non Academic Experience

Alas Elektrik Aydınlatma Arge San. Tic. Ltd. Şti

MPPT Elektrik Elektronik Makine Araştırma Geliştirme San. ve Tic. Ltd. Şti

Işık Elektrik- Elektronik Mak. San. Tic. Ltd. Şti.