

## Assoc. Prof. MUSTAFA ERGİN ŞAHİN

### Personal Information

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**Address:** RTE Üniversitesi Elektrik Elektronik Mühendisliği Bölümü



### International Researcher IDs

ORCID: 0000-0002-5121-6173

Publons / Web Of Science ResearcherID: AAO-9505-2021

ScopusID: 36976368600

Yoksis Researcher ID: 48352

### Education Information

Post Doctorate, Aalborg Universitet (Aalborg University), The Faculty Of Engineering And Science, Department Of Energy Technology (Director: Prof. Frede Blaabjerg), Denmark 2018 - 2019

Doctorate, Karadeniz Technical University, Fen Bilimleri Enstitüsü, Elektrik Elektronik Mühendisliği Anabilim Dalı , Turkey 2008 - 2014

Postgraduate, Gazi University, Termodinamik Ve Isı Tekniği, Elektrik Elektronik Mühendisliği Anabilim Dalı , Turkey 2003 - 2006

Undergraduate, Karadeniz Technical University, Mühendislik Fakültesi, Elektrik Elektronik Mühendisliği, Turkey 1997 - 2002

### Foreign Languages

English, B2 Upper Intermediate

### Certificates, Courses and Trainings

Education Management and Planning, Understand How to Write Good Papers for High Level Journals, Aalborg University (Lecturer Prof. Frede Blaabjerg and Prof. Kaiyuan Lu), 2019

Education Management and Planning, Stability and Control of Grid Forming Power Electronics Systems, Aalborg University (Lecturer Prof. Xiongfei Wang, Prof. Pedro Rodriguez) ), 2019

Education Management and Planning, Power Quality and Synchronization Techniques in Microgrids, Aalborg University (Lecturer Prof. Josep M. Guerrero, Prof. Juan V. Vasquez), 2019

Education Management and Planning, Application Oriented Modelling of Renewable Energy Sources, Conversion and Energy Storage Systems, Aalborg University (Lecturer Dr. Sergiu Spataru), 2019

Education Management and Planning, Introduction to Wind Power (Generation and Integration), Aalborg University (Lecturer Prof. Zhe Chen), 2019

Education Management and Planning, Capacitors in Power Electronics Applications, Aalborg University (Lecturer Prof. Huai Wang), 2018

Education Management and Planning, Reluctance Electric Motor Drives for High Efficiency in Line Start and Variable

Speed Applications, Aalborg University (Lecturer Prof. Ion Boldea), 2018  
Education Management and Planning, Ulakbim Eğitim ve Yazar 6. Eğitim Semineri, TÜBİTAK, 2015  
Quality Management, TSE Temel, Dokümantasyon, İç Tetkik ve Ölçüm Belirsizliği, TSE, 2014  
Education Management and Planning, Fizik ve Yenilikçi Teknolojiler Çalıştayı, RTE Üniversitesi, 2014  
IT, Uygulamalı Matlab Eğitim Semineri, FİGES, Rize Üniversitesi, 2010  
Other, Doğu Karadeniz Bölgesi Enerji Forumu, EMO-KTÜ, 2009

## Dissertations

Doctorate, Karma Enerji Sistemi İçin Paralel Bağlı Azaltan-Artıran Çevirici Tasarımı ve Denetimi, Karadeniz Technical University, Güneysu Fizik Tedavi ve Rehabilitasyon Yüksekokulu, Elektrik Elektronik Mühendisliği Anabilim Dalı , 2014  
Postgraduate, Senkron Buck Dönüşürücü İle Elektroliz Olayının Gerçekleştirilmesi, Gazi University, Fen Bilimleri Enstitüsü, Elektrik Elektronik Mühendisliği Anabilim Dalı , 2006

## Research Areas

Electrical and Electronics Engineering, Electronic, Electronic Circuits, Electromagnetic, Electromagnetic Environment and Interaction, Energy, Direct Energy Conversion and Energy Storage, Renewable energy, Power Electronics, Power Converters, Chemistry, Physical Chemistry, Electrochemistry, Natural Sciences, Engineering and Technology

## Academic Titles / Tasks

Associate Professor, Recep Tayyip Erdogan University, Mühendislik Fakültesi, Elektrik ve Elektronik Mühendisliği Bölümü, 2021 - Continues  
Assistant Professor, Recep Tayyip Erdogan University, Mühendislik Fakültesi, Elektrik ve Elektronik Mühendisliği Bölümü, 2018 - 2021  
Assistant Professor, Recep Tayyip Erdogan University, Mühendislik Fakültesi, Elektrik ve Elektronik Mühendisliği Bölümü, 2015 - 2018  
Lecturer, Recep Tayyip Erdogan University, Fen Edebiyat Fakültesi, Fizik Bölümü, 2007 - 2015

## Academic and Administrative Experience

Fakülte Kurulu Üyesi, Recep Tayyip Erdogan University, MÜHENDİSLİK VE MİMARLIK FAKÜLTESİ, ELEKTRİK VE ELEKTRONİK MÜHENDİSLİĞİ, 2023 - Continues  
Recep Tayyip Erdogan University, Elektrik Elektronik Mühendisliği, 2018 - 2019  
Recep Tayyip Erdogan University, Fizik, 2012 - 2012  
Recep Tayyip Erdogan University, Fizik, 2012 - 2012

## Courses

Ölçme Teknikleri ve Enstrumantasyon, Undergraduate, 2018 - 2019  
Proses Kontrol ve Enstrumantasyon, Postgraduate, 2017 - 2018  
Elektrik Makinaları II, Undergraduate, 2017 - 2018  
Kontrol Sistemleri, Undergraduate, 2017 - 2018  
Devre Teorisi ve Analizi, Undergraduate, 2017 - 2018  
Elektrik Makinaları I, Undergraduate, 2017 - 2018  
Elektrik Makinaları, Undergraduate, 2017 - 2018

Elektrik-Elektronik (5 Yıl), Undergraduate, 2014 - 2015  
Elektrik Müh. Giriş, Undergraduate, 2015 - 2016  
Devre Analizi, Undergraduate, 2014 - 2015  
Elektronikte Özel Konular, Undergraduate, 2012 - 2013  
Yenilenebilir Enerji Kaynakları, Undergraduate, 2012 - 2013  
TEMEL BİLGİSAYAR I-II (C++, MATLAB), Undergraduate, 2011 - 2012  
Bilgisayara Giriş I-II( Ofis Programları-Axcess-Front Page), Undergraduate, 2009 - 2010  
Elektronik I-II Laboratuvarı (5 YIL), Undergraduate, 2007 - 2008  
Bitirme Çalışması (5 Yıl), Undergraduate, 2007 - 2008

## Advising Theses

Şahin M. E., Kahveci H., Transformerless photovoltaic system fed single phase induction motor driver for water pumping, Postgraduate, S.FAIZAN(Student), 2020  
ŞAHİN M. E., DESIGN AND IMPLEMENTATION OF SINGLE INPUT MULTIPLE OUTPUT (SIMO) DC-DC BUCK CONVERTER FOR SOLAR ENERGY APPLICATION, Postgraduate, I.Abdillahi(Student), 2018

## Advising Graduates (Non-Thesis)

Şahin M. E., İNŞAAT SEKTÖRÜNDE YAPAY ZEKA UYGULAMALARI VE RİSK YÖNETİMİ ( Monte Carlo Yöntemi, Masters (Non-Thesis), G.OKAY(Student), 2021  
Şahin M. E., ENDÜSTRİ 4.0'IN İŞ SAĞLIĞI VE GÜVENLİĞİNE KATKILARI VE HATA TÜRÜ VE ETKİLERİ ANALİZİ(FMEA) RİSK DEĞERLENDİRME METODUyla BİR İNCELEME, Masters (Non-Thesis), İ.TOPALOĞLU(Student), 2021  
Şahin M. E., İŞ SAĞLIĞI VE GÜVENLİĞİNDEKİ RİSK DEĞERLENDİRMELERİNDE YAPAY SİNİR AĞLARININ ETKİSİ, Masters (Non-Thesis), F.ATCI(Student), 2021  
Şahin M. E., NESNELERİN İNTERNETİ UYGULAMALARINDA RİSK DEĞERLENDİRMESİ VE İŞ GÜVENLİĞİ İLİŞKİSİ, Masters (Non-Thesis), İ.BİLİCİ(Student), 2021  
Şahin M. E., TURİZM SEKTÖRÜNDE ENDÜSTRİ 4.0 ALANINDA Kİ RİSK DEĞERLENDİRME UYGULAMALAR, Masters (Non-Thesis), N.KURUOĞLU(Student), 2021

## Jury Memberships

Appointment to Academic Staff-Assistant Professorship, Appointment to Academic Staff-Assistant Professorship, Recep Tayyip Erdoğan Üniversitesi, December, 2022  
Academic Staff Examination, Öğretim Görevlisi Alım Sınavı , Rize Üniversitesi Meslek Yüksekokulu , December, 2010  
Competition, Eğitim Öğretim Yılı Eğitim Kurumları Arası Proje Tabanlı Beceri Yarışması İl Değerlendirme Komisyonu Üyesi,, MEB, February, 2010  
Competition, Eğitim Öğretim Yılı Eğitim Kurumları Arası Proje Tabanlı Beceri Yarışması İl Değerlendirme Komisyonu Üyesi,, MEB, January, 2009

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

- I. Challenges and Future Perspectives on Production, Storage Technologies, and Transportation of Hydrogen: A Review  
Omid M. A., ŞAHİN M. E., CORA Ö. N.  
Energy Technology, vol.12, no.4, 2024 (SCI-Expanded)
- II. An investigation on supercapacitors applications with module designing and testing  
ŞAHİN M. E.

- JOURNAL OF ENGINEERING RESEARCH, vol.10, no.4A, pp.297-315, 2022 (SCI-Expanded)
- III. PV Powered Hybrid Energy Storage System Control Using Bidirectional and Boost Converters**  
 Şahin M. E., Blaabjerg F.  
 ELECTRIC POWER COMPONENTS AND SYSTEMS, vol.49, no.15, pp.1260-1277, 2022 (SCI-Expanded)
- IV. A Comprehensive Review on Supercapacitor Applications and Developments**  
 ŞAHİN M. E., Blaabjerg F., Sangwongwanich A.  
 ENERGIES, vol.15, no.3, 2022 (SCI-Expanded)
- V. Design and Implementation of Single-Input Multiple-Output DC-DC Buck Converter for Electric Vehicles**  
 Aden I. A., KAHVECİ H., ŞAHİN M. E.  
 JOURNAL OF CIRCUITS SYSTEMS AND COMPUTERS, vol.30, no.13, 2021 (SCI-Expanded)
- VI. Parallel-Connected Buck-Boost Converter with FLC for Hybrid Energy System**  
 Şahin M. E., Okumuş H. İ.  
 ELECTRIC POWER COMPONENTS AND SYSTEMS, vol.48, no.19-20, pp.2117-2129, 2021 (SCI-Expanded)
- VII. An Overview on MOSFET Drivers and Converter Applications**  
 ŞAHİN M. E., Blaabjerg F.  
 ELECTRIC POWER COMPONENTS AND SYSTEMS, vol.49, no.8, pp.828-847, 2021 (SCI-Expanded)
- VIII. A photovoltaic powered electrolysis converter system with maximum power point tracking control**  
 Sahin M. E.  
 INTERNATIONAL JOURNAL OF HYDROGEN ENERGY, vol.45, pp.9293-9304, 2020 (SCI-Expanded)
- IX. A Hybrid PV-Battery/Supercapacitor System and a Basic Active Power Control Proposal in MATLAB/Simulink**  
 Sahin M. E., Blaabjerg F.  
 ELECTRONICS, vol.9, 2020 (SCI-Expanded)
- X. An Efficient Switched Filter Compensation Used LED Lighting PV-Battery Scheme**  
 Sharaf A. M., Sahin M. E.  
 JOURNAL OF CIRCUITS SYSTEMS AND COMPUTERS, vol.27, no.10, 2018 (SCI-Expanded)
- XI. Comparison of Different Controllers and Stability Analysis for Photovoltaic Powered Buck-Boost DC-DC Converter**  
 Sahin M. E., OKUMUŞ H. İ.  
 ELECTRIC POWER COMPONENTS AND SYSTEMS, vol.46, no.2, pp.149-161, 2018 (SCI-Expanded)
- XII. The Design Steps of a Hybrid Energy System**  
 Sahin M. E., OKUMUŞ H. İ.  
 ACTA PHYSICA POLONICA A, vol.132, no.3, pp.1160-1164, 2017 (SCI-Expanded)
- XIII. Design of a Laboratory Unit Air-Conditioning System with Matlab/Simulink Software**  
 KOZYIGIT N., ŞAHİN M. E.  
 ACTA PHYSICA POLONICA A, vol.132, no.3, pp.839-842, 2017 (SCI-Expanded)
- XIV. Investigation of GSM, LTE and Wi-Fi Electromagnetic Radiation in Dwellings**  
 Karan Y., As N., Sahin M. E.  
 ACTA PHYSICA POLONICA A, vol.132, no.3, pp.509-512, 2017 (SCI-Expanded)
- XV. A Flexible PV-Powered Battery-Charging Scheme for Electric Vehicles**  
 Sharaf A. M., Sahin M. E.  
 IETE TECHNICAL REVIEW, vol.34, no.2, pp.133-143, 2017 (SCI-Expanded)
- XVI. Design of Wave Energy Converter System with Linear Generator**  
 Sahin M. E., OZDINC I.  
 ACTA PHYSICA POLONICA A, vol.128, 2015 (SCI-Expanded)
- XVII. Implementation of an electrolysis system with DC/DC synchronous buck converter**  
 Şahin M. E., Okumuş H. İ., Aydemir M. T.  
 INTERNATIONAL JOURNAL OF HYDROGEN ENERGY, vol.39, no.13, pp.6802-6812, 2014 (SCI-Expanded)
- XVIII. Fuzzy logic controlled parallel connected synchronous buck DC-DC converter for water electrolysis**  
 Sahin M. E., OKUMUŞ H. İ.

## Articles Published in Other Journals

- I. **Intercalation reaction in lithium-ion battery: effect on cell characteristics**  
Theodore A. M., ŞAHİN M. E.  
The International Journal of Materials and Engineering Technology (, vol.6, no.2, pp.70-78, 2023 (Peer-Reviewed Journal)
- II. **Bulanık Mantık Kavramına Genel Bir Bakış**  
YILMAZ H., ŞAHİN M. E.  
Takvim-i Vekayi, vol.11, no.1, pp.94-129, 2023 (Peer-Reviewed Journal)
- III. **Cevizlik Hidroelektrik Santralinde Soğutma Suyu Sistemi ve İncelenmesi**  
KURTULUŞ O., ŞAHİN M. E., EROĞLU H.  
Türk Hidrolik Dergisi, vol.6, no.2, pp.47-56, 2022 (Peer-Reviewed Journal)
- IV. **New Era in Scientific Studies After Covid-19: Remote Research**  
CORA Ö. N., ŞAHİN M. E.  
Turkish Journal of Electromechanics & Energy, vol.7, no.1, pp.1-2, 2022 (Peer-Reviewed Journal)
- V. **Endüstri 4.0'ın İş Sağlığı ve Güvenliğine Katkıları ve Hata Türü ve Etkileri Analizi (FMEA) Risk Değerlendirme Metoduyla Ambulansta Bir İnceleme**  
Topaloğlu İ., ŞAHİN M. E.  
Takvim-i Vekayi, vol.9, no.2, pp.66-94, 2021 (Peer-Reviewed Journal)
- VI. **Parametre Kestirimi Newton-Raphson Yöntemiyle Yapılan MATLAB/GUI Tabanlı Fotovoltaik Sistem Simülatörü**  
Buldu İ., ŞAHİN M. E.  
Gazi Mühendislik Bilimleri Dergisi, vol.7, no.3, pp.196-212, 2021 (Peer-Reviewed Journal)
- VII. **Investigation of vertical axis wind turbines and the design of their components**  
Boztaş A., Demirbaş O., ŞAHİN M. E.  
Turkish Journal of Electromechanics and Energy, vol.6, no.2, pp.64-72, 2021 (Peer-Reviewed Journal)
- VIII. **Recep Tayyip Erdoğan Üniversitesi Merkez Kampüsünde Elektromanyetik Alan Kirlilik Ölçümü ve Spektrum Analizi**  
DİLEK B., AS N., ŞAHİN M. E.  
Recep Tayyip Erdoğan Üniversitesi Fen ve Mühendislik Bilimleri Dergisi, vol.2, no.1, pp.53-65, 2021 (Peer-Reviewed Journal)
- IX. **Modelling of Supercapacitors Based on Simplified Equivalent Circuit**  
Şahin M. E., Blaabjerg F., Sangwongwanich A.  
CPSS Transactions on Power Electronics and Applications, vol.6, no.1, pp.31-39, 2021 (Peer-Reviewed Journal)
- X. **IG ve DFIG lerin Rüzgar Gücü Üretim Sistemleri İçin Karşılaştırılması**  
ŞAHİN M. E.  
Gazi Journal of Engineering Sciences, vol.6, no.3, pp.230-241, 2020 (Peer-Reviewed Journal)
- XI. **A Review on Supercapacitor Materials and Developments**  
ŞAHİN M. E., Blaabjerg F., Sangwongwanich A.  
Turkish Journal of Materials, vol.5, no.2, pp.10-24, 2020 (Peer-Reviewed Journal)
- XII. **Inductance Selection Criteria and Design Steps for Power Electronics Applications**  
Şahin M. E.  
Süleyman Demirel Üniversitesi Fen Bilimleri Enstitüsü Dergisi, vol.24, no.3, pp.689-695, 2020 (Peer-Reviewed Journal)
- XIII. **Açık Deniz Rüzgâr Sistemleri Üzerine Bir İnceleme ve Danimarka Modeli**  
Şahin M. E.  
Recep Tayyip Erdoğan Üniversitesi Fen ve Mühendislik Bilimleri Dergisi, vol.1, no.1, pp.54-67, 2020 (Peer-Reviewed Journal)

- XIV. **Energy Management and Measurement of Computer Controlled Solar House Model for Rize City**  
ŞAHİN M. E.  
Gümüşhane Üniversitesi Fen Bilimleri Enstitüsü Dergisi, vol.10, pp.404-414, 2020 (Peer-Reviewed Journal)
- XV. **An Efficient Solar-Hydrogen DC-DC Buck Converter System with Sliding Mode Control**  
ŞAHİN M. E.  
El-Cezeri Fen ve Mühendislik Dergisi, vol.6, no.3, pp.558-570, 2019 (Peer-Reviewed Journal)
- XVI. **Refreshing Turkish Journal of Electromechanics & Energy in its Fourth Year**  
ŞAHİN M. E., CORA Ö. N.  
Turkish Journal of Electromechanics & Energy, vol.4, no.1, pp.1-2, 2019 (Peer-Reviewed Journal)
- XVII. **Yapay Sinir Ağları ve Yapay Zekâ'ya Genel Bir Bakış**  
Öztürk K., ŞAHİN M. E.  
Takvim-i Vekayi, vol.6, no.2, pp.25-36, 2018 (Peer-Reviewed Journal)
- XVIII. **Single Input, Multiple Output DC-DC Buck Converter for Electric Vehicles**  
Aden İ. A., Kahveci H., Şahin M. E.  
Turkish Journal of Electromechanics and Energy, vol.2, no.2, pp.7-13, 2017 (Peer-Reviewed Journal)
- XIX. **Second Year with "Turkish Journal of Electromechanics & Energy"**  
ŞAHİN M. E.  
Turkish Journal of Electromechanics and Energy, vol.2, no.1, pp.1-2, 2017 (Peer-Reviewed Journal)
- XX. **Introducing "Turkish Journal of Electromechanics & Energy"**  
CORA Ö. N., ŞAHİN M. E.  
Turkish Journal of Electromechanics and Energy, vol.1, no.1, pp.1-4, 2016 (Peer-Reviewed Journal)
- XXI. **Physical Structure, Electrical Design, Mathematical Modeling and Simulation of Solar Cells and Modules**  
ŞAHİN M. E., OKUMUŞ H. İ.  
Turkish Journal of Electromechanics and Energy, vol.1, no.1, pp.5-12, 2016 (Peer-Reviewed Journal)
- XXII. **KTÜ TEMİZ ENERJİ EVİ**  
ŞAHİN M. E.  
EMO ŞUBE BULTENİ, vol.2, no.2, pp.30-34, 2015 (Non Peer-Reviewed Journal)
- XXIII. **Electromagnetic pollution measurement in the RTE university campus area**  
Dilek B., AS N., ŞAHİN M. E., KARAN Y.  
Global Journal on Advances Pure and Applied Sciences, no.3, pp.65-72, 2014 (Peer-Reviewed Journal)
- XXIV. **KTÜ Temiz Enerji Evinin Kurulması ve Temel Uygulamalar**  
ŞAHİN M. E., OKUMUS H. I.  
Faal Enerji Dergisi, vol.1, no.15, pp.34-36, 2013 (Non Peer-Reviewed Journal)
- XXV. **Güneş Pili Modülünün Matlab/Simulink ile Modellenmesi ve Simülasyonu ( Modeling and Simulation of Solar Cell Module in Matlab/Simulink)**  
ŞAHİN M. E., OKUMUS H. I.  
EMO Bilimsel Dergi (The Journal of Electrical, Electronics, Computer and Biomedical Engineering), vol.3, no.5, pp.17-25, 2013 (Peer-Reviewed Journal)
- XXVI. **Modeling and Simulation of Solar Cell Module in Matlab Simulink**  
ŞAHİN M. E., OKUMUŞ H. İ.  
EMO BİLİMSEL DERGİSİ, vol.3, no.5, pp.17-25, 2013 (Peer-Reviewed Journal)
- XXVII. **Selective Radiation Measurement for Safety Evaluation on Base Stations**  
ŞAHİN M. E., KARAN Y., AS N.  
GAZI UNIVERSITY JOURNAL OF SCIENCE, vol.26, no.1, pp.73-83, 2013 (Scopus)
- XXVIII. **A novel filter compensation scheme for single phase-self-excited induction generator micro wind generation system**  
Şahin M. E., Okumuş H. İ., Sharaf A. M.  
SCIENTIFIC RESEARCH AND ESSAYS, vol.7, no.34, pp.3058-3072, 2012 (Peer-Reviewed Journal)
- XXIX. **Dalga Enerjisi ve Deniz Dalgalarından Elektrik Enerjisi Üretim Yöntemleri**  
ŞAHİN M. E., OKUMUS H. I., AKPINAR A. S.

- FAAL ENERJİ DERGİSİ, vol.1, no.2, pp.94-95, 2011 (Non Peer-Reviewed Journal)
- XXX. **Dalga Enerjisi ve Ekonomisi**  
ŞAHİN M. E., AKPINAR A. S., OKUMUS H. I.  
EMO Trabzon Şube Bülteni, vol.1, no.2011, pp.26-28, 2011 (Non Peer-Reviewed Journal)
- XXXI. **Seviye Sensörleri Ve Uygulamaları**  
ŞAHİN M. E.  
OTOMASYON DERGİSİ, vol.1, no.6, pp.1, 2010 (Non Peer-Reviewed Journal)

## Books & Book Chapters

- I. **A Robust Decoupled Microgrid Charging Scheme Using a DC Green Plug-Switched Filter Compensator**  
ŞAHİN M. E., Sharaf A.  
in: Fast Charging and Resilient Transportation Infrastructures in Smart Cities, Hossam A. Gabbar, Editor, Springer Nature, AG, pp.89-116, 2022
- II. **Devre Analizi ve Ölçme Bilgisi Laboratuvarı Deneyleri (Bilgisayar Destekli ve Konu Anlatımlı)**  
ŞAHİN M. E.  
Nobel Akademik Yayıncılık, Ankara, 2020
- III. **DEVRE ANALİZİ VE ÖLÇME BİLGİSİ LABORATUVARI DENEYLERİ (Bilgisayar Destekli ve Konu Anlatımlı)**  
ŞAHİN M. E.  
Nobel Akademik Yayıncılık, Ankara, 2018
- IV. **ELEKTRONİK LABORATUVARI DENEYLERİ -Bilgisayar Destekli ve Konu Anlatımlı**  
ŞAHİN M. E.  
Nobel Akademik Yayıncılık, Ankara, 2018
- V. **Devre Analizi ve Ölçme Bilgisi Laboratuvarı Deneyleri ( Bilgisayar Destekli Konu Anlatımlı)**  
ŞAHİN M. E.  
Nobel Yayın Dağıtım, Ankara, 2017

## Refereed Congress / Symposium Publications in Proceedings

- I. **Energy management strategy based on a robust frequency-decoupling and particle swarm optimization for battery/supercapacitor electric vehicles**  
Kakouche K., ŞAHİN M. E., Theodore A. M., Amine H. M., Rekioua D., Rekioua T. R.  
TİCMET'23, Trabzon, Turkey, 13 November 2023
- II. **Investigation of Incremental Conductance MPPT Algorithm in MATLAB/Simulink Using Photovoltaic Powered DC-DC Boost Converter**  
AKIN E., ŞAHİN M. E.  
2023 22nd International Symposium on Power Electronics (Ee), Novi-Sad, Serbia, 25 October 2023, vol.1, pp.1-6
- III. **THE RISE OF GREEN HYDROGEN: A PROMISING OPPORTUNITY FOR A SUSTAINABLE ENERGY TRANSITION**  
Sebbagh T., ŞAHİN M. E., Benzaid L.  
TİCMET'23, Trabzon, Turkey, 13 November 2023
- IV. **Optimal Energy Management System in A Grid-Connected Renewable Hybrid System With Direct Power Control**  
MENZRI F., BOUTABBA T., ŞAHİN M. E.  
TİCMET'23, Trabzon, Turkey, 13 November 2023
- V. **TWO DIFFERENT TYPES OF SENSORLESS CONTROL APPLIED TO THREE PHASE PWM RECTIFIER**  
Anissa A., ŞAHİN M. E., Djemal S., Noureddine G.  
TİCMET'23, Trabzon, Turkey, 13 November 2023

- VI. **Intercalation Reaction in Lithium-Ion Battery: Effect on Cell Characteristics**  
Theodore A. M., ŞAHİN M. E.  
TİCMET'23, Trabzon, Turkey, 13 November 2023
- VII. **Investigation of the Effect of Electromagnetic Radiation on Honey Bees**  
Karan Y., Kuvancı A., Dizman S., As N., Sayı B. C., Cınbirtoğlu Ş., Öztürk S. H., Şahin M. E.  
1. International Apitherapy and Nature Congress , Nakhchivan, Azerbaijan, 1 - 03 June 2023, vol.1, no.1
- VIII. **Challenges and Future Perspectives on Production, Storage Technologies and Transportation of Hydrogen**  
Omid M. A., ŞAHİN M. E., CORA Ö. N.  
6th International Hydrogen Technologies Congress (IHTEC-2022), Çanakkale, Turkey, 23 January 2022
- IX. **Investigation of Water Electrolysis Types for Hydrogen Production**  
ŞAHİN M. E.  
6th International Hydrogen Technologies Congress (IHTEC-2022), Çanakkale, Turkey, 23 January 2022
- X. **Güneş Pili ile Çalışan Sera Otomasyonu**  
YILMAZ C., SEFER E., ŞAHİN M. E.  
EEMG2021, Trabzon, Turkey, 25 September 2021, vol.1
- XI. **Power Electronic Converters in Microgrid and Renewable Energy Sources**  
ŞAHİN M. E.  
'Microgrid: A Path to Sustainability", Surat, India, 19 December 2021
- XII. **An Efficient PV Powered Battery Charging DC Green Plug Ssheme**  
Şahin M. E., Sharaf A. M.  
The International Conference of Young Scientists on Energy and Natural Sciences Issues (CYSENI 2021), Kaunas, Lithuania, 24 May 2021, vol.1, pp.171-181
- XIII. **Investigation of Vertical Axis Wind Turbines And Their Componenets Design**  
Boztaş A., Demirbaş O., ŞAHİN M. E.  
5 International Anatolian Energy Symposium, Trabzon, Turkey, 24 March 2021, vol.1, pp.485-494
- XIV. **Açık Deniz (Offshore) Rüzgâr Sistemleri ve Danimarka Örneğinin İncelenmesi**  
ŞAHİN M. E.  
YEKSEM\_2019, Antalya, Turkey, 12 - 14 December 2019
- XV. **Comparison of IG and DFIG for Wind Power Generation Systems**  
ŞAHİN M. E.  
3rd International Conference on AdvancedEngineering Technologies, Bayburt, Turkey, 19 - 21 September 2019
- XVI. **A hybrid PV-Battery/Supercapacitor System and a Basic Active Power Control Proposal in MATLAB/Simulink**  
ŞAHİN M. E., BLAABJERG F.  
International Conference on Chemical Energy Semiconductor Photochemistry, Trabzon, Turkey, 4 - 06 September 2019
- XVII. **A Photovoltaic Powered Electrolysis Converter System with Maximum Power Point Tracking Control**  
ŞAHİN M. E.  
International Conference on Chemical Energy Semiconductor Photochemistry, Trabzon, Turkey, 4 - 06 September 2019
- XVIII. **PREDDESIGN SIMULATION OF SUPERCAPACITORS BASED ON SIMPLIFIED EQUIVALENT CIRCUIT MODEL**  
ŞAHİN M. E., BLAABJERG F., SANGWONGWANICH A.  
CYSENI 2019, Kaunas, Lithuania, 23 - 24 May 2019
- XIX. **INDUCTANCE SELECTION CRITERIA AND DESIGN STEPS FOR POWER ELECTRONICS APPLICATIONS**  
ŞAHİN M. E., OKUMUŞ H. İ.  
CYSENI 2019, Kaunas, Lithuania, 23 - 24 May 2019
- XX. **Experimental Setup for Analayzing Electromagnetic Radiation Effect on Bees and Bee Product s**  
Karan Y., Dizman S., Sayı B. C., As N., Şahin M. E.  
1. International Symposium on Multidisiplinary Studies on Innovative Technologies, Tokat, Turkey, 2 - 04

November 2017

- XXI. **Bayburt City Beşpınar Town Electromagnetic Pollution Measurements**  
Sayı B. c., AS N., KARAN Y., DİZMAN S., ŞAHİN M. E.  
II. International Conference on Advanced Engineering Technologies, Bayburt, Turkey, 21 - 23 September 2017
- XXII. **Single Input Multiple Output DC/DC Buck Converter for Electric Vehicles**  
Aden İ. A., KAHVECİ H., ŞAHİN M. E.  
International Conference on Advanced Engineering Technologies, Bayburt, Turkey, 21 - 23 September 2017
- XXIII. **A Novel Efficient PV - Battery Powered LED Lighting Scheme**  
Sahin M. E., SHARAF A. M.  
5th International Istanbul Smart Grid and Cities Congress and Fair (ICSG), İstanbul, Turkey, 19 - 21 April 2017,  
pp.90-94
- XXIV. **Design of a Laboratory Unit Air-Conditioning System with Matlab/Simulink Software**  
KOÇYİĞİT n., ŞAHİN M. E.  
ICCESEN 2016, Antalya, Turkey, 19 - 24 November 2016
- XXV. **Investigation of GSM LTE and Wi Fi Electromagnetic Radiation in Dwellings**  
KARAN Y., AS N., ŞAHİN M. E.  
International Conference on Computational Experimental Science and Engineering(ICCESEN), Antalya, Turkey, 19 - 24  
October 2016
- XXVI. **The Design Steps of a Hybrid Renewable Energy System**  
ŞAHİN M. E., OKUMUŞ H. İ.  
ICCESEN 2016, Antalya, Turkey, 19 - 24 October 2016
- XXVII. **Sliding mode control of PV powered DC/DC Buck-Boost converter with digital signal processor**  
ŞAHİN M. E., OKUMUŞ H. İ., KAHVECİ H.  
17th European Conference on Power Electronics and Applications (EPE ECCE-Europe), Geneva, Switzerland, 8 - 10  
September 2015
- XXVIII. **Design of Wave Energy Converter System with Linear Generator**  
ŞAHİN M. E., ÖZDİNÇ I.  
ICCESEN 2014, Antalya, Turkey, 25 - 29 October 2014, vol.1, no.1, pp.224
- XXIX. **Comparison of Three Different Controllers for PV Powered Buck-Boost DC-DC Converter**  
ŞAHİN M. E., OKUMUS H. I.  
2nd International Conference on Computational & Social Sciences(ICCSS-14), Rize, Turkey, 26 - 28 August 2014,  
vol.1, pp.1-11
- XXX. **Yüksek Kazançlı Kablosuz Ağ Adaptörlerinde Elektromanyetik Radyasyon Analizi**  
KARAN Y., AS N., ŞAHİN M. E.  
TFD 31. Uluslararası Fizik Kongresi, Muğla, Turkey, 21 - 24 July 2014, pp.79
- XXXI. **Electromagnetic Pollution Measurement in the RTE University Campus Area**  
Dilek B., AS N., ŞAHİN M. E., KARAN Y.  
2nd Global Conference on Environmental Studies, Roma, Italy, 10 - 12 April 2014, pp.53
- XXXII. **RTE Üniversitesi Merkez Kampüs Güney Hattı Boyunca Elektromanyetik Kirlilik Ölçümü**  
Dilek B., AS N., ŞAHİN M. E.  
EMANET 2013, İstanbul, Turkey, 8 - 09 November 2013, vol.1, pp.1-6
- XXXIII. **RTE Üniversitesi Kampüs Alanında Elektromanyetik Kirlilik Ölçümü**  
Dilek B., AS N., ŞAHİN M. E.  
GEFİK'13, İzmir, Turkey, 8 - 10 July 2013, vol.1, pp.1
- XXXIV. **Small Signal Analyses and Hardware Implementation of a Buck-Boost Converter for Renewable  
Energy Applications**  
ŞAHİN M. E., OKUMUŞ H. İ.  
International Conference on Renewable Energy Research and Applications (ICRERA), Madrid, Spain, 20 - 23  
October 2013, pp.330-335
- XXXV. **A Sliding Mode and Fuzzy Logic Controlled PV Powered Buck-Boost DC-DC Converter**  
ŞAHİN M. E., OKUMUS H. I.

- 9TH International Conference on Electronics and Computation(ICECCO 2012), Ankara, Turkey, 1 - 03 November 2012, vol.1, pp.195-198
- XXXVI. **A Fuzzy Logic Controlled PV Powered Buck-Boost DC-DC Converter for Battery-Load System**  
ŞAHİN M. E., OKUMUS H. İ.  
International Symposium on INnovations in Intelligent SysTems and Applications IEEE Conference, Trabzon, Turkey, 2 - 04 July 2012, vol.1, pp.1-5
- XXXVII. **A Novel Photovoltaic PV-Powered Boost Battery Charging FACTS Scheme for Electric Vehicles**  
SHARAF A. M., ŞAHİN M. E., OKUMUS H. İ.  
3rd International Conference on Nuclear &Renewable Energy Resources, İstanbul, Turkey, 20 - 23 May 2012, vol.1, pp.1-6
- XXXVIII. **A Sliding Mode and Fuzzy Logic Controlled PV Powered Buck-Boost DC-DC Converter**  
ŞAHİN M. E., OKUMUŞ H. İ.  
9th International Conference on Electronics Computer and Computation (ICECCO 2012), Ankara, Turkey, 1 - 03 November 2012, pp.195-198
- XXXIX. **A Novel Photovoltaic PV-Powered Battery Charging Scheme for Electric Vehicles**  
SHARAF A. M., ŞAHİN M. E.  
ICEAS 2011 IEEE Conference, Odisha, India, 28 - 30 December 2011, vol.1, pp.1-5
- XL. **Spectrum analyzer measurement technique for safety evaluation on wireless communication systems**  
ŞAHİN M. E., KARAN Y., AS N.  
2011 30th URSI General Assembly and Scientific Symposium, URSIGASS 2011, İstanbul, Turkey, 13 - 20 August 2011
- XLI. **Fuzzy Logic Controlled Buck-Boost DC-DC Converter for Solar Energy-Battery System**  
ŞAHİN M. E., OKUMUS H. İ.  
International Symposium on INnovations in Intelligent SysTems and Applications IEEE Conference, İstanbul, Turkey, 15 - 18 June 2011, vol.1, pp.394-397
- XLII. **Elektroliz sistemi için eş zamanlı azaltan dönüştürücü**  
ŞAHİN M. E., OKUMUŞ H. İ.  
ELECO, Turkey, 2 - 05 December 2010, pp.58-61
- XLIII. **Eş Zamanlı Azaltan Dönüştürücü Devresi ile Tasarlanmış Bir Elektroliz Sistemi ile Hidrojen Elde Etme**  
ŞAHİN M. E., OKUMUS H. İ.  
ELECO 2010 IEEE Conference, Bursa, Turkey, 2 - 05 December 2010, vol.1, pp.58-62
- XLIV. **Computer Controlled Solar House For Measurement Rize City Solar Energy Potansiel**  
ŞAHİN M. E., NEVRUZOĞLU V.  
2nd International Conference on Nuclear &Renewable Energy Resources, Ankara, Turkey, 4 - 07 July 2010, vol.1, pp.310-314
- XLV. **Design and Analysis of Fuzzy Controller for a Single Holding Tank**  
ŞAHİN M. E., ALTAŞ İ. H., OKUMUS H. İ.  
International Symposium on INnovations in Intelligent SysTems and Applications, Kayseri, Turkey, 21 - 24 June 2010, vol.1, pp.250-254
- XLVI. **Computer controlled solar house for measurement rize city solar energy potantial**  
ŞAHİN M. E., NEVRUZOĞLU V.  
NURER, 1 July - 05 January 2010
- XLVII. **Rize İli için Tasarlanmış Bilgisayar Kontrollü Güneş Evi Modeli**  
ŞAHİN M. E., NEVRUZOĞLU V., ŞENYURT Ö.  
Ulusal Hidrojen Enerjisi Kongresi ve Sergisi(Uluslararası Katılımlı), Kocaeli, Turkey, 15 - 16 October 2009, vol.1, pp.273-278
- XLVIII. **Fuzzy Logic Controlled Synchronous Buck DC DC Converter Ior Solar Energy Hydrogen Systems**  
ŞAHİN M. E., OKUMUŞ H. İ.  
INISTA 2009, 23 - 30 June 2009
- XLIX. **Fuzzy Logic Controlled Synchronous Buck DC-DC Converter for Solar Energy-Hydrogen Systems**

**ŞAHİN M. E., OKUMUS H. I.**

International Symposium on INnovations in Intelligent SysTems and Applications, Trabzon, Turkey, 29 June - 01 July 2009, vol.1, pp.200-204

**L. Computer Controlled Solar House**

Şenyurt Ö., NEVRUZOĞLU V., ŞAHİN M. E.

Balkan Physical Union 2ND International Physics Project Competition For University, Bodrum, Turkey, 18 - 20 August 2008, pp.101

## **Supported Projects**

AS N., İNCE B. E., ŞAHİN M. E., KARAN Y., DİZMAN S., SAYI B. C., KUVANCI A., ÖZTÜRK H., CINBIRTOĞLU Ş., AYDIN E., Project Supported by Higher Education Institutions, İyonize Olmayan Elektromanyetik Radyasyonun Bal Arıları ve Bal Üretimi Üzerindeki Etkilerinin İncelenmesi, 2017 - 2019

AS N., DİZMAN S., KARAN Y., ŞAHİN M. E., Dilek B., Project Supported by Higher Education Institutions, Çevrede Bulunan İyonize Olamayan Elektromanyetik Alan (0-300 GHz) Kirliliğinin ve Elektromanyetik Alanların Vücut Yüzeyinde Oluşturduğu Isıl Değişimlerin İncelenmesi, 2013 - 2016

TUBITAK Project, Karma (Fotovoltaik/Rüzgâr) Enerji Sistemi İçin Bulanık Kayan Kip (Fuzzy-Sliding Mode) Denetimli Paralel Baglı Azaltan-Artırın (Buck-Boost) Çevirici Tasarımı Ve Güç Analizinin Yapılması, 2012 - 2013

KOÇYİĞİT N., ŞAHİN M. E., Project Supported by Higher Education Institutions, Bilgisayar Kontrollü Elektronik İklimlendirme Sistemi Yapımı, 2010 - 2012

## **Activities in Scientific Journals**

International Journal of Energy and Environmental Science, Committee Member, 2016 - Continues

Turkish Journal of Electrical Engineering & Computer Sciences, Editor, 2015 - Continues

Turkish Journal of Electromechanics and Energy, First Editor, 2014 - Continues

## **Memberships / Tasks in Scientific Organizations**

Elektrik Mühendisleri Odası, Member, 2002 - Continues

## **Scientific Refereeing**

JOURNAL OF CIRCUITS, SYSTEMS AND COMPUTERS, SCI Journal, December 2022

ENERGIES, SCI Journal, December 2022

International Journal of Energy Research, SCI Journal, September 2016

Journal of Circuits, Systems, and Computer(sürekli), National Scientific Refreed Journal, June 2015

Gazi University Journal of Science, Other Indexed Journal, April 2015

Gazi University Journal of Science Part A:Engineering and Innovation, Other Indexed Journal, April 2015 February 2015

Turkish Journal of Electrical Engineering & Computer Sciences(Sürekli), SCI Journal, January 2015

International Journal of Hydrogen Energy,, SCI Journal, July 2014

British Journal of Applied Science & Technology, Other Indexed Journal, June 2013

Scientific Research and Essays, SCI Journal, May 2013

EMO Bilimsel Dergisi, Other Indexed Journal, May 2013

Instrumentation Science & Technology , Taylor & Francis,, SCI Journal, February 2013

Electric Power Components and Systems, Taylor & Francis, SCI Journal, January 2012

## **Scientific Research / Working Group Memberships**

Recep Tayyip Erdoğan Üniversitesi Elektromanyetik Uygulama ve Araştırma Merkezi,, RECEP TAYYİP ERDOĞAN ÜNİVERSİTESİ, Turkey, <http://remam.idari.erdogan.edu.tr/tr/>, 2016 - Continues

## **Metrics**

Publication: 105

Citation (WoS): 139

Citation (Scopus): 271

H-Index (WoS): 7

H-Index (Scopus): 9

## **Congress and Symposium Activities**

IEEE 7th CORPE Symposium, Attendee, Aalborg, Denmark, 2019

IEEE Workshop on Representations of Power Electronics for Grid Dynamic Studies, Attendee, Aalborg, Denmark, 2018

## **Scholarships**

2219 Doktora sonrası araştırma, TUBITAK, 2018 - 2019

1002 Bursu, TUBITAK, 2012 - 2013

## **Awards**

ŞAHİN M. E., Yayın Teşvik Ödülü, RTE Üniversitesi, May 2019

ŞAHİN M. E., Yayın Teşvik Ödülü, RTE Üniversitesi, April 2018

ŞAHİN M. E., Yayın teşvik ödülü, TÜBİTAK, April 2017

Şahin M. E., Yayın Teşvik Ödülü, Tübitak, December 2015

ŞAHİN M. E., Tut elimden adlı proje yarışması ödülü, TTSO-KTU, December 2013

## **Visual Activities**

ŞAHİN M. E., Radio Program, 2020 - 2020

## **Non Academic Experience**

Business Establishment Private, Denetim Şirketi

Other Public Institution, Meb