

## Prof. SELİM BÖREKÇİ

### Personal Information

Office Phone: [+90 242 310 6396](tel:+902423106396) Extension: 6396

Office Phone: [+90 242 310 6396](tel:+902423106396) Extension: 6396

Fax Phone: [+90 242 310 6396](tel:+902423106396)

Email: [sborekci@akdeniz.edu.tr](mailto:sborekci@akdeniz.edu.tr)

Web: <https://avesis.akdeniz.edu.tr/sborekci>

Address: Akdeniz Ünv. Müh. Fak. Elektrik Elektronik Müh. Bölümü ANTALYA

### Education Information

Doctorate, New Mexico State University, Electrical And Computer Eng., Elektrical Eng., United States Of America 1997 - 2001

Postgraduate, New Mexico State University, Electrical And Computer Eng., Elektrical Eng., United States Of America 1995 - 1997

Undergraduate, Istanbul Technical University, Elektrik Elektronik Fak., Elektrik Müh., Turkey 1989 - 1993

### Research Areas

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

### Academic Titles / Tasks

Associate Professor, Akdeniz University, Faculty of Engineering, Elektrik Elektronik Müh. , 2013 - Continues

Assistant Professor, Akdeniz University, Faculty of Engineering, Elektrik Elektronik Müh., 2010 - Continues

Assistant Professor, Pamukkale University, Faculty Of Engineering, Elektrik Elektronik Müh., 2006 - 2010

Lecturer PhD, Pamukkale University, Faculty Of Engineering, Elektrik Elektronik Müh., 2004 - 2006

### Academic and Administrative Experience

Akdeniz University, 2013 - Continues

### Courses

İleri Güç Elektroniği Uygulamaları, Postgraduate, 2017 - 2018

Elektrik Mak., Undergraduate, 2017 - 2018

Elektrik Enerji Dağıtımı, Undergraduate, 2017 - 2018

Enerji Sistemleri Analizi, Postgraduate, 2017 - 2018

Resonant Converters, Doctorate, 2016 - 2017

Güç Elektroniği, Undergraduate, 2017 - 2018

## **Advancing Ineses**

BÖREKÇİ S., TAK – ÜRET MODUNDA TEK DÖNÜŞTÜRÜCÜLÜ MAKSİMUM VERİMDE ÇALIŞAN ŞEBEKE BAĞIMLI 175 W'LIK PV PANEL SİSTEMİ TASARIMI, Postgraduate, E.Kandemir(Student), 2015

BÖREKÇİ S., Tak-Üret modunda tek dönüştürücülü maksimum verimde çalışan şebeke bağımlı PV panel sistemi tasarımı, Postgraduate, E.Kandemir(Student), 2015

BÖREKÇİ S., Kendinden Tetiklemeli Akım Beslemeli Yarı Köprülü İnverter LED Sürücü Devresi, Postgraduate, N.Acar(Student), 2014

BÖREKÇİ S., Çıkış gücü ayarlanabilen, akım beslemeli led sürücü devresi tasarımı, Postgraduate, N.Çetin(Student), 2014

BÖREKÇİ S., Entegresiz, Harmonik Bozulması Azaltılmış Güç Kaynağı Tasarımı, Postgraduate, İ.Lüleci(Student), 2013

BÖREKÇİ S., Tek faz anahtarlamalı güç kaynakları için düşük maliyetli aktif güç çarpanı düzeltmesinin teorisi ve pratik uygulaması, Postgraduate, İ.Murat(Student), 2013

BÖREKÇİ S., Kurşun Asit Akülerin Optimum Şarj Olmasını Sağlayan Şarj Devresi, Postgraduate, M.Emre(Student), 2010

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

- I. **LCC-S compensated variable inductor-based hybrid topology analysis for inductive power transfer system**  
Kandemir E., BÖREKÇİ S.  
Electrical Engineering, vol.106, no.2, pp.1585-1604, 2024 (SCI-Expanded)
- II. **Providing Low Current Ripple and MPPT Requirements in PV Panels with IBC Operating in Critical Current Mode**  
Çandır A., BÖREKÇİ S.  
Electric Power Components and Systems, vol.52, no.10, pp.1832-1841, 2024 (SCI-Expanded)
- III. **Analysis of a Load-Independent and Novel Design Double-Sided LCC Hybrid Compensation Topology for Wireless Power Transfer System**  
Kandemir E., BÖREKÇİ S.  
Iranian Journal of Science and Technology - Transactions of Electrical Engineering, vol.47, no.3, pp.903-924, 2023 (SCI-Expanded)
- IV. **Single-stage photovoltaic system design based on energy recovery and fuzzy logic control for partial shading condition**  
Kandemir E., ÇETİN N. S., BÖREKÇİ S.  
INTERNATIONAL JOURNAL OF CIRCUIT THEORY AND APPLICATIONS, vol.50, no.5, pp.1770-1792, 2022 (SCI-Expanded)
- V. **LED dimming technique without frequency and pulse width modulations**  
BÖREKÇİ S., Acar N. C., Kırçay A.  
INTERNATIONAL JOURNAL OF CIRCUIT THEORY AND APPLICATIONS, vol.46, no.11, pp.2028-2037, 2018 (SCI-Expanded)
- VI. **Comparative Analysis of Reduced-Rule Compressed Fuzzy Logic Control and Incremental Conductance MPPT Methods**  
Kandemir E., BÖREKÇİ S., ÇETİN N. S.  
JOURNAL OF ELECTRONIC MATERIALS, vol.47, no.8, pp.4463-4474, 2018 (SCI-Expanded)
- VII. **PV system fuzzy logic MPPT method and PI control as a charge controller**  
YILMAZ Ü., KIRÇAY A., BÖREKÇİ S.  
RENEWABLE & SUSTAINABLE ENERGY REVIEWS, vol.81, pp.994-1001, 2018 (SCI-Expanded)
- VIII. **Conventional and Soft-Computing Based MPPT Methods Comparisons in Direct and Indirect Modes for Single Stage PV Systems**  
Kandemir E., BÖREKÇİ S., ÇETİN N. S.  
ELEKTRONIKA IR ELEKTROTEHNIKA, vol.24, no.4, 2018 (SCI-Expanded)
- IX. **A comprehensive overview of maximum power extraction methods for PV systems**  
Kandemir E., ÇETİN N. S., BÖREKÇİ S.  
RENEWABLE & SUSTAINABLE ENERGY REVIEWS, vol.78, pp.93-112, 2017 (SCI-Expanded)

- X. **Energy management for on-grid and off-grid wind/PV and battery hybrid systems**  
Basaran K., ÇETİN N. S., BÖREKÇİ S.  
IET RENEWABLE POWER GENERATION, vol.11, no.5, pp.642-649, 2017 (SCI-Expanded)
- XI. **Electronically-Tunable Current-Mode Biquad Design Using MO-OTAs**  
Kircay A., Borekci S.  
JOURNAL OF CIRCUITS SYSTEMS AND COMPUTERS, vol.25, no.9, 2016 (SCI-Expanded)
- XII. **HIGH-BRIGHTNESS AND LOW-COST LED DRIVER - DC OR AC?**  
BÖREKÇİ S., Acar N. C.  
ELECTRONICS WORLD, vol.121, no.1950, pp.34-36, 2015 (SCI-Expanded)
- XIII. **A Simpler Single-Phase Single-Stage Grid-Connected PV System with Maximum Power Point Tracking Controller**  
BÖREKÇİ S., Kandemir E., Kircay A.  
ELEKTRONIKA IR ELEKTROTEHNIKA, vol.21, no.4, pp.44-49, 2015 (SCI-Expanded)
- XIV. **Dimmable electronic ballasts by variable power density modulation technique**  
BÖREKÇİ S., Kesler S.  
INTERNATIONAL JOURNAL OF ELECTRONICS, vol.101, no.11, pp.1570-1579, 2014 (SCI-Expanded)
- XV. **Switching-Mode BJT Driver for Self-Oscillated Push-Pull Inverters**  
BÖREKÇİ S., Oncu S.  
JOURNAL OF POWER ELECTRONICS, vol.12, no.2, pp.242-248, 2012 (SCI-Expanded)
- XVI. **DESIGN AND IMPLEMENTATION OF A SELF OSCILLATING INDUCTION HEATER**  
BAL G., Oncu S., BÖREKÇİ S.  
JOURNAL OF THE FACULTY OF ENGINEERING AND ARCHITECTURE OF GAZI UNIVERSITY, vol.26, no.4, pp.771-776, 2011 (SCI-Expanded)
- XVII. **Dimming Electronic Ballasts Without Striations**  
Borekci S.  
IEEE TRANSACTIONS ON INDUSTRIAL ELECTRONICS, vol.56, no.7, pp.2464-2468, 2009 (SCI-Expanded)
- XVIII. **CURRENT FED SELF OSCILLATING ELECTRONIC BALLAST DESIGN WITH PUSH PULL INVERTER**  
Borekci S., Oncu S.  
JOURNAL OF THE FACULTY OF ENGINEERING AND ARCHITECTURE OF GAZI UNIVERSITY, vol.24, no.1, pp.1-6, 2009 (SCI-Expanded)
- XIX. **Dimming self-oscillating ballast by variable inductor**  
Borekci S., Oncu S.  
ELECTRONICS LETTERS, vol.43, no.14, pp.772-774, 2007 (SCI-Expanded)

## Articles Published in Other Journals

- I. **A Comparison of Perturb Observe and Fuzzy-Logic Based MPPT Methods for Uniform Environment Conditions**  
Kandemir e., ÇETİN N. S., BÖREKÇİ S.  
Periodicals of Engineering and Natural Sciences, vol.5, no.1, pp.16-23, 2017 (Scopus)
- II. **Manyetik Denetimli Bobin ile Elektronik Ballast Güç Denetimi**  
BÖREKÇİ S., Oncu S.  
Pamukkale Üniversitesi Mühendislik Dergisi, vol.14, no.3, pp.261-265, 2008 (Peer-Reviewed Journal)

## Refereed Congress / Symposium Publications in Proceedings

- I. **Modified Carrier-Based Control Strategy to Reduce Switching Losses in Single-Phase Quasi-Impedance Source Inverters**  
AYTEKİN H. İ., BÖREKÇİ S.

4th International Conference on Smart Grid and Renewable Energy, SGRE 2024, Doha, Qatar, 8 - 10 January 2024

- II. **Magnetically Dimmable Half Bridge Current Fed LED Driver**  
BÖREKÇİ S., Çetin Acar N.  
Advance in Robotics, Mechatronics and Circuits, Santorini Island, Greece, 17 - 21 July 2014, pp.150-154
- III. **An Accurate Way of Determining BJT's Switching Loss in Medium and High Voltage Applications**  
BÖREKÇİ S., Çetin Acar N.  
2012 IEEE International Conference on Electronics Design, Systems and Applications, Kuala Lumpur, Malaysia, 5 - 06 November 2012, pp.210-213
- IV. **An Accurate Way of Determining BJT's Switching Loss in Medium and High Voltage Applications**  
BÖREKÇİ S., Acar N. C.  
3rd IEEE International Conference on Electronics Design, Systems and Applications (ICEDSA), Kuala-Lumpur, Malaysia, 5 - 06 November 2012, pp.183-187
- V. **Üniversite Sanayi İşbirliği ve Sanayicinin Elektrik Elektronik Mühendisinden Beklentileri Denizli Pilot Anket Çalışması**  
BÖREKÇİ S., Özek A., Öztürk K., Kilit D.  
EEBB Mühendisleri Eğitimi 4. Ulusal Sempozyumu, Eskişehir, Turkey, 1 - 02 October 2009, pp.297-298
- VI. **Manyetik denetimli Elektronik Ballast Simülasyonu**  
BÖREKÇİ S., Oncu S.  
IV Ulusal Aydınlatma Sempozyumu, İzmir, Turkey, 1 - 03 December 2007, pp.177-182
- VII. **Simulation of Three Phase Inverter Control by the Vernier Technique**  
BÖREKÇİ S., Rodrigues O., Ranade S.  
2007 IEEE Power Engineering General Meeting, Tampa, FL, United States Of America, 27 - 28 June 2007, pp.100
- VIII. **Capacitor Placement Optimization Project**  
BÖREKÇİ S., Romero J., Harrell D.  
38th North American Power Symposium, Carbondale, IL, United States Of America, 17 - 19 September 2006, pp.35-40
- IX. **Modified Temperature Rise Estimation Method for Switching Transistors in Electronic Ballasts**  
BÖREKÇİ S., Harrell D., Ranade S.  
IEEE 2004 First International Conference on Power Electronics Systems and Applications, Hong Kong, China, 1 - 05 November 2004, pp.95-100

## Supported Projects

DİPOVA N., CANGİR B., BÖREKÇİ S., Project Supported by Higher Education Institutions, Boğaçay Ovası (Antalya) ince daneli çökellerinin sismik zemin davranışının incelenmesi, 2015 - 2018

BÖREKÇİ S., TUBITAK Project, Enerji Sistemlerinde Harmoniklerin Yeni Tip Hibrit Filtreleme ile Yok Edilmesi, 2007 - 2010

BÖREKÇİ S., Other International Funding Programs, Contact Probe Experiments on Alodined Surfaces, 1996 - 1997

## Metrics

Publication: 33

Citation (WoS): 250

Citation (Scopus): 663

H-Index (WoS): 5

H-Index (Scopus): 9