

Prof. BEKİR ÇAKIR

Personal Information

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International Researcher IDs

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Education Information

Postgraduate, Technische Universitaet Berlin, Elektrotechnik, Germany 1986 - 1990

Undergraduate, Technische Universitaet Berlin, Elektrotechnik, Germany 1984 - 1986

Associate Degree, Technische Universitaet Berlin, Elektrotechnik, Germany 1982 - 1984

Foreign Languages

German, B2 Upper Intermediate

Research Areas

Engineering and Technology

Academic Titles / Tasks

Professor, Kocaeli University, Mühendislik Fakültesi, Elektrik Mühendisliği Bölümü, 2006 - Continues

Associate Professor, Kocaeli University, Mühendislik Fakültesi, Elektrik Mühendisliği, 2002 - 2006

Assistant Professor, Kocaeli University, Mühendislik Fakültesi, Elektrik Mühendisliği, 1995 - 2002

Academic and Administrative Experience

University Executive Board Member, Kocaeli University, 2014 - 2018

Kocaeli Üniversitesi, Mühendislik Fakültesi, Elektrik Mühendisliği Bölümü, 2014 - 2017

Kocaeli Üniversitesi, Mühendislik Fakültesi, Elektrik Mühendisliği Bölümü, 2011 - 2015

Kocaeli Üniversitesi, Mühendislik Fakültesi, Elektrik Mühendisliği Bölümü, 2012 - 2013

Kocaeli Üniversitesi, Mühendislik Fakültesi, Elektrik Mühendisliği Bölümü, 1998 - 2000

Kocaeli Üniversitesi, Mühendislik Fakültesi, Elektrik Mühendisliği Bölümü, 1997 - 1999

Published journal articles indexed by SCI, SSCI, and AHCI

1. Atomic Comagnetometer Gyroscopes for Inertial Navigation Systems: A Review

KarabiNaoğlu M. S., ÇAKIR B., Başoğlu M. E.

Turkish Journal of Electrical Engineering and Computer Sciences, vol.32, no.2, pp.305-319, 2024 (SCI-Expanded)

- II. **The random varying loads and their impacts on the performance of smart grids**
Iqteit N. A., BASA ARSOY A., ÇAKIR B.
ELECTRIC POWER SYSTEMS RESEARCH, vol.209, 2022 (SCI-Expanded)
- III. **Comparison of deep learning and regression-based MPPT algorithms in PV systems**
Karabinaoglu M. S., ÇAKIR B., BAŞOĞLU M. E., Kazdaloglu A., Guneroglu A.
TURKISH JOURNAL OF ELECTRICAL ENGINEERING AND COMPUTER SCIENCES, vol.30, no.6, pp.2319-2338, 2022 (SCI-Expanded)
- IV. **Hybrid global maximum power point tracking approach for photovoltaic power optimisers**
BAŞOĞLU M. E., ÇAKIR B.
IET RENEWABLE POWER GENERATION, vol.12, no.8, pp.875-882, 2018 (SCI-Expanded)
- V. **COMPARISON OF SINGLE PHASE BUCK-BOOST AND SEPIC LED DRIVER**
ŞEHİRLİ E., ALTINAY M., Üstün Ö., ÇAKIR B.
LIGHT & ENGINEERING, vol.25, no.4, pp.92-98, 2017 (SCI-Expanded)
- VI. **A novel voltage-current characteristic based global maximum power point tracking algorithm in photovoltaic systems**
Basoglu M. E., ÇAKIR B.
ENERGY, vol.112, pp.153-163, 2016 (SCI-Expanded)
- VII. **Comparisons of MPPT performances of isolated and non-isolated DC-DC converters by using a new approach**
Basoglu M. E., ÇAKIR B.
RENEWABLE & SUSTAINABLE ENERGY REVIEWS, vol.60, pp.1100-1113, 2016 (SCI-Expanded)
- VIII. **An improved incremental conductance based MPPT approach for PV modules**
Basoglu M. E., ÇAKIR B.
TURKISH JOURNAL OF ELECTRICAL ENGINEERING AND COMPUTER SCIENCES, vol.23, no.6, pp.1687-1697, 2015 (SCI-Expanded)
- IX. **Comparative Switching Characteristics of the ZCZVT PWM Inverters and Reliability Analysis**
Nil M., Nil M., Cakir B., Demir M.
INTERNATIONAL REVIEW OF ELECTRICAL ENGINEERING-IREE, vol.6, no.1, pp.139-148, 2011 (SCI-Expanded)
- X. **Neuro-PID position controller design for permanent magnet synchronous motor**
Bilgin M. Z., Cakir B.
ADVANCES IN NATURAL COMPUTATION, PT 1, vol.4221, pp.418-426, 2006 (SCI-Expanded)

Articles Published in Other Journals

- I. **Akıllı Şebeke Bileşenleri ve Yapısal Analizi**
Yazıcı F., BAŞOĞLU M. E., ÇAKIR B.
EMO Bilimsel Dergi, vol.8, no.2, pp.21-27, 2019 (Peer-Reviewed Journal)
- II. **Comparative analysis of the maximum power point tracking techniques performance using boost converter**
Sopondja D., ÇAKIR B., Yasko M.
International Journal of Scientific Engineering Research, vol.9, no.5, pp.370-384, 2018 (Peer-Reviewed Journal)
- III. **Promising energy sources within the framework of 2023 energy targets in Turkey Solar and Wind**
BAŞOĞLU M. E., ÇAKIR B.
International Journal of Electronics and Electrical Engineering, vol.5, no.2, pp.183-188, 2017 (Peer-Reviewed Journal)
- IV. **Wind Energy Status in Turkey**
BAŞOĞLU M. E., ÇAKIR B.
International Journal of Environmental, Ecological, Geological and Geophysical Engineering, vol.9, no.1, pp.19-24,

2015 (Peer-Reviewed Journal)

V. Design and Implementation of DC DC Converter with Inc Cond Algorithm

BAŞOĞLU M. E., ÇAKIR B.

International Journal of Electrical, Computer, Electronics and Communication Engineering, vol.9, pp.45-48, 2015
(Peer-Reviewed Journal)

VI. Fotovoltaik Sistemlerde Maksimum Güç Noktası İzleme Yöntemlerinin İncelenmesi

KESKİN Y. E., ÇAKIR B.

3e Electrotech, no.245, pp.110-113, 2014 (Peer-Reviewed Journal)

Refereed Congress / Symposium Publications in Proceedings

I. Magnetic Shielding Simulation for a Low Noise Atomic Comagnetometer

Karabinaoglu M. S., Koç E., ÇAKIR B.

10th International Conference on Electrical and Electronics Engineering, ICEEE 2023, İstanbul, Turkey, 8 - 10 May 2023, pp.327-332

II. FARKLI ROTOR KONFİGÜRASYONLARINDAKİ FIRÇASIZ DOĞRU AKIM MOTORLARININ ANALİZİ VE KARŞILAŞTIRILMASI

YILMAZ A., ÇAKIR B.

5ND INTERNATIONAL CONGRESS ON ENGINEERING, ARCHITECTURE AND DESIGN, İstanbul, Turkey, 21 - 22 December 2019, pp.282-289

III. Fotovoltaik Sistemlerde, Güneş Panellerinin Enerji Profilinin İncelenmesi

KAZDALOĞLU A., ÇAKIR B.

International Multidisciplinary Congress Of Eurasia, 24 - 26 April 2019, pp.251-256

IV. CONTROL OF SPWM APPLIED 15 LEVEL INVERTERWITH ARM PROCESSOR

KAZDALOĞLU A., ÇAKIR B., ERFİDAN T., BİLGİN M. Z.

International Conference on Engineering Technologies, ICENTE'xx18, Konya, Turkey, 26 - 28 October 2018, pp.282-285

V. A NEW SPWM TECHNIQUE IMPLEMENTED USING A CARRIER SIGNAL FOR MULTI LEVEL INVERTERS

KAZDALOĞLU A., ÇAKIR B.

ICAT'xx18, 7th International Conference on Advanced Technologies, 28 April - 01 May 2018, pp.124-127

VI. CONTROL OF SPWM APPLIED 9 LEVELINVERTER WITH DSPACE

KAZDALOĞLU A., ÇAKIR B.

ICAT'xx18, 7th International Conference on Advanced Technologies, 28 April - 01 May 2018, pp.128-134

VII. Accurate modeling for photovoltaic modules

Mohamed Y., ÇAKIR B.

International Congress on Engineering and Life Science, 26 - 29 April 2018, pp.950-954

VIII. Design And Simulation Of A Maximum Power Point TrackerUsing Buck Converter For Photovoltaic System

YASKO M. A., ÇAKIR B., BİLGİN M. Z., ERFİDAN T., KAZDALOĞLU A.

International Renewable Energy and EnergyEfficiency Congress (GAPYENEV-2018), 10 - 12 May 2018

IX. Improving the Performance of the MPPT for Thermoelectric Generator System by using Kalman Filter

YAHYA K., BİLGİN M. Z., ERFİDAN T., ÇAKIR B.

ICEEE 2018 5th International Conference on Electrical and Electronic Engineering, 3 - 05 May 2018

X. Bilimler ve ilim Kainatta İlahi Oran

KAZDALOĞLU A., ÇAKIR B.

ULUSLARARASI SOSYAL VE İSLAMİ BİLİMLER KONFERANSI, Kocaeli, Turkey, 22 December 2017

XI. Module integrated converter based MPPT application

BAŞOĞLU M. E., ÇAKIR B.

First International Conference on Energy Systems Engineering, Karabük, Turkey, 2 - 04 November 2017

- XII. **Improved MPPT Controller Without SystemDependency**
BAŞOĞLU M. E., ÇAKIR B.
First International Conference on Energy Systems Engineering, Karabük, Turkey, 2 - 04 November 2017
- XIII. **Recent developments in photovoltaic electricity in Turkey and a site dependent analysis**
BAŞOĞLU M. E., ÇAKIR B.
First International Conference on Energy Systems Engineering, Karabük, Turkey, 2 - 04 November 2017
- XIV. **A Simple Method to Estimate Power Losses in Distribution Networks**
IQTEIT N., BASA ARSOY A., ÇAKIR B.
ELECO 2017, Bursa, Turkey, 30 November - 02 December 2017, pp.135-140
- XV. **Experimental Evaluations of Global Maximum Power Point Tracking Approaches in Partial Shading Conditions**
Basoglu M. E., ÇAKIR B.
17th IEEE International Conference on Environment and Electrical Engineering (IEEE EEEIC) / 1st IEEE Industrial and Commercial Power Systems Europe (IEEE I and CPS Europe), Milan, Italy, 6 - 09 June 2017
- XVI. **A high speed global maximum power point tracking algorithm for PV systems**
BAŞOĞLU M. E., ÇAKIR B.
EU PVSEC, 20 - 24 June 2016
- XVII. **Promising energy sources within the framework of 2023 energy targets in Turkey Solar and Wind**
BAŞOĞLU M. E., ÇAKIR B.
ICEEE 2016, 11 - 12 April 2016
- XVIII. **GERİLİM ÇÖKMESİ KAYNAĞININ YERİNİ BELİRLEMEDE KULLANILAN YÖNTEMLERİN İNCELENMESİ**
KESKİN Y. E., ÇAKIR B., BASA ARSOY A., TEKDEMİR İ. G.
ENERJİ VERİMLİLİĞİ VE KALİTESİ SEMPOZYUMU, Turkey, 23 May 2015
- XIX. **Wind Energy Status in Turkey**
BAŞOĞLU M. E., ÇAKIR B.
17th International Conference on Nuclear and Renewable Energy Engineering, ICNREE, 13 - 14 January 2015
- XX. **Design and Implementation of DC DC Converter with Inc Cond Algorithm**
BAŞOĞLU M. E., ÇAKIR B.
17th International Conference on Nuclear and Renewable Energy Engineering, ICNREE, 13 - 14 January 2015
- XXI. **A new maximum power point tracking approach for decreasing convergence time**
Basoglu M. E., ÇAKIR B.
IEEE 15th International Conference on Environment and Electrical Engineering (EEEIC), Rome, Italy, 10 - 13 June 2015, pp.172-176
- XXII. **Investigation of solar panel characteristics and MPPT performance under partial shading conditions**
Basoglu M. E., ÇAKIR B.
9th International Conference on Electrical and Electronics Engineering (ELECO), Bursa, Turkey, 26 - 28 November 2015, pp.1043-1047
- XXIII. **Seasonal based energy performance analyzes of Cd-Te and c-Si photovoltaic modules**
BAŞOĞLU M. E., Kazdaloglu A., ERFİDAN T., BİLGİN M. Z., ÇAKIR B.
IEEE 15th International Conference on Environment and Electrical Engineering (EEEIC), Rome, Italy, 10 - 13 June 2015, pp.208-212
- XXIV. **Hardware based comparison of buck-boost converter topologies in MPPT systems**
Basoglu M. E., ÇAKIR B.
9th International Conference on Electrical and Electronics Engineering (ELECO), Bursa, Turkey, 26 - 28 November 2015, pp.1109-1112
- XXV. **Current Controlled SRM fed by Three-phase Voltage Source Converter**
ŞEHİRLİ E., Kuyumcu F. E., ÇAKIR B.
50th International Universities Power Engineering Conference (UPEC), Stoke-On-Trent, United Kingdom, 1 - 04 September 2015
- XXVI. **Farklı Güneş Paneli Teknolojilerinin Kocaeli ili için Performans Değerlendirmesi**
BAŞOĞLU M. E., KAZDALOĞLU A., BİLGİN M. Z., ERFİDAN T., ÇAKIR B.

ELECO 2014 Elektrik – Elektronik – Bilgisayar ve Biyomedikal Mühendisliği Sempozyumu, Turkey, 27 - 29 November 2014

- XXVII. **Fotovoltaik Sistemlerde Değişir Gözle ve Artan İletkenlik Algoritmalarının Karşılaştırılması**
KESKİN Y. E., BAŞOĞLU M. E., ÇAKIR B.
ELECO, Turkey, 20 November 2014
- XXVIII. **Gerilim Çökmesi Kaynağının Yerini Belirlemede Kullanılan Yöntemlerin İncelenmesi**
KESKİN Y. E., BASA ARSOY A., ÇAKIR B., TEKDEMİR İ. G.
2013 Enerji Verimliliği ve Kalitesi Sempozyumu, Kocaeli, Turkey, 23 - 24 May 2013
- XXIX. **Design Principles of and Modelling Self-Sufficient Green Houses**
Basoglu M. E., ÇAKIR B.
1st International Conference on Renewable Energy Research and Applications (ICRERA), Nagasaki, Japan, 11 - 14 November 2012
- XXX. **MTBF Analysis in OEM Company Applications to ZCZVT PWM Soft Transition Inverters Mustafa NIL
Metin NIL and Bekir ÇAKIR**
ÇAKIR B.
IEEE, 9. International Conference on Environment and Electrical Engineering, 2 - 05 June 2010
- XXXI. **Implementation of softswitched frequency unloader technique for single phase inverter**
ÜRGÜN S., ERFİDAN T., ÇAKIR B.
MELECON 2008 - 2008 IEEE Mediterranean Electrotechnical Conference, Ajaccio, France, 5 - 07 May 2008, pp.625-628
- XXXII. **Fuzzy neural network based intelligent controller for 3-DOF robot manipulators**
NİL M., YÜZGEÇ U., Sönmez M., ÇAKIR B.
Proceedings of 5th International Symposium on Intelligent Manufacturing Systems, 29 May 2006
- XXXIII. **I/O Kartı ile Doğru Akım Makinasının Hız Kontrolü**
ERFİDAN T., ÇAKIR B., BEŞER E.
Elektrik-Elektronik-Bilgisayar Mühendisliği 9. Ulusal Kongresi, Turkey, 19 - 21 September 2001, pp.219-221
- XXXIV. **Bulanık Denetim Algoritmalarının PLC Komutlarıyla Gerçekleştirilmesi**
Yılmaz S., Gedik A., Dinçer H., Çakır B.
Elektrik-Elektronik-Bilgisayar Mühendisliği 8. Ulusal Kongresi, Gaziantep, Turkey, 6 - 12 September 1999, pp.572-575
- XXXV. **Speed Control of Conveyor System by Means of Fuzzy Control Aided PLC**
Yılmaz S., Çakır B., Gedik A., Dinçer H.
The 1999 IEEE International Symposium on Industrial Electronics, Proceedings, Ljubljana, Slovenia, 12 - 16 July 1999, vol.3, pp.1328-1332
- XXXVI. **İNDÜKSİYON MOTOR DENETİMİNDE DONANIMSAL VE YAZILIMSAL DGM-MODÜLATÖRÜNÜN UYGULANMASI**
ÇAKIR B., ABUT N., BİLGİN M. Z.
TOK 1998 Otomatik Kontrol Ulusal Toplantısı, Turkey, 15 - 16 October 1998
- XXXVII. **AKIM REGÜLELİ İNVERTER İLE SÜRÜLEN SÜREKLİ MİKNATISLI SENKRON MOTORUN YAPAY SİNİR AĞI İLE KONTROLÜ**
BİLGİN M. Z., ÇAKIR B., ABUT N.
TOK 1998 Otomatik Kontrol Ulusal Toplantısı, Turkey, 15 - 16 October 1998
- XXXVIII. **SWITCHED RELUCTANCE MOTOR DRIVE BY USING FUZZY CONTROL**
ABUT N., ÇAKIR B., İNANÇ N., YILDIZ A. B., BİLGİN M. Z.
IECON'97 23rd International Conference on Industrial Elec., Control and Instrumentation, 9 - 14 November 1997
- XXXIX. **FUZZY CONTROL APPLICATION OF SWITCHED RELUCTANCE MOTOR DRIVE**
ABUT N., ÇAKIR B., İNANÇ N., ertürk n., BİLGİN M. Z.
5th Fuzzy Days, 28 - 30 April 1997

Supported Projects

ÇAKIR B., Project Supported by Higher Education Institutions, KOCAELİ ÜNİVERSİTESİNDE YÜRÜTÜLECEK OLAN VE BAP BİRİMİ TARAFINDAN DESTEKLENEN PROJELERİN ANALİZ EDİLMESİ VE VERİMLİLİĞİNİN ARTIRILMASI İÇİN İSTATİSTİKİ ÇALIŞMA VE VERİ ANALİZİ, 2017 - 2019

ÇAKIR B., Project Supported by Higher Education Institutions, Bölgesel Bazlı Rüzgar ve Fotovoltaik Enerji Tahmini ile Optimum Enerji Yönetimli ve Şebeke Bağlantılı Örnek Ev Modeli ve Uygulaması, 2012 - 2015

ÇAKIR B., Project Supported by Higher Education Institutions, Güneş Enerji Sistemlerinde Kullanılmak Üzere Yeni Bir Üç Fazlı Çok Seviyeli Evirici Tasarımı, 2011 - 2013

Metrics

Publication: 63

Citation (WoS): 135

Citation (Scopus): 84

H-Index (WoS): 6

H-Index (Scopus): 4

Non Academic Experience

TÜBİTAK