

## Assoc. Prof. Bora ACARKAN

### Personal Information

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### Education Information

Doctorate, Yildiz Technical University, Graduate School Of Natural And Applied Sciences, Elektrik Mühendisliği, Turkey 1999 - 2006

Postgraduate, Yildiz Technical University, Graduate School Of Natural And Applied Sciences, Elektrik Mühendisliği, Turkey 1997 - 1999

Undergraduate, Yildiz Technical University, Faculty Of Electrical & Electronics, Elektrik Mühendisliği, Turkey 1993 - 1997

### Dissertations

Doctorate, Ofis donanımının harmonik etkinliğinin kestirimi ve harmonik analizi, Yildiz Technical University, Graduate School of Natural and Applied Sciences, 2006

### Research Areas

Electrical and Electronics Engineering, Energy, Lighting Technology, Power System Analysis, Generating Stations and Plants, Renewable energy, Engineering and Technology

### Academic Titles / Tasks

Associate Professor, Yildiz Technical University, Faculty Of Electrical & Electronics, Electrical Engineering Department, 2021 - Continues

Assistant Professor, Yildiz Technical University, Faculty Of Electrical & Electronics, Electrical Engineering Department, 2018 - 2021

Assistant Professor, Yildiz Technical University, Faculty Of Electrical & Electronics, Electrical Engineering Department, 2014 - 2018

Lecturer PhD, Yildiz Technical University, Faculty Of Electrical & Electronics, Electrical Engineering Department, 2009 - 2014

Research Assistant, Yildiz Technical University, Faculty Of Electrical & Electronics, Electrical Engineering Department, 1998 - 2009

## Academic and Administrative Experience

Deputy Head of Department, Yildiz Technical University, Faculty Of Electrical & Electronics, Electrical Engineering Department, 2016 - 2017

## Advising Theses

- Acarkan B., Elektrikli taşıtlardaki enerji depolama ve dağıtım sistemleri, Postgraduate, C.BERK(Student), 2021
- Acarkan B., Rüzgâr Enerjisi Santrallerinin Enerji Analizi, Postgraduate, D.ERDOĞAN(Student), 2021
- Acarkan B., DEVELOPMENT OF A NEW ELECTRICAL ENERGY MANAGEMENT SYSTEM FOR THE SHIPS IN ACCORDANCE WITH THE SMART GRID INFRASTRUCTURE, Doctorate, K.YİĞİT(Student), 2019
- Acarkan B., FACADE LIGHTING OF HISTORICAL BUILDINGS USING LED LIGHTING TECHNOLOGIES AND THE APPLICATION OF GALATA TOWER AND MAIDEN TOWER, Postgraduate, Y.DEMİRÖZ(Student), 2019
- ACARKAN B., GÜÇ AKIŞ ANALİZİNDE COĞRAFİ BİLGİ SİSTEMLERİNİN KULLANILMASI, Postgraduate, F.AYDIN(Student), 2014
- ACARKAN B., ELEKTRİKLİ ARAÇLARIN DAĞITILMIŞ ENERJİ ÜRETİM VE DEPOLAMA SİSTEMİ OLARAK DEĞERLENDİRİLMESİ, Postgraduate, İ.VERİM(Student), 2013
- ACARKAN B., BEP-TR YAZILIMI İLE KONUTLARDA ENERJİ KİMLİK BELGESİ UYGULAMASI VE AYDINLATMAYA YÖNELİK TÜKETİLEN ENERJİNİN TASARRUF POTANSİYELİNİN BELİRLENMESİ, Postgraduate, K.YİĞİT(Student), 2013

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

- I. **The effect of phase-shifting transformer angle value on system congestion and determination of ideal phase angle**  
AYDIN F., YİĞİT K., ACARKAN B.  
Electrical Engineering, 2024 (SCI-Expanded)
- II. **A new electrical energy management approach for ships using mixed energy sources to ensure sustainable port cities**  
Yiğit K., Acarkan B.  
SUSTAINABLE CITIES AND SOCIETY, vol.40, pp.126-135, 2018 (SCI-Expanded)
- III. **A new ship energy management algorithm to the smart electricity grid system**  
Yiğit K., Acarkan B.  
INTERNATIONAL JOURNAL OF ENERGY RESEARCH, vol.42, no.8, pp.2741-2756, 2018 (SCI-Expanded)
- IV. **Assessment of energy performance certificate systems: a case study for residential buildings in Turkey**  
Yiğit K., Acarkan B.  
TURKISH JOURNAL OF ELECTRICAL ENGINEERING AND COMPUTER SCIENCES, vol.24, pp.4839-4848, 2016 (SCI-Expanded)
- V. **FGD investments as part of energy policy: A case study for Turkey**  
KILIÇ O., ACARKAN B., AY S.  
ENERGY POLICY, vol.62, pp.1461-1469, 2013 (SCI-Expanded)
- VI. **Modeling of hydrogen production with a stand-alone renewable hybrid power system**  
DURSUN E., ACARKAN B., KILIÇ O.  
INTERNATIONAL JOURNAL OF HYDROGEN ENERGY, vol.37, no.4, pp.3098-3107, 2012 (SCI-Expanded)
- VII. **Cost analysis for FGD units of coal-fired power plants: a case study in Turkey**  
Guney I., KILIÇ O., ACARKAN B., AY S.  
ENERGY EDUCATION SCIENCE AND TECHNOLOGY PART A-ENERGY SCIENCE AND RESEARCH, vol.28, no.2, pp.983-994, 2012 (SCI-Expanded)

## Articles Published in Other Journals

- I. **Gemi jeneratörlerinin senkronizasyonu üzerine bir benzetim çalışması**  
Erdoğan D., Yiğit K., Aydın F., Acarkan B.  
Dicle Üniversitesi Mühendislik Fakültesi Mühendislik Dergisi, vol.13, no.3, pp.477-483, 2022 (Peer-Reviewed Journal)
- II. **Determination of the Electrical Energy Production Potential of a Wind Power Plant Depending on the Power Capacity: a Case Study for Province of Artvin**  
Erdoğan D., Yiğit K., Acarkan B.  
İğdır Üniversitesi Fen Bilimleri Enstitüsü Dergisi, vol.11, no.2, pp.998-1013, 2021 (Peer-Reviewed Journal)
- III. **Gemi ve Liman Etkileşimi İçin Önerilen Enerji Yönetim Sistemi Modelinin İncelenmesi**  
Yiğit K., Acarkan B.  
Dokuz Eylül Üniversitesi Denizcilik Fakültesi Dergisi, vol.10, no.2, pp.169-181, 2018 (Peer-Reviewed Journal)
- IV. **An examination of the photovoltaic, energy storage, and diesel hybrid power system for the ship applications**  
Yiğit K., Acarkan B.  
International Journal of Advances on Automotive and Technology,, vol.2, pp.78-88, 2018 (Peer-Reviewed Journal)
- V. **Yol Aydınlatmasında Besleme Gerilimine Bağlı Olarak Nötr Hattındaki Harmonik Kayıpların Modellenmesi**  
Kılıç O., Acarkan B.  
3e Electrotech, no.2006, pp.102-106, 2006 (Peer-Reviewed Journal)

## Books & Book Chapters

- I. **Electric power generation potential estimation, exergy analysis, and future projections in wind turbines**  
Erdoğan D., Yiğit K., Acarkan B.  
in: Advanced Studies in Engineering, Şaban Öztürk,Umut Özkaya, Editor, Nobel Yayınevi, Ankara, pp.33-56, 2022
- II. **Elektrikli Taşıtlar: Tarihsel Gelişimi, Türleri ve Gelecek Eğilimi**  
Aykaç C. B., Yiğit K., Acarkan B.  
in: Academic Research for Sustainability-1, Cengiz KAHRAMAN, Editor, Artikel Akademi, İstanbul, pp.73-91, 2021
- III. **The importance of the ships in the next-generation electric power system, called "Smart Grid"**  
YİĞİT K., ACARKAN B.  
in: Exergetic, Energetic and Environmental Dimensions, Dincer I., Colpan C.O., Kizilkan O., Editor, Elsevier - Academic Press, Londra, pp.167-178, 2017

## Refereed Congress / Symposium Publications in Proceedings

- I. **Determining the ideal size of SVC using secure voltage limits and line thermal constraints**  
Aydın F., Kıyak İ., Acarkan B., Yiğit K.  
EUROASIA International Congress on Scientific Researches and Recent Trends-VII, Ankara, Turkey, 29 - 30 November 2023, pp.815-828
- II. **Evaluation of energy management for stand-alone fuel cell and photovoltaic hybrid system model**  
Albdıry A. T., Yiğit K., Acarkan B.  
The Second International Conference on Artificial Intelligence of Things (ICAIoT 2022), İstanbul, Turkey, 29 - 30 December 2022, pp.1-6
- III. **Tam elektrikli gemilerde enerji verimliliğini artırma yöntemleri ve gelecek projeksiyonları**  
Erdoğan D., Yiğit K., Acarkan B.  
Karadeniz 10th International Conference on Applied Sciences, Samsun, Turkey, 17 - 18 September 2022, pp.15

- IV. **Evaluation the effect of MPPT technique on photovoltaic systems and consumer side**  
Albdıry A. T., Yiğit K., Acarkan B.  
Al-Farabi 4th International Congress on Applied Sciences, Erzurum, Turkey, 19 - 20 August 2022, pp.91-101
- V. **Electric power generation potential estimation, exergy analysis, and future projections in wind turbines**  
Erdoğan D., Yiğit K., Acarkan B.  
3rd International Conference on Applied Engineering and Natural Sciences (ICAENS), Konya, Turkey, 20 - 23 July 2022, pp.2483
- VI. **Multi-criteria decision making methods: A comparative study for ideal compensator location in power grid**  
Aydın F., Gümüş B., Acarkan B., Yiğit K.  
4. INTERNATIONAL PALANDOKEN SCIENTIFIC STUDIES CONGRESS, Erzurum, Turkey, 28 - 29 April 2022, pp.852-863
- VII. **Effect of distributed generation facilities on optimal location of flexible alternating current transmission system controllers**  
Aydın F., Gümüş B., Acarkan B., Yiğit K.  
IV. HAGIA SOPHIA INTERNATIONAL CONFERENCE ON MULTIDISCIPLINARY SCIENTIFIC STUDIES, İstanbul, Turkey, 11 - 13 February 2022, pp.898-911
- VIII. **A case study to determine the capacity factor and electrical energy production potential in wind turbines**  
Erdoğan D., Yiğit K., Acarkan B.  
International Online Conference on Engineering and Natural Sciences (IOCENS), Gümüşhane, Turkey, 5 - 07 July 2021, pp.75
- IX. **Electric motor types for electric vehicles: Advantages and disadvantages**  
Aykaç C. B., Yiğit K., Acarkan B.  
International Congress of Engineering and Natural Sciences Studies (ICENSS), Ankara, Turkey, 7 - 09 May 2021, pp.154-165
- X. **Elektrikli taşıtlar: Tarihsel gelişimi, türleri ve gelecek eğilimi**  
Aykaç C. B., Yiğit K., Acarkan B.  
International Congress on Science and Engineering for Sustainability , İstanbul, Turkey, 16 - 18 April 2021, pp.55-56
- XI. **Sürdürülebilir Şehirlerin Su Şebekelerinde Enerji ve Maliyet Yönetimi için Talep Cevabı Programlarının Rolü ve Önemi Üzerine Bir İnceleme**  
Yalçın Y., Yiğit K., Acarkan B.  
TOK2019 - Otomatik Kontrol Ulusal Toplantısı, Muğla, Turkey, 11 - 14 September 2019, pp.622-627
- XII. **Energy Management Of Water Transfer Stations By Using Demand Response Programs**  
YALÇIN Y., YİĞİT K., ACARKAN B.  
6th International Conference on Control Engineering and Information Technologies, CEIT 2018, İstanbul, Turkey, 25 - 27 October 2018, pp.642-646
- XIII. **Akıllı Şehirlerde Su Terfi İstasyonlarının Talep Cevabı Programları ile Kontrolü**  
YALÇIN Y., YİĞİT K., ACARKAN B.  
Otomatik Kontrol Ulusal Toplantısı, TOK2018, Kayseri, Turkey, 12 - 14 September 2018, pp.189-194
- XIV. **An Examination Of The Photovoltaic, Energy Storage, And Diesel Hybrid Power System For The Ship Applications**  
Yiğit K., Acarkan B.  
3rd Conference On Advances In Mechanical Engineering – ICAME2017, İstanbul, Turkey, 19 - 21 December 2017, pp.807-815
- XV. **Kamu Binalarında LED Ve Floresan Aydınlatma Elemanlarının Kullanılması Ve Karşılaştırmalı Performans Analizi**  
Demiröz Y., Acarkan B.  
11. Ulusal Aydınlatma Kongresi 2017, İstanbul, Turkey, 21 - 22 September 2017, pp.86-92

- XVI. **The Role Of The Ships In The Smart Electric Grid Systems**  
Yiğit K., Acarkan B.  
ICES 2016 International Conference On Energy Systems, İstanbul, Turkey, 21 - 23 December 2016
- XVII. **Tarihi Yapılarda Dış Cephe Aydınlatması Ve Galata Kulesi Uygulaması**  
Demiröz Y., Acarkan B.  
ELECO 2016 - Elektrik - Elektronik ve Biyomedikal Mühendisliği Konferansı, Bursa, Turkey, 1 - 03 December 2016, pp.110-114
- XVIII. **Güç Akış Analizlerinde Coğrafi Bilgi Sistemlerinin Kullanılması**  
Aydın F., Acarkan B.  
3. Elektrik Tesisat Ulusal Kongre ve Sergisi, Güç ve Enerji Sistemleri Sempozyumu, İzmir, Turkey, 21 - 24 November 2013
- XIX. **Floresan Lambaların Harmonik Güç Hesapları Ve Ölçümü**  
KILIÇ O., ACARKAN B., AY S., GÜNDÜZ N.  
V. Enerji Verimliliği ve Kalitesi Sempozyumu, EVK 2013, Kocaeli, Turkey, 23 - 24 May 2013
- XX. **Yeşil Binalar İle Aydınlatma İçin Tüketilen Enerjideki Tasarruf Potansiyelinin Ve Ekonomik Katkıların Belirlenmesi**  
YÜKSEL T., ACARKAN B.  
V. Enerji Verimliliği ve Kalitesi Sempozyumu, EVK 2013, Kocaeli, Turkey, 23 - 24 May 2013
- XXI. **BEP TR yazılımı ile konutlarda enerji kimlik belgesi uygulaması ve aydınlatmaya yönelik tüketilen enerjinin tasarruf potansiyelinin belirlenmesi**  
Acarkan B., Yiğit K.  
V. Enerji Verimliliği ve Kalitesi Sempozyumu (EVK), Kocaeli, Turkey, 23 - 24 May 2013
- XXII. **Elektrikli Araçların Dağıtılmış Enerji Üretim Depolama Sistemi Olarak Değerlendirilmesi**  
Verim İ., Acarkan B., Yağcıtekin B., Uzunoğlu M.  
V. Enerji Verimliliği ve Kalitesi Sempozyumu, EVK 2013, Kocaeli, Turkey, 23 - 24 May 2013
- XXIII. **Bilgisayar Yüklerinin Harmonik Aktivite Kestirimi ve Harmonik Analizi**  
Acarkan B., Kılıç O., Ay S., Gündüz N.  
IV. Enerji Verimliliği ve Kalitesi Sempozyumu, EVK 2011, Kocaeli, Turkey, 12 - 13 May 2011, pp.209-213
- XXIV. **Sodyum Buharlı Lambaların Harmonik Aktivite Kestirimi ve Harmonik Analizi**  
Acarkan B., Kılıç O., Ay S.  
III. Enerji Verimliliği ve Kalitesi Sempozyumu, EVK 2009, Kocaeli, Turkey, 21 - 22 May 2009, pp.201-205
- XXV. **Elektronik Balastlı Floresan Lambaların Harmonik Modellemesi ve Harmonik Analizi**  
Acarkan B., Erkan K.  
II. Enerji Verimliliği ve Kalitesi Sempozyumu, EVK 2007, Kocaeli, Turkey, 17 - 18 May 2007, pp.79-84
- XXVI. **Zero Power Levitation Control Design for a 4 Pole Electromagnet on the Basis of a Transfer Function Approach**  
Erkan K., Acarkan B., Koseki T.  
IEEE International Electric Machines and Drives Conference, IEMDC 2007, Antalya, Turkey, 3 - 05 May 2007, vol.2, pp.1751-1756
- XXVII. **Harmonics Modeling and Harmonic Activity Analysis of Equipments with Switch Mode Power Supply using MATLAB and Simulink**  
ACARKAN B., ERKAN K.  
IEEE International Electric Machines and Drives Conference, IEMDC 2007, Antalya, Turkey, 3 - 05 May 2007, pp.508-513
- XXVIII. **Mesures des Harmoniques dans des Conditions Sinusoïdales et Non Sinusoïdale**  
ACARKAN B., ZORLU PARTAL S.  
4th International Conference on Electrical and Power Engineering, EPE 2006, Iasi, Romania, 12 - 14 October 2006, pp.945-948
- XXIX. **Nonlinear Resistance Modeling using MATLAB and Simulink in Estimation of Office Equipment Harmonic Activity**  
KILIÇ O., ACARKAN B.

- 4th International Conference on Electrical and Power Engineering, EPE 2006, Iasi, Romania, 12 - 14 October 2006, pp.838-843
- XXX. **Power Definitions of Office Equipments under Sinusoidal and Nonsinusoidal Conditions**  
KILIÇ O., ACARKAN B., ZORLU PARTAL S.  
4th International Conference on Electrical and Power Engineering, EPE 2006, Iasi, Romania, 12 - 14 October 2006, pp.844-851
- XXXI. **Harmonic Activity Simulation of Office Equipments using MATLAB Simulink**  
ACARKAN B., ZORLU PARTAL S.  
4th International Conference on Electrical and Power Engineering, EPE 2006, Iasi, Romania, 12 - 14 October 2006, pp.797-803
- XXXII. **Nonlinear Resistance Modeling using MATLAB and Simulink in Estimation of City Street Lighting Harmonic Activity**  
ACARKAN B., ZORLU PARTAL S., KILIÇ O.  
The IEEE International Conference on "Computer as a Tool", EUROCON 2005, Belgrade, Serbia And Montenegro, 21 - 24 November 2005, pp.1251-1254
- XXXIII. **Harmonik Aktivite Kestiriminde MATLAB ve Simulink Kullanarak Nonlineer Direnç Modellemesi**  
Acarkan B., Kılıç O.  
BMYS'2005 - Bilimde Modern Yöntemler Sempozyumu, Kocaeli, Turkey, 16 - 18 November 2005, pp.596-604
- XXXIV. **Yol Aydınlatmasında Besleme Gerilimine Bağlı Olarak Nötr Hattındaki Harmonik Kayıpların Modellenmesi**  
Kılıç O., Acarkan B.  
Elektrik-Elektronik-Bilgisayar Mühendisliği 11. Ulusal Kongresi ve Fuarı, İstanbul, Turkey, 22 - 25 September 2005, pp.1-4
- XXXV. **Medikal Cihazlardan Kaynaklanan Harmoniklerin Etkinliği**  
Acarkan B., İnan A., İzgi E.  
I. Enerji Verimliliği ve Kalitesi Sempozyumu, EVK 2005, Kocaeli, Turkey, 17 - 18 May 2005, pp.279-283
- XXXVI. **Dengeli ve Dengesiz Enerji İletim Sistemlerinde Direk Temas Gerilimi Analizi**  
İzgi E., İnan A., Acarkan B.  
I. Enerji Verimliliği ve Kalitesi Sempozyumu, EVK 2005, Kocaeli, Turkey, 17 - 18 May 2005, pp.296-300
- XXXVII. **Alçak Gerilimde Tek Fazlı Yükler İçin Harmonik Akım Sınırları**  
ACARKAN B., KILIÇ O., İNAN A.  
III. Elektrik, Elektronik ve Bilgisayar Mühendisliği Sempozyumu, ELECO 2004, Bursa, Turkey, 8 - 12 December 2004
- XXXVIII. **Fuzzy Functional Approximation for Determination of Reduction Level in Transformers Apparent Power Rating**  
TANRIÖVEN M., KÜÇÜKSARI S., ACARKAN B., ÇAKIR H.  
International Conference on Fuzzy Systems and Soft Computational Intelligence in Management and Industrial Engineering, FSSCIMIE 2002, İstanbul, Turkey, 29 - 31 May 2002, pp.174-178
- XXXIX. **The State of Corona Discharge in High Voltage Transmission Line under Non Linear Conditions using ANN**  
TANRIÖVEN M., ACARKAN B., BAYSAL M., KARAKAŞ A.  
International Conference on Fuzzy Systems and Soft Computational Intelligence in Management and Industrial Engineering, FSSCIMIE 2002, İstanbul, Turkey, 29 - 31 May 2002, pp.31-36
- XL. **Ofis Aydınlatmasında Ergonomik Aydınlatma Tasarımının Bulanık Kontrolör Kullanılarak Gerçekleştirilmesi**  
TANRIÖVEN M., UZUNOĞLU M., ACARKAN B., ARGİN M.  
İzmir Aydınlatma Sempozyumu, İzmir, Turkey, 28 - 30 November 2001, pp.137-144

## Supported Projects

ACARKAN B., Project Supported by Higher Education Institutions, Elektrikli Araçların Dağıtılmış Enerji Üretim ve

Depolama Sistemi Olarak Deęerlendirmesi, 2012 - 2014

Acarkan B., Arabul A. Y., Inan A., Project Supported by Higher Education Institutions, Analysis of Thermal Specification of Illumination Equipment under Sinusoidal and Non-sinusoidal Supply Voltage Conditions, 2012 - 2013

ACARKAN B., Project Supported by Higher Education Institutions, Ofis Donanımlarının ve Aydınlatma Aygıtlarının Çevresel Koşullara Bağlı Olarak Harmonik Etkinliğinin Kestirimi ve Harmonik Analizi, 2010 - 2012

## **Metrics**

Publication: 57

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