

Prof. ALİ BEKİR YILDIZ

Personal Information

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Education Information

Doctorate, Kocaeli Üniversitesi, Fen Bilimleri Enstitüsü, Elektrik Mühendisliği Anabilim Dalı, Turkey 1993 - 1998

Post Graduate, Yıldız Teknik Üniversitesi, Fen Bilimleri Enstitüsü, Elektrik Mühendisliği (YI) (Tezli), Turkey 1991 - 1993

Under Graduate, Yıldız Teknik Üniversitesi, Elektrik-Elektronik Fakültesi, Elektrik Mühendisliği Bölümü, Turkey 1987 - 1991

Foreign Languages

English, B2 Upper Intermediate

Dissertations

Doctorate, Lineer anahtar modeli kullanılarak güç elektroniği devrelerinin zaman-domeni analizi, Kocaeli University, Fen Bilimleri Enstitüsü, 1998

Post Graduate, Elektrik devrelerinin sayısal yöntemlerle bilgisayar destekli analizi, Yıldız Technical University, Graduate School Of Natural And Applied Sciences, 1993

Research Areas

Electrical and Electronics Engineering, Circuit Theory, Power Converters, Power Quality

Academic Titles / Tasks

Professor, Kocaeli University, Mühendislik Fakültesi, Elektrik Mühendisliği, 2020 - Continues

Associate Professor, Kocaeli University, Elektrik Mühendisliği Bölümü, 2014 - 2020

Assistant Professor, Kocaeli Üniversitesi, Mühendislik Fakültesi, Elektrik Mühendisliği Bölümü, 1998 - 2014

Research Assistant, Kocaeli Üniversitesi, Mühendislik Fakültesi, Elektrik Mühendisliği Bölümü, 1992 - 1998

Courses

Circuit Analysis, Under Graduate, 2019 - 2020

Electric Circuits I, Under Graduate, 2019 - 2020

Electric Circuits II, Under Graduate, 2019 - 2020

Analysis of Electric Circuits Using Numerical Methods, Post Graduate, 2019 - 2020

Advising Theses

Yıldız A. B. , IP66 sınıfı yüksek güçlü bir LED sürücü devresinin güvenilirlik analizi, Doctorate, M.DEMİR(Student), 2019
Yıldız A. B. , Farklı doğrultucu yapılarının çeşitli yük durumları altındaki harmoniklerinin incelenmesi ve lineer modellerin elde edilmesi, Post Graduate, E.ÜNVERDİ(Student), 2014
Yıldız A. B. , Anahtarlamalı devrelerde başlangıç koşullarının belirlenmesi, Post Graduate, M.DEMİR(Student), 2004

Articles Published in Journals That Entered SCI, SSCI and AHCI Indexes

- I. **Large-signal analysis based on nonlinear algebraic equations for an integrated photovoltaic module-converter system**
KIRCIOĞLU O., YILDIZ A. B.
JOURNAL OF COMPUTATIONAL ELECTRONICS, vol.19, no.2, pp.866-874, 2020 (Journal Indexed in SCI)
- II. **Effect of Potting Material on Reliability and EMC Performance of LED Drivers**
Demir M., Agir T., YILDIZ A. B.
IEEE TRANSACTIONS ON COMPONENTS PACKAGING AND MANUFACTURING TECHNOLOGY, vol.9, no.8, pp.1542-1548, 2019 (Journal Indexed in SCI)
- III. **Difference equation-based transient-state and steady-state analysis of flyback converter circuit**
Yener N., YILDIZ A. B.
COMPEL-THE INTERNATIONAL JOURNAL FOR COMPUTATION AND MATHEMATICS IN ELECTRICAL AND ELECTRONIC ENGINEERING, vol.38, no.1, pp.81-94, 2019 (Journal Indexed in SCI)
- IV. **Computer-Based Modelling of Network Functions for Linear Dynamic Circuits Using Modified Nodal Approach**
YILDIZ A. B.
CMES-COMPUTER MODELING IN ENGINEERING & SCIENCES, vol.113, no.3, pp.261-274, 2017 (Journal Indexed in SCI)
- V. **Determination of unified time constants of switching circuits in terms of averaged-nodal equations**
YILDIZ A. B.
AUTOMATIKA, vol.58, no.1, pp.11-17, 2017 (Journal Indexed in SCI)
- VI. **Simplified harmonic model for fullwave diode rectifier circuits Pojednostavljeni harmoničkimodel za punovalni ispravljač s diodama**
YILDIZ A. B. , ÜNVERDİ E.
Automatika, vol.55, no.4, pp.399-404, 2014 (Journal Indexed in SCI)
- VII. **Harmonic modeling of full-wave diode rectifier for nonuniform load currents**
YILDIZ A. B. , Aglar E.
Informacije MIDEM, vol.44, no.4, pp.288-295, 2014 (Journal Indexed in SCI)
- VIII. **A MNA-BASED UNIFIED IDEAL SWITCH MODEL FOR ANALYSIS OF SWITCHING CIRCUITS**
Yildiz A. B.
JOURNAL OF CIRCUITS SYSTEMS AND COMPUTERS, vol.22, 2013 (Journal Indexed in SCI)
- IX. **A Simplified Approach to Analyze of Active Circuits Containing Operational Amplifiers**
YILDIZ A. B. , KELEBEKLER E.
INFORMACIJE MIDEM-JOURNAL OF MICROELECTRONICS ELECTRONIC COMPONENTS AND MATERIALS, vol.43, no.1, pp.67-73, 2013 (Journal Indexed in SCI)
- X. **Electrical equivalent circuit based modeling and analysis of direct current motors**
Yildiz A. B.
INTERNATIONAL JOURNAL OF ELECTRICAL POWER & ENERGY SYSTEMS, vol.43, pp.1043-1047, 2012 (Journal Indexed in SCI)
- XI. **Characteristic Equation-Based Computation of Thevenin and Norton Equivalent Circuits**
KELEBEKLER E., YILDIZ A. B.
IEEJ TRANSACTIONS ON ELECTRICAL AND ELECTRONIC ENGINEERING, vol.6, no.6, pp.509-516, 2011 (Journal Indexed in SCI)
- XII. **Generalized Method Based on Nodal and Mesh Analysis for Computation of Time Constants of Linear**

Circuits

Yildiz A. B.

CMES-COMPUTER MODELING IN ENGINEERING & SCIENCES, vol.75, pp.33-42, 2011 (Journal Indexed in SCI)

XIII. Characteristic equation-based determination of eigenvalues of linear circuits

Yildiz A. B.

INTERNATIONAL JOURNAL OF ELECTRICAL ENGINEERING EDUCATION, vol.48, pp.217-223, 2011 (Journal Indexed in SCI)

XIV. Modified Nodal Analysis-Based Determination of Transfer Functions for Multi-Inputs Multi-Outputs Linear Circuits

Yildiz A. B.

AUTOMATIKA, vol.51, pp.353-360, 2010 (Journal Indexed in SCI)

XV. Large-signal analysis of DC motor drive system using state-space averaging technique

Yildiz A. B.

ENERGY CONVERSION AND MANAGEMENT, vol.49, pp.3069-3074, 2008 (Journal Indexed in SCI)

XVI. Speed control of averaged DC motor drive system by using Neuro-PID controller

Yildiz A. B. , Bilgin M. Z.

KNOWLEDGE-BASED INTELLIGENT INFORMATION AND ENGINEERING SYSTEMS, PT 1, PROCEEDINGS, vol.4251, pp.1075-1082, 2006 (Journal Indexed in SCI)

Articles Published in Other Journals

- I. **Simulation and Harmonics Reduction of Electronic Ballast Fluorescent Lamp by Using Passive Filter**
Erdogan B., YILDIZ A. B.
JOURNAL OF POLYTECHNIC-POLITEKNIK DERGISI, vol.22, no.1, pp.149-155, 2019 (Journal Indexed in ESCI)
- II. **Analysis of Flyback DC-DC Converter by Modified Nodal Equations**
Koseni H., YILDIZ A. B.
JOURNAL OF POLYTECHNIC-POLITEKNIK DERGISI, vol.22, no.1, pp.179-184, 2019 (Journal Indexed in ESCI)
- III. **Geri Dönüşlü DC-DC Dönüştürücünün Genelleştirilmiş Düğüm Denklemleri ile Analizi**
KÖSENİ H., YILDIZ A. B.
Journal of Polytechnic, 2019 (Refereed Journals of Other Institutions)
- IV. **Harmonics in Power Systems and Filter Applications**
Sabuncu B., YILDIZ A. B.
Black Sea Journal of Engineering and Science, 2019 (Other Refereed National Journals)
- V. **Pasif Filtre Kullanılarak Elektronik Balastlı Floresan Lambanın Harmoniklerinin Azaltılması ve Simülasyonu**
ERDOĞAN B., YILDIZ A. B.
Journal of Polytechnic, 2019 (Refereed Journals of Other Institutions)
- VI. **Şebeke Gerilimindeki Azalmaların Tüketici Elektronik Ürünlerinin Güvenilirliğine Etkisinin Belirlenmesi**
Demir M., YILDIZ A. B. , Kavcı M., NİL M.
Celal Bayar Üniversitesi Fen Bilimleri Dergisi, 2017 (Other Refereed National Journals)
- VII. **Fourier Serileri ve Devre Analizi Uygulamaları**
YILDIZ A. B.
3e Electrotech, 2017 (Other Refereed National Journals)
- VIII. **Manyetik Bağlı Devrelerde Max Güç Aktarımının Belirlenmesi**
YILDIZ A. B.
3e Electrotech, no.261, pp.138-144, 2016 (Other Refereed National Journals)

Books & Book Chapters

- I. **ELEKTRİK DEVRELERİ - I, Teori ve Çözümlü Örnekler**
Yıldız A. B.
Umuttepe Yayınları, Kocaeli, 2019
- II. **ELEKTRİK DEVRELERİ - 1, Teori ve Çözümlü**
YILDIZ A. B.
Umuttepe Yayınları,, 2019
- III. **Elektrik Devreleri I Teori ve Çözümlü Örnekler**
YILDIZ A. B.
Volga Yayıncılık, 2016
- IV. **Elektrik Devreleri II Teori ve Çözümlü Örnekler**
YILDIZ A. B.
Volga Yayıncılık, 2016
- V. **ELEKTRİK DEVRELERİ - II, Teori ve Çözümlü Örnekler**
Yıldız A. B.
Umuttepe Yayınları, Kocaeli, 2015

Refereed Congress / Symposium Publications in Proceedings

- I. **An Efficient Approach to Simulation of Sepic Converter with Mutual Inductance**
ŞOLA S., YILDIZ A. B. , ERFİDAN T.
INTERNATIONAL CONFERENCE ON ENGINEERING TECHNOLOGIES, Konya, Turkey, 25 - 27 October 2019, pp.214-217
- II. **Tek Fazlı Kontrolsüz Doğrultucu Devresinin Toplam Harmonik Bozunumunun İncelenmesi ve Pasif Filtre Uygulamaları**
Demiroğlu Y. B. , YILDIZ A. B.
International Engineering Research Symposium, 5 - 07 September 2019
- III. **Tristör Anahtarlamalı Kondansatör Tabanlı Statik VAR Sisteminin Modellenmesi**
Yıldız A. B. , Sabuncu B.
International Engineering Research Symposium, Düzce, Turkey, 3 - 05 September 2019, pp.1-4
- IV. **Electrical Equivalent Circuit Based Analysis of Double Pendulum System**
YAREN T., KİZİR S., YILDIZ A. B.
IEEE 6th International Conference on Electrical and Electronics Engineering (ICEEE), Istanbul, Turkey, 16 - 17 April 2019
- V. **Observation of the Effects of Electrostatic Discharge and Lighting Surge on the Reliability of a LED Circuit Driven by Half-Bridge Converter**
YILDIZ A. B. , Demir M., Ağır T.
24th International Symposium on Power Electronics, Electrical Drives, Automation and Motion (SPEEDAM), 20 - 22 June 2018
- VI. **Observation of the Effects of Electrostatic Discharge and Lightning Surge on the Reliability of A LED Circuit Driven by Half-Bridge Converter**
Demir M., YILDIZ A. B. , Ağır T.
International Symposium on Power Electronics, Electrical Drives, Automation and Motion (SPEEDAM), Amalfi, Italy, 20 - 22 June 2018, pp.1073-1078
- VII. **Time-Domain Analysis of Full-Wave Quasi-Resonant Zero-Current Switching Buck Converter by Modified Nodal Analysis**
Ozdemir I., YILDIZ A. B.
5th International Conference on Electrical and Electronics Engineering (ICEEE), İstanbul, Turkey, 3 - 05 May 2018, pp.23-26

- VIII. **Time-Domain Analysis of Static VAR Compensator by Modified Nodal Analysis**
Akçay E., YILDIZ A. B.
5th International Conference on Electrical and Electronics Engineering (ICEEE), İstanbul, Turkey, 3 - 05 May 2018, pp.148-151
- IX. **Analysis and Modelling of FC-TCR Based on Static VAR Compensator**
Pekdemir A., YILDIZ A. B.
5th International Conference on Electrical and Electronics Engineering (ICEEE), İstanbul, Turkey, 3 - 05 May 2018, pp.115-118
- X. **Elektrik Tesislerinde Pasif Filtre Kullanılarak Harmoniklerin Azaltılması ve Örnek Bir Uygulama**
ERDOĞAN B., YILDIZ A. B.
International Engineering Research Symposium, 11 - 13 September 2017
- XI. **Geri Dönümlü DC-DC Dönüştürücünün Genelleştirilmiş Düğüm Denklemleri ile Analizi**
KÖSENİ H., YILDIZ A. B.
International Engineering Research Symposium, 11 - 13 September 2017
- XII. **Determination of the Effect of Short-Term Interruptions in Mains Voltage on the Reliability of Consumer Electronics Products**
Demir M., İltir M., YILDIZ A. 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
- XIII. **State Space Modelling and Realization of Flyback Converter Circuit**
Tetik M., KÖSENİ H., YILDIZ A. B.
3th International Conference on Advanced Technology & Science, (ICAT), 1 - 03 September 2016
- XIV. **CALCULATING OF FUSE MELTING POINT FOR POWER ELECTRONICS CIRCUITS BY INRUSH ENERGY AND DETERMINATION OF THE ELIGIBILITY**
Demir M., Kahramanoğlu G., YILDIZ A. B.
18th European Conference on Power Electronics and Applications (EPE), Germany, 5 - 09 September 2016
- XV. **Importance of Reliability for Power Electronic Circuits, Case Study: Inrush Current Test and Calculating of Fuse Melting Point**
Demir M., Kahramanoğlu G., YILDIZ A. B.
17th IEEE International Power Electronics and Motion Control Conference (PEMC), Varna, Bulgaria, 25 - 28 September 2016, pp.830-834
- XVI. **Doğrultucularda ve Eviricilerde Kullanılan Pasif Filtre Türlerinin İncelenmesi ve Karşılaştırılması**
YILDIZ A. B.
6. Enerji Verimliliği ve Kalitesi Sempozyumu, Turkey, 4 - 06 June 2015
- XVII. **Fotovoltaik Panelin Tek Diyotlu Eşdeğer Devresine ait Büyük Sinyal Analizi**
KIRICIOĞLU O., YILDIZ A. B.
6. ENERJİ VERİMLİLİĞİ, KALİTESİ SEMPOZYUMU VE FUARI, Turkey, 4 - 06 June 2015
- XVIII. **Large-Signal and Small-Signal Analysis of Nonlinear Three-Terminal Switching Elements**
Demir Y., YILDIZ A. B.
9th International Conference on Electrical and Electronics Engineering (ELECO), Bursa, Turkey, 26 - 28 November 2015, pp.1092-1096
- XIX. **Determining the controllability of switched linear circuits**
Demir M., Yıldız A. B.
IEEE International Symposium on Industrial Electronics, Dubrovnik, Croatia, 20 - 23 June 2005, pp.235-239
- XX. **Defining of the initial conditions in the switching circuits**
Demir M., Yıldız A. B.
12th IEEE Mediterranean Electrotechnical Conference (MELECON 2004), Dubrovnik, Croatia, 12 - 15 May 2004, pp.59-62
- XXI. **A fast simulation technique for the power electronic converters**
Yıldız A. B. , Çakır B., İnanc N., Abut N.
14th Annual Applied Power Electronics Conference and Exposition (APEC 99), Texas, United States Of America, 14

- 18 March 1999, pp.191-196

XXII. DC motor control by using computes based fuzzy technique

Cakir B., Yildiz A. B. , Abut N., Inanc N.

14th Annual Applied Power Electronics Conference and Exposition (APEC 99), Texas, United States Of America, 14

- 18 March 1999, pp.391-395

XXIII. An efficient approach to modeling and analysis of power electronic circuits

Yildiz A. B. , Abut N.

13th Annual Applied Power Electronics Conference and Exposition (APEC 98), California, United States Of America,

15 - 19 February 1998, pp.344-349

XXIV. Analysis method for the simulation of switched-mode converters

Yildiz A. B. , Cakir B., Ozdemir E., Abut N.

9th Mediterranean Electrotechnical Conference (Melecon 98), Tel-Aviv-Yafo, Israel, 18 - 20 May 1998, pp.570-574

XXV. Switched Reluctance Motor drive by using fuzzy controller

Abut N., Cakir B., Inanc N., Yildiz A. B. , Bilgin M.

23rd International Conference of the Industrial-Electronics-Society (IECON 97), Louisiana, United States Of

America, 09 November 1997, pp.348-353

Supported Projects

YILDIZ A. B. , Project Supported by Higher Education Institutions, Manyetik Kontrollü Reaktör (MCR) Tabanlı Statik Kompanzasyon Sistemlerinin Tasarımı Ve Analizi, 2019 - Continues

YILDIZ A. B. , Project Supported by Higher Education Institutions, GÜÇ ELEKTRİĞİ TABANLI KOMPANZASYON SİSTEMLERİNİN TASARIMI, 2018 - 2019

Yıldız A. B. , Demir M., TUBITAK Project, Güç Elektroniği Sistemlerinde Güvenilirlik Analizi ve Led Sürücü Devrelerine Uygulanması, 2016 - 2017

YILDIZ A. B. , Project Supported by Higher Education Institutions, Farklı Doğrultucu Yapılarının Çeşitli Yük Durumları Altındaki Harmoniklerinin İncelenmesi ve Lineer Modellerin Elde Edilmesi, 2013 - 2015

Citations

Total Citations (WOS):43

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