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Education Information

Doctorate, University of Colorado at Boulder, Department Of Electrical And Computer Engineering, United States Of America 1993 - 1999
Postgraduate, University of Colorado at Boulder, Department of Electrical and Computer Engineering, United States Of America 1992 - 1993
Undergraduate, Istanbul Technical University, Elektrik-Elektronik Fakültesi, Elektrik Mühendisliği Bölümü, Turkey 1985 - 1989

Foreign Languages

English

Dissertations

Doctorate, Commissioning of a 30kVA Direct-Drive Variable-Speed Wind Power Plant, University of Colorado at Boulder, Department Of Electrical And Computer Engineering, 1999

Research Areas

Technical Sciences, Electrical and Electronics Engineering, Energy, Renewable energy, Power Electronics, Electrical Machine Theory and Design, Electric Motor Drivers, Power Converters, Power Quality, Mechanical Engineering, Energy, Alternative Energy Resources, Solar energy, Wind power

Academic Titles / Tasks

Assistant Professor, Istanbul Technical University, Elektrik-Elektronik, Elektrik Mühendisliği, 2018 - Continues
Assistant Professor, Istanbul Technical University, Elektrik-Elektronik, Elektrik Mühendisliği, 1999 - 2018

Academic and Administrative Experiences

Academic and Administrative Experience

İstanbul Teknik Üniversitesi, Elektrik-Elektronik Fakültesi, Elektrik Mühendisliği, 2015 - 2017

Advising Theses

Yıldırım D., Improved tracking algorithm for rooftop pv systems employing multi-input DC-DC converter, Postgraduate, G.BAYRAKTAR(Student), 2023
Yıldırım D., Yüksek Güçlü IGBT'ler İçin Kapı Sürme Devresi, Doctorate, O.TANRIVERDİ(Student), 2023
Yıldırım D., A peak current controlled dimmable sepic led driver with low flicker, Postgraduate, K.ÖRÜKLÜ(Student), 2022
Yıldırım D., Compensation of dead time caused output voltage distortion in SPWM full bridge inverter, Postgraduate, U.POLAT(Student), 2022

Published journal articles indexed by SCI, SSCI, and AHCI

I. **Analog dv/dt and di/dt Controlled Gate Driver With Self-Triggered Hold-at-Zero Algorithm for High-Power IGBTs**
Tanrverdi O., Yıldırım D.
IEEE Transactions on Power Electronics, vol.39, no.1, pp.1184-1194, 2024 (SCI-Expanded)
II. **Independent closed loop control of di/dt and dv/dt for high power IGBTs**
Tanriverdi O., Yıldırım D.
TURKISH JOURNAL OF ELECTRICAL ENGINEERING AND COMPUTER SCIENCES, vol.30, no.3, pp.487-501, 2022 (SCI-Expanded)
III. **Control system design of a low-frequency-switching single-phase four-quadrant PWM converter**
Ozturk A. F., Yıldırım D., Ertugrul H. F.
INTERNATIONAL TRANSACTIONS ON ELECTRICAL ENERGY SYSTEMS, vol.31, no.12, 2021 (SCI-Expanded)
IV. **Rooftop photovoltaic potential in Istanbul: Calculations based on LiDAR data, measurements and verifications**
Yıldırım D., Buyuksalih G., Şahin A. D.
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V. **Corrections To "Measurement of Eddy-Current Loss Coefficient Pec-r Derating of Single-phase Transformers, and Comparison with K-factor Approach"**
Yildirim D., Fuchs E. F.
IEEE Transactions on Power Delivery, vol.15, no.4, pp.1357, 2000 (SCI-Expanded)
VI. **Innovative procedure for measurement of losses of transformers supplying nonsinusoidal loads**
Fuchs E., Yildirim D., Batan T.
IEE Proceedings: Generation, Transmission and Distribution, vol.146, no.6, pp.617-625, 1999 (SCI-Expanded)

Articles Published in Other Journals

I. **Temperature Field and Power Loss Calculation With Coupled Simulations for a Medium-Voltage Simplified Switchgear**
Şeker A. E., Çelik B., Yıldırım D., Sakacı E. A., Deniz A.
Electrica, vol.23, no.1, pp.107-120, 2023 (Scopus)
II. **Dynamic Modelling and Experimental Validation of New Generation High Power IGBTs**
Tanrıverdi O., YILDIRIM D.
Karaelmas Fen ve Mühendislik Dergisi, vol.12, no.1, pp.75-85, 2022 (Peer-Reviewed Journal)
III. **A PEAK CURRENT MODE CONTROLLED SEPIC LED DRIVER DESIGN CONSIDERING POWER FACTOR AND FLICKER**

Örüklü K., Yıldırım D.
Eskişehir Technical University Journal of Science and Technology A - Applied Sciences and Engineering, vol.1, pp.1-11, 2022 (Peer-Reviewed Journal)

IV. **Quasi-Resonant Half-Wave Buck Converter with Non-Isolated High Side Switching Techniques**
Gördük B., Topuz E., Yıldırım D.
SAKARYA UNIVERSITY JOURNAL OF SCIENCE, vol.1, pp.1-11, 2022 (Peer-Reviewed Journal)

V. **Measurement of eddy-current loss coefficient P/sub EC-R/, derating of single-phase transformers, and comparison with K-factor approach**
Fuchs E. F., Yıldırım D., Grady W. M.
IEEE Transactions on Power Delivery, vol.15, pp.148-154, 2000 (Peer-Reviewed Journal)

VI. **Commentary on Various Formulations of Distortion Power D**
Yildirim D., Fuchs E.
IEEE Power Engineering Review, vol.19, no.5, pp.50-52, 1999 (Scopus)

Refereed Congress / Symposium Publications in Proceedings

I. **Current Control of Grid-Connected Simplified Split-Source Converters (S3I) for Single Phase Photovoltaic Microinverter Application**
Polat U., Yıldırım D.
2023 10th International Conference on Electrical and Electronics Engineering (ICEEE), İstanbul, Turkey, 8 - 10 May 2023, pp.391-396

II. **Advantages of Rogowski Coil over Desaturation Method for Leg Short Circuit Detection in Inverters**
Mutlu A., Yıldırım D., Kürüm B. A.
International Exhibition and Conference for Power Electronics, Intelligent Motion, Renewable Energy and Energy Management, PCIM Europe 2022, Nuremberg, Germany, 10 - 12 May 2022, pp.1146-1151

III. **SELENOİD KİLİTLEMELİ EMNİYET KAPI ŞALTERİ OPTİMUM TASARIMI**
Özbek E., Yılmaz A. S., YILDIRIM D.
6. ULUSLARARASI MÜHENDİSLİK VE TEKNOLOJİ YÖNETİMİ KONGRESİ, İstanbul, Turkey, 20 November - 21 December 2021

IV. **ACTIVE POWER CONTROL IN SINGLE PHASE GRID CONNECTED INVERTERS USED IN PHOTOVOLTAIC SYSTEMS**
Polat U., Yıldırım D.
2. INTERNATIONAL PALANDOKEN SCIENTIFIC STUDIES CONGRESS, Erzurum, Turkey, 24 - 25 April 2021, vol.2, pp.448-462

V. **Half-Bridge LLC Resonant Converter Design for High Voltage Battery to Low Voltage Battery Conversion in Electric Vehicles**
Lordoğlu M., Polat U., Örüklü K., Yıldırım D.
13th International Conference on Electrical and Electronics Engineering, ELECO 2021, Virtual, Bursa, Turkey, 25 - 27 November 2021, pp.565-569

VI. **Bir Güneş Enerji Sistemi Güç Kaynağında Yardımcı Besleme Gerilimlerinin Oluşturulması**
Bayraktar G., Cabri A., YILDIRIM D.
10. Yenilenebilir Enerji kaynaklari Sempozyumu, Turkey, 12 - 14 December 2019

VII. **A Phase-Locked-Loop Study in Microinverters**
Gultekin M. A., YILDIRIM D.
International Conference on Electrical and Electronics Engineering ELECO, Turkey, 28 - 30 November 2019

VIII. **Thermal Analyses for a Simplified Medium-Voltage Switchgear: Numerical and Experimental Benchmark Studies**
Seker A. E., Sakaci E. A., Deniz A., ÇELİK B., YILDIRIM D.
International Conference on Electrical and Electronics Engineering ELECO, Turkey, 28 - 30 November 2019

IX. **Multi Input DC-DC Converters for PV Power Systems**

Bayraktar G., Cabri A., YILDIRIM D.
International Conference on Electrical and Electronics Engineering ELECO, Turkey, 28 - 30 November 2019

X. **GÜNEŞ ENERJİSİ İLE ÇALIŞAN BİR SU ÜSTÜ TEKNESİ ELEKTRİK SİSTEMİ**
Askan K., Ilhan E., Kilic B., YILDIRIM D.
8. GÜNEŞ ENERJİSİ SİSTEMLERİ SEMPOZYUMU, Turkey, 8 - 09 November 2019

XI. **Investigation of Phase Locked Loops in Microinverters for Varying Grid Conditions**
Gultekin M. A., Yıldırım D.
11th International Conference on Electrical and Electronics Engineering (ELECO), Bursa, Turkey, 28 - 30 November 2019, pp.265-270

XII. **Multi Input DC-DC Converters for Rooftop PV Power Systems**
Bayraktar G., Cabri A., Yıldırım D.
11th International Conference on Electrical and Electronics Engineering (ELECO), Bursa, Turkey, 28 - 30 November 2019, pp.230-234

XIII. **A Dimmer Circuit for Various Lighting Devices**
Dai R. B., Turhan M., Yıldırım D., UÇAK C.
8th International Conference on Electrical and Electronics Engineering (ELECO), Bursa, Turkey, 28 - 30 November 2013, pp.278-282

XIV. **Analytical MPPT Solution Using Thevenin Approach for Solar Panels**
Turhan M., Dai B., Yıldırım D.
IEEE EUROCON Conference, Zagreb, Croatia, 1 - 04 July 2013, pp.803-808

XV. **Induction Cooker Design with Quasi Resonant Topology using Jitter Drive Method**
Tulu M. E., Yıldırım D.
12th International Conference on Environment and Electrical Engineering (EEEIC), Wroclaw, Poland, 5 - 08 May 2013, pp.1-6

XVI. **The Control Unit of a Single Phase Voltage Regulator**
Colak I., Yıldırım D.
36th Annual Conference of the IEEE Industrial-Electronics-Society (IECON)/4th IEEE International Conference on E-Learning in Industrial Electronics/IES Industry Forum, Arizona, United States Of America, 7 - 10 November 2010

XVII. **Evolving a Line Following Robot to Use in Shopping Centers for Entertainment**
Colak I., Yıldırım D.
35th Annual Conference of the IEEE-Industrial-Electronics-Society, Porto, Portugal, 3 - 05 November 2009, pp.3615-3619

XVIII. **An Algebraic Method for Maximum Power Point Tracking in Wind Turbines**
Yıldırım D., Gurkaynak Y.
2nd International Power and Energy Conference (PECon 2008), Johor-Bahru, Malaysia, 1 - 03 December 2008, pp.445-446

XIX. **PWM AC Chopper Control of Single-Phase Induction Motor for Variable-Speed Fan Application**
Yıldırım D., Bilgic M.
34th Annual Conference of the IEEE-Industrial-Electronics-Society, Florida, United States Of America, 10 - 13 November 2008, pp.1284-1289

XX. **A new soft switching multi-output forward converter with independent and precise regulation**
Ertike S., Yıldırım D.
12th European Conference on Power Electronics and Applications, Aalborg, Denmark, 2 - 05 September 2007, pp.818-825

XXI. **A new control scheme for multi-output forward converters**
Ertike S., Yildirim D.
38th IEEE Power Electronic Specialists Conference (PESC 07), Florida, United States Of America, 17 - 21 June 2007, pp.207-213

XXII. **Understanding the Unbalanced-Voltage Problem in Wind Turbine Generation**
muljadi e., YILDIRIM D., batan t., Butterfield c.
IEEE Industry Applications Society Thirty-Fourth Annual Meeting, 3 - 07 October 1999

Supported Projects

Yıldırım D., Project Supported by Higher Education Institutions, ŞEBEKE BAĞLANTILI BİR ÜZGAR ENERJİ SİSTEMİNDE GÜÇ PAYLAŞIMI, 2010 - 2021
Yıldırım D., Project Supported by Higher Education Institutions, BİR FAZLI GERİLİM REGÜLATÖRÜ KONTROL ÜNİTESİ, 2010 - 2018
Yıldırım D., Project Supported by Higher Education Institutions, ALIŞVERİŞ MERKEZLERİNDE EĞLENCE AMAÇLI KULLANILMAK ÜZERE ÇİZGİ İZLEYEN ROBOT, 2009 - 2018
Yıldırım D., Project Supported by Higher Education Institutions, değişken Hızlı Fan Uygulamaları için Bir Fazlı Asenkron Motorun DGM AA Kıyıcı ile Kontrolü, 2008 - 2018
Yıldırım D., Project Supported by Higher Education Institutions, A New Soft Swithching Multi-Output Forward Converter With Independent and Precise Regulation, 2007 - 2018
Yıldırım D., Project Supported by Higher Education Institutions, Doğrudan Tahrikli Rüzgar Türbinleri için Çok Seviyeli Evirici, 2011 - 2014
Yıldırım D., Project Supported by Higher Education Institutions, Sayısal İşaret İşlemci Tabanlı Çok Çıkışlı Forward Çeviricide Gerilim Regülasyonu, 2007 - 2010
Yıldırım D., Project Supported by Higher Education Institutions, Magnetik Malzemelerdeki Kayıpların Yapay Sinir Ağları ile Modellenmesi ve Çeşitli Çalışma Noktalarındaki Tahmini, 2003 - 2004

Patent

Yıldırım D., Multi-Output Forward Converter with Independent and Precise Regulation, Patent, CHAPTER H Electricity, The Invention Registration Number: EP2001114 , Standard Registration, 2011

Metrics

Publication: 36
Citation (WoS): 87
Citation (Scopus): 381
H-Index (WoS): 5
H-Index (Scopus): 8