

Res. Asst. TUĞÇE DEMİRDELEN

Personal Information

Email: tdemirdelen@cu.edu.tr

Web: <https://avesis.cu.edu.tr//tdemirdelen>

Education Information

Doctorate, Cukurova University, Fen Bilimleri Enstitüsü, Elektrik-Elektronik Mühendisliği, Turkey 2013 - Continues

Post Graduate, Cukurova University, Fen Bilimleri Enstitüsü, Elektrik-Elektronik Mühendisliği, Turkey 2011 - 2013

Undergraduate Double Major, Cukurova University, Fen-Edebiyat Fakültesi, Fizik Bölümü, Turkey 2008 - 2011

Under Graduate, Cukurova University, Mühendislik-Mimarlık Fakültesi, Elektrik-Elektronik Mühendisliği, Turkey 2006 - 2011

Foreign Languages

English, B2 Upper Intermediate

Dissertations

Post Graduate, Modeling and Analysis of Multilevel Parallel Hybrid Active Power Filter, Cukurova University, Fen Bilimleri Enstitüsü, Elektrik-Elektronik Mühendisliği, 2013

Research Areas

Electrical and Electronics Engineering, Energy, Power Electronics, Electrical Machine Theory and Design, Power Apparatus (transformers,reactors,switchgear,etc.), Power Converters, Power Quality, Engineering and Technology

Academic Titles / Tasks

Research Assistant, Cukurova University, Fen Bilimleri Enstitüsü, Elektrik-Elektronik Mühendisliği, 2011 - Continues

Research Assistant, Karamanoglu Mehmetbey University, Mühendislik Fakültesi, Elektrik-Elektronik Mühendisliği, 2011 - 2011

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

- I. **Performance evaluation of phase-shifting transformer for integration of renewable energy sources**
Sakallioğlu B., Esenboga B., DEMİRDELEN T., TÜMAY M.
ELECTRICAL ENGINEERING, vol.102, pp.2025-2039, 2020 (Journal Indexed in SCI)
- II. **A novel hybrid metaheuristic optimization method to estimate medium-term output power for horizontal axis wind turbine**
EKINCI F., Demirdelen T., AKSU I. O. , AYGÜL K., ESENBGA B., BİLGİLİ M.
PROCEEDINGS OF THE INSTITUTION OF MECHANICAL ENGINEERS PART A-JOURNAL OF POWER AND ENERGY,

vol.233, pp.646-658, 2019 (Journal Indexed in SCI)

- III. **The role of hydropower installations for sustainable energy development in Turkey and the world**
BİLGİLİ M., BILIRGEN H., ÖZBEK A., EKINCI F., Demirdelen T.
RENEWABLE ENERGY, vol.126, pp.755-764, 2018 (Journal Indexed in SCI)
- IV. **A review of magnetically controlled shunt reactor for power quality improvement with renewable energy applications**
Tumay M., DEMİRDELEN T., Bal S., KAYAALP R. İ. , DOĞRU B., AKSOY M.
RENEWABLE & SUSTAINABLE ENERGY REVIEWS, vol.77, pp.215-228, 2017 (Journal Indexed in SCI)
- V. **Simulation modelling and analysis of modular cascaded multilevel converter based shunt hybrid active power filter for large scale photovoltaic system interconnection**
DEMİRDELEN T., KAYAALP R. İ. , TÜMAY M.
SIMULATION MODELLING PRACTICE AND THEORY, vol.71, pp.27-44, 2017 (Journal Indexed in SCI)

Articles Published in Other Journals

- I. **Comparison of Different Phase-Shift Control Methods at Isolated Bidirectional DC-DC Converter**
KAYAALP R. İ. , DEMİRDELEN T., KÖROĞLU T., CUMA M. U. , Bayındır K. Ç. , TÜMAY M.
INTERNATIONAL JOURNAL OF APPLIED MATHEMATICS, ELECTRONICS AND COMPUTERS, vol.4, pp.68-73, 2016
(International Refereed University Journal)
- II. **Modeling and Analysis of a Multilevel Parallel Hybrid Active Power Filter**
DEMİRDELEN T., KAYAALP R. İ. , TÜMAY M.
ENGINEERING TECHNOLOGY & APPLIED SCIENCE RESEARCH, vol.6, pp.976-981, 2016 (Journal Indexed in ESCI)
- III. **Fuzzy Logic Controlled DC-DC Converter Based Dynamic Voltage Restorer**
Inci M., DEMİRDELEN T., TÜMAY M.
JOURNAL OF ELECTRICAL SYSTEMS, vol.11, pp.367-375, 2015 (Journal Indexed in ESCI)
- IV. **Performance Analysis of Closed Loop and Open Loop Control Methods in Dynamic Voltage Restorer**
İNCİ M., DEMİRDELEN T., TÜMAY M.
International Journal of Engineering Research, vol.11, no.4, pp.582-585, 2015 (Refereed Journals of Other Institutions)
- V. **PARALLEL HYBRID ACTIVE POWER FILTER FOR STATIC REACTIVE POWER AND HARMONICS COMPENSATION WITH SOGI-PLL**
DEMİRDELEN T.
International Journal on Technical and Physical Problems of Engineering (IJTPE) Journal, vol.6, no.1, pp.148-153, 2014 (Refereed Journals of Other Institutions)

Books & Book Chapters

- I. **A New Method for Generating Short-Term Power Forecasting Based on Artificial Neural Networks and Optimization Methods for Solar Photovoltaic Power Plants**
DEMİRDELEN T., AKSU I. O. , ESENBOGA B., AYGÜL K., EKINCI F., BİLGİLİ M.
in: Solar Photovoltaic Power Plants, Precup R.E, Kamal T., Zulqadar Hassan S., Editor, Springer, Singapore, -, pp.165-189, 2019

Refereed Congress / Symposium Publications in Proceedings

- I. **A Fuzzy Neural Network Approach to Estimate PMSG based and DFIG based Wind Turbines' Power Generation**
Demirdelen T., Bakmaz E., TÜMAY M.

7th International Conference on Innovative Computing Technology (INTECH), Luton, United Kingdom, 16 - 18 August 2017, pp.101-106

- II. **A novel fuzzy logic control for bidirectional DC-DC converter and comparison with dual phase-shift control method in medium voltage applications**
KAYAALP R. İ. , DEMİRDELEN T., TÜMAY M.
2016 IEEE International Conference on Computational Intelligence and Virtual Environments for Measurement Systems and Applications, CIVEMSA 2016, Budapest, Hungary, 27 - 29 July 2016
- III. **A Novel Control Scheme for Dynamic Reactive Power Compensation Multilevel Inverter Based Shunt Hybrid Active Power Filter**
DEMİRDELEN T., TÜMAY M.
IEEE 2016 UKSim-AMSS 18th International Conference on Computer Modelling and Simulation, Cambridge, United Kingdom, 6 - 08 April 2016, pp.217-223
- IV. **A Novel Control Scheme for Dynamic Reactive Power Compensation Multilevel Inverter Based Shunt Hybrid Active Power Filter**
DEMİRDELEN T., TÜMAY M.
IEEE 2016 UKSim-AMSS 18th International Conference on Computer Modelling and Simulation, Cambridge, United Kingdom, 6 - 08 April 2016, pp.217-223
- V. **A Power Rating and Application Survey of Magnetically Controlled Shunt Reactor**
TÜMAY M., DEMİRDELEN T., BAL S., KAYAALP R. İ. , Dogru B., Aksoy M.
10th UKSim-AMSS European Modelling Symposium on Computer Modelling and Simulation (EMS), Pisa, Italy, 28 - 30 November 2016, pp.111-116
- VI. **PSO - PI Based DC Link Voltage Control Technique for Shunt Hybrid Active Power Filter**
DEMİRDELEN T., KAYAALP R. İ. , TÜMAY M.
2nd International Conference on Systems Informatics, Modelling and Simulation (SIMS), Riga, Latvia, 1 - 03 June 2016, pp.97-102
- VII. **Review of The Control Strategies Applied to Magnetically Controlled Shunt Reactor**
TÜMAY M., DEMİRDELEN T., BAL S., KAYAALP R. İ. , Dogru B., Aksoy M.
National Conference on Electrical, Electronics and Biomedical Engineering (ELECO), Bursa, Turkey, 1 - 03 December 2016, pp.96-100
- VIII. **A Novel Control Scheme for Dynamic Reactive Power Compensation Multilevel Inverter Based Shunt Hybrid Active Power Filter**
DEMİRDELEN T., TÜMAY M.
18th UKSim-AMSS International Conference on Computer Modelling and Simulation (UKSim), Cambridge, Canada, 6 - 08 April 2016, pp.217-223
- IX. **Adaptive Input Voltage Prediction Method Based on ANN for Bidirectional DC-DC Converter**
KAYAALP R. İ. , DEMİRDELEN T., TÜMAY M.
2nd International Conference on Systems Informatics, Modelling and Simulation (SIMS), Riga, Latvia, 1 - 03 June 2016, pp.35-40
- X. **Performance Investigation of High Level Modular Multilevel Inverter based Shunt Hybrid Active Power Filter**
DEMİRDELEN T., KAYAALP R. İ. , TÜMAY M.
International Symposium on Fundamentals of Electrical Engineering (ISFEE), Romania, 30 June - 02 July 2016
- XI. **A New Control Approach for Shunt Hybrid Active Power Filter to Compensate Harmonics and Dynamic Reactive Power with Grid Interconnection**
DEMİRDELEN T., İNCİ M., TÜMAY M.
A New Control Approach for Shunt Hybrid Active Power Filter to Compensate Harmonics and Dynamic Reactive Power with Grid Interconnection, Madrid, Spain, 6 - 08 October 2015, pp.247-253
- XII. **The Analysis and Performance Results of Bidirectional DC-DC Converter Based Dynamic Voltage Restorer under Voltage Sag/Swell Conditions**
İNCİ M., DEMİRDELEN T., TÜMAY M.
UKSim-AMSS 9th European Modelling Symposium on Mathematical Modelling and Computer Simulation, Madrid,

Spain, 6 - 08 October 2015, pp.254-259

- XIII. **Comparison of Different Phase-Shift Control Methods at Isolated Bidirectional DC-DC Converter**
KAYAALP R. İ. , DEMİRDELEN T., KÖROĞLU T., CUMA M. U. , BAYINDIR K. Ç. , TÜMAY M.
International Conference on Advanced Technology and Sciences, Antalya, Turkey, 4 - 07 August 2015, pp.273-279
- XIV. **Performance Evaluation of a New Hybrid Unified Power Quality Conditioner (HUPQC)**
KÖROĞLU T., CUMA M. U. , TAN A., İNCİ M., DEMİRDELEN T., BAYINDIR K. Ç. , TÜMAY M.
The 6th International Symposium on Power Electronics for Distributed Generation Systems (PEDG?2015), Aachen, Germany, 22 - 25 June 2015, pp.1-6
- XV. **Performance Investigation of Shunt Hybrid Active Power Filter with a Synchronous Reference Frame Based Controller**
TAN A., KÖROĞLU T., DEMİRDELEN T., İNCİ M., CUMA M. U. , BAYINDIR K. Ç. , TÜMAY M.
The 6th International Symposium on Power Electronics for Distributed Generation Systems (PEDG?2015), Aachen, Germany, 22 - 25 June 2015, pp.1-8
- XVI. **A Novel Low Cost Sag/Swell Generator**
İNCİ M., DEMİRDELEN T., TAN A., KÖROĞLU T., CUMA M. U. , BAYINDIR K. Ç. , TÜMAY M.
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- XVII. **Performance Investigation of Shunt Hybrid Active Power Filter with A Synchronous Reference Frame Based Controller**
TAN A., KÖROĞLU T., DEMİRDELEN T., İNCİ M., CUMA M. U. , BAYINDIR K. Ç. , TÜMAY M.
IEEE 6th International Symposium on Power Electronics for Distributed Generation Systems, 2015, Aachen, Germany, 22 - 25 June 2015, pp.391-398
- XVIII. **Performance Investigation of Shunt Hybrid Active Power Filter with A Synchronous Reference Frame Based Controller**
TAN A., KÖROĞLU T., DEMİRDELEN T., İNCİ M., CUMA M. U. , BAYINDIR K. Ç. , TÜMAY M.
IEEE 6th International Symposium on Power Electronics for Distributed Generation Systems, 2015, Aachen, Germany, 22 - 25 June 2015, pp.391-398
- XIX. **A Novel Low Cost Sag/Swell Generator**
İNCİ M., DEMİRDELEN T., TAN A., KÖROĞLU T., CUMA M. U. , BAYINDIR K. Ç. , TÜMAY M.
IEEE 6th International Symposium on Power Electronics for Distributed Generation Systems - PEDG 2015, Aachen, Germany, 22 - 25 June 2015, pp.239-242
- XX. **Performance Investigation of Shunt Hybrid Active Power Filter with A Synchronous Reference Frame Based Controller**
TAN A., KÖROĞLU T., DEMİRDELEN T., İNCİ M., CUMA M. U. , BAYINDIR K. Ç. , TÜMAY M.
IEEE 6th International Symposium on Power Electronics for Distributed Generation Systems, 2015, Aachen, Germany, 22 - 25 June 2015, pp.391-398
- XXI. **A Novel Low Cost Sag/Swell Generator**
İNCİ M., DEMİRDELEN T., TAN A., KÖROĞLU T., CUMA M. U. , BAYINDIR K. Ç. , TÜMAY M.
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IEEE 6th International Symposium on Power Electronics for Distributed Generation Systems - PEDG 2015, Aachen, Germany, 22 - 25 June 2015, pp.111-116
- XXIII. **Performance Evaluation of a New Hybrid Unified Power Quality Conditioner (HUPQC)**
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The 6th International Symposium on Power Electronics for Distributed Generation Systems (PEDG?2015), Aachen, Germany, 22 - 25 June 2015, pp.1-8

- XXV. **A New Control Approach for Shunt Hybrid Active Power Filter to Compensate Harmonics and Dynamic Reactive Power with Grid Interconnection**
DEMİRDELEN T., İnci M., TÜMAY M.
UKSim-AMSS 9th IEEE European Modelling Symposium on Computer Modelling and Simulation (EMS), Madrid, Spain, 6 - 08 October 2015, pp.247-253
- XXVI. **A Novel Low Cost Sag/Swell Generator**
İnci M., DEMİRDELEN T., TAN A., KÖROĞLU T., CUMA M. U. , BAYINDIR K. Ç. , TÜMAY M.
IEEE 6th International Symposium on Power Electronics for Distributed Generation Systems (PEDG), Aachen, Germany, 22 - 25 June 2015, pp.239-242
- XXVII. **PERFORMANCE INVESTIGATION OF SHUNT HYBRID ACTIVE POWER FILTER WITH A SYNCHRONOUS REFERENCE FRAME BASED CONTROLLER**
TAN A., KÖROĞLU T., DEMİRDELEN T., İnci M., CUMA M. U. , BAYINDIR K. Ç. , TÜMAY M.
IEEE 6th International Symposium on Power Electronics for Distributed Generation Systems (PEDG), Aachen, Germany, 22 - 25 June 2015, pp.391-398
- XXVIII. **The Analysis and Performance Results of Bidirectional DC-DC Converter Based Dynamic Voltage Restorer under Voltage Sag/Swell Conditions**
İnci M., DEMİRDELEN T., BAYINDIR K. Ç. , TÜMAY M.
UKSim-AMSS 9th IEEE European Modelling Symposium on Computer Modelling and Simulation (EMS), Madrid, Spain, 6 - 08 October 2015, pp.254-259
- XXIX. **Performance Evaluation of a New Hybrid Unified Power Quality Conditioner (HUPQC)**
KÖROĞLU T., CUMA M. U. , TAN A., İnci M., DEMİRDELEN T., BAYINDIR K. Ç. , TÜMAY M.
IEEE 6th International Symposium on Power Electronics for Distributed Generation Systems (PEDG), Aachen, Germany, 22 - 25 June 2015, pp.111-116
- XXX. **PARALLEL HYBRID ACTIVE POWER FILTER STATIC REACTIVE POWER COMPENSATION WITH HARMONIC COMPENSATION**
DEMİRDELEN T.
9th International Conference on Technical and Physical Problems of Electrical Engineering (ICTPE-2013), İstanbul, Turkey, 9 - 11 September 2013, pp.153-158
- XXXI. **Şebekeye Bağlı Sistemler İçin Üç Faz ve Tek Faz PLL'lerin Performans Değerlendirmesi**
DEMİRDELEN T., TAN A., İNCİ M., KÖROĞLU T., BÜYÜK M., TERCİYANLI A., BAYINDIR K. Ç. , TÜMAY M.
5. Enerji Verimliliği ve Kalitesi Sempozyumu - EVK 2013, Kocaeli, Turkey, 23 - 24 May 2013, pp.5-9
- XXXII. **Şebekeye Bağlı Sistemler için Üç Faz ve Tek Faz PLL'lerin Performans Değerlendirmesi**
DEMİRDELEN T., TAN A., İNCİ M., KÖROĞLU T., Büyük M., Terciyanlı A., Bayındır K. Ç. , TÜMAY M.
5. Enerji Verimliliği Ve Kalitesi Sempozyumu 2013, Kocaeli, Turkey, 23 - 24 May 2013, pp.5-9
- XXXIII. **Şebekeye Bağlı Sistemler İçin Üç Faz ve Tek Faz PLL'lerin Performans Değerlendirmesi**
DEMİRDELEN T., TAN A., İNCİ M., KÖROĞLU T., BÜYÜK M., TERCİYANLI A., BAYINDIR K. Ç. , TÜMAY M.
5. Enerji Verimliliği ve Kalitesi Sempozyumu - EVK 2013, Kocaeli, Turkey, 23 - 24 May 2013, pp.5-9
- XXXIV. **Analysis of Power Quality Problems of Coreless Induction Melting Furnace with Exact Simulation Model Based on Field Measurements**
TAN A., DEMİRDELEN T., BAYINDIR K. Ç. , TÜMAY M.
IEEE 4th International Conference on Power Engineering, Energy and Electrical Drives - POWERENG 2013, İstanbul, Turkey, 13 - 17 May 2013, pp.283-289
- XXXV. **Review of Hybrid Active Power Filter Topologies and Controllers**
DEMİRDELEN T.
4th International Conference on Power Engineering, Energy and Electrical Drives, İstanbul, Turkey, 13 - 17 May 2013, pp.587-592
- XXXVI. **Analysis of Power Quality Problems of Coreless Induction Melting Furnace with Exact Simulation Model Based on Field Measurements**
TAN A., DEMİRDELEN T., BAYINDIR K. Ç. , TÜMAY M.

Supported Projects

- DEMİRDELEN T., TÜBİTAK Project, Çok Seviyeli Dönüştürücü Tabanlı Özgün Melez Aktif Güç Filtresinin Modellemesi Ve Analizi, 2016 - Continues
- TÜBİTAK Project, Da-Da Yükseltici Çeviricili Melez Birleştirilmiş Güç Kalitesi Düzenleyicisi Tasarımı Ve Gerçekleştirilmesi, 2011 - Continues
- TÜMAY M., Sakalhoğlu B., DEMİRDELEN T., Project Supported by Higher Education Institutions, Modelling and Analysis of Two Core Asymmetric Phase Shifting Transformer, 2016 - 2020
- TÜMAY M., BAL S., DEMİRDELEN T., Project Supported by Higher Education Institutions, Manyetik Kontrollü Şönt Reaktör için Uygulanan Kontrol Yöntemlerinin İncelenmesi, 2016 - 2017
- TÜMAY M., DEMİRDELEN T., KAYAALP R. İ. , Project Supported by Higher Education Institutions, Modelling and Analysis of Modular Cascaded Multilevel Converter Based Shunt Hybrid Active Power Filter for Large Scale Photovoltaic System Interconnection, 2016 - 2016

Scientific Refereeing

- International Journal for Innovation Education and Research, Other Indexed Journal, January 2016
- Alexandria Engineering Journal, Other Indexed Journal, January 2016
- Electric Power Components and Systems Journal, SCI Journal, January 2014
- International Journal of Electrical Power & Energy Systems, SCI Journal, November 2013
- TURKISH JOURNAL OF ELECTRICAL ENGINEERING & COMPUTER SCIENCES, SCI Journal, June 2013

Citations

Total Citations (WOS):52
h-index (WOS):4