

Prof. Mehmet Emin Meral

Personal Information

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Education Information

Doctorate, Cukurova University, Fen Bilimleri Enstitüsü, Elektrik-Elektronik Mühendisliği, Turkey 2005 - 2009

Post Graduate, Van Yüzüncü Yil University, Fen Bilimleri Enstitüsü, Elektrik-Elektronik Mühendisliği, Turkey 2001 - 2003

Under Graduate, Inonu University, Mühendislik Fakültesi, Elektrik-Elektronik Mühendisliği, Turkey 1997 - 2001

Foreign Languages

English, B2 Upper Intermediate

Dissertations

Doctorate, Voltage Quality Enhancement with Custom Power Park, Cukurova University, Fen Bilimleri Enstitüsü, Elektrik-Elektronik Mühendisliği, 2009

Post Graduate, Doğrusal Olmayan Güç Sistemi Devrelerinin Durum Uzayı Tekniğiyle Çözümü, Van Yüzüncü Yil University, Fen Bilimleri Enstitüsü, Elektrik-Elektronik Mühendisliği, 2003

Research Areas

Electrical and Electronics Engineering, Electronic, Circuit Theory, Energy, Power System Analysis, Electric Power Transmission, Distribution and Protection, Renewable energy, Power Electronics, Power Quality, Engineering and Technology

Academic Titles / Tasks

Professor, Van Yüzüncü Yil University, Mühendislik Fakültesi, Elektrik-Elektronik Mühendisliği Bölümü, 2019 - Continues

Associate Professor, Van Yüzüncü Yil University, Mühendislik Fakültesi, Elektrik-Elektronik Mühendisliği, 2013 - 2019

Assistant Professor, Van Yüzüncü Yil University, Mühendislik-Mimarlık Fakültesi, Elektrik-Elektronik Mühendisliği, 2010 - 2013

Research Assistant, Cukurova University, Fen Bilimleri Enstitüsü, 2005 - 2009

Professional Experience

Head of Department, Van Yüzüncü Yil University, Mühendislik Fakültesi, Elektrik Elektronik Mühendisliği Bölümü, 2020 - Continues

Fakülte Kurulu Üyesi, Van Yüzüncü Yil University, Mühendislik Fakültesi, 2020 - Continues

Head of Department, Van Yüzüncü Yil University, Mühendislik Fakültesi, Elektrik-Elektronik Mühendisliği Bölümü Elektrik Tesisleri Ana Bilim Dalı, 2013 - Continues
Fakülte Yönetim Kurulu Üyesi, Van Yüzüncü Yil University, Mühendislik Fakültesi, 2015 - 2019
Rectorate Commissioner, Van Yüzüncü Yil University, Rektörlük, 2015 - 2017
Fakülte Kurulu Üyesi, Van Yüzüncü Yil University, Mühendislik Fakültesi, 2015 - 2017

Advising Theses

Meral M. E. , Mikro Şebeke Uygulamalarında Evirici Kontrol Yöntemlerinin Geliştirilmesi, Doctorate, D.Çelik(Student), 2020
Meral M. E. , Dağıtım Şebekelerinde D-STATKOM ile Gerilim Kalitesinin İyileştirilmesi, Post Graduate, F.ÇAKMAK(Student), 2018
Meral M. E. , Dağıtılmış Üretim Sistemlerinin Modellenmesi, Analizi Ve Şebekeyle Entegrasyonunun İncelenmesi, Post Graduate, D.ÇELİK(Student), 2016
Meral M. E. , Maden Konsantrasyon Tesislerinde Kullanılan Bilyalı Değirmenlerin Otomasyonu ve Verimlilik Analizi, Post Graduate, E.BAYKAN(Student), 2014

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

- I. **Minimisation of power oscillations with a novel optimal control strategy for distributed generation inverter under grid faulty and harmonic networks**
Meral M. E. , Çelik D.
IET Renewable Power Generation, vol.14, pp.3010-3022, 2020 (Journal Indexed in SCI Expanded)
- II. **Proportional complex integral based control of distributed energy converters connected to unbalanced grid system**
Meral M. E. , Çelik D.
Control Engineering Practice, vol.103, 2020 (Journal Indexed in SCI Expanded)
- III. **Multi-objective control scheme for operation of parallel inverter-based microgrids during asymmetrical grid faults**
Çelik D., Meral M. E.
IET RENEWABLE POWER GENERATION, vol.14, pp.2487-2498, 2020 (Journal Indexed in SCI)
- IV. **Voltage support control strategy of grid-connected inverter system under unbalanced grid faults to meet fault ride through requirements**
Çelik D., Meral M. E.
IET GENERATION TRANSMISSION & DISTRIBUTION, vol.14, pp.3198-3210, 2020 (Journal Indexed in SCI)
- V. **PERFORMANCE COMPARISON OF SEQUENCE EXTRACTORS FOR REFERENCE CURRENT GENERATION AND SAG/SWELL DETECTION IN POWER SYSTEMS**
Çelik D., Meral M. E.
REVUE ROUMAINE DES SCIENCES TECHNIQUES-SERIE ELECTROTECHNIQUE ET ENERGETIQUE, vol.65, pp.21-26, 2020 (Journal Indexed in SCI)
- VI. **A novel current control strategy for grid connected renewable energy source inverters**
Meral M. E. , Çelik D.
JOURNAL OF THE FACULTY OF ENGINEERING AND ARCHITECTURE OF GAZI UNIVERSITY, vol.35, pp.537-550, 2020 (Journal Indexed in SCI)
- VII. **Virtual Park-based control strategy for grid-connected inverter interfaced renewable energy sources**
Çelik D., Meral M. E. , İnci M.
IET RENEWABLE POWER GENERATION, vol.13, pp.2840-2852, 2019 (Journal Indexed in SCI)
- VIII. **A novel control strategy for grid connected distributed generation system to maximize power**

delivery capability

Çelik D., Meral M. E.

ENERGY, vol.186, 2019 (Journal Indexed in SCI)

- IX. **Current control based power management strategy for distributed power generation system**
Çelik D., Meral M. E.
CONTROL ENGINEERING PRACTICE, vol.82, pp.72-85, 2019 (Journal Indexed in SCI)
- X. **A comprehensive survey on control strategies of distributed generation power systems under normal and abnormal conditions**
Meral M. E. , Çelik D.
ANNUAL REVIEWS IN CONTROL, vol.47, pp.112-132, 2019 (Journal Indexed in SCI)
- XI. **A flexible control strategy with overcurrent limitation in distributed generation systems**
Çelik D., Meral M. E.
INTERNATIONAL JOURNAL OF ELECTRICAL POWER & ENERGY SYSTEMS, vol.104, pp.456-471, 2019 (Journal Indexed in SCI)
- XII. **Benchmarking simulation and theory of various PLLs produce orthogonal signals under abnormal electric grid conditions**
Meral M. E. , Çelik D.
ELECTRICAL ENGINEERING, vol.100, pp.1805-1817, 2018 (Journal Indexed in SCI)
- XIII. **Comparison of SRF/PI- and STRF/PR-based power controllers for grid-tied distributed generation systems**
Meral M. E. , Çelik D.
ELECTRICAL ENGINEERING, vol.100, pp.633-643, 2018 (Journal Indexed in SCI)
- XIV. **Experimental and simulation based study of an adaptive filter controlled solid state transfer switch**
Meral M. E. , CUMA M. U. , TEKE A., TÜMAY M., BAYINDIR K. Ç.
ELECTRICAL ENGINEERING, vol.96, pp.385-395, 2014 (Journal Indexed in SCI)
- XV. **Implementation of a Non-Linear Adaptive Filter Based Sag Detection Method for Dynamic Voltage Restorers under Unbalanced Fault Conditions**
CUMA M. U. , TEKE A., Meral M. E. , BAYINDIR K. Ç. , TÜMAY M.
JOURNAL OF POWER ELECTRONICS, vol.13, pp.304-312, 2013 (Journal Indexed in SCI)
- XVI. **OPEN unified power quality conditioner with control based on enhanced phase locked loop**
TEKE A., Meral M. E. , CUMA M. U. , TÜMAY M., BAYINDIR K. Ç.
IET GENERATION TRANSMISSION & DISTRIBUTION, vol.7, pp.254-264, 2013 (Journal Indexed in SCI)
- XVII. **A practical disturbance generator to test performances of various power quality mitigation devices**
TEKE A., Meral M. E. , TÜMAY M., CUMA M. U.
TURKISH JOURNAL OF ELECTRICAL ENGINEERING AND COMPUTER SCIENCES, vol.21, pp.38-54, 2013 (Journal Indexed in SCI)
- XVIII. **Computer simulation and experimental implementation of a PIC-controlled hybrid multilevel inverter for undergraduate laboratories**
Saribulut L., TEKE A., Meral M. E. , TÜMAY M.
COMPUTER APPLICATIONS IN ENGINEERING EDUCATION, vol.20, pp.445-453, 2012 (Journal Indexed in SCI)
- XIX. **Improved phase-locked loop for robust and fast tracking of three phases under unbalanced electric grid conditions**
Meral M. E.
IET GENERATION TRANSMISSION & DISTRIBUTION, vol.6, pp.152-160, 2012 (Journal Indexed in SCI)
- XX. **Using active power factor correction (PFC) boost rectifiers for an improved topology of static series compensators with no energy storage**
Meral M. E.
IET POWER ELECTRONICS, vol.5, pp.1438-1445, 2012 (Journal Indexed in SCI)
- XXI. **Implementation of fuzzy logic controller using FORTRAN language in PSCAD/EMTDC**
TEKE A., Meral M. E. , Saribulut L., TÜMAY M.
INTERNATIONAL JOURNAL OF ELECTRICAL ENGINEERING EDUCATION, vol.48, pp.372-390, 2011 (Journal

Indexed in SCI)

- XXII. **A review of the factors affecting operation and efficiency of photovoltaic based electricity generation systems**
Meral M. E. , DINCER F.
RENEWABLE & SUSTAINABLE ENERGY REVIEWS, vol.15, pp.2176-2184, 2011 (Journal Indexed in SCI)
- XXIII. **Power quality improvement with an extended custom power park**
MERAL M. E. , TEKE A., BAYINDIR K. Ç. , TÜMAY M.
ELECTRIC POWER SYSTEMS RESEARCH, vol.79, pp.1553-1560, 2009 (Journal Indexed in SCI)
- XXIV. **Sequence reference frame-based new sag/swell detection method for static transfer switches**
TÜMAY M., MERAL M. E. , BAYINDIR K. Ç.
IET POWER ELECTRONICS, vol.2, pp.431-442, 2009 (Journal Indexed in SCI)
- XXV. **Extraction of voltage harmonics using multi-layer perceptron neural network**
TÜMAY M., MERAL M. E. , BAYINDIR K. Ç.
NEURAL COMPUTING & APPLICATIONS, vol.17, pp.585-593, 2008 (Journal Indexed in SCI)
- XXVI. **State-space modeling and analysis of fault arcs**
MAMIS M., Meral M. E.
ELECTRIC POWER SYSTEMS RESEARCH, vol.76, pp.46-51, 2005 (Journal Indexed in SCI)

Articles Published in Other Journals

- I. **Power Management Strategy of Grid Connected Solar Power Generation**
Çelik D., Meral M. E.
International Journal on Technical and Physical Problems of Engineering, vol.10, no.36, pp.14-18, 2018 (Refereed Journals of Other Institutions)
- II. **DSOGI-PLL BASED POWER CONTROL METHOD TO MITIGATE CONTROL ERRORS UNDER DISTURBANCES OF GRID CONNECTED HYBRID RENEWABLE POWER SYSTEMS**
Meral M. E. , Çelik D.
ADVANCES IN ELECTRICAL AND ELECTRONIC ENGINEERING, vol.16, pp.81-91, 2018 (Journal Indexed in ESCI)
- III. **Modelling, Design and Control of a Single Phase Solid Oxide Fuel Cell based Power System**
Çelik D., Meral M. E.
IĞDIR ÜNİVERSİTESİ FEN BİLİMLERİ ENSTİTÜSÜ DERGİSİ, vol.8, pp.81-88, 2018 (National Refreed University Journal)
- IV. **Şebekeye Bağlı SOGI-PLL Tabanlı Tek Fazlı Eviricinin PR ve HCC ile Güç Kontrolü**
Çelik D., Meral M. E.
Yüzüncü Yıl Üniversitesi Fen Bilimleri Enstitüsü Dergisi, vol.20, pp.10-21, 2015 (National Refreed University Journal)
- V. **Performance comparison of PWM methods for 27-level hybrid multilevel inverters**
Saribulut L., Meral M. E. , TEKE A., TÜMAY M.
Gazi University Journal of Science, vol.25, pp.689-695, 2012 (Refereed Journals of Other Institutions)
- VI. **Active power filter: Review of converter topologies and control strategies**
TEKE A., Saribulut L., Emin Meral M. E. , TÜMAY M.
Gazi University Journal of Science, vol.24, pp.283-289, 2011 (Refereed Journals of Other Institutions)
- VII. **Türkiye'nin Güney Sanayi Bölgelerindeki Güç Kalitesi Üzerine Bir Araştırma**
TEKE A., Meral M. E. , TUMAY M., BAYINDIR K. C.
Uludağ Üniversitesi Mühendislik-Mimarlık Fakültesi Dergisi, vol.14, pp.23-31, 2009 (National Refreed University Journal)
- VIII. **Elektrik Tesislerinde Enerji Verimliliği**
Meral M. E. , TEKE A., TUMAY M.
Uludağ Üniversitesi Mühendislik-Mimarlık Fakültesi Dergisi, vol.14, pp.31-37, 2009 (National Refreed University Journal)

IX. Dynamic Voltage Restorers: A Literature Review

TEKE A., Meral M. E., SARIBULUT L., TUMAY M.

Faculty of Electrical Engineering Universiti Teknologi Malaysia, vol.12, pp.7-13, 2009 (International Refereed University Journal)

X. Evaluation of Available Power Disturbance Generators for Testing of Power Quality Mitigation Devices

TEKE A., Meral M. E., TUMAY M.

International Journal on Sciences and Techniques of Automatic Control and Computer Engineering, vol.1, pp.624-635, 2008 (Refereed Journals of Other Institutions)

Refereed Congress / Symposium Publications in Proceedings

I. A Current Limiting Control Strategy of Grid Connected Inverter for Overcurrent Protection

Meral M. E., Çelik D.

International Conference on Engineering Technologies (ICENTE'19), Konya, Turkey, 25 - 27 October 2019, pp.205-209

II. An improved sequence based control strategy for three phase grid interfaced inverter systems

Çelik D., Meral M. E.

The 4th International Conference on Power Electronics and their Applications (ICPEA'19), Elazığ, Turkey, 25 - 27 September 2019, pp.1-6

III. Dual Average Filter based PNS Extractor for Inverter Applications in Power Systems

Meral M. E., Çelik D.

ENAR'18, Antalya, Turkey, 14 - 16 November 2018, vol.1, no.1, pp.1-10

IV. Applications of Artificial Neural Networks in Agriculture and Food Industry

Öner B., Meral R., Meral M. E.

International Agricultural Science Congress, Van, Turkey, 9 - 12 May 2018, pp.354

V. Dağıtım Şebekelerinde Gerilim Çökmesinin D-STATCOM Kullanılarak Kompanze Edilmesi

Çakmak F., Çelik D., Meral M. E.

IMESET' 17, Bitlis, Turkey, 27 - 29 October 2017, vol.1, no.1, pp.302-307

VI. Generation of Fast and Accurate Positive-Negative Sequences for Control of Three Phase Inverter

Meral M. E., Çelik D.

2nd International Iğdır Symposium, Iğdır, Turkey, 9 - 12 October 2017, vol.1, no.1, pp.1

VII. Modeling and Design of a Single Phase SOFC System's Control

Çelik D., Meral M. E.

2nd International Iğdır Symposium, Iğdır, Turkey, 9 - 11 October 2017, vol.1, no.1, pp.1

VIII. Power Control and Management of Solar Power Generation

Çelik D., Meral M. E.

13th International Conference on Technical and Physical Problems of Electrical Engineering, Van, Turkey, 21 - 23 September 2017, vol.1, no.1, pp.269-272

IX. The Effect of Disturbances on Grid Tied Power Converters and DSOGI Based Power Controller Solution

Çelik D., Meral M. E.

5th International Conference on Advanced Technology & Sciences (ICAT'17), İstanbul, Turkey, 9 - 12 May 2017, vol.1, no.1, pp.486-491

X. Comparison of two different Power Controllers for Grid Tied Distributed Generation Systems

Çelik D., Meral M. E.

International Conference on Advanced Technology & Sciences 3th International Conference (ICAT'16), Konya, Turkey, 1 - 03 September 2016, vol.1, no.1, pp.781-786

XI. Grid Tied Fuel Cell System Using Single Phase PLL Based SOGI with PI and PR Current Controllers

Meral M. E., Çelik D.

The 5th International Congress on Engineering and Information (ICEAI 2016), Osaka, Japan, 10 May - 12 June 2016, pp.513-524

- XII. **A novel switching signals generation method for hybrid multilevel inverters**
MERAL M. E. , Saribulut L., TEKE A., TÜMAY M.
6th International Conference on Electrical and Electronics Engineering, ELECO 2009, Bursa, Turkey, 5 - 08 November 2009
- XIII. **İnternet Tabanlı Elektrik ve Güç Kalitesi İzleme Sistemi**
Meral M. E. , TEKE A., BAYINDIR K. C. , TUMAY M., Tan A., Şenses O.
3. Enerji Verimliliği ve Kalitesi Sempozyumu, Kocaeli, Turkey, 1 - 04 April 2009, pp.1-5
- XIV. **Güç Kalitesi Bozucusu: Teorisi ve Simülasyonu**
SARIBULUT L., Yüzbaşıoğlu S., Meral M. E. , TEKE A., TUMAY M.
Eleco'08, Elektrik - Elektronik Ve Bilgisayar Mühendisliği Sempozyumu, Bursa, Turkey, 1 - 05 November 2008, pp.351-357
- XV. **Overview of an Extended Custom Power Park**
MERAL M. E. , TEKE A., TÜMAY M.
2nd International Power and Energy Conference (PECon 2008), Johor-Bahru, Malaysia, 1 - 03 December 2008, pp.1364-1368
- XVI. **Power Quality Survey on South Industrial Districts of Turkey**
BAYINDIR K. C. , TEKE A., Yiğit İ., Meral M. E. , TUMAY M., Yalçın B.
ICPS'07, International Conference on Power Systems, Bangalore, India, 12 - 14 December 2007, pp.1
- XVII. **Positive Sequence SRF based Sag/Swell Detection Method for Static Transfer Switch**
BAYINDIR K. C. , Meral M. E. , TUMAY M.
ICEAI 2016, International Conference on Power Systems,, Bangalore, India, 12 December 2007, pp.1
- XVIII. **Parafudurun Geçici Rejim Altındaki Davranışının İncelenmesi**
Meral M. E. , MAMIS M.
Elektrik_Elektornik-Bilgisayar Mühendisliği 10. Ulusal Kongresi, İstanbul, Turkey, 18 - 21 September 2003, vol.1, no.1, pp.52-55

Supported Projects

Meral M. E. , Çelik D., Project Supported by Higher Education Institutions, Şebekeye Bağlı Üç Fazlı Eviricinin Döngüsel İşlemci Emülatörü Tabanlı Gerçek Zamanlı Kontrolü, 2019 - Continues

Meral M. E. , Çelik D., Project Supported by Higher Education Institutions, Yenilenebilir Enerji Kaynaklı Eviricilerin GüçAkım Kontrolünde Kullanılan Yöntemlerin İncelenmesi ve Geliştirilmesi, 2017 - 2019

Meral M. E. , Project Supported by Higher Education Institutions, Siirt Madenköy Bakır Konsantrasyon Tesisi Otomasyon Sisteminin İncelenmesi ve Optimizasyon Analizi, 2012 - 2014

Meral M. E. , TUBITAK Project, Özel Güç Parkının Modellenmesi ve Uygulanması, 2007 - 2010

Scientific Refereeing

IEEE Power Engineering Letters, Other Indexed Journal, December 2018

Renewable and Sustainable Energy Reviews, SCI Journal, December 2018

Project Supported by Higher Education Institutions, April 2018

Renewable and Sustainable Energy Reviews, SCI Journal, February 2018

TURKISH JOURNAL OF ELECTRICAL ENGINEERING & COMPUTER SCIENCES, SCI Journal, December 2017

TURKISH JOURNAL OF ELECTRICAL ENGINEERING & COMPUTER SCIENCES , SCI Journal, September 2017

IET Generation, Transmission and Distribution, SCI Journal, August 2017

IEEE Transactions on Energy Conversion, SCI Journal, July 2017

International Transactions on Electrical Energy Systems, SCI Journal, April 2017

IET Generation, Transmission and Distribution, SCI Journal, April 2017

ELECTRICAL ENGINEERING,, SCI Journal, July 2016

IET RENEWABLE POWER GENERATION, SCI Journal, April 2016

The Journal of Engineering, Other Indexed Journal, February 2016

TURKISH JOURNAL OF ELECTRICAL ENGINEERING & COMPUTER SCIENCES, SCI Journal, February 2016

TURKISH JOURNAL OF ELECTRICAL ENGINEERING & COMPUTER SCIENCES, SCI Journal, February 2016

Turkish Journal of Electrical Engineering & Computer Sciences, SCI Journal, October 2015

Electrical Engineering, SCI Journal, April 2015

IET Generation, Transmission & Distribution, SCI Journal, January 2015

Invited Congress and Symposium Activities

ICENTE' 19, Session Moderator, Konya, Turkey, 2019

Citations

Total Citations (WOS):320

h-index (WOS):10

Awards

Meral M. E. , Mühendislik Fakültesi İkincisi Plaket ve Başarı Belgesi, İnönü Üniversitesi Rektörlüğü, June 2001