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International Researcher IDs

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Learning Knowledge

Doctorate 2001 - 2007	Gazi University, Fen Bilimleri Enstitüsü, Elektrik Eğitimi (Dr), Turkey
Postgraduate 1997 - 2001	Gazi University, Fen Bilimleri Enstitüsü, Elektrik Eğitimi (Yl) (Tezli), Turkey
Undergraduate 1993 - 1997	Gazi University, Teknik Eğitim Fakültesi, Elektrik Eğitimi Bölümü, Turkey

Certificates, Courses and Trainings

Occupational Health and Safety, İşyeri Hekimliği ve İş Güvenliği Uzmanlığı Eğitici Belgesi (Occupational Safety Expertise Training Certificate), Republic of Türkiye, Ministry of Labour and Social Security, General Directorate of Occupational Health and Safety, 2012

Dissertations

Doctorate, Implementation of the internet based laboratory for distance education, Gazi University, Fen Bilimleri Enstitüsü, Elektrik Eğitimi (Dr), 2007

Postgraduate, Design and implementation of computer controlled building security system, Gazi University, Fen Bilimleri Enstitüsü, Elektrik Eğitimi (Yl) (Tezli), 2001

Academic Titles / Tasks

Professor 2019 - Continues	Gazi University, Teknoloji Fakültesi, Elektrik - Elektronik Mühendisliği
Associate Professor 2013 - 2019	Gazi University, Teknoloji Fakültesi, Elektrik - Elektronik Mühendisliği

Assistant Professor 2012 - 2013	Gazi University, Teknoloji Fakültesi, Elektrik - Elektronik Mühendisliği

Assistant Professor 2009 - 2012	Gazi University, Teknik Eğitim Fakültesi, Elektrik Eğitimi

Lecturer PhD 2007 - 2009	Gazi University, Teknik Eğitim Fakültesi, Elektrik Eğitimi

Research Assistant 1998 - 2007	Gazi University, Teknik Eğitim Fakültesi, Elektrik Eğitimi

Supported Projects

1. Irmak E., Kondolot Solak E., Kaya S., Taşkın Çakıcı G., Yiyit Doğan S., Project Supported by Higher Education Institutions, Design, Characterization and Efficiency Analysis of a New Organic Solar Cell with Synthesized Magnetite Additive, 2023 - 2024
2. IRMAK E., Project Supported by Higher Education Institutions, Dağıtık Üretim Tabanlı Bir Mikroşebekenin Tasarımı ve Olay Tetiklemeli Merkezi Olmayan Hiyerarşik Kontrol Yöntemi ile Kontrolü, 2020 - 2024
3. Güler N., Irmak E., Project Supported by Higher Education Institutions, Batarya Şarj Ünitesinin Çok Seviyeli DA/DA Dönüştürücü ile Tasarımı ve Model Öngörmeli Yöntem (MPC) ile Kontrolü, 2017 - 2019
4. Irmak E., Tepe İ. F., TUBITAK Project, Akıllı Şebekelerde Konut Yüklerinin Gerçek Zamanlı Fiyatlandırmaya Göre Talep Yanıtının Optimizasyonu, 2017 - 2018
5. Kurt E., IRMAK E., Erasmus Project, Innovative European Studies on Renewable Energy Systems, 2015 - 2018
6. Irmak E., Tekincan E. B., TUBITAK Project, Atık Isı Enerjisinden Elektrik Enerjisi Üretimi ve Tasarlanan Termoelektrik Jeneratör Sistemi ile Hibrit Araçlara Uygulanması, 2016 - 2017
7. Irmak E., Güler N., Project Supported by Higher Education Institutions, Rüzgâr Enerji Sistemleri için Çoklu Girişe Olanak Sağlayan Bir Güç Dönüştürücüsü Tasarımı ve Uygulaması, 2016 - 2017
8. Irmak E., Kilisli H., Hazer E., TUBITAK Project, Rotoru Sargılı Asenkron Motorlar İçin Bilgisayar Kontrollü Hız Denetim Sistemi Tasarımı, 2013 - 2014
9. Irmak E., Güler N., Project Supported by Higher Education Institutions, Senkron Generatörlerin dsPIC Kullanılarak Paralel Bağlanması ve Arayüz Üzerinden Yük Kontrolünün Gerçekleştirilmesi, 2011 - 2013
10. Irmak E., Köse A., Project Supported by Higher Education Institutions, Elektrik Enerji Kalitesinin İzlenmesi ve İyileştirilmesi, 2011 - 2013
11. IRMAK E., Project Supported by Higher Education Institutions, PLC VE SCADA SİSTEMLERİ İÇİN ÇOKLU ORTAM DESTEKLİ BİR EĞİTİM SETİ TASARIMI ve UYGULAMASI, 2011 - 2013
12. Irmak E., Ersan M., TUBITAK Project, Kablo Ucu Belirleme ve Arıza Tespit Sistemi Tasarımı, 2011 - 2012
13. IRMAK E., Project Supported by Higher Education Institutions, Endüstriyel İşletmelerde Elektrik Güç Parametrelerinin İnternet Üzerinden Takibi ve Analizi, 2011 - 2012
14. Irmak E., Güler N., Köse A., Project Supported by Higher Education Institutions, Endüstriyel İşletmelerde Elektrik Güç Parametrelerinin İnternet Üzerinden Takibi ve Analizi, 2011 - 2012
15. Demirbaş Ş., Irmak E., Project Supported by Higher Education Institutions, Elektrik Makineleri Dersleri ve Deneylerinin Gerçekleştirilmesi için İnternet Tabanlı Uzaktan Eğitim, 2006 - 2008

Designed Lessons

Irmak E., KRİTİK ALTYAPILAR VE GÜVENLİĞİ, Masters (Non-Thesis), 2020 - 2021

Irmak E., AKILLI ŞEBEKELER, Undergraduate, 2019 - 2020

Irmak E., AKILLI ŞEBEKELERDE SİBER GÜVENLİK, Postgraduate, 2019 - 2020

Irmak E., PRIVACY AND SECURITY APPLICATIONS IN SMART GRIDS, Postgraduate, 2019 - 2020

Irmak E., GÜÇ SİSTEMLERİNİN MODELLENMESİ VE SİMÜLASYONU, Doctorate, 2019 - 2020

Irmak E., AKILLI ŞEBEKELER VE UYGULAMALARI, Doctorate, 2019 - 2020

Irmak E., ENERJİ DAĞITIMI, Undergraduate, 2019 - 2020

Taught Courses And Trainings

Irmak E., Elektrik İç Tesislerinin Denetimi ve Raporlama Eğitimi, 2022 - 2022

Irmak E., Orta Gerilim (OG) Sistem Tasarımı ve Elektrik Altyapısı Eğitimi, 2022 - 2022

Published journal articles indexed by SCI, SSCI, and AHCI

1. **Optimizing real-time demand response in smart homes through fuzzy-based energy management and control system**
Tepe İ. F., Irmak E.
ELECTRICAL ENGINEERING, vol.2024, pp.1-25, 2024 (SCI-Expanded)

2. **Development and Integration of a Digital Twin Model for a Real Hydroelectric Power Plant**
Ersan M., Irmak E.
SENSORS, vol.24, no.13, pp.1-33, 2024 (SCI-Expanded)

3. **Enhanced PV Power Prediction Considering PM10 Parameter by Hybrid JAYA-ANN Model**
Irmak E., Yeşilbudak M., Taşdemir O.
ELECTRIC POWER COMPONENTS AND SYSTEMS, vol.52, no.11, pp.1998-2007, 2024 (SCI-Expanded)

4. **Reduction of a Real Power System: Turkish Transmission System Case**
Yeşil M., Irmak E.
ELECTRIC POWER COMPONENTS AND SYSTEMS, vol.52, no.7, pp.1155-1173, 2024 (SCI-Expanded)

5. **Design and Implementation of an Energy Management System with Event-Triggered Distributed Secondary Control in DC Microgrids**
Calpbinici A., Irmak E., Kabalcı E.
ENERGIES, vol.17, no.3, pp.1-28, 2024 (SCI-Expanded)

6. **Event-triggered distributed secondary control for enhancing efficiency, reliability and communication in island mode DC microgrids**
Irmak E., Kabalcı E., Calpbinici A.
IET RENEWABLE POWER GENERATION, vol.18, no.1, pp.78-94, 2024 (SCI-Expanded)

7. **Electric Vehicle Advancements, Barriers, and Potential: A Comprehensive Review**
Çolak A. M., Irmak E.
ELECTRIC POWER COMPONENTS AND SYSTEMS, vol.51, no.17, pp.2010-2042, 2023 (SCI-Expanded)

8. **Digital Transformation of Microgrids: A Review of Design, Operation, Optimization, and Cybersecurity**
Irmak E., Kabalcı E., Kabalcı Y.
ENERGIES, vol.16, no.12, pp.1-58, 2023 (SCI-Expanded)

9. **Advances in organic photovoltaic cells: a comprehensive review of materials, technologies, and performance**
Kondolot Solak E., Irmak E.
RSC ADVANCES, vol.13, no.18, pp.12244-12269, 2023 (SCI-Expanded)

10. **An Integrated Energy Control System to Provide Optimum Demand Side Management of a Grid-Interactive Microgrid**

Tepe I. F., Irmak E.
ELECTRIC POWER COMPONENTS AND SYSTEMS, vol.51, no.6, pp.619-638, 2023 (SCI-Expanded)

11. **A State-of-the-Art Review on Electric Power Systems and Digital Transformation**
Çolak M., IRMAK E.
Electric Power Components and Systems, vol.51, no.11, pp.1089-1112, 2023 (SCI-Expanded)

12. **Estimation of inertia constant in Turkish power system and its analysis during real system disturbances**
Yesil M., IRMAK E.
INTERNATIONAL TRANSACTIONS ON ELECTRICAL ENERGY SYSTEMS, vol.31, no.11, 2021 (SCI-Expanded)

13. **Design, implementation and model predictive based control of a mode-changeable DC/DC converter for hybrid renewable energy systems**
Güler N., Irmak E.
ISA TRANSACTIONS, vol.114, pp.485-498, 2021 (SCI-Expanded)

14. **A model predictive control-based hybrid MPPT method for boost converters**
Irmak E., Güler N.
INTERNATIONAL JOURNAL OF ELECTRONICS, vol.107, no.1, pp.1-16, 2020 (SCI-Expanded)

15. **An inverter design for a new permanent magnet synchronous generator**
GÜLER N., IRMAK E., Gor H., KURT E.
INTERNATIONAL JOURNAL OF HYDROGEN ENERGY, vol.42, no.28, pp.17723-17732, 2017 (SCI-Expanded)

16. **Design, implementation, and verification of computer interactive parallel connection system with load-sharing control for synchronous generators**
GÜLER N., IRMAK E.
ELECTRICAL ENGINEERING, vol.99, no.1, pp.241-263, 2017 (SCI-Expanded)

17. **A novel design for e-laboratories: Simultaneously accessible experimental application platform**
IRMAK E., CALPBİNİCİ A.
JOURNAL OF THE FACULTY OF ENGINEERING AND ARCHITECTURE OF GAZI UNIVERSITY, vol.32, no.2, pp.363-375, 2017 (SCI-Expanded)

18. **Design and experimental analysis of an advanced static VAR compensator with computer aided control**
Irmak E., Bayındır R., Köse A.
ISA TRANSACTIONS, vol.64, pp.384-393, 2016 (SCI-Expanded)

19. **Design and Analyse of a Parallel Connection Model for Hybrid Energy Systems**
GÜLER N., DEMİRBAŞ Ş., IRMAK E.
ELEKTRONIKA IR ELEKTROTECHNIKA, vol.21, no.2, pp.44-49, 2015 (SCI-Expanded)

20. **Design and Implementation of a Remote Laboratory Platform Using MATLAB Builder for NE**
Colak I., IRMAK E., KABALCI E., Issi F.
COMPUTER APPLICATIONS IN ENGINEERING EDUCATION, vol.22, no.4, pp.617-629, 2014 (SCI-Expanded)

21. **Application of a high efficient voltage regulation system with MPPT algorithm**
IRMAK E., GÜLER N.
INTERNATIONAL JOURNAL OF ELECTRICAL POWER & ENERGY SYSTEMS, vol.44, no.1, pp.703-712, 2013 (SCI-Expanded)

22. **A Real Time Application for Analysing Impacts of Frequency Variation on Induction Motor Parameters**
IRMAK E.
PRZEGLAD ELEKTROTECHNICZNY, vol.88, pp.290-293, 2012 (SCI-Expanded)

23. **A Remote Laboratory Experiment for 4-Quadrant Control of a DC Motor**
IRMAK E., BAYINDIR R., Colak I., Soysal M.
COMPUTER APPLICATIONS IN ENGINEERING EDUCATION, vol.19, no.4, pp.747-758, 2011 (SCI-Expanded)

24. **COMPUTER BASED IMPLEMENTATION OF SPEED CONTROL EXPERIMENT DEPENDING ON FREQUENCY VARIATION FOR INDUCTION MOTORS**
IRMAK E., VADİ S.

JOURNAL OF THE FACULTY OF ENGINEERING AND ARCHITECTURE OF GAZI UNIVERSITY, vol.26, no.1, pp.57-62, 2011 (SCI-Expanded)

25. **A Novel Web-Based Laboratory for DC Motor Experiments**
Colak I., DEMİRBAŞ Ş., SAĞIROĞLU Ş., IRMAK E.
COMPUTER APPLICATIONS IN ENGINEERING EDUCATION, vol.19, no.1, pp.125-135, 2011 (SCI-Expanded)

26. **Design of an AC-DC-AC converter for wind turbines**
KABALCI E., IRMAK E., Colak I.
INTERNATIONAL JOURNAL OF ENERGY RESEARCH, vol.35, no.2, pp.169-175, 2011 (SCI-Expanded)

27. **Development of a real time energy monitoring platform**
BAYINDIR R., IRMAK E., Colak I., Bektas A.
INTERNATIONAL JOURNAL OF ELECTRICAL POWER & ENERGY SYSTEMS, vol.33, no.1, pp.137-146, 2011 (SCI-Expanded)

28. **DESIGN OF A REMOTELY ACCESSIBLE E-LABORATORY PLATFORM**
IRMAK E.
JOURNAL OF THE FACULTY OF ENGINEERING AND ARCHITECTURE OF GAZI UNIVERSITY, vol.24, no.2, pp.311-322, 2009 (SCI-Expanded)

29. **TORQUE AND SPEED CONTROL OF WOUND ROTOR INDUCTION MOTOR BY ADJUSTING THE ROTOR RESISTANCE WITH A MICROCONTROLLER**
DEMİRBAŞ Ş., IRMAK E., Bayhan S., Colak I.
JOURNAL OF THE FACULTY OF ENGINEERING AND ARCHITECTURE OF GAZI UNIVERSITY, vol.23, no.4, pp.801-809, 2008 (SCI-Expanded)

30. **MICROCONTROLLER BASED DC/DC BOOST CONVERTER FOR SOLAR ENERGY SYSTEMS**
DEMİRTAŞ M., SEFA İ., IRMAK E., Colak I.
JOURNAL OF THE FACULTY OF ENGINEERING AND ARCHITECTURE OF GAZI UNIVERSITY, vol.23, no.3, pp.719-728, 2008 (SCI-Expanded)

31. **Remote controlling and monitoring of HVAC system over Internet**
Colak I., DEMİRBAŞ Ş., SEFA İ., IRMAK E., Kahraman H. T.
JOURNAL OF SCIENTIFIC & INDUSTRIAL RESEARCH, vol.67, no.9, pp.680-684, 2008 (SCI-Expanded)

32. **USAGE OF MATLAB WEB SERVER FOR E-LEARNING PLATFORMS**
IRMAK E.
JOURNAL OF THE FACULTY OF ENGINEERING AND ARCHITECTURE OF GAZI UNIVERSITY, vol.23, no.2, pp.495-506, 2008 (SCI-Expanded)

Articles Published in Other Journals

1. **Windows Active Directory Domain Services and Enterprise Network Security: Analysis and Measures for PowerShell Access**
Şentürk Z., Irmak E.
Gazi Üniversitesi Fen Bilimleri Dergisi Part C: Tasarım ve Teknoloji, vol.12, no.3, pp.475-487, 2024 (Peer-Reviewed Journal)

2. **A Review of Control Strategies and Metaheuristic Algorithms Used in DC Microgrids**
Tepe I. F., IRMAK E.
INTERNATIONAL JOURNAL OF RENEWABLE ENERGY RESEARCH, vol.12, no.2, pp.799-818, 2022 (ESCI)

3. **Computer Forensics and Examination of Digital Evidence on Windows Operating System**
Önel B., Irmak E.
Politeknik Dergisi, vol.24, no.3, pp.1187-1196, 2021 (ESCI)

4. **Early Period Impacts of the Covid-19 Pandemic on Turkish Electricity Profile**
Firik B., Irmak E.
Gazi Üniversitesi Fen Bilimleri Dergisi Part: C Tasarım ve Teknoloji, vol.9, no.1, pp.40-56, 2021 (Peer-Reviewed Journal)

5. Separation of Incoming E-Mails Through Artificial Intelligence Techniques
Yağanoğlu M., Irmak E.
European Journal of Science and Technology, no.21, pp.690-696, 2021 (Peer-Reviewed Journal)

6. LINUX TABANLI SUNUCULARDA VE KABLOSUZ AĞLARDA SİBER SALDIRILARIN TESPİTİ VE ÖNLENMESİ
Irmak E., Zengin S., Bülbül H. İ.
Uluslararası Bilgi Güvenliği Mühendisliği Dergisi, vol.6, no.2, pp.89-107, 2020 (Peer-Reviewed Journal)

7. Kritik Altyapı Operatörleri İçin Görüntü İşleme Tabanlı Bir Yorgunluk tespit ve Uyarı Sistemi.
Yeşil O., Irmak E., Bülbül H. İ.
Uluslararası Bilgi Güvenliği Mühendisliği Dergisi., vol.6, no.1, pp.35-44, 2020 (Peer-Reviewed Journal)

8. Nötr Kenetlemeli Eviriciler için Çok Giriş – Çok Çıkışlı DA-DA Çevirici Tasarımı ve Kontrolü
Güler N., Irmak E.
G.Ü. Fen Bilimleri Dergisi Part C: Tasarım ve Teknoloji, vol.7, no.1, pp.49-62, 2019 (Peer-Reviewed Journal)

9. Endüstriyel Kontrol Sistemleri ve SCADA Uygulamalarının Siber Güvenliği: Modbus TCP Protokolü Örneği
IRMAK E., ERKEK İ.
G.Ü. Fen Bilimleri Dergisi Part C: Tasarım ve Teknoloji, vol.6, no.1, pp.1-16, 2018 (Peer-Reviewed Journal)

10. Experimental Analysis of The Internal Attacks on Scada Systems
IRMAK E., Erkek I., Ozcelik M. M.
GAZI UNIVERSITY JOURNAL OF SCIENCE, vol.30, no.4, pp.216-230, 2017 (ESCI)

11. Mikrodenetleyici Temelli Sistemlerde Dspic Kullanımı ve Örnek Uygulama Geliştirme Süreci
Güler N., Irmak E.
Gazi Üniversitesi Fen Bilimleri Dergisi Part: C Tasarım ve Teknoloji, vol.4, no.2, pp.71-82, 2016 (Peer-Reviewed Journal)

12. Orta Ölçekli Bir İşletmenin Enerji İzleme Sisteminin Tasarlanması
IRMAK E., GÜLER N., CALPBİNİCİ A.
Pamukkale Üniv. Mühendislik Bilimleri Dergisi, vol.18, no.2, pp.123-131, 2012 (Peer-Reviewed Journal)

13. Design of an Energy Monitoring System for a Medium Scale Plant
IRMAK E., CALPBİNİCİ A., GÜLER N.
PAMUKKALE UNIVERSITY JOURNAL OF ENGINEERING SCIENCES-PAMUKKALE UNIVERSITESI MUHENDISLIK BILIMLERI DERGISI, vol.18, no.2, pp.123-131, 2012 (ESCI)

14. DA Motorunun Dört Bölge Denetiminin Eğitim Amaçlı Gerçekleştirilmesi
ÇOLAK İ., SOYSAL M., IRMAK E., BAYINDIR R.
Politeknik, vol.10, no.3, pp.219-227, 2007 (Peer-Reviewed Journal)

15. Asenkron Motorlar İçin Denetleyici Tabanlı Koruma ve Yol Verme Rölesi Tasarımı ve Uygulaması
BAYINDIR R., DEMİRBAŞ Ş., IRMAK E., BEKİROĞLU E.
Politeknik Dergisi, vol.10, no.1, pp.1-5, 2007 (Peer-Reviewed Journal)

16. Asenkron Motor Benzetimi İçin Web Tabanlı Bir Eğitim Aracı
DEMİRBAŞ Ş., IRMAK E., ÇOLAK İ.
Politeknik Dergisi, vol.9, no.4, pp.147-152, 2007 (Peer-Reviewed Journal)

17. Doğru Akım Motorunun Temel Giriş Sinyallerine Tepkisinin İnternet Üzerinden Benzetimi
IRMAK E.
Politeknik Dergisi, vol.9, no.2, pp.71-77, 2006 (Peer-Reviewed Journal)

18. Bilgisayar Kontrollu Bina Güvenlik Sisteminin Tasarımı ve Uygulaması
ÇOLAK İ., IRMAK E.
G.Ü. Fen Bilimleri Dergisi, vol.16, no.2, pp.411-421, 2003 (Peer-Reviewed Journal)

19. Merdiven Aydınlatmasının Pasif Kızılötesi Yaklaşım Sensörü ile Kontrolü
YILMAZ C., GÜRDAL O., IRMAK E.
Politeknik Dergisi, vol.3, no.1, pp.45-50, 2000 (Peer-Reviewed Journal)

Books & Book Chapters

1. **Endüstriyel Kontrol Sistemlerinin Siber Güvenliği**
   ERKEK İ., IRMAK E.
   in: SİBER GÜVENLİK VE SAVUNMA: Biyometrik ve Kriptografik Uygulamalar, Sağıroğlu Şeref, Akleylek Sedat,
   Editor, Nobel Yayınevi, pp.413-452, 2020

Refereed Congress / Symposium Publications in Proceedings

1. **Eco-Friendly Energy Storage Systems based Demand Side Management for Rural Microgrid by Dandelion Optimization Algorithm**
   Tepe İ. F., Demirtaş M., Irmak E., Bayındır R.
   IEEE 13th International Conference on Renewable Energy Research and Applications (ICRERA), Nagasaki, Japan, 9 - 13 November 2024, pp.1-11

2. **Design and Comparative Analysis of Synchronous Reference Frame based Enhanced Power Quality Management with Metaheuristic Algorithms**
   Tepe İ. F., Kaplan O., Irmak E., Bayındır R.
   IEEE 13th International Conference on Renewable Energy Research and Applications (ICRERA), Nagasaki, Japan, 9 - 13 November 2024, pp.1-9

3. **A Brief Overview of Future Mobility and Energy Management Strategies with Vehicle-to-Everything (V2X) Concept on Smart Grid**
   Çolak İ., Irmak E., Tepe İ. F.
   IEEE 13th International Conference on Renewable Energy Research and Applications (ICRERA), Nagasaki, Japan, 9 - 13 November 2024, pp.1-7

4. **Comparative Analysis of Fuzzy Logic and PI Control for Harmonic Suppression in Shunt Active Power Filter**
   Gök R., Çolak A. M., Irmak E., Öztürk N.
   IEEE 13th International Conference on Renewable Energy Research and Applications (ICRERA), Nagasaki, Japan, 9 - 13 November 2024, pp.1-6

5. **Current Developments in Electric Power Systems and Cyber Security of Grid: Challenges and a Smart Sustainable Future Approach**
   Irmak E.
   NATO SPS Programme: Capacity Building for a New Generation of Scientists in Energy Security and Climate Neutrality, Budapest, Hungary, 8 - 16 October 2024, pp.1-50

6. **Current Developments in Electric Power Systems: Challenges and a Sustainable Future**
   Irmak E.
   3rd International Conference on Engineering, and Science to Achieve the Sustainable Development Goals, (ICASDG2024), İstanbul, Turkey, 25 - 26 September 2024, pp.1-30

7. **Optimal Sizing of Battery Energy Storage Systems Participating in Primary Frequency Control in Turkish Power Grid**
   Yeşil M., Tör O. B., Küçükler M., Irmak E.
   IEEE 6th Global Power, Energy and Communication Conference, Budapest, Hungary, 4 - 07 June 2024, pp.1-10

8. **Optimization of Seasonal Wind Energy Forecasts with PSO Algorithm**
   Taşdemir O., Tepe İ. F., Irmak E.
   IEEE 6th Global Power, Energy and Communication Conference, Budapest, Hungary, 4 - 07 June 2024, pp.1-10

9. **AGC Integration and Parameter Optimization for The Reduced Dynamic Model of Turkish Power Grid**
   Yeşil M., Irmak E.
   IEEE 6th Global Power, Energy and Communication Conference, Budapest, Hungary, 4 - 07 June 2024, pp.1-12

10. **Applications, Insights and Implications of Digital Twins in Smart City Management**
    Ersan M., Irmak E., Çolak A. M.

IEEE 12th International Conference on Smart Grid , Setúbal, Portugal, 27 - 29 May 2024, pp.378-383

11. **Enhancing Cybersecurity of A Hydroelectric Power Plant Using Its Digital Twin Model**
Erkek İ., Irmak E.
IEEE 12th International Conference on Smart Grid , Setúbal, Portugal, 27 - 29 May 2024, pp.372-377

12. **Design and Model Predictive Control of A Bidirectional Ev Fast Charging Station Operating in A DC Microgrid**
Tepe İ. F., Irmak E.
IEEE 12th International Conference on Smart Grid, Setúbal, Portugal, 27 - 29 May 2024, pp.521-529

13. **Persistence Techniques in Microsoft Active Directory: Detection and Mitigation Strategies**
Şentürk Z., Irmak E.
12th International Symposium on Digital Forensics and Security (ISDFS 2024), Texas, United States Of America, 29 - 30 April 2024, pp.1-6

14. **Modeling, Analysis and Optimization of Energy Management in An Islanded Microgrid**
Gök R., Değirmenci S., Irmak E., Öztürk N.
6th IEEE Global Power, Energy and Communication Conference, GPECOM 2024, Budapest, Hungary, 4 - 07 June 2024, pp.537-542

15. **A Brief Overview and Key Points in Electric Vehicle Charging Systems**
Çolak İ., Irmak E., Tepe İ. F.
5th International Conference on Control Systems, Mathematical Modeling, Automation and Energy Efficiency, Lipeck, Russia, 8 - 10 November 2023, pp.956-964

16. **Preliminary Studies on Dynamic Reduction of the Turkish Transmission Network**
Yeşil M., Irmak E.
12th International Conference on Renewable Energy Research and Applications (ICRERA), Oshawa, Canada, 29 August - 01 September 2023, pp.581-590

17. **Digital Twin Approach for Current Protection Relays: Utilizing Real-Time Data for Optimal Protection**
Ersan M., Çelebioğlu T. K., Irmak E.
12th International Conference on Renewable Energy Research and Applications (ICRERA), Oshawa, Canada, 29 August - 01 September 2023, pp.597-606

18. **Distributed Hierarchical Control for Voltage Stability and Proportional Current Sharing in Island-Mode DC Microgrids**
Calpbinici A., Irmak E., Kabalcı E.
5th Global Power, Energy and Communication Conference (GPECOM), Nevşehir, Turkey, 14 - 16 June 2023, pp.388-393

19. **Governor Control Systems in Hydroelectric Power Plants: Overview, Challenges, and Recommendations**
Ersan M., Irmak E.
11th International Conference on Smart Grid (icSmartGrid), Paris, France, 4 - 07 June 2023, pp.1-9

20. **Daily Prediction of PV Power Output Using Particulate Matter Parameter with Artificial Neural Networks**
Irmak E., Yeşilbudak M., Taşdemir O.
11th International Conference on Smart Grid (icSmartGrid), Paris, France, 4 - 07 June 2023, pp.1-4

21. **Evaluation of SCADA Test Beds and Design of a New Software-Based Test Bed**
Erkek İ., Irmak E.
11th International Conference on Smart Grid (icSmartGrid), Paris, France, 4 - 07 June 2023, pp.1-8

22. **Synergistic Effects of Magnetite Nanoparticles in the Hole Transport Layer of Organic PV Cells**
IRMAK E., KONDOLOT SOLAK E., KAYA S., YİYİT DOĞAN S., Cakici G. T.
5th IEEE Global Power, Energy and Communication Conference, GPECOM 2023, Cappadocia, Turkey, 14 - 16 June 2023, pp.508-512

23. **Review and Comparative Analysis of Metaheuristic MPPT Algorithms in PV Systems Under Partial Shading Conditions**
Tepe İ. F., Irmak E.

2022 11th International Conference on Renewable Energy Research and Applications, İstanbul, Turkey, 18 - 21 September 2022, pp.471-479

24. **An Estimation Algorithm for Distributed Hierarchical Control Used in Microgrids**
CALPBİNİCİ A., KABALCI E., IRMAK E.
4th IEEE Global Power, Energy and Communication Conference (IEEE GPECOM), Cappadocia, Turkey, 14 - 17 June 2022, pp.378-382

25. **A New Bus Reduction Approach based on Extended REI Model**
Yesil M., IRMAK E.
4th IEEE Global Power, Energy and Communication Conference (IEEE GPECOM), Cappadocia, Turkey, 14 - 17 June 2022, pp.400-405

26. **Cyber Security of Internet Connected ICS/SCADA Devices and Services**
ERKEK İ., IRMAK E.
International Conference on Information Security and Cryptology (ISCTURKEY), Ankara, Turkey, 02 December 2021, vol.2021, pp.75-80

27. **Design of an Energy Management System for AC/DC Microgrid**
Calpbinici A., Irmak E., Kabalcı E., Bayındır R.
3rd Global Power, Energy and Communication Conference (GPECOM), Nevşehir, Turkey, 5 - 08 October 2021, pp.1-5

28. **Distributed Hierarchical Control for Proportional Current Sharing in PV Systems**
Calpbinici A., Irmak E., Kabalci E.
2nd IEEE Global Power, Energy and Communication Conference, GPECOM 2020, Virtual, Izmir, Turkey, 20 - 23 October 2020, pp.108-113

29. **Optimization of PID Parameters Using Ant Colony Algorithm for Position Control of DC Motor**
Şimşek E. C., Köse A., Şahin M., Irmak E.
8th International Conference on Renewable Energy Research and Applications, Brasov, Romania, 3 - 06 November 2019

30. **A Modified Droop Control Method for PV Systems in Island Mode DC Microgrid**
Irmak E., Güler N., Kabalcı E., Calpbinici A.
8th International Conference on Renewable Energy Research and Applications, Brasov, Romania, 3 - 06 November 2019, pp.1008-1013

31. **MPPT Based Model Predictive Control of Grid Connected Inverter for PV Systems**
GÜLER N., IRMAK E.
8th International Conference on Renewable Energy Research and Applications, 3 - 06 November 2019

32. **Software and Hardware Implementation of a Graphical User Interface for Solar Power Plants**
IRMAK E., ERSAN M., GÜNEY O.
IEEE Global Power, Energy and Communication Conference, 12 - 15 June 2019

33. **Effects of Change in Wind Energy Generation on the Power Grid Angle**
YEŞİL M., KÖSE A., IRMAK E.
IEEE Global Power, Energy and Communication Conference, Nevşehir, Turkey, 12 - 15 June 2019

34. **A NEW APPROACH FOR ELECTRICITY ENERGY GENERATION FROM WASTE HEAT ENERGY: BATTERY CHARGER WITH THERMOELECTRIC GENERATOR**
IRMAK E., KÖSE A., TEKINCAN E. B.
6th European Conference on Renewable Energy Systems (ECRES 2018), İstanbul, Turkey, 25 - 27 June 2018

35. **Usage of the Nodal Pricing Technique in Electricity Market**
Irmak E., Calpbinici A.
6th European Conference on Renewable Energy Systems (ECRES'2018), İstanbul, Turkey, 25 - 27 June 2018, pp.1-5

36. **Application of MPPT Controlled Boost Converter for Photovoltaic Systems**
Irmak E., Güler N., Yavuz A.
6th European Conference on Renewable Energy Systems (ECRES'2018), İstanbul, Turkey, 25 - 27 June 2018, pp.6-11

37. **Design and Technical Analysis of a Two-Terminal Voltage Source Converter based HVDC System**
IRMAK E., Yeşil M.
6th European Conference on Renewable Energy Systems (ECRES'xx2018), 25 - 27 June 2018

38. **Design of A Load Sharing Method for Unbalanced Power Systems**
IRMAK E., TEKE H.
7th International Conference on Advanced Technologies~ICAT'xx18, 28 April - 01 May 2018

39. **Model Predictive Control of Grid-Tied Three Level Neutral Point Clamped Inverter Integrated with A Double Layer Multi-Input Single Output DC/DC Converter**
IRMAK E., GÜLER N.
12th IEEE International Conference on Compatibility, Power Electronics and Power Engineering (CPE-POWERENG), Doha, Qatar, 10 - 12 April 2018

40. **An Overview of Cyber-Attack Vectors on SCADA Systems**
IRMAK E., Erkek I.
6th International Symposium on Digital Forensic and Security (ISDFS), Antalya, Turkey, 22 - 25 March 2018, pp.350-354

41. **Application of A Boost Based Multi-Input Single-Output DC/DC Converter**
IRMAK E., GÜLER N.
th International Conference on Renewable Energy Research and Applications~ICRERA'xx2017, 5 - 08 November 2017

42. **Güneş Enerji Santralleri için Bir Dizi Evirici ve Enerji İzleme Sistemi Tasarımı**
IRMAK E., GÜLER N., ERSAN M.
9. Otomatik Kontrol Ulusal Toplantısı~TOK'2017, Turkey, 21 - 23 September 2017

43. **A Smart Home Application Based on Wireless Sensor Networks**
IRMAK E., GÖÇMEN G., KÖSE A.
V. European Conference on Renewable Energy Systems (ECRES'xx2017), 27 - 30 August 2017

44. **A Hybrid Trust Based Intrusion Detection System for Wireless Sensor Networks**
Ozcelik M. M., IRMAK E., Ozdemir S.
International Symposium on Networks, Computers and Communications (ISNCC), Marrakech, Morocco, 16 - 18 May 2017

45. **PI Controlled Solar Energy Supported Static Excitation System for Synchronous Generators**
IRMAK E., GÜLER N., ERSAN M.
5th International Conference on Renewable Energy Research and Applications, 20 - 23 November 2016

46. **Adding New Parameters to Attacker Profile by Using Multi Attribute Utility Theory and Probability Analysis of the Success of Cyber Attack**
IRMAK E., ERKEK İ.
9th International Conference on Information Security and Cryptology, 25 - 26 October 2016

47. **Design and Simulation of a New Inverter for an Axial Flux Permanent Magnet Generator**
Güler N., Irmak E., Gör H., Kurt E.
4th European Conference on Renewable Energy Systems, İstanbul, Turkey, 28 - 31 August 2016

48. **Cyber security in Critical Infrastructure**
IRMAK E.
International Cyber Security Workshop and Certificate Program, 23 - 27 May 2016

49. **Effects of Renewable Energy Sources on the Power System**
BAYINDIR R., DEMİRBAŞ Ş., IRMAK E., Cetinkaya U., Ova A., Yesil M.
17th IEEE International Power Electronics and Motion Control Conference (PEMC), Varna, Bulgaria, 25 - 30 September 2016, pp.388-393

50. **Simulation and ZigBee Based Wireless Monitoring of the Amount of Consumed Energy at Smart Homes**
Irmak E., Köse A., Gocmen G.
5th IEEE International Conference on Renewable Energy Research and Applications (ICRERA), Birmingham, United Kingdom, 20 - 23 November 2016, pp.1019-1023

51. **DESIGN AND APPLICATION OF A NOVEL SINGLE INPUT - MULTI OUTPUT DC/DC CONVERTER**
    GÜLER N., IRMAK E.
    5th IEEE International Conference on Renewable Energy Research and Applications (ICRERA), Birmingham, United Kingdom, 20 - 23 November 2016, pp.1039-1045

52. **PI CONTROLLED SOLAR ENERGY SUPPORTED STATIC EXCITATION SYSTEM DESING AND SIMULATION FOR SYNCHRONOUS GENERATORS**
    IRMAK E., GÜLER N., Ersan M.
    5th IEEE International Conference on Renewable Energy Research and Applications (ICRERA), Birmingham, United Kingdom, 20 - 23 November 2016, pp.1024-1028

53. **Modeling and Simulation of a Static VAR Compensator based on FC-TCR**
    KÖSE A., IRMAK E.
    5th IEEE International Conference on Renewable Energy Research and Applications (ICRERA), Birmingham, United Kingdom, 20 - 23 November 2016, pp.924-927

54. **Consept of 4th Dimension for Databases**
    IRMAK E., KURTULDU Ö.
    14th International Conference on Machine Learning and Applications, Miami, United States Of America, 9 - 11 December 2015

55. **Design of a Computer Controlled Speed Control System for Wound Rotor Induction Machines**
    IRMAK E., ÇOLAK İ., GÜLER N., Emre H., Kilisli H.
    37th Int. Telecommunications Energy Conference~INTELEC'xx2015, 18 - 22 October 2015

56. **Design Of A Computer Controlled Speed Control System for Wound-Rotor Inducion Machines**
    IRMAK E., Colak I., GÜLER N., Hazer E., Kilisli H.
    IEEE International Telecommunications Energy Conference (INTELEC), Namba, PEOPLES R CHINA, 18 - 22 October 2015

57. **Concept of 4th Dimension for Databases**
    IRMAK E., Kurtuldu O.
    IEEE 14th International Conference on Machine Learning and Applications ICMLA, Florida, United States Of America, 9 - 11 December 2015, pp.1159-1162

58. **Short-Circuit Fault Analysis on Microgrid**
    BAYINDIR R., IRMAK E., ISSI F., GÜLER N.
    4th International Conference on Renewable Energy Research and Applications (ICRERA), Palermo, Italy, 22 - 25 November 2015, pp.1248-1252

59. **A Survey on Public Awareness Towards Renewable Energy in Turkey**
    IRMAK E., AYAZ M. S., Gok S. G., Sahin A. B.
    3rd THE INTERNATIONAL CONFERENCE on RENEWABLE ENERGY RESEARCH and APPLICATIONS (ICRERA), Wisconsin, United States Of America, 19 - 22 October 2014, pp.932-937

60. **A Web Based Real Time Industrial Energy Monitoring System**
    Irmak E., Bülbül H. İ., Köse A., Calpbinici A.
    Fourth International Conference on Power Engineering, Energy and Electrical Drives (POWERENG), İstanbul, Turkey, 13 - 17 May 2013, pp.1713-1716

61. **The Estimation of Students' Academic Success by Data Mining Methods**
    Goker H., Bülbül H. İ., Irmak E.
    12th International Conference on Machine Learning and Applications (ICMLA), Florida, United States Of America, 4 - 07 December 2013, pp.535-539

62. **Monitoring the quality of electrical energy and improving it using thyristor controlled reactor**
    IRMAK E., Colak I., Sagiroglu Ş., KÖSE A., Kabalci E.
    1st International Conference on Renewable Energy Research and Applications, ICRERA 2012, Nagasaki, Japan, 11 - 14 November 2012

63. **Güneş Enerjisiyle Led li Aydınlatma Sistemi ve Operatör Panel Üzerinden İzleme ve Kontrol Uygulaması**
    IRMAK E., KÖSE A.

Ulusal Meslek Yüksekokulları Çalıştayı ve Öğrenci Sempozyumu, Nevşehir, Turkey, 13 - 15 June 2012, pp.34-41

64. **Kablo Ucu Belirleme ve Arıza Tespit Sistemi**
Irmak E., Ersan M.
1. Ulusal Meslek Yüksekokulları Çalıştayı ve Öğrenci Sempozyumu~UMÇÖS'2012, Nevşehir, Turkey, 13 - 15 June 2012, pp.1-5

65. **Yenilenebilir Enerji Kaynakları Üzerine Eğitim Amaçlı Bir Simulasyon Çalışması**
GÜLER N., Ersan M., IRMAK E.
1. Ulusal Meslek Yüksekokulları Çalıştayı ve Öğrenci Sempozyumu~UMÇÖS'xx2012, Turkey, 13 - 15 June 2012

66. **Remote Monitoring and Reporting the Parameters of A Hybrid Power System via Internet**
ÇOLAK İ., IRMAK E., GÜLER N., ISSI F.
EVER'12, 22 - 25 March 2012

67. **Implementation of an Interactive Remote Laboratory Platform for Stepper Motor Experiments**
Irmak E., Çolak İ., Kabalci E., Köse A.
15th International Power Electronics and Motion Control Conference and Exposition (EPE-PEMC ECCE Europe), Novi-Sad, Serbia, 4 - 06 September 2012

68. **FPGA Based Parallel Connection System of Separate Voltage Sources**
Irmak E., Colak I., Bulbul H. İ., Guler N., Calpbinici A.
1st International Conference on Renewable Energy Research and Applications (ICRERA), Nagasaki, Japan, 11 - 14 November 2012

69. **A comparative study of harmonic extraction methods for single phase shunt active power filter**
ÇOLAK İ., BAYINDIR R., IRMAK E., KAPLAN O.
2011 International Conference on Power Engineering, Energy and Electrical Drives, Malaga, Spain, 11 - 13 May 2011

70. **Design of a Parameter Determination System for Non-Isolated Converter Topologies**
Çolak İ., Irmak E., Yeşilbudak M., Kabalcı E.
International Aegean Conference on Electrical Machines and Power Electronics & Electromotion Joint Conference~ACEMP'2011, İstanbul, Turkey, 8 - 11 September 2011, pp.1-4

71. **Design and Application of a Novel Zero Crossing Detector Circuit**
IRMAK E., ÇOLAK İ., KAPLAN O., GÜLER N.
International Conference on Power Engineering, Energy and Electrical Drives~POWERENG2011, 11 - 13 May 2011

72. **Development of a Real Time Monitoring and Control System for PLC Based Elevator**
Irmak E., Colak I., Kaplan O., Köse A.
14th European Conference on Power Electronics and Applications (EPE)/ECCE Europe Conference on Power Electronics and Adjustable Speed Drives - Towards the 20-20-20 Target, Birmingham, United Kingdom, 30 August - 01 September 2011

73. **Design and Implementation of a Computer Interacted Smart Home System Based on PLC**
Irmak E., Kabalcı E., Köse A.
4th International Conference of Application of Information and Communication Technologies (AICT), Toskent, Uzbekistan, 12 - 14 October 2010, pp.1-5

74. **Rüzgâr Türbinleri İçin AA-DA Çevirici Tasarımı**
Kabalcı E., Irmak E., Çolak İ.
Nükleer ve Yenilenebilir Enerji Kaynakları Konferansı~NUYEK2009, Ankara, Turkey, 28 - 29 September 2009, pp.1-4

75. **Design of a 6-Pulse Multilevel SPWM Controlled Converter For Fixed Speed Wind Turbines**
Çolak İ., Kabalcı E., Irmak E., Bayındır R.
5th International Conference on Technical and Physical Problems of Power Engineering~TPE2009, Bilbao, Spain, 3 - 05 September 2009, pp.293-297

76. **Modeling of an SPWM Controlled AC-DC-AC Converter for Fixed Speed Wind Turbines**
Çolak İ., Kabalcı E., Irmak E., Bayındır R.
5th International Conference on Technical and Physical Problems of Power Engineering~TPE-2009, Bilbao, Spain, 3 - 05 September 2009, pp.288-293

77. **Usage of .NET Platform to Build up Interactive Simulations for Electrical Machines**
IRMAK E., BULUT H., SAĞIROĞLU Ş., Colak I.
35th Annual Conference of the IEEE-Industrial-Electronics-Society, Porto, Portugal, 3 - 05 November 2009, pp.115-118

78. **The Fuzzy Logic Control of a Multilevel Converter in a Variable Speed Wind Turbine**
BAYINDIR R., Colak I., KABALCI E., IRMAK E.
8th International Conference on Machine Learning and Applications, Florida, United States Of America, 13 - 15 December 2009, pp.787-788

79. **A New Tool for Four-Quadrant Drive System of DC Motor Based on Microcontroller**
Çolak İ., Bayındır R., Irmak E., Soysal M.
4rd International Conference on Technical and Physical Problems in Power Engineering~TPE2008, Pitesti, Romania, 4 - 06 September 2008, pp.216-219

80. **A Virtual Laboratory Platform Based on .NET Framework**
Çolak İ., Sağıroğlu Ş., Irmak E., Bulut H.
2nd International Future Learning Conference on Innovations in Learning for the Future 2008: e-learning, İstanbul, Turkey, 27 - 29 March 2008, pp.800-807

81. **Low-Cost and High Sensitive Microcontroller Based Data Acquisition System for Renewable Energy Sources**
DEMİRTAŞ M., SEFA İ., IRMAK E., Colak I.
International Symposium on Power Electronics, Electrical Drives, Automation and Motion, Ischia, Italy, 11 - 13 June 2008, pp.196-199

82. **A Web Based Real Time Speed Control Experiment on Ultrasonic Motor for Educational Purposes**
IRMAK E., BAYINDIR R., Colak I., SAĞIROĞLU Ş., BAL G.
International Symposium on Power Electronics, Electrical Drives, Automation and Motion, Ischia, Italy, 11 - 13 June 2008, pp.1451-1452

83. **A novel integrated web based learning system for electrical machines education**
Colak I., IRMAK E., DEMİRBAŞ Ş., Sagiroglu Ş.
International Conference on Power Engineering, Energy and Electrical Drives, POWERENG 2007, Setúbal, Portugal, 12 - 14 April 2007, pp.265-269

84. **Remote Control Of DC Motor Over the Internet**
ÇOLAK İ., DEMİRBAŞ Ş., IRMAK E., SEFA İ., BAYINDIR R.
3rd International Conference on Technical and Physical Problems in Power Engineering, Ankara, Turkey, 29 - 31 May 2006, pp.216-219

85. **Açık ve Kapalı Döngü Denetim Sistemlerinin Web Tabanlı Benzetimi**
ÇOLAK İ., IRMAK E., BAYINDIR R., DEMİRBAŞ Ş., SEFA İ.
6. International Educational Technology Conference, 19 - 21 April 2006

86. **Temel Elektrik Devrelerinin Analizi için İnternet Tabanlı Bir Eğitim Aracı**
ÇOLAK İ., IRMAK E., SEFA İ., DEMİRBAŞ Ş., BAYINDIR R.
6th International Educational Technology Conference, FAMAGUSTA, Cyprus (Kktc), 19 - 21 April 2006, pp.446-451

87. **Doğru Akım Motorlarının Web Tabanlı Modellenmesi ve Analizi**
DEMİRBAŞ Ş., IRMAK E., SEFA İ., BAYINDIR R., ÇOLAK İ.
Bilimde Modern Yöntemler Sempozyumu, Turkey, 16 - 18 November 2005

88. **Teknik Eğitimde İnternet Teknolojisinin Kullanımı**
ÇOLAK İ., DEMİRBAŞ Ş., IRMAK E., BAYINDIR R.
1. Uluslararası Mesleki ev Teknik Eğitim Teknolojileri Kongresi, 5 - 07 September 2005

Academic and Administrative Experience

2022 - Continues	Eğitim ve Müfredat Kurulu üyesi	Gazi University, Teknoloji Fakültesi, Elektrik - Elektronik Mühendisliği

2020 - Continues	**Uygulama ve Araştırma Merkezi Yönetim Kurulu Üyesi**	Gazi University, Araştırma ve Uygulama Merkezleri, Non-İyonizan Radyasyondan Korunma Merkezi Müdürlüğü (Gnrk)
2021 - 2023	**Head of ADEK Commission**	Gazi University, Teknoloji Fakültesi, Elektrik - Elektronik Mühendisliği
2020 - 2022	**Rektörlük Stratejik Plan Komisyonu Üyesi**	Gazi University, Teknoloji Fakültesi, Elektrik - Elektronik Mühendisliği
2020 - 2022	**Rektörlük Kalite Komisyonu Üyesi**	Gazi University, Teknoloji Fakültesi, Elektrik - Elektronik Mühendisliği
2020 - 2022	**Uygulama ve Araştırma Merkezi Yönetim Kurulu Üyesi**	Gazi University, Araştırma ve Uygulama Merkezleri, Kariyer Planlama Uygulama ve Araştırma Merkezi Müdürlüğü
2020 - 2022	**Director of Vocational School**	Gazi University, Teknik Bilimler Meslek Yüksekokulu
2018 - 2019	**Assistant Director of the Institute**	Gazi University, Fen Bilimleri Enstitüsü
2016 - 2016	**Assistant Director of the Institute**	Gazi University, Bilişim Enstitüsü
2011 - 2012	**Assistant Director of Vocational School**	Gazi University, Gazi Meslek Yüksekokulu
2009 - 2011	**Deputy Head of Department**	Gazi University, Teknik Eğitim Fakültesi, Elektrik Eğitimi Bölümü

Courses

İşyeri Eğitimi, Undergraduate, 2022 - 2023
Güç Sistem Analizi, Undergraduate, 2021 - 2022
Dönem Projesi (Hoca Ahmet Yesevi Üniversitesi), Postgraduate, 2022 - 2023
Enerji Dağıtımı (Gazi Üniversitesi), Undergraduate, 2022 - 2023
Kritik Altyapılar ve Güvenliği (Hoca Ahmet Yesevi Üniversitesi), Postgraduate, 2022 - 2023
Privacy and Security Applications in Smart Grids, Doctorate, 2022 - 2023
Akıllı Şebekelerde Siber Güvenlik, Doctorate, 2022 - 2023
Güç Sistemlerinin Modellenmesi ve Simülasyonu (Gazi Üniversitesi), Postgraduate, 2017 - 2018
Enerji Dağıtımı (TOBB ETÜ), Undergraduate, 2017 - 2018
Güç Sistemleri (Gazi Üniversitesi), Undergraduate, 2017 - 2018

Advising Theses

Irmak E., Elektrik Şebekelerinin Dijital İkiz Modellerinin Oluşturulması ve Bu Modeller Üzerinden Siber Güvenlik Testlerinin Gerçekleştirilmesi, Doctorate, İ.ERKEK(Student), Continues
Irmak E., Belirlenmedi (öğrenci ders aşamasında), Postgraduate, R.GÖK(Student), Continues
Irmak E., Kurumsal Yapılarda Windows Etki Alanına Yönelik Tehditler, Önlemler ve Ortam Güvenliği Olgunluk Seviyesinin Tespiti, Postgraduate, Z.Şentürk(Student), Continues
Irmak E., Belirlenmedi (öğrenci ders aşamasında), Doctorate, Z.Ebru(Student), Continues

Irmak E., Yenilenebilir Enerji Kaynakları Kullanılan Bir Mikro Şebekenin Tasarımı ve Hiyerarşik Enerji Yönetim Sistemi ile Kontrolü, Doctorate, A.CALPBİNİCİ(Student), Continues

Irmak E., Hidroelektrik Santrallerde Enerji Yönetimi ve Optimizasyonu, Doctorate, M.ERSAN(Student), Continues

Irmak E., A Novel Power Estimation Study for Photovoltaic Energy Systems, Doctorate, O.Taşdemir(Student), Continues

Irmak E., Türkiye Elektrik Şebekesi İçin Bir Otomatik Üretim Kontrol Modelinin Geliştirilmesi ve Rüzgar Santrallerinin Bu Modele Etkilerinin İncelenmesi, Doctorate, M.YEŞİL(Student), Continues

Irmak E., Optimization of power sharing in grid-connected microgrids byartificial intelligence methods, Postgraduate, İ.Fatımanur(Student), 2023

Irmak E., Desıgn And Implementatıon Of A Novel Dc/Dc Converter Usıng Model Predıctıve Control Method For Dıstrıbuted Generatıon Sources, Doctorate, N.Güler(Student), 2019

IRMAK E., Integratıon Of A Vsc-Based Hvdc Lıne To Turkısh Electrıcıty Transmıssıon Network And System Stabılıty Analysıs, Postgraduate, M.Yeşil(Student), 2018

IRMAK E., A Novel Approach For Cyber Securıty Of Modbus Based Scada Systems, Postgraduate, İ.ERKEK(Student), 2018

IRMAK E., Desıgn And Implementatıon Of Statıc Excıtatıon System For Synchronous Generator Used In Hydroelectrıc Power Plants, Postgraduate, M.Ersan(Student), 2017

IRMAK E., Investigation of wireless sensor networks from cyber security perspective and proposing a novel intrusion detection system, Postgraduate, M.MELİH(Student), 2017

IRMAK E., Design of an E-laboratory allowing simultaneous access to electrical machines experimental sets, Postgraduate, A.CALPBİNİCİ(Student), 2014

IRMAK E., Parallel connection of synchronous generators using dsPIC and achieving the load-sharing control over an interface, Postgraduate, N.GÜLER(Student), 2012

Activities in Scientific Journals

Electric Power Components And Systems, Editor, 2022 - Continues
Gazi University Journal of Science Part A: Engineering and Innovation, Editor, 2019 - Continues
International Journal of Renewable Energy Research (IJRER), Editor, 2017 - Continues
Gazi University Journal of Science, Editor, 2017 - Continues
Uluslararası Bilgi Güvenliği Mühendisliği Dergisi, Editor, 2015 - Continues
TÜBAV Bilim Dergisi, Publication Committee Member, 2009 - Continues
Gazi Üniversitesi Fen Bilimleri Dergisi Part C: Tasarım ve Teknoloji, Editor, 2018 - 2022

Memberships / Tasks in Scientific Organizations

Senior Member, IEEE, Member, 2010 - Continues, United States Of America

Tasks In Event Organizations

Irmak E., IEEE 6th Global Power, Energy and Communication Conference Puan, Scientific Congress, Budapest, Hungary, Haziran 2024

Irmak E., IEEE 12th International Conference on Smart Grid, Scientific Congress, Setúbal, Portugal, Mayıs 2024

Irmak E., 11th International Conference on Smart Grid, Scientific Congress, Paris, France, Haziran 2023

Demirci M., Irmak E., 15th International Information Security and Cryptology Conference, Scientific Congress, Ankara, Turkey, Ekim 2022

Irmak E., 11th International Conference on Renewable Energy Research and Applications, Scientific Congress, İstanbul, Turkey, Eylül 2022

Irmak E., 10th International Conference on Smart Grid, Scientific Congress, İstanbul, Turkey, Haziran 2022

Irmak E., 4th Global Power, Energy and Communication Conference, Scientific Congress, Nevşehir, Turkey, Haziran 2022

Irmak E., Kondolot Solak E., Özer A., Özbaş M., Şentürk Z., Kutbay N. H., Kaya L., YİYİT DOĞAN S., Sanayide Eğitim İhtiyacının Değerlendirilmesi Çalıştayı, Workshop Organization, Ankara, Turkey, Mart 2022

Demirci M., Irmak E., 14th International Information Security and Cryptology Conference, Scientific Congress, Ankara, Turkey, Aralık 2021

Kondolot Solak E., Irmak E., 6. International Congress of Academic Research, Scientific Congress, Turkey, Ağustos 2021

Irmak E., Batman Enerji Zirvesi, Workshop Organization, Batman, Turkey, Mayıs 2021

Irmak E., 18th IEEE International Conference on Machine Learning and Applications - ICMLA 2019, Scientific Congress, Florida, United States Of America, Aralık 2019

Irmak E., 17th IEEE International Conference on Machine Learning and Applications, Scientific Congress, Florida, United States Of America, Aralık 2018

Irmak E., Elektrik Elektronik Mühendisliği Kongresi, Scientific Congress, İstanbul, Turkey, Kasım 2017

Mobility Activity

Other Exchange Programme, Faculty Exchange, Hoca Ahmet Yesevi Türk Kazak Üniversitesi, Kazakhstan, 2023 - 2023
Bilateral Colloboration Agreement, Language Course, Georgia State University, United States Of America, 2011 - 2011

Metrics

Publication: 142
Citation (WoS): 562
Citation (Scopus): 855
H-Index (WoS): 15
H-Index (Scopus): 17

Congress and Symposium Activities

EMO Ankara Şubesi Lisanssız Güneş Enerji Santralleri Ulusal Çalıştayı, Invited Speaker, Ankara, Turkey, 2022
10th International Conference on Smart Grid, Invited Speaker, İstanbul, Turkey, 2022
Akıllı Şebekeler Ulusal Çalıştayı, Invited Speaker, Ankara, Turkey, 2022
Batman Enerji Zirvesi, Invited Speaker, Batman, Turkey, 2021
Uluslararası Türk Enerji Birliği Kongresi, Invited Speaker, Ankara, Turkey, 2021
Eğitim ve Süreçler Bağlamında Meslek Yüksekokullarının Bugünü ve Geleceği Çalıştayı, Invited Speaker, Yozgat, Turkey, 2021
IEEE Türkiye GP Power&Energy (PES) Sempozyumu, Invited Speaker, Ankara, Turkey, 2020
Nişantaşı Üniversitesi Teknoloji ve Etik Çalıştayı, Invited Speaker, İstanbul, Turkey, 2017

Invited Talks

Elektrik Şebekelerinde Sistem Çökmesi ve Yeniden Toparlanma: Türkiye Örneği, Seminar, Hoca Ahmet Yesevi Üniversitesi, Turkey, February 2017
Cyber Security in Critical Infrastructure, Workshop, İstanbul Gelişim Üniversitesi, Turkey, May 2016

Research Areas

Information System Reliability, Energy, Direct Energy Conversion and Energy Storage, Power System Analysis, Generating Stations and Plants, Electric Power Transmission, Distribution and Protection, Protection Systems, Renewable

energy, High Voltage Technique, Power Apparatus (transformers,reactors,switchgear,etc.), Power Quality

Non Academic Experience

University, Hoca Ahmet Yesevi Uluslararası Türk-Kazak Üniversitesi, Elektrik Elektronik Mühendisliği
Hoca Ahmet Yesevi Ünviersitesi (Kazakistan)
Georgia State University
University, Georgia State University, The Middle East Institute