

Prof.Dr. Belgin Türkay

Kişisel Bilgiler

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Yoksis Araştırmacı ID: 4696

Eğitim Bilgileri

Doktora, İstanbul Teknik Üniversitesi, Elektrik-Elektronik Fakültesi, Elektrik Mühendisliği Bölümü, Türkiye 1986 - 1993

Yabancı Diller

İngilizce, B2 Orta Üstü

Yaptığı Tezler

Yüksek Lisans, DC iletimde maliyet, İstanbul Teknik Üniversitesi, Elektrik Mühendisliği, Elektrik Mühendisliği Anabilimdalı, 1985

Araştırma Alanları

Teknik Bilimler, Elektrik-Elektronik Mühendisliği, Enerji, Enerji Üretim İstasyonları ve Tesisleri , Enerji İletimi ve Dağıtımı , Yenilenebilir Enerji

Akademik Unvanlar / Görevler

Prof.Dr., İstanbul Teknik Üniversitesi, Elektrik-Elektronik Fakültesi, Elektrik Mühendisliği Bölümü, 2011 - Devam Ediyor

Prof.Dr., İstanbul Teknik Üniversitesi, Elektrik-Elektronik Fakültesi, Elektrik Mühendisliği Bölümü, 2011 - Devam Ediyor

Prof.Dr., İstanbul Teknik Üniversitesi, Elektrik-Elektronik Fakültesi, Elektrik Mühendisliği Bölümü, 2011 - Devam Ediyor

Doç.Dr., İstanbul Teknik Üniversitesi, Elektrik-Elektronik Fakültesi, Elektrik Mühendisliği Bölümü, 1997 - Devam Ediyor

Akademik İdari Deneyim

İstanbul Teknik Üniversitesi, Elektrik-Elektronik Fakültesi, Elektrik Mühendisliği Bölümü, 2014 - Devam Ediyor

İstanbul Teknik Üniversitesi, Elektrik-Elektronik Fakültesi, Elektrik Mühendisliği Bölümü, 2014 - 2017

İstanbul Teknik Üniversitesi, Elektrik-Elektronik Fakültesi, 2001 - 2004

İstanbul Teknik Üniversitesi, Elektrik-Elektronik Fakültesi, 2001 - 2004

İstanbul Teknik Üniversitesi, Elektrik-Elektronik Fakültesi, Elektrik Mühendisliği Bölümü, 2000 - 2001

İstanbul Teknik Üniversitesi, Elektrik-Elektronik Fakültesi, Elektrik Mühendisliği Bölümü, 1998 - 2000

İstanbul Teknik Üniversitesi, Elektrik-Elektronik Fakültesi, Elektrik Mühendisliği Bölümü, 1997 - 1998

SCI, SSCI ve AHCI İndekslerine Giren Dergilerde Yayınlanan Makaleler

- I. **A robust crow search algorithm based power system state estimation**
Andiç C., Ozturk A., Turkey B.
Energy Reports, cilt.9, ss.490-501, 2023 (SCI-Expanded)
- II. **Power system state estimation using a robust crow search algorithm based on PMUs with limited number of channels**
Andiç C., Ozturk A., Turkey B.
Electric Power Systems Research, cilt.217, 2023 (SCI-Expanded)
- III. **Optimizing Security Systems with an Optimum Design of a Hybrid Renewable Energy System**
Kiyak M. H., Pürlü M., Emre Turkey B., Akıncı T. Ç.
Electric Power Components and Systems, 2023 (SCI-Expanded)
- IV. **Techno-Economic Comparative Analysis of Grid-connected and Islanded Hybrid Renewable Energy Systems in 7 Climate Regions, Turkey**
Ayan O., Turkey B.
IEEE Access, cilt.11, ss.48797-48825, 2023 (SCI-Expanded)
- V. **Tap Staggering Analysis and Effects on the Adaptive Protection System in Networks With Renewable Energy Sources**
Kasap H., Pürlü M., Turkey B., Ganjavi R.
IEEE Access, cilt.11, ss.138623-138637, 2023 (SCI-Expanded)
- VI. **A comparative study on harmonic analysis and thermal performance of different types of lamps for residential building**
Ayan O., Turkey B.
ENERGY REPORTS, cilt.8, ss.932-945, 2022 (SCI-Expanded)
- VII. **Distribution network reconfiguration using time-varying acceleration coefficient assisted binary particle swarm optimization**
Hizarci H., Demirel O., Turkey B.
ENGINEERING SCIENCE AND TECHNOLOGY-AN INTERNATIONAL JOURNAL-JESTECH, cilt.35, 2022 (SCI-Expanded)
- VIII. **Optimal Allocation of Renewable Distributed Generations Using Heuristic Methods to Minimize Annual Energy Losses and Voltage Deviation Index**
Pürlü M., Turkey B.
IEEE Access, cilt.10, ss.21455-21474, 2022 (SCI-Expanded)
- IX. **Estimating the Distributed Generation Unit Sizing and Its Effects on the Distribution System by Using Machine Learning Methods**
Pürlü M., Turkey B.
ELEKTRONIKA IR ELEKTROTEHNIKA, cilt.27, sa.4, ss.24-32, 2021 (SCI-Expanded)
- X. **Wavelet Entropy and its Application for Flicker Contribution Evaluation**
SİLSÜPÜR M., Turkey B.
IEEJ TRANSACTIONS ON ELECTRICAL AND ELECTRONIC ENGINEERING, cilt.14, sa.1, ss.67-74, 2019 (SCI-Expanded)
- XI. **Determination of Flicker Contribution Level by Using Proposed Index**
SİLSÜPÜR M., Turkey B. E.
ELEKTRONIKA IR ELEKTROTEHNIKA, cilt.24, sa.2, ss.18-26, 2018 (SCI-Expanded)
- XII. **A New Approach for Flicker Analysis Using Information-Theory-Based Wavelet Energy Entropy**

Silsupur M., Türkyay B.

IEEE TRANSACTIONS ON ELECTRICAL AND ELECTRONIC ENGINEERING, cilt.12, sa.6, ss.961-962, 2017 (SCI-Expanded)

XIII. The prediction and penetration of wind energy with storage system analysis

AKYÜREK B., Turkey B.

ENERGY SOURCES PART B-ECONOMICS PLANNING AND POLICY, cilt.12, sa.3, ss.211-215, 2017 (SCI-Expanded)

XIV. Economic analysis of standalone and grid connected hybrid energy systems

Turkey B., TELLİ A. Y.

RENEWABLE ENERGY, cilt.36, sa.7, ss.1931-1943, 2011 (SCI-Expanded)

XV. A novel differential evolution application to short-term electrical power generation scheduling

Uyar A. Ş., Turkey B., KELES A.

INTERNATIONAL JOURNAL OF ELECTRICAL POWER & ENERGY SYSTEMS, cilt.33, sa.6, ss.1236-1242, 2011 (SCI-Expanded)

XVI. Electrical Load Forecasting Using Support Vector Machines a Case Study

Dilara D., Turkey B.

International Review of Electrical Engineering-IREE, cilt.6, sa.5, ss.2411-2418, 2011 (SCI-Expanded)

XVII. An Economic Analysis of Grid-connected Hybrid Energy Systems

Türkyay B., TELLİ A. Y.

ENERGY SOURCES PART B-ECONOMICS PLANNING AND POLICY, cilt.6, sa.3, ss.228-241, 2011 (SCI-Expanded)

XVIII. Application of a Fast Evolutionary Algorithm to Short-term Hydro-thermal Generation Scheduling

Türkyay B., MECİTOĞLU F., Baran Ş.

ENERGY SOURCES PART B-ECONOMICS PLANNING AND POLICY, cilt.6, sa.4, ss.395-405, 2011 (SCI-Expanded)

XIX. Evolutionary Algorithms for the Unit Commitment Problem

Türkyay B., UYAR A. Ş.

Turkish Journal of Electrical Engineering and Computer Sciences, cilt.16, sa.3, ss.239-255, 2008 (SCI-Expanded)

XX. Optimal Distribution Network Design Using Genetic Algorithms

Türkyay B., Taylan A.

Electric Power and Component Systems, cilt.33, sa.5, ss.513-524, 2005 (SCI-Expanded)

Diğer Dergilerde Yayınlanan Makaleler

I. Power quality comparison of single-phase and three-phase inverter topologies for renewable energy systems

TÜRKAY B., Saçlı M., AYAN O., Silsüpür M.

International Journal of Smart Grid and Clean Energy, cilt.1, sa.1, ss.174-183, 2019 (Hakemli Dergi)

II. Flicker Source Detection Methods Based on IEC 61000 4 15 and Signal Processing Techniques A Review

TÜRKAY B., SİLSÜPÜR M.

Balkan Journal of Electrical and Computer Engineering, cilt.3, ss.93-97, 2015 (Hakemli Dergi)

Hakemli Kongre / Sempozyum Bildiri Kitaplarında Yer Alan Yayınlar

I. False Data Injection Attacks on CSA-Based State Estimation in Smart Grid

ANDIÇ C., ÖZTÜRK A., TÜRKAY B.

IEEE Global Energy Conference (GEC2022), Türkiye, 26 Ekim 2022, cilt.1, ss.253-257

II. The Application of HBA Technique to Economic Dispatch: A Case Study From Turkey

ANDIÇ C., AYDIN E., ÖZTÜRK A., TÜRKAY B.

IEEE Global Energy Conference (GEC2022), Türkiye, 26 Ekim 2022, cilt.1, ss.258-261

III. Short Term Load Forecasting Using Machine Learning Algorithms: A Case Study in Turkey

- PÜRLÜ M., ANDIÇ C., TÜRKAY B., Nobari A.
IEEE Global Energy Conference (GEC2022), Türkiye, 26 Ekim 2022, cilt.1, ss.13-18
- IV. **"False Data Injection Attacks on CSA-Based State Estimation in Smart Grid**
ANDIÇ C., ÖZTÜRK A., TÜRKAY B.
IEEE Global Energy Conference (GEC2022), Batman, Türkiye, 26 - 29 Ekim 2022, cilt.1, ss.253-257
- V. **"Short-Term Load Forecasting Using Machine Learning Algorithms: A Case Study in Turkey**
Nobari A., PÜRLÜ M., ANDIÇ C., TÜRKAY B., Nobari A.
IEEE Global Energy Conference (GEC2022), Batman, Türkiye, 26 - 29 Ekim 2022, cilt.1, ss.13-18
- VI. **The Application of HBA Technique to Economic Dispatch: A Case Study From Turkey**
ANDIÇ C., Aydın E., ÖZTÜRK A., TÜRKAY B.
IEEE Global Energy Conference (GEC2022, Batman, Türkiye, 26 - 29 Ekim 2022, cilt.1, ss.258-259
- VII. **Optimum Energy Management in Electric Vehicle Parking Lots Using Heuristic Methods**
CANOL B., ANDIÇ C., PÜRLÜ M., TÜRKAY B.
2022 IEEE 4th Global Power, Energy and Communication Conference (GPECOM), Türkiye, 14 - 17 Haziran 2022, ss.473-477
- VIII. **Market-Clearing Price Forecasting Using Keras in Turkish Day-Ahead Electricity Market**
PÜRLÜ M., TÜRKAY B., ANDIÇ C., AYDIN E., CANOL B., KÜÇÜKASLAN B.
2022 IEEE 4th Global Power, Energy and Communication Conference (GPECOM), Türkiye, 14 - 17 Haziran 2022, ss.517-522
- IX. **Rotor Angle Stability Analysis by Using Lyapunov's Direct Method of a SMIB Power System**
ANDIÇ C., ÖZTÜRK A., TÜRKAY B.
2022 IEEE 4th Global Power, Energy and Communication Conference (GPECOM), Türkiye, 14 - 17 Haziran 2022, ss.296-300
- X. **Honey Badger Algorithm Based Tuning of PID Controller for Load Frequency Control in Two-Area Power System Including Electric Vehicle Battery**
ANDIÇ C., Özümcan S., ÖZTÜRK A., TÜRKAY B.
2022 IEEE 4th Global Power, Energy and Communication Conference (GPECOM), Türkiye, 14 - 17 Haziran 2022, ss.307-310
- XI. **Economic Dispatch of Multi-Microgrid Systems by Using Particle Swarm Optimization**
Aydın E., Pürlü M., Türkay B.
13th International Conference on Electrical and Electronics Engineering, ELECO 2021, Virtual, Bursa, Türkiye, 25 - 27 Kasım 2021, ss.268-272
- XII. **Optimal Design of Hybrid Grid-connected Microgrid with Renewable Energy and Storage in a Rural Area in Turkey by Using HOMER**
Pürlü M., Beyarslan S., Türkay B.
13th International Conference on Electrical and Electronics Engineering, ELECO 2021, Virtual, Bursa, Türkiye, 25 - 27 Kasım 2021, ss.263-267
- XIII. **Effects of Electric Vehicles on Distribution Network, Cost Analysis and Optimization with Genetic Algorithm**
ÇİFTÇİ H., TÜRKAY B.
ELECO, Bursa, Türkiye, 28 - 30 Kasım 2019
- XIV. **Short Circuit Analysis in Grid Connected with High Penetration of PV Systems**
Mustafaoglu S., ÇİFTÇİ H., TÜRKAY B.
ELECO, Bursa, Türkiye, 28 - 30 Kasım 2019
- XV. **Energy Quality Analysis Of Grid-Connected Solar Inverter Topologies**
Özli Ş., ÇİFTÇİ H., AYAN O., TÜRKAY B.
ELECO, Türkiye, 28 - 30 Kasım 2019
- XVI. **Elektrikli Araçların Dağıtım Şebekesine Etkisinin Maliyet Analizi ve Genetik Algoritma ile Optimizasyonu**
Çiftçi H., Yıldız B., Türkay B., Ayan O.
CIGRE Türkiye Güç Sistemleri Konferansı, Ankara, Türkiye, 14 - 15 Kasım 2018, ss.1-6

- XVII. Dynamic Economic Dispatch with Valve Point Effect by Using GA**
TÜRKAY B., PÜRLÜ M.
CEIT 2018(6th International Conference on Control Engineering Inform, İstanbul, Türkiye, 25 - 27 Ekim 2018
- XVIII. Improvement Of Home Energy Awareness Through The Designed Graphical User Interface**
TÜRKAY B., AYAN O.
CEIT 2018 (6th International Conference on Control Engineering Infor, İstanbul, Türkiye, 25 - 27 Ekim 2018
- XIX. Accommodating Photovoltaics Integration Impacts on Distribution Network Protection System using Distance Relay**
ABED HEDAYA A. S., Turkey B.
2nd International Symposium on Multidisciplinary Studies and Innovative Technologies, ISMSIT 2018, Kizilcahamam, Ankara, Türkiye, 19 - 21 Ekim 2018
- XX. Harmonic effects of Electric Vehicles on Low Voltage Distribution Ttransformers and Power Grid**
TÜRKAY B., AYAN O., CAN B., SİLSÜPÜR M.
2nd International Symposium on Multidisciplinary Innovative, Ankara, Türkiye, 19 - 01 Ekim 2018
- XXI. An examination of the effects of distributed generation on distribution systems by load flow analysis**
TÜRKAY B., AYAN O., JAFARZADEH N.
20th International Symposium on Electrical Apparatus and Technologies, SIELA 2018, Burgas, Bulgaristan, 3 - 06 Temmuz 2018
- XXII. Energy management algorithm for peak demand reduction**
TÜRKAY B., AYAN O.
2018 20th International Symposium on Electrical Apparatus and Technologies, SIELA 2018, Burgas, Bulgaristan, 3 - 06 Temmuz 2018
- XXIII. Domestic electrical load management in smart grids and classification of residential loads**
TÜRKAY B., AYAN O.
5th International Conference on Electrical and Electronics Engineering, ICEEE 2018, İstanbul, Türkiye, 3 - 05 Mayıs 2018
- XXIV. Optimal capacitor placement in radial distribution system using genetic algorithm method**
Delkhooni M., Ayan O., Pürlü M., Türkay B.
10th International Conference on Electrical and Electronics Engineering, ELECO 2017, Bursa, Türkiye, 29 Kasım - 02 Aralık 2017, cilt.2018-January, ss.1491-1495
- XXV. Harmonic Effects of Electric Vehicles on Low Voltage Distribution Transformers and Power Grid**
Can B., Ayan O., Silsupur M., Türkay B.
2nd International Symposium on Multidisciplinary Studies and Innovative Technologies (ISMSIT), Kizilcahamam, Türkiye, 19 - 21 Ekim 2018, ss.232-237
- XXVI. Smart Thermostats for Home Automation Systems and Energy Savings from Smart Thermostats**
Ayan O., Türkay B.
6th International Conference on Control Engineering and Information Technology (CEIT), İstanbul, Türkiye, 25 - 27 Ekim 2018
- XXVII. Dynamic Economic Dispatch with Valve Point Effect by Using GA and PSO Algorithm**
Pürlü M., Türkay B.
6th International Conference on Control Engineering and Information Technology (CEIT), İstanbul, Türkiye, 25 - 27 Ekim 2018
- XXVIII. Optimal Capacitor Placement in Radial Distribution System Using Genetic Algorithm Method**
DELKHOONİ M., AYAN O., Purlu M., TÜRKAY B.
EMO, Bursa, Türkiye, 30 Kasım - 02 Aralık 2017, cilt.1, ss.1491-1495
- XXIX. Investigation of Power Quality Analysis of Three-Phase Inverter Topologies for Renewable Energy Systems**
SAÇLI M., AYAN O., SİLSÜPÜR M., TÜRKAY B.
Bursa akademik Odalar birliği, Bursa, Türkiye, 30 Kasım - 02 Aralık 2017, cilt.1, ss.1145-1449
- XXX. Smart Home Energy Management Technologies Based on Demand Side Management and A Review of**

Smart Plugs with Smart Thermostats

AYAN O., TÜRKAY B.

EMO, Bursa, Türkiye, 30 Kasım - 02 Aralık 2017, cilt.1, ss.1247-1252

XXXI. Remote Controlled Load Shifting and Effects of ToU on end-Users

AYAN O., TÜRKAY B.

4th international conference on computational and experimental science and engineering (iccesen), Antalya, Türkiye, 4 - 08 Ekim 2017, cilt.1, ss.219

XXXII. Residential Load Management through Smart Plugs in Smart Grids

AYAN O., SAÇLI M., TÜRKAY B.

International Conference on Condition Monitoring, Diagnosis and Maintenance, Bucharest, Romanya, 25 - 27 Eylül 2017, cilt.1, ss.78-87

XXXIII. Investigation of Power Quality Analysis of Single-Phase Inverter Topologies for Solar Energy Systems

SAÇLI M., AYAN O., SİLSÜPÜR M., TÜRKAY B.

Investigation of Power Quality Analysis of Single-Phase Inverter Topologies for Solar Energy Systems, Bucharest, Romanya, 25 - 27 Eylül 2017, cilt.1, ss.88-96

XXXIV. Impact of Distributed Generation on Radial Distribution Network with Various Load Models

Hizarci H., Türkay B.

52nd International Universities Power Engineering Conference (UPEC), Heraklion, Yunanistan, 28 - 31 Ağustos 2017

XXXV. Economic and environmental load dispatch using genetic algorithm

AYAN O., SEVİL M., TÜRKAY B.

Sustainable and Renewable energy engineering (ICSREE) konferans, Tokyo, Japonya, 13 - 15 Mayıs 2017, cilt.1, ss.760-763

XXXVI. Comparison of Lighting Technologies in Residential area for Energy conservation

AYAN O., TÜRKAY B.

sustainable and Renewable energy engineering (ICSREE) konferans?, Tokyo, Japonya, 13 - 15 Mayıs 2017, cilt.1, ss.760-763

XXXVII. Economic and Environmental Load Dispatch Using Genetic Algorithm

Sevil M., Ayan O., Türkay B.

2nd International Conference on Sustainable and Renewable Energy Engineering (ICSREE), Hiroshima, Japonya, 10 - 12 Mayıs 2017, ss.53-57

XXXVIII. Transient Stability Analysis of the Transmission System Considering the Initial Steady State Results

TAVUKÇU E., TÜRKAY B.

"f the Transmission System Considering the Initial Steady State Results", 03/2017, s. 760-763, THE 10th INTERNATIONAL SYMPOSIUM ON ADVANCED TOPICS IN ELECTRICAL ENGI, Bükreş, Romanya, 23 - 25 Mart 2017, cilt.1, ss.750-753

XXXIX. Optimal Placement of Phasor Measurement Units for State Estimation in Smart Grid

Var H., Türkay B.

National Conference on Electrical, Electronics and Biomedical Engineering (ELECO), Bursa, Türkiye, 1 - 03 Aralık 2016, ss.6-10

XL. Akıllı Şebekelerde Durum Kestrimi için Fazör ölçüm Birimlerinin Optimum Yerleştirilmesi

TÜRKAY B., VAR H.

ELECO2016, Bursa, Türkiye, 1 - 03 Aralık 2016

XLI. İşaret İşleme ve Bilgi Kuramı Temelli Fliker Analizi

TÜRKAY B., SİLSÜPÜR M.

GÜÇ SİSTEMLERİ KONFERANSI 2016, İstanbul, Türkiye, 15 - 16 Kasım 2016

XLII. Application of Information Theory in Smart Grid Measurements

Silsupur M., Türkay B.

4th International Istanbul Smart Grid Congress and Fair (ICSG), İstanbul, Türkiye, 20 - 21 Nisan 2016, ss.122-125

XLIII. Application of Information Theory in Smart Grid Measurement

SİLSÜPÜR M., TÜRKAY B.

ISCG Istanbul 2016, İstanbul, Türkiye, 20 - 21 Nisan 2016, ss.122-125

XLIV. Optimal Power Flow Solution Using Particle Swarm Optimization Algorithm

Türkay B., Cabadag R. I.

IEEE EUROCON Conference, Zagreb, Hırvatistan, 1 - 04 Temmuz 2013, ss.1412-1418

Desteklenen Projeler

Türkay B., Çiftçi H., Yükseköğretim Kurumları Destekli Proje, Dağıtım Şebekelerinde Gerilim Regülasyonu İçin Dağıtılmış Enerji Depolama Sistemlerinin Koordineli Kontrolü, 2018 - 2019

Türkay B., Yükseköğretim Kurumları Destekli Proje, Rüzgar Enerjisinin Şebekeye Penetrasyonunda Depolama Sistemlerinin Yerleşimi, 2014 - 2018

Türkay B., Yükseköğretim Kurumları Destekli Proje, Ünite Yüklenme Probleminin Parçacık Sürü Optimizasyonu Yönetimi ile Çözümü, 2012 - 2018

Türkay B., Yükseköğretim Kurumları Destekli Proje, PARALEL REZONANSIN ENDÜSTRİDE TESPİTİ, 2010 - 2018

Türkay B., Yükseköğretim Kurumları Destekli Proje, Meskenlerde Talep Tarafı Yönetimi ve Talep Cevabı Uygulamaları, 2016 - 2017

Türkay B., Yükseköğretim Kurumları Destekli Proje, Genetik Algoritma İle Dağıtım Şebekelerinin Optimum Tasarımı, 2004 - 2005

Metrikler

Yayın: 69

Atıf (WoS): 166

Atıf (Scopus): 202

H-İndeks (WoS): 6

H-İndeks (Scopus): 11

Akademi Dışı Deneyim

Matriks Bilgi Dağıtım Hizmetleri