

Dr.Öğr.Üyesi MUSTAFA ALPARSLAN ZEHİR

Kişisel Bilgiler

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Uluslararası Araştırmacı ID'leri

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Publons / Web Of Science ResearcherID: AAG-3040-2020

ScopusID: 55363508500

Yoksis Araştırmacı ID: 36399

Eğitim Bilgileri

Doktora, İstanbul Teknik Üniversitesi, Fen Bilimleri Enstitüsü, Türkiye 2013 - 2019

Yüksek Lisans, İstanbul Teknik Üniversitesi, Fen Bilimleri Enstitüsü, Türkiye 2011 - 2013

Lisans, İstanbul Teknik Üniversitesi, Elektrik-Elektronik, Elektrik Mühendisliği, Türkiye 2005 - 2010

Yabancı Diller

İngilizce, C2 Ustalık

Yaptığı Tezler

Doktora, Şebeke etkileşimli tüketiciler ile toplu talep yönetimi, İstanbul Teknik Üniversitesi, Fen Bilimleri Enstitüsü, 2019
Yüksek Lisans, Akıllı şebekelerde termostat kontrollü yükler için gelişmiş yerel talep yönetim sistemi tasarımları, İstanbul Teknik Üniversitesi, Fen Bilimleri Enstitüsü, 2013

Araştırma Alanları

Benzetim ve Modelleme, İnsan Bilgisayar Etkileşimi , Otomatik Problem Çözümü, Kuram Kanıtlaması ve Mantıksal Nedenleme, Programlama Dilleri , Doğrudan Enerji Dönüşümü ve Enerji Depolaması , Güç Sistemlerinin Analizi , Enerji Üretim İstasyonları ve Tesisleri , Enerji İletimi ve Dağıtıtı , Yenilenebilir Enerji, Yüksek Gerilim Teknikleri

Akademik Unvanlar / Görevler

Dr.Öğr.Üyesi, Marmara Üniversitesi, Mühendislik Fakültesi, Elektrik ve Elektronik Mühendisliği Bölümü, 2020 - Devam Ediyor

Araştırma Görevlisi, İstanbul Teknik Üniversitesi, Elektrik-Elektronik, Elektrik Mühendisliği, 2011 - 2019

Akademik İdari Deneyim

Verdiği Dersler

High Voltage Techniques I, Lisans, 2022 - 2023, 2021 - 2022, 2020 - 2021

Electrical Circuits II, Lisans, 2022 - 2023

Elektrik Mühendisliğine Giriş, Lisans, 2021 - 2022

Power System Protection, Lisans, 2020 - 2021

Electrical Circuits I, Lisans, 2021 - 2022, 2020 - 2021

Selected Topics in Electrical Engineering, Yüksek Lisans, 2021 - 2022

SCI, SSCI ve AHCI İndekslerine Giren Dergilerde Yayınlanan Makaleler

- I. **Voltage constraint-oriented management of low carbon technologies in a large-scale distribution network**
Sengor I., Mehigan L., ZEHİR M. A., Cuenca J. J., Geaney C., Hayes B. P.
Journal of Cleaner Production, cilt.408, 2023 (SCI-Expanded)
- II. **A Dual Distributed Optimal Energy Management Method for Distribution Grids With Electric Vehicles**
Hoang P. H., Ozkan G., Badr P. R., Papari B., Edrington C. S., ZEHİR M. A., Hayes B., Mehigan L., Kez D. A., Foley A. M.
IEEE Transactions on Intelligent Transportation Systems, cilt.23, sa.8, ss.13666-13677, 2022 (SCI-Expanded)
- III. **Synergies Between Low Carbon Technologies in a Large-Scale MV/LV Distribution System**
Mehigan L., ZEHİR M. A., Cuenca J. J., Sengor I., Geaney C., Hayes B. P.
IEEE ACCESS, cilt.10, ss.88655-88666, 2022 (SCI-Expanded)
- IV. **A critical evaluation of grid stability and codes, energy storage and smart loads in power systems with wind generation**
Al Kez D., Foley A. M., McIlwaine N., Morrow D. J., Hayes B. P., Zehir M. A., Mehigan L., Papari B., Edrington C. S., Baran M.
ENERGY, cilt.205, 2020 (SCI-Expanded)
- V. **Development and Field Demonstration of a Gamified Residential Demand Management Platform Compatible with Smart Meters and Building Automation Systems**
Zehir M. A., Ortac K. B., Gul H., Batman A., Aydin Z., Portela J. C., Soares F. J., Bağrıyanık M., Kucuk U., Özdemir A.
ENERGIES, cilt.12, sa.5, 2019 (SCI-Expanded)
- VI. **Impacts of microgrids with renewables on secondary distribution networks**
Zehir M. A., Batman A., Sonmez M. A., Font A., Tsiamitros D., Stimoniaris D., Kollatou T., Bağrıyanık M., Özdemir A., Dialynas E.
APPLIED ENERGY, cilt.201, ss.308-319, 2017 (SCI-Expanded)
- VII. **Demand-side management by integrating bus communication technologies into smart grids**
Stimoniaris D., Kollatou T., Tsiamitros D., Zehir M. A., Batman A., Bağrıyanık M., Özdemir A., Dialynas E.
ELECTRIC POWER SYSTEMS RESEARCH, cilt.136, ss.251-261, 2016 (SCI-Expanded)
- VIII. **Review and comparison of demand response options for more effective use of renewable energy at consumer level**
Zehir M. A., Batman A., Bağrıyanık M.
RENEWABLE & SUSTAINABLE ENERGY REVIEWS, cilt.56, ss.631-642, 2016 (SCI-Expanded)
- IX. **Demand Side Management by controlling refrigerators and its effects on consumers**
Zehir M. A., Bağrıyanık M.
ENERGY CONVERSION AND MANAGEMENT, cilt.64, ss.238-244, 2012 (SCI-Expanded)

Kitap & Kitap Bölümleri

I. Distribution Network Oriented Demand Response

Zehir M. A., Bağriyanık M.

Electric Distribution Network Management and Control, Arefi, Ali, Shahnia, Farhad, Ledwich, Gerard, Editör, Springer, London/Berlin , Singapore, ss.111-129, 2018

Hakemli Kongre / Sempozyum Bildiri Kitaplarında Yer Alan Yayınlar

I. Holistic Performance Benchmarking in Power Systems with Distributed Control under Disruptive Cyberattacks

Badr P. R., Papari B., Robison A., Edrington C. S., Abulebdah A., ZEHİR M. A., Hammad E.

IEEE/AIAA Transportation Electrification Conference / Electric Aircraft Technologies Symposium (ITEC+EATS), California, Amerika Birleşik Devletleri, 15 - 17 Haziran 2022, ss.640-646

II. Development of a Vehicle-to-Grid (V2G) Energy Management System to Mitigate Local Operational Challenges in Low Voltage Distribution Networks with Photovoltaics

Gunes F., ZEHİR M. A.

4th IEEE Global Power, Energy and Communication Conference (IEEE GPECOM), Cappadocia, Türkiye, 14 - 17 Haziran 2022, ss.389-394

III. Technical Coordination of Aggregated Electric Vehicle Charging and Residential Loads at the Medium Voltage Level

Dumlu F., ZEHİR M. A.

4th IEEE Global Power, Energy and Communication Conference (IEEE GPECOM), Cappadocia, Türkiye, 14 - 17 Haziran 2022, ss.546-551

IV. Impact of Cyber-attacks on EV Charging Coordination: The Case of Single Point of Failure

Gumrukcu E., Arsalan A., Muriithi G., Joglekar C., Aboulebdeh A., ZEHİR M. A., Papari B., Monti A.

4th IEEE Global Power, Energy and Communication Conference (IEEE GPECOM), Cappadocia, Türkiye, 14 - 17 Haziran 2022, ss.506-511

V. Cloud-based Optimal Energy Scheduling of Photovoltaics and Electric Vehicle-integrated Community Microgrids

ZEHİR M. A., Dogan O. T., Merdanoglu H., Yakici E., DURAN S., Akyildirim H. C.

4th IEEE Global Power, Energy and Communication Conference (IEEE GPECOM), Cappadocia, Türkiye, 14 - 17 Haziran 2022, ss.535-540

VI. High-Fidelity Electric Vehicle Energy Consumption Modelling and Investigation of Factors in Driving on Energy Consumption

Kocaarslan İ., ZEHİR M. A., Uzun E., Uzun E. C., Korkmaz M. E., Cakiroglu Y.

4th IEEE Global Power, Energy and Communication Conference (IEEE GPECOM), Cappadocia, Türkiye, 14 - 17 Haziran 2022, ss.227-231

VII. Investigation of Residential Demand Response Flexibility Including the Effects of the COVID-19 Pandemic on Energy Usage Habits in Turkey

Tanugur M. M., ZEHİR M. A.

4th IEEE Global Power, Energy and Communication Conference (IEEE GPECOM), Cappadocia, Türkiye, 14 - 17 Haziran 2022, ss.523-528

VIII. Designing laboratory experiments for electricity grid integration of renewable energy using microgrid, test-rig emulators and real time simulation tools

Murray D., Erdogan N., Zehir M. A., Hayes B.

Engineering Education for Sustainable Development (EESD2021), Cork, İrlanda, 14 - 16 Haziran 2021, ss.1-8

IX. Optimal Electric Vehicle Scheduling in Residential Distribution Networks Considering Customer Charging Preferences

Cam M. L., Alparslan Zehir M. A., Hayes B.

- 2021 IEEE Madrid PowerTech, PowerTech 2021, Madrid, İspanya, 28 Haziran - 02 Temmuz 2021
- X. **Distribution feeder-level multi-temporal coordination of electric vehicle charging flexibilities considering rebound impact and vehicle owner preferences**
Zehir M. A., Hayes B.
CIRED Workshop 2020 Berlin, 22 Eylül 2020, ss.487-489
- XI. **Modeling for cross-domain electromobility simulations**
Yavuzer A., Gümrükçü E., Zehir M. A., Monti A.
2020 IEEE Power and Energy Student Summit, PESS 2020, Darmstadt, Virtual, Almanya, 5 - 07 Ekim 2020, ss.217-222
- XII. **Detailed Evaluation of Long-term Gamified Residential Demand Management System Field Implementation**
Dashti N., Zehir M. A., Gul H., Batman A., Bağrıyanık M., Özdemir A., Kucuk U., Soares F. J.
20th International Conference on Intelligent System Application to Power Systems, ISAP 2019, New Delhi, Hindistan, 10 - 14 Aralık 2019
- XIII. **Real-time Grouped Management of Electric Vehicle Battery Chargers (EVBCs) for Voltage Profile Improvement in Radial Distribution Networks**
Zehir M. A., Hayes B., Djokic S. Z.
2019 IEEE PES Innovative Smart Grid Technologies Europe, ISGT-Europe 2019, Bucharest, Romanya, 29 Eylül - 02 Ekim 2019
- XIV. **Analysis of consumer expectations, preferences and concerns on deployment of demand response in Turkey**
Zehir M. A., Erpaytoncu S., Yilmaz E., Baici D., Batman A., Bağrıyanık M., Kucuk U., Soares F., Özdemir A.
10th International Conference on Electrical and Electronics Engineering, ELECO 2017, Bursa, Türkiye, 29 Kasım - 02 Aralık 2017, ss.1262-1266
- XV. **GReSBAS project: A gamified approach to promote more energy efficient behaviours in buildings**
Barbosa A., Iria J., Cassola F., Coelho A., Portela J., Kucuk U., Madureira A., Zehir M. A., Özdemir A., Soares F.
10th International Conference on Electrical and Electronics Engineering, ELECO 2017, Bursa, Türkiye, 29 Kasım - 02 Aralık 2017, ss.1258-1261
- XVI. **Aggregated active and reactive power and energy management of distributed energy resources and performance evaluation**
Zehir M. A., Barbosa A., Sandroni C., Pellegrino L., Lazzari R., Verga M., Bağrıyanık M., Kucuk U., Soares F. J., Özdemir A.
Mediterranean Conference on Power Generation, Transmission, Distribution and Energy Conversion, MEDPOWER 2018, Dubrovnik, Hırvatistan, 12 - 15 Kasım 2018, cilt.2018
- XVII. **Demand Response by Real-time Management of Flexible Loads using Dynamic Priorities**
Sönmez M. Ş., Zehir M. A., Bağrıyanık M.
6th International Istanbul Smart Grids and Cities Congress and Fair (ICSG), İstanbul, Türkiye, 25 - 26 Nisan 2018, ss.155-159
- XVIII. **Demand Response with Residential and Commercial Loads for Phase Balancing in Secondary Distribution Networks**
Zacharaki V., Zehir M. A., Thavlov A., Heussen K., Batman A., Tsiamitros D., Stimoniaris D., Özdemir A., Dialynas E., Bağrıyanık M.
6th International Istanbul Smart Grids and Cities Congress and Fair (ICSG), İstanbul, Türkiye, 25 - 26 Nisan 2018, ss.124-128
- XIX. **Management of Inverter-based Distributed Energy Resources for Providing Voltage Regulation Support in Islanded Operation of Low Voltage Networks**
Zehir M. A., Bargiyanik M., Özdemir A., Barbosa A., Soares F. J., Sandroni C., Pellegrino L., Lazzari R., Verga M., Kucuk U.
53rd International Universities Power Engineering Conference (UPEC), Glasgow, Birleşik Krallık, 4 - 07 Eylül 2018
- XX. **Identification and Comparison of Power and Energy Management Capabilities of Distributed Energy Resources**

- Zehir M. A., Barbosa A., Sandroni C., Pellegrino L., Lazzari R., Verga M., Bağrıyanık M., Kucuk U., Soares F. J., Özdemir A.
6th International Istanbul Smart Grids and Cities Congress and Fair (ICSG), İstanbul, Türkiye, 25 - 26 Nisan 2018, ss.119-123
- XXI. **Building automation systems and smart meter integrated residential customer platform**
Aydin Z., Portela J. C., Kucuk U., Zehir M. A., Gul H., Bağrıyanık M., Soares F. J., Özdemir A.
Mediterranean Conference on Power Generation, Transmission, Distribution and Energy Conversion, MEDPOWER 2018, Dubrovnik, Hırvatistan, 12 - 15 Kasım 2018, cilt.2018
- XXII. **Mitigation of Negative Impacts of Distributed Generation on LV Distribution Networks through Microgrid Management Systems**
Zehir M. A., Batman A., Sönmez M. Ş., Font A., Tsiamitros D., Stimoniaris D., Zacharaki V., Orth C., Bağrıyanık M., Özdemir A., et al.
IEEE Manchester PowerTech, Manchester, Birleşik Krallık, 18 - 22 Haziran 2017
- XXIII. **A Novel Incentive-based Retail Demand Response Program for Collaborative Participation of Small Customers**
Zehir M. A., Wevers M. H., Batman A., Bağrıyanık M., Hurink J. L., Kucuk U., Soares F. J., Özdemir A.
IEEE Manchester PowerTech, Manchester, Birleşik Krallık, 18 - 22 Haziran 2017
- XXIV. **Analysis of critical operating conditions for LV distribution networks with microgrids**
Zehir M. A., Batman A., Sönmez M. Ş., Font A., Tsiamitros D., Stimoniaris D., Kollatou T., Bağrıyanık M., Özdemir A., Dialynas E.
20th Innovative Manufacturing Engineering and Energy Conference (IManEE), Kallithea, Yunanistan, 23 - 25 Eylül 2016, cilt.161
- XXV. **Impact of renewable based microgrid supply/demand profiles on low voltage distribution networks**
Zehir M. A., Batman A., Sönmez M. Ş., Font A., Tsiamitros D., Stimoniaris D., Kollatou T., Bağrıyanık M., Özdemir A., Dialynas E.
Applied Energy Symposium and Submit on Renewable Energy Integration with Mini/Microgrid (REM), Maldivler, 19 - 21 Nisan 2016, cilt.103, ss.231-236
- XXVI. **Smart energy aggregation network (SEAN): An advanced management system for using distributed energy resources in virtual power plant applications**
Zehir M. A., Bağrıyanık M.
3rd International Istanbul Smart Grid Congress and Fair, ICSG 2015, İstanbul, Türkiye, 29 - 30 Nisan 2015
- XXVII. **Development of a Field Data-based Virtual Test Bed for Microgrid Integration of Building Automation Technologies**
Zehir M. A., Batman A., Sönmez M. Ş., Font A., Tsiamitros D., Stimoniaris D., Kollatou T., Bağrıyanık M., Özdemir A., Dialynas E.
9th International Conference on Electrical and Electronics Engineering (ELECO), Bursa, Türkiye, 26 - 28 Kasım 2015, ss.51-55
- XXVIII. **Cooperation scheme between KNX and a microgrid control system for enhanced demand-side management**
Stimoniaris D., Kollatou T., Tsiamitros D., Gavros K., Kikis V., Asimonis S., Zehir M. A., Batman A., Bağrıyanık M., Özdemir A., et al.
9th International Conference on Electrical and Electronics Engineering (ELECO), Bursa, Türkiye, 26 - 28 Kasım 2015, ss.46-50
- XXIX. **Advanced Energy Storage and Demand-Side Management in Smart Grids using Buildings Energy Efficiency Technologies**
Tsiamitros D., Stimoniaris D., Poulakis N., Zehir M. A., Batman A., Bağrıyanık M., Özdemir A., Dialynas E.
5th IEEE PES Innovative Smart Grid Technologies Conference Europe (ISGT Europe), İstanbul, Türkiye, 12 - 15 Ekim 2014
- XXX. **An event-driven energy management system for planned control of thermostatic loads**
Zehir M. A., Batman A., Bağrıyanık M.
2013 IEEE Grenoble Conference PowerTech, POWERTECH 2013, Grenoble, Fransa, 16 - 20 Haziran 2013

- XXXI. **Demand response planning tool for management method evaluation and tariff design**
Zehir M. A., Bağrıyanık M.
2013 4th IEEE/PES Innovative Smart Grid Technologies Europe, ISGT Europe 2013, Lyngby, Danimarka, 6 - 09 Ekim 2013
- XXXII. **Akıllı Şebekekelerde Gelişmiş Yerel Talep Yönetimi**
Zehir M. A., Bağrıyanık M.
5. Enerji Verimliliği ve Kalitesi Sempozyumu (EVK), Kocaeli, Türkiye, 23 - 24 Mayıs 2013
- XXXIII. **Impulsive Noise Survey on Power Line Communication Networks up to 125 kHz for Smart Metering Infrastructure in Systems with Solar Inverters in Turkey**
Sönmez M. Ş., Zehir M. A., Bağrıyanık M., Nak O.
International Conference on Renewable Energy Research and Applications (ICRERA), Madrid, İspanya, 20 - 23 Ekim 2013, ss.705-710
- XXXIV. **Demand Side Management potential of refrigerators with different energy classes**
Zehir M. A., Bağrıyanık M.
2012 47th International Universities Power Engineering Conference, UPEC 2012, London, Birleşik Krallık, 4 - 07 Eylül 2012
- XXXV. **Evaluation of management strategies for thermostatic loads in smart grid**
Zehir M. A., Bağrıyanık M.
2012 3rd IEEE PES Innovative Smart Grid Technologies Europe, ISGT Europe 2012, Berlin, Almanya, 14 - 17 Ekim 2012

Desteklenen Projeler

Özdemir A., Bağrıyanık M., AB Destekli Diğer Projeler, Bina Otomasyon Sistemleri ve Şebeke Etkileşimli Toplum Grid Responsive Society through Building Automation Systems GReSBAS Proje No 115E816, 2016 - 2019
Özdemir A., Bağrıyanık M., TÜBİTAK Uluslararası İkili İşbirliği Projesi, Smart Electrical Energy Management and Buildings Energy Efficiency Technologies Elektrik Enerjisinin Akıllı Yönetimi ve Binalarda Enerji Verimliliği Teknolojileri Proje No 113E286, 2014 - 2015

Metrikler

Yayın: 45
Atıf (WoS): 229
Atıf (Scopus): 310
H-İndeks (WoS): 7
H-İndeks (Scopus): 8

Akademi Dışı Deneyim

Platin Yapı Mühendislik