Assoc. Prof. AHMET ÖNEN

Personal Information

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Biography

Dr. Onen received the B.Sc. degree in Electrical-Electronics Engineering from Gaziantep University in 2005. He received the M.S degree in Electrical-Computer Engineering from Clemson University in 2010 and his Ph.D. from Virginia Tech – Electrical and Computer Engineering Department in 2014. Prior to joining Abdullah Gül University as a faculty of Electrical-Electronics Engineering in 2014, He was a member of DEW software developing team for power systems planning and operation. During the time he was a member of DEW software developing, he had close relationship with distribution companies in New York and developed smart grid solutions for their system and consulted the biggest utilities in USA for advancing their grid with the technologies he developed the during his PhD. His research interests are distribution system reliability, storm outage and reconfiguration, Distributed Series Reactance (DSR), Renewable Energy Integration to Grid, Smart Grid optimization, control, economic analysis and micro-grid. He has more than 16 SCI journals including high rank journals and 11 international conferences in last three years.

Education Information

Doctorate, Virginia Polytechnic Institute and State University, Muhendislik Ve Doga Bilimleri, United States Of America 2010 - 2014
Postgraduate, Clemson University, Muhendislik Ve Doga Bilimleri, United States Of America 2008 - 2010
Undergraduate, Gaziantep University, Muhendislik Ve Doga Bilimleri, Turkey 2000 - 2005

Foreign Languages

English, C1 Advanced

Dissertations

Doctorate, Model-Based Grid Modernization Economic Evaluation Framework, Virginia Polytechnic Institute And State University, Electrical And Computer Engineering, Power System, 2014

Research Areas

Electrical and Electronics Engineering, Energy, Power System Analysis, Electric Power Transmission, Distribution and

Protection, Renewable energy, Power Electronics, Power Apparatus (transformers,reactors,switchgear,etc.), Power Quality, Engineering and Technology

Academic Titles / Tasks

Associate Professor, Abdullah Gul University, Mühendislik Fakültesi, Elektrik Elektronik Mühendisliği, 2018 - Continues
Assistant Professor, Abdullah Gul University, Muhendislik Ve Doga Bilimler, Elektrik-Elektronik Muhendisligi, 2018 - 2018
Assistant Professor, Abdullah Gul University, Muhendislik Ve Doga Bilimler, Elektrik-Elektronik Muhendisligi, 2014 - 2018
Research Assistant, Virginia Polytechnic Institute and State University, Muhendislik Ve Doga Bilimler, Elektrik-Elektronik Muhendisligi, 2010 - 2014
Research Assistant, Clemson University, Muhendislik Ve Doga Bilimler, Elektrik-Elektronik Muhendisligi, 2008 - 2010
Research Assistant, Kocaeli University, Muhendislik Ve Doga Bilimler, Mekatronik Muhendisligi, 2006 - 2007

Academic and Administrative Experience

Abdullah Gül Üniversitesi, Fen Bilimleri, 2016 - Continues
Abdullah Gül Üniversitesi, Elektrik Elektronik Muhendisligi, 2015 - 2016

Courses

Electric Distribution Systems, Undergraduate, 2021 - 2022
Power Systems Analysis, Undergraduate, 2021 - 2022

Published journal articles indexed by SCI, SSCI, and AHCI

I. **Network cost allocation methods for pay-as-bid peer-to-peer energy trading: A comparison**
Önen A.
ENERGY REPORTS, vol.8, pp.14442-14463, 2022 (SCI-Expanded)

II. **Energy Trading on a Peer-to-Peer Basis between Virtual Power Plants Using Decentralized Finance Instruments**
SEVEN S., YOLDAŞ Y., Soran A., YALÇIN ALKAN G., Jung J., Ustun T. S., ÖNEN A.
SUSTAINABILITY, vol.14, no.20, 2022 (SCI-Expanded)

III. **Optimization of multiple battery swapping stations with mobile support for ancillary services**
Kocer M. C., ÖNEN A., Ustun T. S., Albayrak S.
FRONTIERS IN ENERGY RESEARCH, vol.10, 2022 (SCI-Expanded)

IV. **A reinforcement learning-based demand response strategy designed from the Aggregator's perspective**
Oh S., Jung J., ÖNEN A., Lee C.
FRONTIERS IN ENERGY RESEARCH, vol.10, 2022 (SCI-Expanded)

V. **Dynamic rolling horizon control approach for a university campus**
YOLDAŞ Y., GÖREN S., ÖNEN A., Ustun T. S.
ENERGY REPORTS, vol.8, pp.1154-1162, 2022 (SCI-Expanded)

VI. **Review on Energy Application Using Blockchain Technology With an Introductions in the Pricing Infrastructure**
Al-Abri T., Onen A., Al-Abri R., Hossen A., Al-Hinai A., Jung J., Ustun T. S.
IEEE ACCESS, vol.10, pp.80119-80137, 2022 (SCI-Expanded)

VII. **Rooftop Solar PV Penetration Impacts on Distribution Network and Further Growth Factors-A Comprehensive Review**
Uzum B., ÖNEN A., Hasanien H. M., Muyeen S. M.
ELECTRONICS, vol.10, no.1, 2021 (SCI-Expanded)

VIII. **Artificial Intelligence Based Intrusion Detection System for IEC 61850 Sampled Values Under Symmetric and Asymmetric Faults**
Ustun T. S., Hussain S. M. S., YAVUZ L., ÖNEN A.
IEEE ACCESS, vol.9, pp.56486-56495, 2021 (SCI-Expanded)

IX. **Optimal Control of Microgrids with Multi-stage Mixed-integer Nonlinear Programming Guided Q-learning Algorithm**
YOLDAŞ Y., GÖREN S., ÖNEN A.
JOURNAL OF MODERN POWER SYSTEMS AND CLEAN ENERGY, vol.8, no.6, pp.1151-1159, 2020 (SCI-Expanded)

X. **Neuro-Fuzzy-Based Model Predictive Energy Management for Grid Connected Microgrids**
Ulutas A., ALTAŞ İ. H., ÖNEN A., Ustun T. S.
ELECTRONICS, vol.9, no.6, 2020 (SCI-Expanded)

XI. **Peer-to-Peer Energy Trading in Virtual Power Plant Based on Blockchain Smart Contracts**
SEVEN S., Yao G., SORAN A., ÖNEN A., Muyeen S. M.
IEEE ACCESS, vol.8, pp.175713-175726, 2020 (SCI-Expanded)

Refereed Congress / Symposium Publications in Proceedings

I. **Optimal Energy Management and Scheduling of a Microgrid in Grid-Connected and Islanded Modes**
ÖNEN A.
2019 International Conference on Smart Energy Systems and Technologies (SEST), Porto, Portugal, 9 - 11 September 2019

II. **Coronary Artery Disease Diagnosis Using Optimized Adaptive Ensemble Machine Learning Algorithm**
KOLUKISA B., YAVUZ L., SORAN A., GÜNGÖR B., Tuncer D., ÖNEN A., GÜNGÖR V. Ç.
3rd Int. Conference on Information System and Data Mining (ICISDM 2019), Texas, United States Of America, 6 - 08 April 2019

III. **A hybrid agent-based secondary control for microgrids with increased fault-tolerance needs**
ÖNEN A.
Mediterranean Conference on Power Generation, Transmission, Distribution and Energy Conversion (MEDPOWER 2018), Dubrovnik, Croatia, 12 - 15 November 2018

IV. **Design considerations for campus micro-grid: MCAST Case Study**
ÖNEN A.
2018 IEEE 7th World Conference on Photovoltaic Energy Conversion (WCPEC) (A Joint Conference of 45th IEEE PVSC, 28th PVSEC 34th EU PVSEC), Waikoloa Village, HI, 10 - 15 June 2018

V. **Investigation of Energy Quality on MGs Under High Penetration of PV Generation**
ÜNSAL ÇELİMLİ D. B., KULAKSIZ A. A., ÖNEN A.
International Conference on Innovative Engineering Applications, Sivas, Turkey, 20 - 22 October 2018

VI. **Distribution Automation Effects on Reliability during Major Contingencies**
Yoldas Y., ÖNEN A., ALAN İ., Broadwater R. P.
18th IEEE International Conference on Harmonics and Quality of Power (ICHQP), Ljubljana, Slovenia, 13 - 16 May 2018

VII. **Provision of Ancillary Services by a Smart Microgrid: An OPF Approach**
Martinez-Ramos J. L., Marano-Marcolini A., Garcia-Lopez F. P., Almagro-Yravedra F., ÖNEN A., Yoldas Y., Khiat M., Ghomri L., Fragale N.
International Conference on Smart Energy Systems and Technologies (SEST), Sevilla, Spain, 10 - 12 September 2018

VIII. **Cloud Induced PV Impact on Voltage Profiles for Real Microgrids**

Kocer M. C., Yoldas Y., GÖREN S., ÖNEN A., ALAN İ., Al-Agtash S., Azzopardi B., Martensen N., Martinez-Ramos J. L., Tzovaras D., et al.

5th International Symposium on Environment-Friendly Energies and Applications (EFEA), Rome, Italy, 24 - 26 September 2018

IX. **Novel Hybrid Design for Microgrid Control**

Bintoudi A. D., Zyglakis L., Apostolos T., Ioannidis D., Al-Agtash S., Martinez-Ramos J. L., ÖNEN A., Azzopardi B., Hadjidemetriou L., Martensen N., et al.

IEEE PES Asia-Pacific Power and Energy Engineering Conference (APPEEC), Bangalore, India, 8 - 10 November 2017

X. **Investigation of LV Networks with EVs Under High Penetration of PV Generation**

Ünsal B., Kulaksız A., ÖNEN A.

International Advanced Technology Symposium, Elazığ, Turkey, 19 - 22 October 2017, pp.20-30

XI. **Investigation of Design Considerations based on Energy Efficiency with loss calculation**

ÖNEN A.

2017 2nd International Conference on Renewable Energy and Smart Grid, Şangay, China, 24 - 26 March 2017, pp.10

XII. **Coordinated Conservation Voltage Reduction Algorithm for Different Load Model**

ÖNEN A.

23 World Energy Congress, İstanbul, Turkey, 9 - 13 October 2016, vol.1, no.1, pp.214-228

XIII. **Efficiency and Cost Evaluation of Distribution Systems based on Multiple Time Points**

ÖNEN A.

MEPS2015, Wroclaw, Poland, 6 - 09 July 2015, pp.1-5

XIV. **Is the Smart Grid A Good Investment?**

ÖNEN A., Broadwater R.

3rd International Istanbul Smart Grid Congress and Fair (ICSG), İstanbul, Turkey, 29 - 30 April 2015

XV. **Is the Smart Grid a good investment**

ÖNEN A., Broadwater R. P.

3. Uluslararası Istanbul akıllı şebekeler kongre ve fuarı, İstanbul, Turkey, 29 - 30 April 2015, pp.1-5

XVI. **Model Centric Approach for Monte Carlo Assessment of Storm Restoration and Smart Grid Automation**

Cheng D., ÖNEN A., Arghandeh R., Jung J., Broadwater R. P., Scirbona C.

ASME Power 2014 Conference, Baltimore, United States Of America, 28 - 31 July 2014, pp.1-6

XVII. **Harmonic Impact Study For Distributed Energy Resources Integrated into Power Distribution Networks**

Arghandeh R., ÖNEN A., Jung J., Broadwater R. P., Centeno V.

American Society of Mechanical Engineers Power Conference 2013, Boston, United States Of America, 29 July - 01 August 2013, pp.1-7

XVIII. **Distributed energy storage system control for optimal adoption of electric vehicles**

Arghandeh R., ÖNEN A., Broadwater R. P.

Power and Energy Society General Meeting, 2012 IEEE, San Diego, United States Of America, 22 - 26 July 2012, pp.1-8

Supported Projects

ÖNEN A., EU Framework Program Project, 3D Micro Grid, 2016 - Continues

ÖNEN A., Project Supported by Higher Education Institutions, Rastgele Yük Eğrisi metodu ile elektrik kayıplarının hesaplanması, 2016 - 2017

Activities in Scientific Journals

Electrical Engineering, Editor, 2019 - Continues
Frontiers in Energy, Assistant Editor/Section Editor, 2018 - Continues
El-Cezeri Journal of Science and Engineering, Editor, 2017 - Continues

Scientific Refereeing

Wiley international Transaction of Electrical Energy System, SCI Journal, November 2015
IEEE transaction on Industrial Electronic, SCI Journal, May 2015
Türkish Journal of Electrical and Computer Engineering, SCI Journal, March 2015

Metrics

Publication: 60
Citation (WoS): 629
Citation (Scopus): 801
H-Index (WoS): 12
H-Index (Scopus): 12

Congress and Symposium Activities

Horizon 2020 Smart Grid info Day, Attendee, Brussel, Belgium, 2015

Scholarships

MEB yurt dışı bursu, Ministry of Education, 2007 - 2014

Awards

ÖNEN A., En iyi bildiri, IEEE PES, July 2012

Non Academic Experience

Other Public Institution, TEIAS
Business Organization (private), Edd Engineering