

## Asst. Prof. MİKAIL PÜRLÜ



### Personal Information

**Email:** mikailpurlu@cumhuriyet.edu.tr

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### International Researcher IDs

ScholarID: 45luOkIAAAAJ

ORCID: 0000-0002-1194-3931

Publons / Web Of Science ResearcherID: MB-6943-2023

ScopusID: 57201856023

Yoksis Researcher ID: 104151

### Education Information

Doctorate, Istanbul Technical University, Elektrik-Elektronik, Elektrik Mühendisliği,  
Turkey 2017 - 2022

Postgraduate, Istanbul Technical University, Elektrik-Elektronik, Elektrik Mühendisliği,  
Turkey 2014 - 2017

Undergraduate, Sivas Cumhuriyet University, Mühendislik Fakültesi, Elektrik Elektronik  
Mühen., Turkey 2009 - 2013

### Foreign Languages

English, B2 Upper Intermediate

### Dissertations

Doctorate, Examination of the effects of distributed generation on smart grids, Istanbul Technical University, Lisansüstü  
Eğitim Enstitüsü, 2022

Postgraduate, Üretim sistemlerinde valf-nokta etkili konveks olmayan dinamik ekonomik yük dağıtımı, Istanbul Technical  
University, Fen Bilimleri Enstitüsü, Electrical Engineering, 2017

### Research Areas

Electrical and Electronics Engineering, Energy, Direct Energy Conversion and Energy Storage, Power System Analysis,  
Generating Stations and Plants, Electric Power Transmission, Distribution and Protection, Protection Systems, Renewable  
energy, Heuristic Methods, Solar energy, Wind power

### Academic Titles / Tasks

Assistant Professor, Sivas Cumhuriyet University, Mühendislik Fakültesi, Elektrik Elektronik Mühen., 2023 - Continues

Research Assistant, Sivas Cumhuriyet University, Mühendislik Fakültesi, Elektrik Elektronik Mühen., 2013 - 2023

Research Assistant, Istanbul Technical University, Elektrik-Elektronik, Elektrik Mühendisliği, 2014 - 2022

## Academic and Administrative Experience

Deputy Head of Department, Sivas Cumhuriyet University, 2023 - Continues

Çift Anadal Program Koordinatörü, Sivas Cumhuriyet University, Mühendislik Fakültesi, Elektrik Elektronik Müh., 2022 - Continues

## Courses

Engineering Mathematics, Undergraduate, 2023 - 2024, 2022 - 2023

Diferansiyel Denklemler, Undergraduate, 2022 - 2023

Distribution of Electrical Energy, Undergraduate, 2022 - 2023

Diferansiyel Denklemler (Blg. Müh.), Undergraduate, 2023 - 2024

Seminer Dersi, Postgraduate, 2023 - 2024

Generation and Transmission of Electrical Energy, Undergraduate, 2023 - 2024, 2022 - 2023

HIGH VOLTAGE UNDERGROUND CABLES, Postgraduate, 2023 - 2024

Bitirme Ödevi, Undergraduate, 2023 - 2024, 2022 - 2023

Elektrikle Tahrik, Undergraduate, 2023 - 2024, 2022 - 2023

Uzmanlık Alan Dersi, Postgraduate, 2023 - 2024

Güç Elektroniği, Undergraduate, 2022 - 2023

Güç Elektroniği Lab., Undergraduate, 2022 - 2023

## Published journal articles indexed by SCI, SSCI, and AHCI

- I. **Tap Staggering Analysis and Effects on the Adaptive Protection System in Networks With Renewable Energy Sources**  
Kasap H., Pürlü M., Turkay B., Ganjavi R.  
IEEE Access, vol.11, pp.138623-138637, 2023 (SCI-Expanded)
- II. **Optimal Allocation of Renewable Distributed Generations Using Heuristic Methods to Minimize Annual Energy Losses and Voltage Deviation Index**  
Pürlü M., Türkay B.  
IEEE Access, vol.10, pp.21455-21474, 2022 (SCI-Expanded)
- III. **Estimating the distributed generation unit sizing and its effects on the distribution system by using machine learning methods**  
Pürlü M., Turkay B.  
Elektronika ir Elektrotehnika, vol.27, no.4, pp.24-32, 2021 (SCI-Expanded)

## Articles Published in Other Journals

- I. **Optimal Design of Hybrid Renewable Energy System for a Region in Turkey Using HOMER**  
Pürlü M., Andiç C., Aydın E., Solak B.  
Turkish Journal of Electrical Power and Energy Systems, vol.3, no.3, pp.146-155, 2023 (Peer-Reviewed Journal)
- II. **Economic and Environmental Analysis of Grid-Connected Rooftop Photovoltaic System Using HOMER**  
Purlu M., Department of Electrical and Electronic Engineering S. C. U., Ozkan U., Department of Electrical and Electronic Engineering S. C. U.  
Turkish Journal of Electrical Power and Energy Systems, vol.3, no.1, pp.39-46, 2023 (Peer-Reviewed Journal)
- III. **Heuristic Algorithms on Economic Dispatch of Multi-Microgrids with Photovoltaics**

Aydın E., Pürlü M., Türkay B.

Turkish Journal of Electrical Power and Energy Systems, vol.2, no.2, pp.147-157, 2022 (Peer-Reviewed Journal)

IV. **On-Grid and Off-Grid Hybrid Renewable Energy System Designs with HOMER: A Case Study of Rural Electrification in Turkey**

PÜRLÜ M., Beyarslan S., TÜRKAY B.

Turkish Journal of Electrical Power and Energy Systems, vol.2, no.1, pp.75-84, 2022 (Peer-Reviewed Journal)

## Books & Book Chapters

I. **EN YENİ YAKLAŞIMLAR: SÜRÜNGEN ARAMA ALGORİTMASI**

PÜRLÜ M.

in: TEKNOBİLİM-2023: Yapay Zeka ve Mühendislik, Andiç Cenk, Editor, Efe Akademi, İstanbul, pp.133-152, 2023

II. **MİKROBİYAL YAKIT HÜCRELERİ: ENERJİ KRİZİNİ YENMEK İÇİN TERCİH EDİLEN BİR TEKNOLOJİ**

PÜRLÜ M.

in: TEKNOBİLİM 2022: Enerji Krizi ve Yenilenebilir Enerji-II, Ceren Karaman, Editor, Efe Akademi Yayınları, İstanbul, pp.83-100, 2022

## Refereed Congress / Symposium Publications in Proceedings

I. **Minimization of Residential Electricity Bill using EMS**

Alay H., Andiç C., Aydın E., Pürlü M., Türkay B.

"14th International Conference on Electrical and Electronics Engineering (ELECO2023), Bursa, Turkey, 30 November 2023, pp.1-5

II. **Forecasting of Wind Turbine Output Power with Artificial Neural Network in Izmir, Türkiye**

Şen A., Andiç C., Aydın E., Pürlü M., Türkay B.

"14th International Conference on Electrical and Electronics Engineering (ELECO2023), Bursa, Turkey, 30 November - 02 December 2023, pp.1-5

III. **Effects of the Tap Staggering Volt/VAr Control Method on Online and Adaptive Protection System in Grids with Wind Energy Sources**

Kasap H., Pürlü M., Türkay B., Ganjavı R.

7th International Symposium on Innovative Approaches in Smart Technologies (ISAS2023), İstanbul, Turkey, 23 - 25 November 2023, pp.1-8

IV. **Mersin Deniz Limanı'ndaki Güvenlik Sistemine Yönelik Optimum Hibrit Enerji Sistemi Tasarımı ve Konvansiyonel Çözümlerle Karşılaştırılması**

Kıyak M. H., Pürlü M., Türkay B.

UMTEB-XIII International Scientific Research Congress, Paris, France, 29 June 2023, pp.866-880

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

PÜRLÜ M., ANDIÇ C., TÜRKAY B., NOBARİ A. G.

2022 Global Energy Conference (GEC), Batman, Turkey, 26 - 29 October 2022, pp.13-18

VI. **Non-convex Dynamic Economic Emission Dispatch With Ramp Rate Limits Using Heuristic Algorithms**

Aydın E., PÜRLÜ M., TÜRKAY B.

2022 Global Energy Conference (GEC), Batman, Turkey, 26 - 29 October 2022

VII. **Design of On-Grid Microgrid Using PVsyst and HOMER**

Çetinkaya O., Pürlü M., Türkay B.

Güç Sistemleri Konferansı (GSK2022), Ankara, Turkey, 18 - 19 October 2022

VIII. **Economic Analysis of Stand-alone and Grid-connected Microgrid by Using HOMER**

Pürlü M., Beyarslan S., Türkay B.

CIGRE Paris Session 2022, Paris, France, 28 August - 03 September 2022

IX. **Market-Clearing Price Forecasting Using Keras in Turkish Day-Ahead Electricity Market**

Pürlü M., Türkay B., Andiç C., Aydın E., Canol B., Kucukaslan B.

4th IEEE Global Power, Energy and Communication Conference, GPECOM 2022, Cappadocia, Turkey, 14 - 17 June 2022, pp.517-522

**X. Optimum Energy Management in Electric Vehicle Parking Lots Using Heuristic Methods**

Canol B., Andiç C., Pürlü M., Türkay B.

4th IEEE Global Power, Energy and Communication Conference, GPECOM 2022, Cappadocia, Turkey, 14 - 17 June 2022, pp.473-477

**XI. Economic Dispatch of Multi-Microgrid Systems by Using Particle Swarm Optimization**

Pürlü M., Türkay B.

13th International Conference on Electrical and Electronics Engineering, ELECO 2021, Virtual, Bursa, Turkey, 25 - 27 November 2021, pp.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., Türkay B.

13th International Conference on Electrical and Electronics Engineering, ELECO 2021, Virtual, Bursa, Turkey, 25 - 27 November 2021, pp.263-267

**XIII. Dynamic economic dispatch with valve point effect by using GA and PSO Algorithm**

Türkay B., Pürlü M.

6th International Conference on Control Engineering and Information Technology, CEIT 2018, İstanbul, Turkey, 25 - 27 October 2018

**XIV. 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, Turkey, 29 November - 02 December 2017, vol.2018-January, pp.1491-1495

## Metrics

Publication: 23

Citation (WoS): 9

Citation (Scopus): 98

H-Index (WoS): 2

H-Index (Scopus): 5

## Scholarships

2211 A Yurtiçi Genel Doktora Bursu, TÜBİTAK, 2017 - 2021