

## Asst. Prof. YAHYA DANAYİYEN

### Personal Information

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**Address:** Karadeniz Teknik Üniversitesi Elektrik Elektronik Mühendisliği Bölüm Sekreterliği

### International Researcher IDs

ScholarID: Z3B11-sAAAAJ

ORCID: 0000-0002-8679-4088

Publons / Web Of Science ResearcherID: C-2728-2019

ScopusID: 56038876100

Yoksis Researcher ID: 183969

### Education Information

Doctorate, Karadeniz Technical University, Fen Bilimleri Enstitüsü, Elektrik Elektronik Mühendisliği, Turkey 2014 - 2021

Doctorate, Seoul National University Of Science And Technology, South Korea 2017 - 2018

Doctorate, University of Southampton, Electronics And Computer Science, Electronics And Computer Science, United Kingdom 2015 - 2015

Postgraduate, Högskola Dalarna (Dalarna University College), Faculty Of Energy And Environmental Engineering, Solar Energy Engineering, Sweden 2011 - 2011

### Foreign Languages

English, C1 Advanced

### Dissertations

Doctorate, Kesintisiz Güç Kaynaklarında Model Öngörülü Kontrol Uygulamaları, Karadeniz Technical University, Mühendislik Fakültesi, Elektrik-Elektronik, 2021

Postgraduate, Model Öngörülü Kontrol Yönteminin Örneklerle Karşılaştırmalı İncelenmesi, Karadeniz Technical University, Mühendislik Fakültesi, Elektrik-Elektronik, 2013

### Research Areas

Optimal Control, Electrical and Electronics Engineering, Direct Energy Conversion and Energy Storage, Renewable energy, Power Electronics, Electric Motor Drivers, Power Converters, System Dynamics and Control

### Academic Titles / Tasks

Research Assistant, Karadeniz Technical University, Mühendislik Fakültesi, Elektrik-Elektronik, 2012 - 2021

## Courses

Aydınlatma Tekniđi, Undergraduate, 2022 - 2023  
Lighting Techniques , Undergraduate, 2022 - 2023  
Mühendislik Optimizasyonu, Postgraduate, 2022 - 2023  
Drive Systems, Undergraduate, 2021 - 2022  
Güç Elektroniđi Uygulamaları, Undergraduate, 2022 - 2023  
Power Electronic Circuits, Undergraduate, 2022 - 2023  
Güç Elektroniđi Devreleri, Undergraduate, 2022 - 2023

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

- I. **Model Predictive Control of Uninterruptible Power Supply with Robust Disturbance Observer**  
Danayiyen Y., Lee K., Choi M., Lee Y. I.  
ENERGIES, vol.12, no.15, 2019 (SCI-Expanded)

## Articles Published in Other Journals

- I. **A Novel Fractional Order Proportional Integral-Fractional Order Proportional Derivative Controller Design Based on Symbiotic Organisms Search Algorithm for Speed Control of a Direct Current Motor**  
DANAYİYEN Y., DİNCER K., Nuhoglu Y.  
ELECTRICA, vol.24, pp.327-335, 2024 (ESCI)
- II. **MODEL PREDICTIVE CONTROL OF A DC-DC BUCK CONVERTER**  
Danayiyen Y., Altaş İ. H., Şahin E.  
SIGMA JOURNAL OF ENGINEERING AND NATURAL SCIENCES-SIGMA MUHENDISLIK VE FEN BILIMLERI DERGISI, vol.8, no.2, pp.91-97, 2017 (Peer-Reviewed Journal)

## Refereed Congress / Symposium Publications in Proceedings

- I. **Hidroelektrik Santral Modeli için PSO, GWO ve MA Optimizasyon Algoritmalarıyla Kesir Dereceli PID Denetleyici Tasarımı**  
Köse İ. H., Danayiye Y., Çavdar B.  
Akıllı Sistemlerde Yenilikler ve Uygulamaları Konferansı (ASYU), Sivas, Turkey, 11 - 13 October 2023
- II. **X-Band Pyramidal Horn Antenna Directivity Optimization with Symbiotic Organism Search Algorithm**  
SAĞ ÖRNEK R., ATEŞ O. K., BOĞA A. Y., DANAYİYEN Y.  
5th Global Power, Energy and Communication Conference (GPECOM), Nevşehir, Turkey, 14 - 16 June 2023, pp.519-523
- III. **Nonlinear Convergence Factor Based Grey Wolf Optimization Algorithm and Load Frequency Control**  
HOCAOĞLU G. S., ÇAVLI N., KILIÇ E., DANAYİYEN Y.  
5th Global Power, Energy and Communication Conference (GPECOM), Nevşehir, Turkey, 14 - 16 June 2023, pp.282-287
- IV. **A Comparative Study for Optimum Computation of PID Parameters Using Metaheuristic Algorithms in a DC-DC Buck Converter Application**  
Akay B., Danayiyen Y.  
13th International Istanbul Scientific Research Congresses, İstanbul, Turkey, 29 April 2023, pp.259-266
- V. **Karınca Kolonisi Optimizasyon Algoritması ile Bir AVR Sistemi için Optimum PID Denetleyici Tasarımı**  
Yurdusever T., Danayiyen Y.  
1th International Conference on Frontiers in Academic Research, Konya, Turkey, 18 - 21 February 2023, vol.1, pp.108-113
- VI. **Robust Discrete Time Disturbance Observer with Finite Control Set Model Predictive Control in UPS**

## System

Danayiyen Y., Altaş İ. H., Lee Y. I.

IFAC Workshop on Control of Smart Grid and Renewable Energy Systems (CSGRES), Jeju, South Korea, 10 - 12 June 2019, vol.52, pp.51-56

### VII. A Novel Robust Disturbance Observer for Uninterruptible Power Supplies

DANAYİYEN Y., LEE Y. I.

18th International Conference on Control, Automation and Systems (ICCAS 2018), Pyeongchang, South Korea, 17 - 20 October 2018, pp.44

### VIII. Güneş Paneli İle Beslenen Kesintisiz Güç Kaynağında Yük Akımının Model Öngörülü Kontrolü

Danayiyen Y., Altaş İ. H.

International Conference on Advanced Engineering Technologies, Bayburt, Turkey, 21 - 23 September 2017, pp.1408

### IX. Dalga/Ultra Kondansatör Enerji Sistemi için Bir DA-DA Artıran Çeviricinin Bulanık Mantık ile Denetimi

ŞAHİN E., ALTAŞ İ. H., DANAYİYEN Y.

Akıllı Sistemlerde Yenilikler ve Uygulamaları Sempozyumu (ASYU), Düzce, Turkey, 29 September - 01 October 2016, pp.158-163

### X. Alçaltan DA-DA Dönüştürücünün Model Öngörülü Kontrolü

DANAYİYEN Y., ALTAŞ İ. H., ŞAHİN E.

Akıllı Sistemlerde Yenilikler ve Uygulamaları Sempozyumu (ASYU2016), Düzce, Turkey, 29 September - 01 October 2016, pp.154-157

### XI. Laguerre Fonksiyonları Kullanarak DA Motor Hızının Sürekli Zamanlı Model Öngörülü Kontrolü

DANAYİYEN Y., ALTAŞ İ. H.

Akıllı Sistemlerde Yenilikler ve Uygulamaları Sempozyumu (ASYU2014), İzmir, Turkey, 9 - 10 October 2014, pp.41

### XII. Design of a fuzzy logic controller for a 2-DOF robot manipulator

AYAS M. Ş., DANAYİYEN Y., ALTAŞ İ. H.

Electronics, Computer and Computation (ICECCO), Ankara, Turkey, 7 - 09 November 2013, pp.265-268

### XIII. DESIGN OF A FUZZY LOGIC CONTROLLER FOR A 2-DOF ROBOT MANIPULATOR

AYAS M. Ş., DANAYİYEN Y., ALTAŞ İ. H.

10th International Conference on Electronics, Computer and Computation (ICECCO), Ankara, Turkey, 7 - 09 November 2013, pp.265-268

## Supported Projects

ATASOY A., SEVİM Y., HACIOĞLU G., ÖZKOP E., BENLİ E., TURHAL M., YAZGAN A., DANAYİYEN Y., ÖZTÜRK M., Project Supported by Higher Education Institutions, Yenilikçi Laboratuvar Yaklaşımlarının Elektrik Elektronik Mühendisliği Eğitimine Uygulanması, 2022 - Continues

Altaş İ. H., Ayas M. Ş., Baysal Y. A., Danayiyen Y., Özgenç B., TUBITAK Project, Grid/Load Integration of Photovoltaic Systems with shadow effect for Energy Continuity, 2023 - 2026

Danayiyen Y., Tüysüz M., Şahin E., Project Supported by Higher Education Institutions, Yeni Nesil Elektrikli Araç Teknolojilerine Yönelik Nitelikli Eleman Yetiştirilmesi için Bir Stüdyo Tarzı Laboratuvarın Tasarımı, 2023 - 2024

Altaş İ. H., Danayiyen Y., TUBITAK Project, Belirsizlik İçeren Kesintisiz Güç Kaynaklarında Model Öngörülü Kontrol Uygulamaları, 2019 - 2020

Altaş İ. H., TUBITAK Project, Şebeke Bağlantılı Fv Güneş Enerji Sistemine Sahip Konutlarda Akıllı Güç Tüketimi Ve Enerji Yönetimi, 2016 - 2018

## Memberships / Tasks in Scientific Organizations

IEEE Control System Society Membership, Member, 2019 - Continues, Turkey

Elektrik Mühendisleri Odası, Member, 2009 - Continues, Turkey

## Scientific Refereeing

INTERNATIONAL JOURNAL OF CONTROL, AUTOMATION AND SYSTEMS, SCI Journal, December 2022

INTERNATIONAL JOURNAL OF CONTROL, AUTOMATION AND SYSTEMS, SCI Journal, October 2022

INTERNATIONAL JOURNAL OF CONTROL, AUTOMATION AND SYSTEMS, SCI Journal, June 2022

INTERNATIONAL JOURNAL OF CONTROL, AUTOMATION AND SYSTEMS, SCI Journal, April 2022

IEEE TRANSACTIONS ON INDUSTRIAL ELECTRONICS, SCI Journal, January 2021

INTERNATIONAL JOURNAL OF CONTROL, AUTOMATION AND SYSTEMS, SCI Journal, September 2020

INTERNATIONAL JOURNAL OF CONTROL, AUTOMATION AND SYSTEMS, SCI Journal, May 2020

INTERNATIONAL JOURNAL OF CONTROL, AUTOMATION AND SYSTEMS, SCI Journal, April 2020

INTERNATIONAL JOURNAL OF HYDROGEN ENERGY, SCI Journal, March 2017

## Tasks In Event Organizations

Danayiyen Y., YENİLENEBİLİR ENERJİ SİSTEMLERİ KIŞ OKULU, Scientific Congress, Afyonkarahisar, Turkey, Ocak 2024

Danayiyen Y., RAYLI SİSTEMLER KONGRE VE SERGİSİ, Scientific Congress, Eskişehir, Turkey, Kasım 2023

## Scientific Research / Working Group Memberships

Cost Action Ca20109, Modular Energy Islands For Sustainability And Resilience (Modenerlands), COST-European Cooperation in Science and Technology, Portugal, <https://modenerlands.eu/>, 2022 - Continues

Ca21104 - Pan-European Network For Sustainable Hydropower (Pen@Hydropower), COST-European Cooperation in Science and Technology, Turkey, <https://www.pen-hydropower.eu/>, 2022 - Continues

Ca19108 - High-Temperature Superconductivity For Accelerating The Energy Transition, COST-European Cooperation in Science and Technology, Belgium, <https://www.cost.eu/>, 2020 - Continues

Digital Control System Laboratory (Dcsl), Seoul National University of Science and Technology, South Korea, <http://mpc.seoultech.ac.kr/>, 2017 - Continues

Power Energy And Control Research Laboratory, Karadeniz Technical University, Turkey, <http://www.powencon.com/>, 2014 - Continues

## Metrics

Publication: 16

Citation (WoS): 18

Citation (Scopus): 18

H-Index (WoS): 3

H-Index (Scopus): 3

## Congress and Symposium Activities

Control of Smart Grid and Renewable Energy Systems (CSGRES 2019), Attendee, Jeju-Si, South Korea, 2019

Dünya Enerji Konseyi Türk Milli Komitesi VI. Gençlik ve Enerji Çalıştayı, Attendee, Ankara, Turkey, 2013

## Scholarships

## **Non Academic Experience**

Serkan İnşaat

Sıkada Elektrik Tic. San. Ltd