Res. Asst. PhD BİLAL KARAMAN

Personal Information

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Education

Doctorate, Manisa Celal Bayar University, Lisansüstü Eğitim Enstitüsü, Lisansüstü Eğitim Enstitüsü, Turkey 2020 - 2026
Postgraduate, Manisa Celal Bayar University, Turkey 2017 - 2020
Undergraduate, Manisa Celal Bayar University, Turkey 2013 - 2017

Dissertations

Postgraduate, Akıllı şebekeler ve akıllı bina uygulamaları için wi-fi tabanlı yeni nesil elektrik sayacı tasarımı, Manisa Celal Bayar University, 2020

Research Areas

Avesis Research Areas: Communication Engineering
WoS Research Areas: Telecommunications
Scopus Research Areas: Signal Processing, Computer Networks and Communications

Academic Positions

Research Assistant, Manisa Celal Bayar University, Mühendislik Ve Doğa Bilimleri Fakültesi, Elektrik-Elektronik Mühendisliği, 2018 - Present

Articles

I. **HAPS-RIS-Assisted IoT Networks for Disaster Recovery and Emergency Response: Architecture, Application Scenarios, and Open Challenges**
KARAMAN B., BAŞTÜRK İ., ZEYDAN E., KARA F., AYCAN BEYAZIT E., TAŞKIN S., YANIKÖMEROĞLU H.
IEEE Internet of Things Magazine, vol.9, no.4, pp.37-44, 2026 (Scopus)

II. **Akıllı Yansıtıcı Yüzey Destekli MIMO Sistemlerinde Kanal Kapasitesi Analizi**
Bakbak H. E., Demirci O., Karaman B., Baştürk İ.
International Journal of 3D Printing Technologies and Digital Industry, vol.10, no.1, pp.225-233, 2026 (TRDizin)

III. **Proof of Genesis-Supported Blockchain and Resilience Networks for In-Disaster Scenarios**
Çay A., Özçevik M., Karaman B., Baştürk İ., Zeydan E., Taşkın S.

IEEE TRANSACTIONS ON NETWORK AND SERVICE MANAGEMENT, vol.1, pp.1-12, 2026 (SCI-Expanded, Scopus)

IV. **Solutions for Sustainable and Resilient Communication Infrastructure in Disaster Relief and Management Scenarios**
KARAMAN B., BAŞTÜRK İ., TAŞKIN S., Zeydan E., Kara F., Beyazıt E. A., Camelo M., Björnson E., Yanikomeroglu H.
IEEE Communications Surveys and Tutorials, vol.28, pp.716-760, 2026 (SCI-Expanded, Scopus)

V. **Forecasting day-ahead electricity prices for the electricity market with dynamic time period**
Özcan A. V., ÖZÇEVİK M., KARAMAN B., BAŞTÜRK İ., Zeydan E., TAŞKIN S., Çetinkaya Ü.
Energy, vol.338, 2025 (SCI-Expanded, Scopus)

VI. **On-Demand HAPS-Assisted Communication System for Public Safety in Emergency and Disaster Response**
Karaman B., Baştürk İ., Kara F., Zeydan E., Beyazıt E. A., Taşkın S., Björnson E., Yanikomeroglu H.
IEEE COMMUNICATIONS MAGAZINE, vol.63, no.12, pp.54-61, 2025 (SCI-Expanded, Scopus)

VII. **Enhancing Resiliency of Integrated Space-Air Ground-Sea Networks with Renewable Energies: A Use Case After the 2023 Türkiye Earthquake**
KARAMAN B., BAŞTÜRK İ., TAŞKIN S., Kara F., Zeydan E., Yanikomeroglu H.
IEEE Communications Magazine, vol.62, no.12, pp.104-111, 2024 (SCI-Expanded, Scopus)

VIII. **Plant water stress monitoring and control system**
Simbeye D. S., Mkiramweni M. E., KARAMAN B., TAŞKIN S.
Smart Agricultural Technology, vol.3, 2023 (Scopus)

IX. **Design and development of smart cover system for vineyards**
KARAMAN B., TAŞKIN S., Simbeye D. S., Mkiramweni M. E., Kurtoglu A.
Smart Agricultural Technology, vol.3, 2023 (Scopus)

X. **Design of Wi-Fi-based new generation electricity meter for smart grids and smart building applications**
KARAMAN B., TAŞKIN S.
PAMUKKALE UNIVERSITY JOURNAL OF ENGINEERING SCIENCES-PAMUKKALE UNIVERSITESI MUHENDISLIK BILIMLERI DERGISI, vol.29, no.6, pp.577-588, 2023 (ESCI, TRDizin)

XI. **Development of autonomous photovoltaic panel surface cleaning robot and analyzing of cleaning interval on energy efficiency**
KARAMAN B., TAŞKIN S.
PAMUKKALE UNIVERSITY JOURNAL OF ENGINEERING SCIENCES-PAMUKKALE UNIVERSITESI MUHENDISLIK BILIMLERI DERGISI, vol.28, no.2, pp.234-239, 2022 (ESCI, TRDizin)

Papers Presented at Peer-Reviewed Scientific Conferences

I. **HAPS-RIS or HAPS-Relay: Which Outperforms Under Impairments with NOMA in 6G NTN?**
KARAMAN B., Khennoufa F., BAŞTÜRK İ., ÖZTÜRK M., TAŞKIN S., YANIKÖMEROĞLU H.
IEEE Global Communications Conference (GLOBECOM), Macau, China, 21 September 2026, (Full Text)

II. **Energy- and Hardware-Efficient Phase-Shifter Sharing Architecture for HAPS–RIS Assisted Communication Systems**
KARAMAN B., BAŞTÜRK İ., TAŞKIN S.
34th Signal Processing and Communications Applications Conference (SIU), İstanbul, Turkey, 7 - 10 July 2026, (Full Text)

III. **On the Trade-Off Between Sum-Rate and EnergyEfficiency through the Convergence of HAPS andActive RIS Technologies**
Karaman B., Baştürk İ., Kara F., Öztürk M., Taşkın S., Yanıkömeroğlu H.
IEEE International Symposium on Personal, Indoor and Mobile Radio Communications, İstanbul, Turkey, 1 - 04 September 2025, (Full Text)

IV. **STAR Intelligent Reflecting Surfaces Enhanced Air Networks for 6G and Beyond: NOMA and OMA Performance Analysis**

KARAMAN B., BAŞTÜRK İ., TAŞKIN S.
2025 33rd Signal Processing and Communications Applications Conference (SIU), 25 - 28 June 2025, (Full Text)

V. **Performance Evaluation of Passive and Active Intelligent Reflecting Surfaces Assisted OMA and NOMA Systems**
KARAMAN B., BAŞTÜRK İ., TAŞKIN S.
2024 32nd Signal Processing and Communications Applications Conference (SIU), Mersin, Turkey, 15 - 18 May 2024, (Full Text)

VI. **Performance Evaluation of Passive and Active Intelligent Reflecting Surfaces Assisted OMA and NOMA Systems Pasif ve Aktif Akıllı Yansıtıcı Yüzey Destekli OMA ve NOMA Sistemlerinin Performans Değerlendirmesi**
KARAMAN B., BAŞTÜRK İ., TAŞKIN S.
32nd IEEE Conference on Signal Processing and Communications Applications, SIU 2024, Mersin, Turkey, 15 - 18 May 2024, (Full Text)

VII. **Wi-Fi Tabanlı Akıllı Enerji Ölçüm Modülü ve Mobil Takip Uygulaması Geliştirilmesi**
KARAMAN B., TAŞKIN S.
IV. GÜÇ VE ENERJİ SİSTEMLERİ SEMPOZYUMU, İzmir, Turkey, 16 - 19 October 2019, (Full Text)

VIII. **AUTONOMOUS PHOTOVOLTAIC PANEL CLEANING ROBOT**
KARAMAN B., TAŞKIN S., TOPRAK Y., TUNCER A.
MANİSA CELAL BAYAR UNIVERSITY, ÜSİTEM1. INTERNATIONAL UNIVERSITY INDUSTRY COOPERATION,RD AND INNOVATION CONGRESS, 18 - 19 December 2017, pp.10, (Summary Text)

Funded Projects

Taşkın S., Onat N., Demirci O., Baştürk İ., TUBITAK Project, 1505 - University-Industry Cooperation Support Program, Kurşun-Asit Akülere Yönelik Akıllı Durum İzleme Sensörü Tasarımı Ve Mobil Uygulama Geliştirilmesi, 2022 - 2024
ONAT N., BAŞTÜRK İ., DEMİRCİ O., TAŞKIN S., KURŞUN-ASİT AKÜLERE YÖNELİK AKILLI DURUM İZLEME SENSÖRÜ TASARIMI ve MOBİL UYGULAMA GELİŞTİRİLMESİ, 2021 - 2024
ONAT N., TAŞKIN S., Güneş Enerji Santralleri İçin Otonom FotoVoltaik panel Yüzey Temizleme Robotu Geliştirilmesi, 2018 - 2019
MAMUR H., KARAÇOR M., KARAMAN B., NİL M., Project Supported by Higher Education Institutions, BAP Infrastructure, Fırçasız Doğru Akım Motoru Hız Denetiminin Farklı Gömülü Sistem Yapıları ve Güç Anahtarlama Elemanlarıyla Gerçekleştirilmesi ve Burada Öğrenci Tepkilerinin Aynı Anda Ölçülmesi, 2018 - 2019
MAMUR H., KARAÇOR M., NİL M., KARAMAN B., Project Supported by Higher Education Institutions, Realization of brushless DC motor speed control with different embedded system structures and power switching devices and measuring student reactions at the same time, 2018 - 2019

Metrics

Publication: 19
Citation (WoS): 50
Citation (Scopus): 105
H-Index (WoS): 4
H-Index (Scopus): 5

Non Academic Experience

Carleton University, Visiting Researcher