

## **Res. Asst. Muhammet Ali KARABULUT**

### **Personal Information**

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### **International Researcher IDs**

ScholarID: 9WPgnyEAAAAJ

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Publons / Web Of Science ResearcherID: AAE-6976-2019

ScopusID: 56247329800

Yoksis Researcher ID: 34197

### **Education Information**

Doctorate, Yıldız Technical University, Faculty Of Electrical & Electronics, Electronics And Communication Engineering, Turkey 2015 - 2021

Postgraduate, Yıldız Technical University, Faculty Of Electrical & Electronics, Electronics And Communication Engineering, Turkey 2013 - 2015

Undergraduate, Hatay Mustafa Kemal University, Faculty Of Engineering, Turkey 2006 - 2010

### **Foreign Languages**

English, C1 Advanced

### **Dissertations**

Postgraduate, Çoklu Erişim Rôle Kanallarında Evre Uyumsuz İşbirlikli İletişim Teknikleri, Yıldız Teknik Üniversitesi, Fen Bilimleri, Elektronik Ve Haberleşme Mühendisliği / Haberleşme Anabilimdalı, 2015

### **Research Areas**

Electrical and Electronics Engineering, Engineering and Technology

### **Academic Titles / Tasks**

Research Assistant, Yıldız Technical University, Fen Bilimleri, Elektronik Ve Haberleşme Mühendisliği , 2013 - Continues

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

- I. **The impact of cooperative unmanned aerial vehicles communication under Nakagami-m fading channel**  
 Karabulut M. A., Shah A. F. M. S.  
 JOURNAL OF THE FACULTY OF ENGINEERING AND ARCHITECTURE OF GAZI UNIVERSITY, vol.38, no.4, pp.2095-2106, 2023 (SCI-Expanded)
- II. **Performance modeling and analysis of the IEEE 802.11 MAC protocol for VANETs**  
 Karabulut M. A., Shah A. S., İlhan H.  
 Journal Of The Faculty Of Engineering And Architecture Of Gazi University, vol.35, no.3, pp.1575-1587, 2020 (SCI-Expanded)
- III. **Performance Optimization of Cluster-Based MAC Protocol for VANETs**  
 Shah A. S., KARABULUT M. A., İLHAN H., Tureli U.  
 IEEE ACCESS, vol.8, pp.167731-167738, 2020 (SCI-Expanded)
- IV. **OEC-MAC: A Novel OFDMA Based Efficient Cooperative MAC Protocol for VANETs**  
 KARABULUT M. A., Shah A. S., İLHAN H.  
 IEEE ACCESS, vol.8, pp.94665-94677, 2020 (SCI-Expanded)
- V. **Performance analysis of multiple access relay channels for non-coherent modulations**  
 Karabulut M. A., Özdemir O., İlhan H.  
 PHYSICAL COMMUNICATION, vol.34, pp.1-8, 2019 (SCI-Expanded)

## Articles Published in Other Journals

- I. **A Study and Future Challenges in 6G Networks: Aeronautical Network, AI and Blockchain**  
 Karabulut M. A., Shah A. S.  
 Havacılık ve Uzay Teknolojileri Dergisi, vol.17, no.2, pp.122-138, 2024 (Peer-Reviewed Journal)
- II. **Terahertz Communication with MIMO-OFDM in FANETs for 6G**  
 Mustari N., Karabulut M. A., SHAH A. F. M. S., Tureli U.  
 Open Transportation Journal, vol.17, 2023 (Scopus)

## Books & Book Chapters

- I. **Performance Modeling and Analysis of the IEEE 802.11 EDCAF for VANETs**  
 Shah A. F. M. S., Karabulut M. A., İlhan H.  
 in: Intelligent Systems and Applications, Arai K., Kapoor S., Bhatia R., Editor, Springer International Publishi, Zug, pp.34-46, 2018
- II. **Çoklu Erişim Rôle Kanalında Evre Uyumsuz İletişim Teknikleri**  
 Karabulut M. A., İlhan H., Özdemir Ö.  
 Lambert Academic Publishing, İstanbul, 2017

## Refereed Congress / Symposium Publications in Proceedings

- I. **Improvement of performance with MIMO Enabled MAC Protocol for VANETs**  
 Karabulut M. A., Shah A. S., İlhan H.  
 IEEE The Innovations in Intelligent Systems and Applications Conference (ASYU), İstanbul, Turkey, 15 - 17 October 2020, pp.1-4
- II. **Performance analysis of virtual noise based cooperative communication systems**  
 Ayhan Y. E., Karabulut M. A., İlhan H.  
 IEEE 28th Signal Processing and Communications Applications Conference (IEEE SIU 2020), Gaziantep, Turkey, 5 - 07 October 2020, pp.1-4

- III. Performance analysis and power allocation for virtual noise based cooperative systems**  
Ayhan Y. E., Karabulut M. A., İlhan H.  
IEEE International Black Sea Conference on Communications and Networking (IEEE BLACKSEACOM), Odessa, Ukraine, 26 - 29 May 2020, pp.1-5
- IV. Performance of the CR-MAC with Channel Fading and Capture Effect under Practical Traffic Scenarios for VANETs**  
Karabulut M. A., Shah A. S., İlhan H.  
IEEE 10th Annual Ubiquitous Computing, Electronics Mobile Communication Conference (UEMCON), New York, United States Of America, 10 - 12 October 2019, pp.647-652
- V. Performance Optimization by Using Artificial Neural Network Algorithms in VANETs**  
Karabulut M. A., Shah A. S., İlhan H.  
IEEE 42nd International Conference on Telecommunications and Signal Processing (TSP), Budapest, Hungary, 1 - 03 July 2019, pp.633-636
- VI. CoMACAV: Cooperative MAC protocol for autonomous vehicles**  
Karabulut M. A., Shah A. S., İlhan H.  
IEEE International Symposium on Innovations in Intelligent Systems and Applications (INISTA), Sofija, Bulgaria, 3 - 05 July 2019, pp.1-5
- VII. CR-MAC: Cooperative relaying MAC protocol for VANETs**  
Karabulut M. A., Shahen Shah A. S., İlhan H.  
2019 Scientific Meeting on Electrical-Electronics and Biomedical Engineering and Computer Science, EBBT 2019, İstanbul, Turkey, 24 - 26 April 2019
- VIII. The Performance of the IEEE 802.11 DCF for Different Contention Window in VANETs**  
Karabulut M. A., Shahen Shah A. S., İlhan H.  
41st International Conference on Telecommunications and Signal Processing, TSP 2018, Athens, Greece, 4 - 06 July 2018
- IX. The effect of contention window size of the IEEE 802.11 dcf for VANETs VANET'ler için IEEE 802.11 DCF'in çekişme penceresi boyutu üzerindeki etkisi**  
Karabulut M. A., Shah A. S., İlhan H.  
26th IEEE Signal Processing and Communications Applications Conference, SIU 2018, İzmir, Turkey, 2 - 05 May 2018, pp.1-4
- X. The Effect of Co-channel Interference in DF Based MARC System with Relay Selection**  
Karabulut M. A., Aslan H., Özdemir Ö., İlhan H.  
IEEE 10th International Conference on Electrical and Electronics Engineering (ELECO), Bursa, Turkey, 30 November - 02 December 2017, pp.1-5
- XI. Performance modeling and analysis of the IEEE 802.11 DCF for VANETs**  
Karabulut M. A., Shahen Shah A. S., İlhan H.  
9th International Congress on Ultra Modern Telecommunications and Control Systems and Workshops, ICUMT 2017, Munich, Germany, 6 - 08 November 2017, pp.346-351
- XII. Effect of co-channel interference in MARC system Ortak Kanal Girişiminin MARC Sistemine Etkisi**  
Karabulut M. A., İlhan H.  
25th Signal Processing and Communications Applications Conference, SIU 2017, Antalya, Turkey, 15 - 18 May 2017
- XIII. Channel estimation by using ANN in DF based cooperative communication system**  
Karabulut M. A., Çukur H., İlhan H., Yıldırım T.  
National Conference on Electrical, Electronics and Biomedical Engineering (ELECO 2016), Bursa, Turkey, 01 December 2016 - 03 December 2017, pp.590-593
- XIV. Performance analysis of cooperative system with best relay selection in presence of co-channel interference**  
Aslan H., Karabulut M. A., İlhan H., Özdemir Ö.  
16th International Conference on Electronics, Information, and Communication (ICEIC 2017), Phuket, Thailand, 11 - 14 January 2017, pp.25-31
- XV. Relaying Selection Based Multiple Access Relay Channel**

- Karabulut M. A., Ozdemir O., İlhan H.  
24th Signal Processing and Communication Application Conference (SIU), Zonguldak, Turkey, 16 - 19 May 2016,  
pp.369-372
- XVI. **Link adaptive relaying with non-coherent BFSK and DPSK modulations in multiple access relay channels**  
Karabulut M. A., İlhan H., Ozdemir O.  
IEEE Wireless Telecommunications Symposium (WTS), New York, United States Of America, 15 - 17 April 2015,  
pp.1-5
- XVII. **Differential Modulation Based Network Coded Cooperative Communications**  
Karabulut M. A., İlhan H., Ozdemir O.  
23rd Signal Processing and Communications Applications Conference (SIU), Malatya, Turkey, 16 - 19 May 2015,  
pp.523-526
- XVIII. **Network Coded Noncoherent Cooperative Communications**  
Karabulut M. A., İlhan H., Ozdemir O.  
22nd IEEE Signal Processing and Communications Applications Conference (SIU), Trabzon, Turkey, 23 - 25 April  
2014, pp.943-946

## Supported Projects

İLHAN H., KARABULUT M. A., Project Supported by Higher Education Institutions, İşbirlikli Haberleşme Sistemleri İçin Ortam Erişim Kontrol MAC Protokolü Tasarımı ve Analizi, 2018 - 2021

İlhan H., TUBITAK Project, Hareketli küme tabanlı taşılarda ilişkin geçici ağlar (VANET) için etkin ve güvenilir işbirlikli MAC protokolü, 2019 - 2020

İlhan H., Karabulut M. A., Project Supported by Higher Education Institutions, Medium access control (MAC) protocol design and analysis for cooperative communication systems, 2018 - 2020

İlhan H., Karabulut M. A., Project Supported by Higher Education Institutions, Noncoherent communication techniques over multiple access relay channel, 2015 - 2016

## Memberships / Tasks in Scientific Organizations

IEEE, Member, 2014 - Continues, United States Of America

## Metrics

Publication: 28  
Citation (WoS): 38  
Citation (Scopus): 130  
H-Index (WoS): 4  
H-Index (Scopus): 6