

HACI İLHAN

PROF.

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Fakültesi, Elektronik ve Haberleşme Müh. Bölümü, Davutpaşa,
İstanbul



Biography

Dr. Hacı İLHAN received a B.Sc. degree in electronics and communication engineering from Yıldız Technical University, Istanbul, Turkey. The M.Sc. and the Ph.D. degree are all in electronics and communication engineering from Istanbul Technical University, Istanbul, Turkey. From 2001 to 2011 he was a research and teaching assistant in the communication department at Istanbul Technical University. Since 2011, he has been with the Department of Electronics and Communication, Yıldız Technical University, Istanbul Turkey, where he is a Professor Doctor. His general research interests lie in communications theory and signal processing for communications with particular emphasis on wireless applications. Specific research areas include cooperative communication, MIMO communication techniques, space-time coding, multicarrier communication, and MAC protocols for vehicular ad hoc networks. Dr. İlhan is a Senior Member of IEEE. He has been a TPC member for several IEEE conferences and a regular reviewer for various IEEE journals. He is married and has three children.

Learning Knowledge

Doctorate 2003 - 2011	Istanbul Technical University, Fen Bilimleri Enstitüsü, Department of Electronics and Communication, Turkey
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Foreign Languages

English, C1 Advanced

Academic Titles / Tasks

Professor 2022 - Continues	Yıldız Technical University, Faculty Of Electrical & Electronics, Electronics And Communication Engineering
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Associate Professor 2017 - 2022	Yıldız Technical University, Faculty Of Electrical & Electronics, Electronics And Communication Engineering
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Assistant Professor 2011 - 2017	Yıldız Technical University, Faculty Of Electrical & Electronics, Electronics And Communication Engineering
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Research Assistant 2002 - 2011	Istanbul Technical University, Elektrik-Elektronik, Elektronik Ve Haberleşme Mühendisliği
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Supported Projects

1. İlhan H., Kuru E., Taş F., Sah E. Z. , TUBITAK Project, Yapay Zeka ile Akıllı Park Sistemi, 2021 - 2021
2. İlhan H., Dinçer H. İ. , Yılmazoğlu Y., Bindak M. C. , TUBITAK Project, Akıllı Bisiklet Tasarımı, 2021 - 2021
3. 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
4. İlhan H., TUBITAK Project, An efficient and reliable cooperative MAC protocol for mobility aware cluster-based VANETs, 2019 - 2020
5. İlhan H., Shah A. S. , Project Supported by Higher Education Institutions, Novel cooperative MAC protocols for vehicular networks, 2018 - 2020
6. İlhan H., Al-Hayani B., Project Supported by Higher Education Institutions, Image transmission in cooperative wireless sensor networks, 2017 - 2019
7. İlhan H., Aslan H., Project Supported by Higher Education Institutions, The effect of co-channel interference on cooperative systems, 2016 - 2017
8. İlhan H., Karabulut M. A. , Project Supported by Higher Education Institutions, Noncoherent communication techniques over multiple access relay channel, 2015 - 2016
9. İlhan H., Aydın E., Project Supported by Higher Education Institutions, Spatial modulation based high performance relay systems, 2014 - 2016
10. İlhan H., Güçlüoğlu T., Özdemir Ö., TUBITAK Project, Complexity reduction methods and error performance analysis for cooperative/relay systems, 2013 - 2016
11. İlhan H., Akin A. I. , Project Supported by Higher Education Institutions, Relay selection in DF and AF relaying cooperative systems, 2013 - 2014
12. Altunbaş İ., TUBITAK Project, Channel coding and modulation techniques increasing performance in cooperative communications, 2007 - 2010

Awards

1. Shah A. S. , Karabulut M. A. , İlhan H., Türeli M. S. U. , GOLD award, The 32Nd International Invention, Innovation & Technology Exhibition (Itex) 2021, December 2021
2. Bulut İ. S. , İlhan H., En İyi Makale Ödülü, 2019 Ieee The Fourth International Conference On Information And Telecommunication Technologies And Radio Electronics (Ukrmico'2019), September 2019
3. Çöğen F., Aydın E., Başar E., İlhan H., Kabaoğlu N., Best Paper Award, Ieee 2018 41St International Conference On Telecommunications And Signal Processing (Tsp), July 2018
4. İlhan H., Best Paper Award, 2015 Tmber Conference On "Trends In Multidisciplinary Business & Economic Research" (Tmber 2015), March 2015
5. İlhan H., Altunbaş İ., Uysal M., Second Best Student Paper Award, 2008 Ieee 16Th Signal Processing, Communication And Applications Conference (Siu2008), April 2008
6. İlhan H., Lisans Bölüm İkinciliği, Yıldız Teknik Üniversitesi, June 1999

Published journal articles indexed by SCI, SSCI, and AHCI

1. **Optimized video internet of things using elliptic curve cryptography based encryption and decryption**
Alhayani B. S. , Hamid N., Almkhtar F. H. , Alkawak O. A. , Mahajan H. B. , Kwekha-Rashid A. S. , İlhan H., Marhoon H. A. , Mohammed H. J. , Chalooob I. Z. , et al.
COMPUTERS AND ELECTRICAL ENGINEERING, vol.101, pp.1-10, 2022 (Journal Indexed in SCI)
2. **Enhanced performance analysis with exact solutions for downlink-NOMA system in vehicular communications**
Bulut I. S. , İlhan H.

- VEHICULAR COMMUNICATIONS, vol.1, no.1, pp.1-9, 2022 (Journal Indexed in SCI Expanded)
3. **A Novel MIMO-OFDM Based MAC Protocol for VANETs**
Karabulut M. A. , Shah A. S. , İlhan H.
IEEE TRANSACTIONS ON INTELLIGENT TRANSPORTATION SYSTEMS, vol.1, no.1, pp.1-13, 2022 (Journal Indexed in SCI Expanded)
 4. **HP-DF SSK Method for UAVs Communication in Cooperative Multi-hop Rician Networks**
Tastan M. C. , İlhan H.
IEEE TRANSACTIONS ON VEHICULAR TECHNOLOGY, vol.1, no.1, pp.1-13, 2022 (Journal Indexed in SCI Expanded)
 5. **5G standards for the Industry 4.0 enabled communication systems using artificial intelligence: perspective of smart healthcare system**
Alhayani B., Kwekha-Rashid A. S. , Mahajan H. B. , İLHAN H., Uke N., Alkhayyat A., Mohammed H. J.
APPLIED NANOSCIENCE, 2022 (Journal Indexed in SCI)
 6. **Performance analysis of SSK modulation for UAVs communication**
Tastan M. C. , İLHAN H.
VEHICULAR COMMUNICATIONS, vol.31, 2021 (Journal Indexed in SCI)
 7. **Performance evaluation of RIS-based SSK and SM schemes with perfect and imperfect channel phase estimation over Weibull fading channels**
Salan O., Bayar F., İLHAN H.
AEU-INTERNATIONAL JOURNAL OF ELECTRONICS AND COMMUNICATIONS, vol.136, 2021 (Journal Indexed in SCI)
 8. **Energy Harvesting Optimization of Uplink-NOMA System for IoT Networks Based on Channel Capacity Analysis Using the Water Cycle Algorithm**
BULUT I. S. , İLHAN H.
IEEE TRANSACTIONS ON GREEN COMMUNICATIONS AND NETWORKING, vol.5, no.1, pp.291-307, 2021 (Journal Indexed in SCI)
 9. **Generalized Code Index Modulation and Spatial Modulation for High Rate and Energy-Efficient MIMO Systems on Rayleigh Block-Fading Channel**
Cogen F., AYDIN E., KABAOĞLU N., Basar E., İLHAN H.
IEEE SYSTEMS JOURNAL, vol.15, no.1, pp.538-545, 2021 (Journal Indexed in SCI)
 10. **Visual sensor intelligent module based image transmission in industrial manufacturing for monitoring and manipulation problems**
Alhayani B. S. A. , İLHAN H.
JOURNAL OF INTELLIGENT MANUFACTURING, vol.32, no.2, pp.597-610, 2021 (Journal Indexed in SCI)
 11. **Survey and Performance Evaluation of Multiple Access Schemes for Next-Generation Wireless Communication Systems**
SHAH A. S. , Qasim A. N. , KARABULUT M. A. , İLHAN H., Islam M. B.
IEEE ACCESS, vol.9, pp.113428-113442, 2021 (Journal Indexed in SCI)
 12. **C-MRC-based cooperative spatial modulation with antenna selection**
AYDIN E., Basar E., İLHAN H., KABAOĞLU N.
INTERNATIONAL JOURNAL OF COMMUNICATION SYSTEMS, vol.33, no.17, 2020 (Journal Indexed in SCI)
 13. **End-to-end SER of MRT/MRC and SC in multi-hop wireless sensor networks**
İlhan H.
WIRELESS NETWORKS, vol.26, no.6, pp.3985-3995, 2020 (Journal Indexed in SCI)
 14. **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 (Journal Indexed in SCI Expanded)
 15. **Efficient cooperative image transmission in one-way multi-hop sensor network**
Al-Hayani B., İlhan H.
International Journal Of Electrical Engineering Education, vol.57, no.4, pp.321-339, 2020 (Journal Indexed in SCI Expanded)
 16. **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 (Journal Indexed in SCI)
17. **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 (Journal Indexed in SCI)
 18. **Image Transmission Over Decode and Forward Based Cooperative Wireless Multimedia Sensor Networks for Rayleigh Fading Channels in Medical Internet of Things (MIoT) for Remote Health-Care and Health Communication Monitoring**
Al Hayani B., İLHAN H.
JOURNAL OF MEDICAL IMAGING AND HEALTH INFORMATICS, vol.10, no.1, pp.160-168, 2020 (Journal Indexed in SCI)
 19. **RECV-MAC: a novel reliable and efficient cooperative MAC protocol for VANETS**
Shah A. S. , İlhan H., Türeli M. S. U.
IET COMMUNICATIONS, vol.13, no.16, pp.2541-2549, 2019 (Journal Indexed in SCI)
 20. **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 (Journal Indexed in SCI)
 21. **CB-MAC: a novel cluster-based MAC protocol for VANETS**
SHAH A. S. , İLHAN H., Tureli U.
IET INTELLIGENT TRANSPORT SYSTEMS, vol.13, no.4, pp.587-595, 2019 (Journal Indexed in SCI)
 22. **Exact Closed-Form Solution for Detection Probability in Cognitive Radio Networks With Switch-and-Examine Combining Diversity**
Namdar M., İlhan H.
IEEE TRANSACTIONS ON VEHICULAR TECHNOLOGY, vol.67, pp.8215-8222, 2018 (Journal Indexed in SCI)
 23. **The performance of MIMO system using MRT scheme in vehicular systems**
İLHAN H.
INTERNATIONAL JOURNAL OF COMMUNICATION SYSTEMS, vol.30, no.9, 2017 (Journal Indexed in SCI)
 24. **Optimal Detection Thresholds in Spectrum Sensing with Receiver Diversity**
Namdar M., İLHAN H., Durak-Ata L.
WIRELESS PERSONAL COMMUNICATIONS, vol.87, no.1, pp.63-81, 2016 (Journal Indexed in SCI)
 25. **A Novel SM-Based MIMO System With Index Modulation**
Aydin E., İLHAN H.
IEEE COMMUNICATIONS LETTERS, vol.20, no.2, pp.244-247, 2016 (Journal Indexed in SCI)
 26. **A novel LMS-BLM algorithm for AF relays based cooperative wireless networks**
Gatera O., İLHAN H., Kayran A. H.
AEU-INTERNATIONAL JOURNAL OF ELECTRONICS AND COMMUNICATIONS, vol.70, no.11, pp.1480-1488, 2016 (Journal Indexed in SCI)
 27. **OFDM based link adaptive one-way DF relaying**
Yildirim M., İlhan H.
AEU-INTERNATIONAL JOURNAL OF ELECTRONICS AND COMMUNICATIONS, vol.70, no.5, pp.657-661, 2016 (Journal Indexed in SCI)
 28. **Performance Analysis of Cooperative Vehicular Systems with Co-channel Interference Over Cascaded Nakagami-m Fading Channels**
İLHAN H.
WIRELESS PERSONAL COMMUNICATIONS, vol.83, no.1, pp.203-214, 2015 (Journal Indexed in SCI)
 29. **Relay selection for DF-based cooperative vehicular systems**
Akin A. I. , İLHAN H., Ozdemir O.
EURASIP JOURNAL ON WIRELESS COMMUNICATIONS AND NETWORKING, 2015 (Journal Indexed in SCI)
 30. **Relay Selection in Two-Way Cooperative Systems**
İlhan H.
WIRELESS PERSONAL COMMUNICATIONS, vol.77, no.2, pp.1329-1341, 2014 (Journal Indexed in SCI)

31. **Dispersed chirp-z transform-based spectrum sensing and utilisation in cognitive radio networks**
Namdar M., İLHAN H., Durak-Ata L.
IET SIGNAL PROCESSING, vol.8, no.4, pp.320-329, 2014 (Journal Indexed in SCI)
32. **Performance Analysis of Two-Way AF Relaying Systems Over Cascaded Nakagami-m Fading Channels**
Ilhan H.
IEEE SIGNAL PROCESSING LETTERS, vol.19, no.6, pp.332-335, 2012 (Journal Indexed in SCI)
33. **Moment generating function-based performance evaluation of amplify-and-forward relaying in N*Nakagami fading channels**
Ilhan H., Altunbaş İ., Uysal M.
IET COMMUNICATIONS, vol.5, no.3, pp.253-263, 2011 (Journal Indexed in SCI)
34. **Novel Distributed Space-Time Trellis Codes for Relay Systems over Cascaded Rayleigh Fading**
Ilhan H., Altunbaş İ., Uysal M.
IEEE COMMUNICATIONS LETTERS, vol.14, no.12, pp.1140-1142, 2010 (Journal Indexed in SCI)
35. **Cooperative Diversity for Intervehicular Communication: Performance Analysis and Optimization**
Ilhan H., Uysal M., Altunbaş İ.
IEEE TRANSACTIONS ON VEHICULAR TECHNOLOGY, vol.58, no.7, pp.3301-3310, 2009 (Journal Indexed in SCI)

Articles Published in Other Journals

1. **UAV-Assisted NOMA-Based Network with Alamouti Space-Time Block Coding**
Yılmaz T., Ayrancı A., Bacanlı E., İlhan H.
Politeknik Dergisi, vol.24, pp.1-10, 2021 (Journal Indexed in ESCI)
2. **Spectrum Sensing Performance for Cognitive Radio Networks with GFDM Modulation over Nakagami-m fading Channel**
ALHASAANI N., NAMDAR M., İLHAN H., SERBES A.
International Journal of Scientific Engineering Research-IJSER, vol.8, pp.1298-1302, 2017 (Refereed Journals of Other Institutions)
3. **Hyper spectral image classification using dimensionality reduction techniques**
Alhayani B., İlhan H.
International Journal of Innovative Research in Electrical, Electronics, Instrumentation and Control Engineering, vol.5, no.4, pp.71-74, 2017 (Refereed Journals of Other Institutions)
4. **Performance analysis of differential BLM detector in AF relay networks with time varying channels**
Gatera O., İLHAN H., Kayran A. H.
International Journal of Computing and Information Sciences, vol.12, pp.213-219, 2016 (Refereed Journals of Other Institutions)

Books & Book Chapters

1. **qCB-MAC: QoS Aware Cluster-Based MAC Protocol for VANETs**
SHAH A. F. M. S. , İLHAN H., TÜRELİ M. S. U.
in: Intelligent Computing, Arai K., Kapoor S., Bhatia R. , Editor, Springer International Publishi, Cham, İsvicre, pp.685-695, 2019
2. **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
3. **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

1. **Deep Convolutional Neural Networks-Based Sign Language Recognition System**
Yemenoğlu İ. H. , Shah A. S. , İlhan H.
The 12th Annual IEEE Information Technology, Electronics and Mobile Communication Conference (IEEE IEMCON 2021), Vancouver, Canada, 27 - 30 October 2021, pp.1-4
2. **Error performance of magic square based generalized SM for UAV communication**
İlhan H., Taştan M. C.
2021 IEEE International Conference on Problems of Infocommunications Science and Technology, Kharkiv, Ukraine, 5 - 07 October 2021, pp.1-6
3. **Performance of Downlink NOMA Network Using Space-Time Line Coding Technique**
Yılmaz T., Ayrancı A. A. , İlhan H.
IEEE SIU 2021, İstanbul, Turkey, 9 - 11 June 2021, pp.1-4
4. **Performance of Deep Learning Methods in DF Based Cooperative Communication Systems**
Akdemir B., Karabulut M. A. , İlhan H.
IEEE International Black Sea Conference on Communications and Networking (BlackSeaCom 2021), Bucuresti, Romania, 24 - 27 May 2021, pp.1-6
5. **Performance evaluation of QSM technique with imperfect channel estimation over double Nakagami-m fading channels**
İlhan H., Bayar F.
14th International Conference on Signal Processing and Communication Systems (ICSPCS 2020), Adelaide, Australia, 14 - 16 December 2020, pp.1-5
6. **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
7. **Performance of Alamouti STBC-NOMA scheme employing different transmit antenna selection strategies**
Kartal M. Z. , Coşkun A. F. , Solak V., İlhan H.
IEEE 28th Signal Processing and Communications Applications Conference (IEEE SIU 2020), Gaziantep, Turkey, 5 - 07 October 2020, pp.1-4
8. **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
9. **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
10. **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
11. **Yazılım Yaşam Döngüsünde Testin Önemi ve Selenium Kullanılarak Bir Test Otomasyonunun Gerçekleştirilmesi**
Nalbant E., İlhan H.
5th International Congress on Engineering, Architecture and Design, İstanbul, Turkey, 21 - 22 December 2019, pp.308-314
12. **Performance analysis of NOMA in drone communication**
Ayrancı A., Bacanlı E., İlhan H.

11th International Conference on Electrical and Electronics Engineering, Bursa, Turkey, 27 - 30 November 2019, pp.1-5

13. **Performance and Complexity Analysis of MAC Protocol for VANETs**
Shah A. S. , İLHAN H., TÜRELİ M. S. U.
2019 IEEE 10th Annual Information Technology, Electronics and Mobile Communication Conference (IEMCON), Vancouver, BC, Canada, 17 - 19 October 2019
14. **Designing and analysis of IEEE 802.11 MAC for UAVs Ad Hoc Networks**
Shah A. S. , İlhan H., Türeli M. S. U.
The 10 th IEEE Annual Ubiquitous Computing, Electronics & Mobile Communication Conference (IEEE UEMCON 2019), New-York, United States Of America, 10 - 12 October 2019, pp.1-5
15. **Cloud based vehicle and traffic information sharing application architecture for industry 4.0 (IoT)**
Bulut İ. S. , İlhan H.
The Fourth International Conference on Information and Telecommunication Technologies and Radio Electronics (UkrMiCo'2019), Odesa, Ukraine, 9 - 13 September 2019, pp.1-7
16. **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
17. **Modeling and performance analysis of the IEEE 802.11 MAC for VANETs under channel fading and capture effect**
Shah A. F. M. S. , İLHAN H., TÜRELİ M. S. U.
International Symposium on Innovations in Intelligent Systems and Applications (INISTA), Sofya, Bulgaria, 03 July 2019, pp.1-5
18. **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
19. **Modeling and performance analysis of the IEEE 802.11p MAC for VANETs**
Shah A. F. M. S. , İLHAN H., TÜRELİ M. S. U.
42nd International Conference on Telecommunications and Signal Processing (TSP), Budapeşte, Hungary, 01 June 2019, pp.1-4
20. **Modeling and performance analysis of the IEEE 802.11 MAC for VANETs under capture effect**
Shah A. S. , İLHAN H., TÜRELİ M. S. U.
IEEE Wireless and Microwave Technology Conference (WAMICON 2019), Florida, United States Of America, 08 April 2019, pp.1-5
21. **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
22. **Design and reliability analysis of an electronic board in safety-related applications for lifts**
Karabayır F., Kaymakçı Ö. T. , İlhan H.
6th International Conference on Control & Signal Processing, Tunis, Tunisia, 30 - 31 March 2019, pp.1-5
23. **On analysis of signal detection in relays networks over time-varying Rayleigh channels**
Gatera O., Sibomana L., İLHAN H., Kayran A. H.
International Conference on Communications, Signal Processing, and Their Applications (IEEE ICCSPA), Sharjah, United Arab Emirates, 19 March 2019, pp.1-5
24. **Creating secure and performance software-defined networks with artificial intelligence**
Cakmak F., İLHAN H.
4th International Scientific Research Congress, Yalova, Turkey, 14 February 2019, pp.265-276
25. **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

26. **QoS aware cluster-based MAC protocol for VANETs**
Shah A. F. M. S. , İLHAN H., TÜRELİ M. S. U.
IEEE Technically Sponsored Computing Conference 2018, United Kingdom, 10 - 12 July 2018
27. **Code index modulation and spatial modulation: A new high rate and energy efficient scheme for MIMO systems**
Çöğen F., Aydın E., Kabaoğlu N., Başar E., İLHAN H.
IEEE 41st International Conference on Telecommunications and Signal Processing (IEEE TSP 2018) (Best Paper Award), Atina, Greece, 04 July 2018, pp.1-4
28. **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
29. **Efficient cooperative image transmission in one way multi-hop sensor network**
Alhayani B., İLHAN H.
International Conference on Emerging Trends in Science Engineering and Technology (ICETSET-18), Pune, India, 08 May 2018, pp.1-12
30. **A novel MIMO scheme based on code-indexmodulation and spatial modulation**
Çöğen F., Aydın E., Kabaoğlu N., Başar E., İlhan H.
26th Signal Processing and Communications Applications Conference (SIU), İzmir, Turkey, 02 May 2018, pp.1-4
31. **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
32. **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
33. **Energy detection of spectrum sensing for cognitive radio networks using GFDM modulation**
Al-Hasaani N. A. , Namdar M., İLHAN H.
The 10th International Conference on Electrical and Electronics Engineering (IEEE ELECO2017), Bursa, Turkey, 30 November 2017, pp.1-5
34. **On-Line energy management strategy for hybrid electric vehicles based on AMPC**
Jun M., Shah A., Baysal M., İlhan H.
The 10th International Conference on Electrical and Electronics Engineering (IEEE ELECO2017), Bursa, Turkey, 30 November - 02 December 2017, pp.1-5
35. **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
36. **Error performance of LDPC coded spatial. Modulation technique LDPC Kodlamalı Uzaysal Modülasyon Tekniğinin Hata Performansı**
Bayar F., İLHAN H.
25th Signal Processing and Communications Applications Conference, SIU 2017, Antalya, Turkey, 15 - 18 May 2017
37. **Outage performance of a SIMO HP-DF cooperative multi-hop network**
Taştan M. C. , İLHAN H., Aygölü Ü.
IEEE International Black Sea Conference on Communications and Networking (IEEE BlackSeaCom), İstanbul, Turkey, 05 June 2017, pp.20-26
38. **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

39. **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
40. **Performance analysis of differential BLM detector in AF relay networks with time varying channels**
Gatera O., İLHAN H., KAYRAN A. H.
The International Conference on Computer and Applications, 14 - 15 September 2016
41. **LMS-BLM receiver in AF based cooperative relay networks**
Gatera O., Kayran A. H. , İLHAN H.
18th Mediterranean Electrotechnical Conference, MELECON 2016, Limassol, Cyprus (Gkry), 18 - 20 April 2016
42. **ROC analysis of BLM detector in AF relays based cooperative wireless networks**
Gatera O., İlhan H., Kayran A. H.
2016 International Conference on Sustainable Energy, Environment and Information Engineering, Buri-Ram, Thailand, 20 - 21 March 2016, pp.1-5
43. **Virtual Noise Based Detection in Cooperative Systems with Co-Channel Interference**
Aslan H., İLHAN H., Ozdemir O.
24th Signal Processing and Communication Application Conference (SIU), Zonguldak, Turkey, 16 - 19 May 2016, pp.557-560
44. **Relaying Selection Based Multiple Access Relay Channel**
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2008 IEEE 16th Signal Processing, Communication and Applications Conference, SIU, Aydın, Turkey, 20 - 22 April 2008
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ELECO, Bursa, Turkey, 6 - 10 December 2006, pp.1-5

Academic and Administrative Experience

2013 - 2013	Deputy Head of Department	Yildiz Technical University, Faculty of Electrical & Electronics, Electronics And Communication Engineering
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Courses

Multidisciplinary Project, Undergraduate, 2018 - 2019, 2019 - 2020

Information Theory, Doctorate, 2012 - 2013, 2013 - 2014, 2014 - 2015, 2015 - 2016, 2016 - 2017, 2018 - 2019, 2019 - 2020

Design Project, Undergraduate, 2018 - 2019, 2019 - 2020

Graduation Project, Undergraduate, 2018 - 2019

Digital Communication Systems, Postgraduate, 2015 - 2016, 2016 - 2017, 2018 - 2019

Haberleşme I, Undergraduate, 2019 - 2020

Field Course (Master), Postgraduate, 2012 - 2013, 2013 - 2014, 2014 - 2015, 2015 - 2016, 2016 - 2017, 2017 - 2018, 2018 - 2019, 2019 - 2020

Communication 1, Undergraduate, 2019 - 2020

Field Course (Doctorate), Doctorate, 2012 - 2013, 2013 - 2014, 2014 - 2015, 2015 - 2016, 2016 - 2017, 2017 - 2018, 2018 - 2019, 2019 - 2020

Fundamentals of Digital Communication Systems, Undergraduate, 2017 - 2018

Communication 2, Undergraduate, 2015 - 2016, 2016 - 2017, 2017 - 2018

Graduation Project, Undergraduate, 2014 - 2015, 2015 - 2016, 2016 - 2017

Probability Theory, Undergraduate, 2014 - 2015, 2016 - 2017

Probability Theory, Undergraduate, 2016 - 2017

Fundamentals of Digital Communication Systems, Undergraduate, 2016 - 2017

Design Project, Undergraduate, 2015 - 2016, 2016 - 2017

Communication 2, Undergraduate, 2013 - 2014, 2015 - 2016

Communication 1, Undergraduate, 2013 - 2014, 2014 - 2015, 2015 - 2016, 2016 - 2017

Communication Lab., Undergraduate, 2013 - 2014

Signal and Systems, Undergraduate, 2014 - 2015

Digital Communications, Undergraduate, 2011 - 2012, 2012 - 2013, 2013 - 2014

Communication Circuit Design, Undergraduate, 2011 - 2012, 2012 - 2013, 2013 - 2014

Graduation Thesis / Project, Undergraduate, 2011 - 2012, 2012 - 2013, 2013 - 2014

Electronic and Communication Lab., Undergraduate, 2011 - 2012, 2012 - 2013

Professional English, Undergraduate, 2012 - 2013

Communication Systems, Undergraduate, 2011 - 2012

Analog Communication, Undergraduate, 2012 - 2013

Advising Theses

Ilhan H., Dik Olmayan Çoklu Erişim Sistemlerinin Performans Analizi, Doctorate, İ.SERHAT(Student), 2022

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İlhan H., Investigation of Performance of Space Time Coding Techniques in Communication Systems Based on Non-Orthogonal Multiple Access Technique, Postgraduate, T.Yılmaz(Student), 2021

İlhan H., İşbirliğine Dayalı Ortam Erişim Kontrol Protokolü Tasarımı ve Analizi, Doctorate, M.ALİ(Student), 2021

İlhan H., Performance Affect of Power Allocation over Decode and Forward Method Based Cooperative Transmission Systems, Postgraduate, Y.EMRE(Student), 2020

İlhan H., Index Modulation from multiple antenna transmission techniques and their applications, Postgraduate, F.BAYAR(Student), 2020

İlhan H., GÜVENLİK POLİTİKALARI VE SERVİS ZİNCİRİ MEKANİZMASIYLA YAZILIM TANIMLI AĞLARDA PERFORMANS ANALİZİ, Postgraduate, F.FATİH(Student), 2020

İlhan H., Energy-efficient secure cooperative based image transmission in wireless sensor networks using different system models, Doctorate, B.SALİH(Student), 2020

İlhan H., Yazılım Yaşam Döngüsünde Testin Önemi ve Bir Test Otomasyonunun Gerçekleştirilmesi, Postgraduate, E.DURSUNÜSTÜN(Student), 2020

İlhan H., Designing and performance analysis of efficient and reliable medium access control protocols for vehicular ad hoc networks, Doctorate, A.F(Student), 2020

İlhan H., Kaymakçı Ö. T. , An electronic board design for a safety related lift application and Its reliability analysis, Postgraduate, F.Karabayır(Student), 2019

İlhan H., Sanal Özel Ağ Servislerinde Yedeklilik Teknikleri ve Uygulamaları, Postgraduate, D.ATBAN(Student), 2019

İlhan H., Özdemir Ö., Effect of co-channel interference in cooperative systems, Postgraduate, H.ASLAN(Student), 2016

İlhan H., Spatial modulation based high performance relay systems, Doctorate, E.AYDIN(Student), 2016

İlhan H., Özdemir Ö., Noncoherent cooperative communication techniques in multiple access relay channels, Postgraduate, M.Ali(Student), 2015

Durak Ata L., İlhan H., Dispersed spectrum sensing and receiver diversity techniques in cognitive radio networks, Doctorate, M.NAMDAR(Student), 2014

İlhan H., Özdemir Ö., Link adaptive relaying with virtual noise based detection in cooperative wireless networks, Postgraduate, A.BOZDAĞ(Student), 2013

İlhan H., Relay selection in AF and DF based cooperative systems, Postgraduate, A.ipek(Student), 2013

Activities in Scientific Journals

Turk J Elec Eng & Comp Sci, Editor, 2015 - Continues

Memberships / Tasks in Scientific Organizations

IEEE, Member, 2007 - Continues

Scientific Refereeing

Peer-to-Peer Networking and Applications , SCI Journal, Continues

IEEE Transactions on Communications, SCI Journal, Continues

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Research Areas

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