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Education Information

Doctorate, Middle East Technical University, Faculty Of Engineering, Elektrik-Elektronik Mühendisliği Bölümü, Turkey 2000 - 2005

Postgraduate, Rice University, School Of Engineering-Department Of Electrical And Computer Engineering, Electrical and Computer Engineering, United States Of America 1997 - 1999

Undergraduate, University of Southern California, School Of Engineering-Electrical Engineering Department, Electrical Engineering, United States Of America 1993 - 1997

Dissertations

Doctorate, Generalized Random Spreading Performance Analysis of CDMA over GWSSUS Fading Channels, Middle East Technical University, Faculty Of Engineering, Department Of Electrical And Electronics Engineering, 2005

Postgraduate, Real-Time Prefetching and Buffer Management for Paralel Multimedia I/O Systems, Rice University, School Of Engineering-Department Of Electrical And Computer Engineering, 1999

Research Areas

Communication Engineering

Academic Titles / Tasks

Professor, Gazi University, Mühendislik Fakültesi, Elektrik - Elektronik Mühendisliği, 2023 - Continues

Associate Professor, Gazi University, Mühendislik Fakültesi, Elektrik - Elektronik Mühendisliği, 2015 - 2023

Assistant Professor, Gazi University, Mühendislik Fakültesi, Elektrik - Elektronik Mühendisliği, 2007 - 2015
Lecturer, Gazi University, Mühendislik Fakültesi, Elektrik - Elektronik Mühendisliği, 2006 - 2007
Research Assistant, Middle East Technical University, Faculty Of Engineering, Elektrik-Elektronik Mühendisliği Bölümü, 2000 - 2006
Research Assistant, Rice University, Elektrik Ve Bilgisayar Mühendisliği, 1997 - 1999
Student, University of Southern California, Viterbi School of Engineering, Ming-Hsieh Electrical Engineering, 1994 - 1997

Academic and Administrative Experience

Internship Coordinator, Gazi University, Mühendislik Fakültesi, Elektrik - Elektronik Mühendisliği, 2020 - Continues Education and Curriculum Board Member, Gazi University, Mühendislik Fakültesi, Elektrik - Elektronik Mühendisliği, 2013 - 2019
Gazi University, Mühendislik Fakültesi, Elektrik-Elektronik Mühendisliği Bölümü, 2015 - 2016
Accreditation, Continuous Improvement, and Renewal Board Member, Gazi University, Mühendislik Fakültesi, Elektrik - Elektronik Mühendisliği, 2008 - 2012
Internship Coordinator, Gazi University, Mühendislik Fakültesi, Elektrik - Elektronik Mühendisliği, 2007 - 2012

Courses

EEE581 Advanced Digital Communications, Postgraduate
EEE492 Electrical Engineering Design II, Undergraduate
EEE584 Wireless Communications, Postgraduate
EEE441 Communication Systems I, Undergraduate
EEE491 Electrical Engineering Design I, Undergraduate
EEE442 Communication Systems II, Undergraduate

Advising Theses

Ertuğ Ö., A Comparative Performance Analysis of GPS Position Estimation Methods, Postgraduate, N.Gürcan(Student), 2024
Ertuğ Ö., Performance analysis of ambient backscatter communication based cognitive radio networks, Doctorate, M.Yusuf(Student), 2023
Ertuğ Ö., Variable Transmitter-Receiver Antenna Selection for MIMO NOMA in Wireless Networks, Doctorate, B.Demiral(Student), 2023
Savaşçihabeş A., Ertuğ Ö., Görünür Işık Haberleşmesinde M-CSK Modüleli Flip-Ofdm İletişim Sistemleri, Postgraduate, M.Tekin(Student), 2022
Ertuğ Ö., Comparative Performance Analysis of PRIME-PLC- and G4-PLC for PLC-AMR , Postgraduate, E.Bayram(Student), 2021
Ertuğ Ö., Compressed Sensing Based Multuser Detection For Sparse Code Multiple Access, Doctorate, M.Hakan(Student), 2021
Ertuğ Ö., Adaptive Modulation-Coding For Q-Band Satellite Channel Model, Postgraduate, E.Bastırmacı(Student), 2021
Ertuğ Ö., Tıbbi Nesnelerde İki Yönlü İnternet İletişiminde Bit Hata Oranının İyileştirilmesi, Postgraduate, N.Alkhan(Student), 2021
Ertuğ Ö., GNS3 Emülasyonu ile IPV4'ten IPV6 ya Geçiş: Bir Vaka Çalışması Olarak Yemen PTE, Postgraduate, A.Hamood(Student), 2021
Ertuğ Ö., Adaptive Frequency Domain Equalizer Design For Sc-Fde, Doctorate, N.Hakan(Student), 2020
Ertuğ Ö., BER/SNR Analysis According To Cable Length And Line Impedance Values In Low Voltage Power Line Communication, Postgraduate, T.Başayar(Student), 2020

Ertuğ Ö., Improving the Transmission of UWB MB-OFDM System using Adaptive Modulation, Postgraduate, M.Alboğa(Student), 2020

Ertuğ Ö., Bit Error Rate Minimizing And Capacity Maximizing Code Space Multiplexing Method With Receiver Transmitter Antenna Selection, Doctorate, M.Civil(Student), 2020

Ertuğ Ö., The Effects Of Jammers On LTE/LTE-A Downlink Physical Layer, Postgraduate, G.Kısa(Student), 2018

Ertuğ Ö., Adaptive Nonlinear Multuser Detection Using Innovative Algorithms In SDMA-OFDM Systems, Postgraduate, U.Yeşilyurt(Student), 2018

Ertuğ Ö., Adaptive Modulation Coding MIMO-OFDM Spatial Multiplexing Based Broadband Powerline Communication, Postgraduate, G.Karaarslan(Student), 2018

Ertuğ Ö., Analysis Of The Bit Error Rate Of M-PSK Systems Using LMMSE Channel Estimation And MRC/EGC Diversity Combining Over Ricean-Fading Channels, Postgraduate, S.Musazade(Student), 2016

Ertuğ Ö., On The Design And Performance Analysis Of FH-TTC-CPM-FDE Waveform High Frequency Communications, Postgraduate, P.Ebrahimpour(Student), 2016

Ertuğ Ö., Minimum Bit-Error-Rate Linear Multiuser Detector for Time-Varying and Frequency-Selective Fading DS-CDMA Channels, Doctorate, M.Zeybek(Student), 2013

Ertuğ Ö., Capacity Improvement in MimoOofdm WLAN Systems Using Compact Multimode Antenna Arrays and Antenna Selection, Doctorate, A.Yavanoğlu(Student), 2013

Ertuğ Ö., Performance Improvement of Single Code Cyclic Shift (SCCS) Multiuser Detector by Using Turbo Coding and Multiple Antenna Receive Diversity over Multipath Fading Channels for Synchronous DS-CDMA Systems, Postgraduate, S.Gündoğan(Student), 2013

Ertuğ Ö., Performance Analysis of SC-FDMA Uplink Communication Systems using Multiple Carrier Frequency Offset Synchronization with Null Subcarriers, Postgraduate, M.Anıl(Student), 2013

Ertuğ Ö., Çok Giriş Çok Çıkış Çoklu Taşıyıcılı Kod Bölmeli Çoklu Erişim ve Çok Giriş Çok Çıkış Uzak Zaman Kodlama Dik Frekans Bölmeli Çoklu Erişim Sistemleri Performans Analizi, Postgraduate, A.Aslan(Student), 2012

Ertuğ Ö., Analysis of Adaptive Modulated & Turbo Coded OFDM Systems Under Imperfect Channel Estimation, Postgraduate, M.Civil(Student), 2012

Ertuğ Ö., Examination of The Spatial Modal Diversity Gain in Circular Microstrip Antennas, Postgraduate, R.Urfaloğlu(Student), 2011

Ertuğ Ö., Joint Decision Feedback Equalization and Interference-Cancelling Multipath Combining for Mobile Radio Systems, Postgraduate, S.Şahin(Student), 2011

Yazgan E., Ertuğ Ö., Çift-Polarize Karesel Yama Anten Tasarımı ve MIMO Konfigürasyonları için İlgili Korelasyon/Spektral Verimlilik Analizleri, Postgraduate, A.Öcalan(Student), 2010

Ertuğ Ö., Performance Analysis of MRC/EGC Antenna Diversity for M-QAM Systems over Ricean Fading Channels with PSAM-Based LMMSE Channel Estimation, Postgraduate, J.Ali(Student), 2010

Yazgan E., Ertuğ Ö., Çift-Mod Bindirilmiş Dairesel Yama Antenlerin Tasarımı ve MIMO Konfigürasyonları ile İlgili Korelasyon/Spektral Verimlilik Analizleri, Postgraduate, İ.Görgeç(Student), 2009

Published journal articles indexed by SCI, SSCI, and AHCI

- I. **Ambient Backscatter Communication Based Cooperative Relaying for Heterogeneous Cognitive Radio Networks**
ONAY M. Y., ERTUĞ Ö.
Radioengineering, vol.32, no.2, pp.237-247, 2023 (SCI-Expanded)
- II. **M-CSK modulated flip-OFDM communication systems in visible light communications M-CSK-Flip-OFDM sistemlerinin RS ve CC kodlama altında BER ve PAPR analizlerinin incelenmesi**
Tekin M., Savaşçıbaşı A., ERTUĞ Ö.
Journal of the Faculty of Engineering and Architecture of Gazi University, vol.38, no.4, pp.2301-2310, 2023 (SCI-Expanded)
- III. **Performance analysis of downlink MIMO-NOMA systems in Rayleigh channels with max-max-max and max-min-max antenna selection algorithms Aşağı-hat MIMO-NOMA sistemlerinin max-max-max ve**

max-min-max anten seçim algoritmaları ile Rayleigh kanallarda performans analizi

Demiral B., ERTUĞ Ö.

Journal of the Faculty of Engineering and Architecture of Gazi University, vol.38, no.3, pp.1675-1687, 2023 (SCI-Expanded)

- IV. **Dynamic and Sparsity Adaptive Compressed Sensing Based Active User Detection and Channel Estimation of Uplink Grant-Free SCMA**
DURAK M. H., ERTUĞ Ö.
RADIOENGINEERING, vol.30, no.3, pp.576-583, 2021 (SCI-Expanded)
- V. **Hybrid SNR-Adaptive Multiuser Detectors for SDMA-OFDM Systems**
YEŞİLYURT U., Ertug Ö.
ETRI JOURNAL, vol.40, no.2, pp.218-226, 2018 (SCI-Expanded)
- VI. **On the Design and Performance Analysis of Low-Correlation Compact Space-Multimode Diversity Stacked Microstrip Antenna Arrays for MIMO-OFDM WLANs over Statistically-Clustered Indoor Radio Channels**
Savascihabes A., ERTUĞ Ö., Yazgan E.
RADIOENGINEERING, vol.24, no.1, pp.54-63, 2015 (SCI-Expanded)
- VII. **On the Comparative Performance Analysis of Turbo-Coded Non-Ideal Single-Carrier and Multi-Carrier Waveforms over Wideband and Vogler-Hoffmeyer HF Channels**
Genc F., REŞAT M. A., SAVAŞÇIHABEŞ A., ERTUĞ Ö.
RADIOENGINEERING, vol.23, no.3, pp.872-879, 2014 (SCI-Expanded)
- VIII. **A maximum-likelihood bound approaching minimum bit error rate linear multiuser detector for frequency-selective DS-CDMA systems**
Zeybek M., Ertug Ö.
AEU-INTERNATIONAL JOURNAL OF ELECTRONICS AND COMMUNICATIONS, vol.68, no.2, pp.111-114, 2014 (SCI-Expanded)
- IX. **Spectral and power efficiency trade-offs for multiple-antenna reception techniques under co-channel interference**
Ertug Ö.
EUROPEAN TRANSACTIONS ON TELECOMMUNICATIONS, vol.22, no.7, pp.415-427, 2011 (SCI-Expanded)
- X. **Spectral and power efficiency of IEEE802.11n MIMO-OFDM WLAN systems using space-multimode-polarization diversity compact stacked circular microstrip antenna arrays**
Yavanoglu A., Ertug Ö.
EUROPEAN TRANSACTIONS ON TELECOMMUNICATIONS, vol.22, no.5, pp.231-239, 2011 (SCI-Expanded)
- XI. **Asymptotic ergodic capacity of multidimensional vector-sensor array MIMO channels**
Ertug Ö.
IEEE TRANSACTIONS ON WIRELESS COMMUNICATIONS, vol.7, no.9, pp.3297-3300, 2008 (SCI-Expanded)
- XII. **Communication over hypercomplex Kahler manifolds: Capacity of dual-polarized multidimensional-MIMO channels**
Ertug Ö.
WIRELESS PERSONAL COMMUNICATIONS, vol.41, no.1, pp.155-168, 2007 (SCI-Expanded)
- XIII. **Methodology for performance analysis of randomly-spread CDMA systems over multipath fading channels via crosscorrelation matrix non-asymptotic average eigenvalue densities**
ERTUĞ Ö., BAYKAL B., ÜNAL B.
Electronics Letters, vol.39, no.16, pp.1210-1212, 2003 (SCI-Expanded)

Articles Published in Other Journals

- I. **A PDR-based scheduling scheme for LTE-A networks**
Hajjawi A., Ismail M., Abdullah N. F., Nordin R., ERTUĞ Ö.
Journal of Communications, vol.11, no.9, pp.856-861, 2016 (Scopus)

Refereed Congress / Symposium Publications in Proceedings

- I. **SDR Tabanlı GPS Destekli Frekans Atlamalı İletişim Sistemi Tasarımı**
Kaya G., Ertuğ Ö.
7. Ulusal Başkent Disiplinlerarası Bilisel Araştırmalar Kongresi, Ankara, Turkey, 20 - 21 September 2024, pp.63-73
- II. **Performance Analysis of Joint Backscattering and Energy Harvesting Full-Duplex Access Points in Wireless Cellular Area Networks** **Kablosuz Hücresel Alan Ağlarında Ortak Geri Saçılım ve Enerji Hasadı Çift Yönlü Erişim Noktalarının Performans Analizi**
ONAY M. Y., ERTUĞ Ö.
31st IEEE Conference on Signal Processing and Communications Applications, SIU 2023, İstanbul, Turkey, 5 - 08 July 2023
- III. **Performance Analysis under Signal Jammer in Relay Aided Ambient Backscatter Cognitive Radio Networks** **Bilişsel Radyo Ağlarında Röle Kullanan Çevresel Geri Saçılım Haberleşme Sistemlerinin Sinyal Karıştırıcı Altındaki Performans Analizi**
Yusuf Onay M., ERTUĞ Ö.
31st IEEE Conference on Signal Processing and Communications Applications, SIU 2023, İstanbul, Turkey, 5 - 08 July 2023
- IV. **Capacity and Rate Performance of Antenna Selection Algorithms in MIMO-NOMA Systems**
DEMİRAL B., ERTUĞ Ö.
ISPEC 14. Uluslararası Mühendislik ve Fen Bilimleri Kongresi, 18 July 2022
- V. **Performance Optimization of 6LoWPAN Systems for RF AMR System Using Turbo and LDPC Codes**
Lafci M., Ertuğ Ö.
29th International Conference on Systems, Signals and Image Processing (IWSSIP), Sofija, Bulgaria, 1 - 03 June 2022
- VI. **Transmission Performance Analysis of Cognitive Radio Based Backscatter Communication Systems**
Onay M. Y., Durak M. H., Ertuğ Ö.
International Conference on Electrical and Electronics Engineering, ELECO, Bursa, Turkey, 25 November 2021
- VII. **Cooperative Protocol For Health-Care in IoT**
Ertuğ Ö., Alkan N.
4th International Iraqi Conference on Engineering Technology and Their Applications, IICETA 2021, Najaf, Iraq, 21 - 22 September 2021, pp.75-80
- VIII. **Transmitter receiver antenna selection for MIMO-Noma system**
Demiral B., Ertuğ Ö.
29th International Conference on Software, Telecommunications and Computer Networks, SoftCOM 2021, Hvar, Croatia, 23 - 25 September 2021
- IX. **M-CSK-Flip OFDM for Visible Light Communication Systems**
Tekin M., SAVAŞÇIHABEŞ A., ERTUĞ Ö.
44th International Conference on Telecommunications and Signal Processing (TSP), ELECTR NETWORK, 26 - 28 July 2021, pp.106-109
- X. **Transition from IPv4 to IPv6 Mechanisms by GNS3 Emulation: YPTC as a Case Study**
Qaid A., Ertuğ Ö.
2021 International Symposium on Networks, Computers and Communications, ISNCC 2021, Dubai, United Arab Emirates, 31 October - 02 November 2021
- XI. **Q-Bant Uydu Kanal Modeli için Uyarlamalı Modülasyon-Kodlama**
Bastırmacı E., ERTUĞ Ö.
ICCESS 2020, ya, Turkey, 08 October 2020
- XII. **CS-Based Multiuser Detector for SCMA Systems**
Durak M. H., ERTUĞ Ö.
International Symposium on Networks, Computers and Communications (ISNCC), İstanbul, Turkey, 18 - 20 June 2019
- XIII. **A New Algorithm with Adaptive Power Allocation (APA) for Variable Transmit Antenna Selection**

under MISO-SCMA Systems

Civil M., ERTUĞ Ö.

27th International Conference on Software, Telecommunications and Computer Networks (SoftCOM), Split, Croatia, 19 - 21 September 2019, pp.216-220

- XIV. **Compressed Sensing Based Multiuser Detection for Sparse Code Multiple Access**
Durak M. H., ERTUĞ Ö.
27th Signal Processing and Communications Applications Conference (SIU), Sivas, Turkey, 24 - 26 April 2019
- XV. **Performance Modelling of Turbo-Coded Non-Ideal Single-Carrier and Multi-Carrier Waveforms over Wide-Band Vogler-Hoffmeyer HF Channels”,**
SAVAŞCIHABEŞ A., ERTUĞ Ö., REŞAT M. A., genç f.
CECNET2014, 07 May 2018
- XVI. **Adaptive Modulation and Coding Technique under Multipath Fading and Impulsive Noise in Broadband Power-line Communication**
ERTUĞ Ö., KARAARSLAN G.
ELECO 2017, 30 November - 02 December 2017
- XVII. **Hybrid ML-MMSE Adaptive Multiuser Detection Based on Joint Channel Estimation in SDMA-OFDM Systems**
YEŞİLYURT U., ERTUĞ Ö.
25th International Conference on Software, Telecommunications and Computer Networks (SoftCOM), Split, Croatia, 21 - 23 September 2017, pp.136-140
- XVIII. **On the Bit Error Rate Analysis of M-PSK Systems using LMMSE Channel Estimation and MRC/EGC Diversity Combining over Ricean-Fading Channels**
Ebrahimpour P., Musazade S., ERTUĞ Ö.
National Conference on Electrical, Electronics and Biomedical Engineering (ELECO), Bursa, Turkey, 1 - 03 December 2016, pp.609-611
- XIX. **Performance Assessment of TTC CPM FDE OFDM Waveforms for Narrowband and Wideband HF Military Communications**
Ebrahimpour P., ERTUĞ Ö.
Proceedings of 2015 Knowledge-Based Engineering and Innovation (KBEI'15), BİLİNMEYEN ÜLKELER (DİĞER), 5 - 06 November 2015, pp.1421-1425
- XX. **IEEE 802.11n MIMO-OFDM WLAN Sistemlerin Yüksek-Derece Modlu Kompakt Uzay-Multimod Dairesel Mikroşerit Anten Dizinleri ile Spektral ve Güç Verimliliği”,**
SAVAŞCIHABEŞ A., ERTUĞ Ö.
SIU2011, Turkey, 05 May 2014
- XXI. **CAPACITY IMPROVEMENT OF IEEE802.11N MIMO-OFDM WLANS USING JOINT TRANSMIT/RECEIVE ANTENNA SELECTION OVER SPATIALLY MULTIPLEXING CORRELATED CHANNELS**
SAVAŞCIHABEŞ A., ERTUĞ Ö.
22nd IEEE Signal Processing and Communications Applications Conference (SIU), Trabzon, Turkey, 23 - 25 April 2014, pp.361-364
- XXII. **On the Optimum Ring Ratio Determination for 16-DAPSK Modulation in OFDM Systems**
Genc F., YENGEL E., Savaschabes A., ERTUĞ Ö.
22nd IEEE Signal Processing and Communications Applications Conference (SIU), Trabzon, Turkey, 23 - 25 April 2014, pp.742-745
- XXIII. **COMPARISON OF THE PERFORMANCE ANALYSES OF SC-FDMA AND GFDMA SYSTEMS UNDER NULL SUB-CARRIERS BASED MULTIPLE CARRIER FREQUENCY OFFSET SYNCHRONIZATION**
Resat M. A., ERTUĞ Ö.
22nd IEEE Signal Processing and Communications Applications Conference (SIU), Trabzon, Turkey, 23 - 25 April 2014, pp.1355-1358
- XXIV. **On the Comparative Performance Analysis of GFDMA and SC-FDMA Systems Under Multiple CFO Synchronization Using Null Sub-carriers**
Resat M. A., ERTUĞ Ö.

22nd International Conference on Software, Telecommunications and Computer Networks (SoftCOM), Split, Croatia, 17 - 19 September 2014

- XXV. **Minimum BER multi-user detection for time-varying frequency selective fading DS-CDMA channels**
Zamanla deęişen frekans seçicili sönümlü DD-KBÇÖ kanallarda en az bit hata oranlı çok kullanıcı sezici
Zeybek M., ERTUĞ Ö.
2012 20th Signal Processing and Communications Applications Conference, SIU 2012, Fethiye, Muęla, Turkey, 18 - 20 April 2012
- XXVI. **An Efficient Algorithm Assisted Minimum Bit Error Rate Multiuser Detector for DS-CDMA Systems in Time-Varying and Frequency-Selective Fading Channels**
Zeybek M., ERTUĞ Ö.
4th International Congress on Ultra Modern Telecommunications and Control Systems (ICUMT), St Petersburg, Russia, 3 - 05 October 2012, pp.154-161
- XXVII. **On the capacity analysis of IEEE802.11n MIMO-OFDM WLAN systems using sub-optimal mimo detectors and compact space-multimode antenna arrays**
Yavanoęlu A., ERTUĞ Ö.
2011 3rd International Congress on Ultra Modern Telecommunications and Control Systems and Workshops, ICUMT 2011, Budapest, Hungary, 5 - 07 October 2011
- XXVIII. **Spectral and power efficiency of IEEE802.11n MIMO-OFDM WLAN systems using higher-order space-multimode diversity compact stacked circular microstrip antenna arrays**
IEEE 802.11n MIMO-OFDM WLAN sistemlerin yüksek derece modlu kompakt uzay-multimod dairesel mikroşerit anten dizinleri ile spektral ve güç verimlilięi
Yavanoęlu A., ERTUĞ Ö.
2011 IEEE 19th Signal Processing and Communications Applications Conference, SIU 2011, Antalya, Turkey, 20 - 22 April 2011, pp.319-322
- XXIX. **Tek Taşıyıcılı ve Çoklu Taşıyıcılı Dalga Biçimlerinin Ideal Olmayan Geniş Bant HF Kanallarda Karşılaştırılması**
SAVAŞCIHABEŞ A., ERTUĞ Ö., REŞAT M. A., genç f.
URSI2014, Turkey, 10 May 2011
- XXX. **Quadrature Cosine-Basis Beamforming in Wireless Networks using Dual-Polarized Circular Multimode Antenna Arrays**
Ertug Ö.
17th Asia-Pacific Conference on Communications (APCC), Kota-Kinabalu, Malaysia, 2 - 05 October 2011, pp.588-592
- XXXI. **On the Capacity Analysis of Compact Space Multimode Microstrip Antenna Arrays for IEEE802 11n MIMO OFDM Systems using Sub Optimal MIMO Detectors**
SAVAŞCIHABEŞ A., ERTUĞ Ö.
SIU2010, Diyarbakır, Turkey, 22 April 2010, vol.1, pp.121
- XXXII. **Spectral and power efficiency trade-offs for multi-antenna reception techniques under co-channel interference**
ERTUĞ Ö.
2010 International Congress on Ultra Modern Telecommunications and Control Systems and Workshops, ICUMT 2010, Moscow, Russia, 18 - 20 October 2010, pp.350-357
- XXXIII. **Performance of MRC and EGC antenna diversity reception for M-QAM over ricean fading environment with PSAM and LMMSE channel estimation**
Ali J., ERTUĞ Ö.
6th International Conference on Electrical and Electronics Engineering, ELECO 2009, Bursa, Turkey, 5 - 08 November 2009
- XXXIV. **On the Outage Probability and BER of MRC and EGC Space-Diversity Reception over Ricean Fading with LMMSE Channel Estimation**
Ali J., Ertuğ Ö.

- Telecommunications Forum 2009, Belgrade, Serbia, 24 - 26 November 2009, pp.496-499
- XXXV. **Performance of MRC and EGC Antenna Diversity Reception for M-QAM over Ricean Fading Environment with PSAM and LMMSE Channel Estimation**
Ali J., Ertuğ Ö.
ELECO 2009, Bursa, Turkey, 05 November 2009, vol.2, pp.204-207
- XXXVI. **Compact Space Multimode Diversity Stacked Circular Microstrip Antenna Array for 802 11n MIMO OFDM WLANs**
SAVAŞCIHABEŞ A., ERTUĞ Ö., YAZGAN E.
LAPC2009, 01 November 2009, vol.1, pp.525
- XXXVII. **IEEE 802 11n MIMO OFDM WLAN Haberleşme Sistemlerinde Kompakt Multimod Mikroşerit Antenlerin Korelasyon ve Kapasite Analizi**
SAVAŞCIHABEŞ A., ERTUĞ Ö.
Habtekus2009, Turkey, 02 November 2008, vol.1, pp.127
- XXXVIII. **Asymptotic ergodic capacity of multidimensional vector-sensor array MIMO channels**
Ertug Ö.
6th International Symposium on Communication Systems, Networks and Digital Signal Processing, Graz, Austria, 23 - 25 July 2008, pp.731-735
- XXXIX. **Communication over Hypercomplex Kahler Manifolds: Capacity of Dual-Polarized Multidimensional-MIMO Channels**
Ertuğ Ö.
ISITA 2006, Seoul, South Korea, 29 October - 01 November 2006, pp.342-347
- XL. **Generalized Random Spreading Performance Analysis of CDMA over GWSSUS Fading Channels**
Ertuğ Ö.
ISITA 2006, Seoul, South Korea, 29 October - 01 November 2006, pp.575-580
- XLI. **On the impact of diversity combining schemes to the performance of RAKE receivers over GWSSUS fading channels**
ERTUĞ Ö.
EUROCON 2005 - The International Conference on Computer as a Tool, Belgrade, Serbia, 21 - 24 November 2005, vol.I, pp.470-473
- XLII. **A new approach to unified performance analysis of randomly-spread CDMA systems over multipath fading channels via crosscorrelation matrix non-asymptotic average eigenvalue distributions**
ERTUĞ Ö., BAYKAL B., Sayrac B.
14th IEEE 2003 International Symposium on Personal, Indoor and Mobile Radio Communications, PIMRC2003, Beijing, China, 7 - 10 September 2003, vol.1, pp.564-568
- XLIII. **Maximum Total Ergodic Spectral Efficiency of Randomly-Spread Coded-CDMA with Linear Multiuser Receivers over Multipath Fading Channels**
ERTUĞ Ö., ÜNAL B., BAYKAL B., YÜCEL M.
IEEE Global Telecommunications Conference GLOBECOM'03, San Francisco, CA, United States Of America, 1 - 05 December 2003, vol.3, pp.1568-1572
- XLIV. **Total outage capacity of randomly-spread coded-CDMA with linear multiuser receivers over multipath fading channels**
ERTUĞ Ö., Sayrac B., BAYKAL B., YÜCEL M.
8th IEEE International Symposium on Computers and Communication, ISCC 2003, Kemer-Antalya, Turkey, 30 June - 03 July 2003, pp.913-918
- XLV. **On the comparative analysis of precombining and postcombining interference suppression in time-frequency decision-driven multiuser detectors over fast-fading multipath channels for synchronous DS-SS-SS systems**
ERTUĞ Ö., BAYKAL B., Ünal B. S.
Proceedings - 2001 International Conference on Third Generation Wireless and Beyond, San Francisco, CA, United States Of America, 30 June - 02 July 2001, pp.999-1004
- XLVI. **Space-time-frequency multiuser detection over fast-fading multipath channels for synchronous DS-**

CDMA systems

Ertuğ Ö., Baykal B.

IEEE Vehicular Tehcnology Conceference Spring 2001, Rodos, Greece, 6 - 09 May 2001, pp.1503-1507

- XLVII. **Senkron Direkt-Dizin Kod-Bölmeli Çoklu-Erişim Sistemleri İçin Hızlı-Kayan Çok-Gönderim -Yollu Kanallar Üzerinde Zaman-Frekans Karar Destekli Çok-Kullıncılı Data Belirleme Algorıtmalarında Ön-Birleştirimli ve Geri-Birleştirimli Enterferans Bastırımının Karşılaştırmalı Analizi Üzerine**

Ertuğ Ö.

SIU 2001, Gazimagusa, Cyprus (Kkct), 25 - 27 April 2001, pp.723-728

- XLVIII. **Spectral efficiency and error-exponents of randomly-spread CDMA with linear multiuser receivers over multipath Rayleigh fading channels**

ERTUĞ Ö., ÜNAL B., BAYKAL B.

International Zurich Seminar on Broadband Communications Access - Transmission - Networking, IZS 2002, Zürich, Switzerland, 19 - 21 February 2002

- XLIX. **Time-frequency decision-driven multiuser detectors over fast-fading multipath channels for synchronous DS-CDMA systems**

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Ertuğ Ö., TUBITAK Project, Adaptive Noise Reduction and Voice Activity Detection for Multimedia Intercom System, 2018 - 2019

Ertuğ Ö., TUBITAK Project, Alçak Gerilim Dağıtım Sistemi Verilerinin İzlenmesi Ve Kayıt Altına Alınması, 2016 - 2019
Ertuğ Ö., TUBITAK Project, Dijital Almaç Tasarımı, 2015 - 2017
ERTUĞ Ö., Project Supported by Higher Education Institutions, Kablosuz Haberleşme Sistemlerinde Çabuk-Protipleme için Yazılım-Tabanlı Test-Sahası Gerçeklenimi, 2011 - 2014
Ertuğ Ö., Project Supported by Other Private Institutions, Physical Layer Algorithms for Military Frequency-Hopping HF-Band RadioLinks., 2011 - 2012
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Activities in Scientific Journals

TURKISH JOURNAL OF ELECTRICAL ENGINEERING AND COMPUTER SCIENCES, Committee Member, 2017 - 2020

Memberships / Tasks in Scientific Organizations

Chamber of Electrical Engineers, Member, 2024 - Continues, Turkey
European Science Foundation-IC0803 RFCSET: RF and Microwave Communication Subsystems for Wireless Communications Action Management Committee, Country Representative, 2009 - 2012, Turkey

Tasks In Event Organizations

Ertuğ Ö., 32. IEEE Conference on Signal Processing and Communications-Scientific and Technical Committee Member, Scientific Congress, Turkey, Mayıs 2024
Ertuğ Ö., 7th International Conference on Engineering Science, Scientific Congress, Turkey, Şubat 2024
Ertuğ Ö., 2021 URSI-TR Conference-Session Chair for "Performance Analysis of Communication Systems" , Scientific Congress, Turkey, Eylül 2021
Ertuğ Ö., 2014 IEEE GLOBECOM CONFERENCE-5G Cellular Communications Workshop Technical Committee Member, Scientific Congress, United States Of America, Aralık 2014
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Metrics

Publication: 67
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Invited Talks

Transportation Congress-Telecommunications Infrastructure Workshop, Workshop, Ministry of Transportation, Turkey, October 2009

Awards

Ertuğ Ö., Patent Award, Gazi University, December 2012