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Education Information

Doctorate, Istanbul Technical University, Biliřim Enstitüsü, Biliřim Uygulamaları, Turkey 2018 - Continues

Postgraduate, Istanbul Technical University, Biliřim Enstitüsü, Biliřim Uygulamaları, Turkey 2016 - 2018

Undergraduate, Istanbul Technical University, Elektrik-Elektronik, Telecommunication Engineering , Turkey 2009 - 2016

Research Areas

Communication Engineering, Signal Processing

Published journal articles indexed by SCI, SSCI, and AHCI

- I. **Iterative interference alignment with spatial hole sensing in MIMO cognitive radio networks**
NAMDAR M., BAřGÜMÜř A., ALDIRMAZ ÇOLAK S., ERDOĞAN E., Alakoca H., Ustunbas S., Durak Ata L.
ANNALS OF TELECOMMUNICATIONS, vol.77, no.3-4, pp.177-185, 2022 (SCI-Expanded)
- II. **Interference Alignment in Multi-Hop Cognitive Radio Networks under Interference Leakage**
ERDOĞAN E., Colak S. A., Alakoca H., Namdar M., Basgumus A., Durak-Ata L.
APPLIED SCIENCES-BASEL, vol.8, no.12, 2018 (SCI-Expanded)
- III. **OFDMA-based network-coded cooperation: design and implementation using software-defined radio nodes**
Gokceli S., ALAKOCA H., BASARAN S. T., KURT G. K.
EURASIP JOURNAL ON ADVANCES IN SIGNAL PROCESSING, 2016 (SCI-Expanded)

Articles Published in Other Journals

- I. **MEASUREMENT BASED INVESTIGATION OF CYCLOSTATIONARITY OF OFDMA SIGNALS**
Tekbiyik K., Alakoca H., Tugrel H. B., Ayyildiz C., Kurt G. K.
ISTANBUL UNIVERSITY-JOURNAL OF ELECTRICAL AND ELECTRONICS ENGINEERING, vol.17, no.2, 2017 (ESCI)

Books & Book Chapters

- I. **Interference Alignment in Multi-Input Multi-Output Cognitive Radio-based Network**

BASGUMUS A., NAMDAR M., ALAKOCA H., ERDOĞAN E., DURAK ATA L.

in: Cognitive Radio in 4G/5G Wireless Communication Systems, S.S. Moghaddam, Editor, InTech Open, Rijeka, pp.117-139, 2018

Refereed Congress / Symposium Publications in Proceedings

- I. **On the Channel Estimation Performance of NOMA Systems: Experimental Implementation of Real-Time Downlink NOMA-OFDM**
Angjo J., Tuncer M. M., Akertek E., Alakoca H., Başaran M., Durak-Ata L.
IEEE International Black Sea Conference on Communications and Networking (IEEE BlackSeaCom), ELECTRONETWORK, 26 - 29 May 2020
- II. **On the Secrecy Performance of the K-User Cognitive Radio Network with Iterative Interference Alignment**
Erdogan E., Namdar M., Basgumus A., Colak S. A., Ustunbas S., Alakoca H., Durak-Ata L.
30th IEEE Annual International Symposium on Personal, Indoor and Mobile Radio Communications, PIMRC 2019, İstanbul, Turkey, 8 - 11 September 2019
- III. **Impact of partial band jammer in cognitive radio networks with interference alignment Girişim hizalama kullanan bilişsel radyo ağlarında kısmi bant karıştırıcı etkisi**
ERDOĞAN E., Aldirmaz-Colak S., Namdar M., Basgumus A., Alakoca H., Durak-Ata L.
27th Signal Processing and Communications Applications Conference, SIU 2019, Sivas, Turkey, 24 - 26 April 2019
- IV. **Impact of Partial Band Jammer in Cognitive Radio Networks with Interference Alignment**
ERDOĞAN E., ALDIRMAZ ÇOLAK S., NAMDAR M., BAŞGÜMÜŞ A., Alakoca H., Durak Ata L.
27th Signal Processing and Communications Applications Conference (SIU), Sivas, Turkey, 24 - 26 April 2019
- V. **Identification of Non-Conforming Cordless Phone Signals in Licensed Bands**
Gecgel S., Durmaz M. A., Alakoca H., Karabulut Kurt G. Z., Ayyildiz C.
1st International Telecommunications Conference (ITelCon), İstanbul, Turkey, 28 - 29 December 2017, vol.504, pp.271-280
- VI. **Adaptive Bandwidth Utilization with Self-Configuring Networks**
ÜSTÜNBAŞ S., ALAKOCA H., DURAK ATA L.
2018 41st International Conference on Telecommunications and Signal Processing (TSP), 4 - 06 July 2018
- VII. **System Performance of Interference Alignment in MIMO Cognitive Radio Networks under Interference Leakage**
Alakoca H., ÜSTÜNBAŞ S., Namdar M., Basgumus A., ERDOĞAN E., Durak-Ata L.
41st International Conference on Telecommunications and Signal Processing, TSP 2018, Athens, Greece, 4 - 06 July 2018
- VIII. **Performance of interference alignment in cognitive radio networks under interference leakage Bilişsel radyo ağlarında girişim kaçağı altında girişim hizalama performansı**
ERDOĞAN E., Namdar M., Basgumus A., Alakoca H., Durak-Ata L.
26th IEEE Signal Processing and Communications Applications Conference, SIU 2018, İzmir, Turkey, 2 - 05 May 2018, pp.1-4
- IX. **Performance of Interference Alignment in Cognitive Radio Networks under Interference Leakage**
ERDOĞAN E., NAMDAR M., BAŞGÜMÜŞ A., Alakoca H., Durak Ata L.
26th IEEE Signal Processing and Communications Applications Conference (SIU), İzmir, Turkey, 2 - 05 May 2018
- X. **A Testbed based Verification of Joint Communication and Computation Systems**
ALTUN u., TEDİK S., alakoca h., KARABULUT KURT G. Z.
25th Telecommunications forum TELFOR 2017, 21 - 22 November 2017
- XI. **PHY Based Jamming Attacks against OFDM Systems: A Measurement Study**
Alakoca H., Karabulut Kurt G. Z., Ayyildiz C.
25th Telecommunication Forum (TELFOR), Belgrade, Serbia And Montenegro, 21 - 22 November 2017, pp.234-237

- XII. **Chirp Subcarrier Jamming Attacks: An OFDM Based Smart Jammer Design**
Durmaz M. A., Alakoca H., Karabulut Kurt G. Z., Ayyildiz C.
16th Annual Mediterranean Ad Hoc Networking Workshop (Med-Hoc-Net), Budva, MONTENEGRO, 28 - 30 June 2017
- XIII. **OFDMA System Identification using Cyclic Autocorrelation Function: A Software Defined Radio Testbed**
TUGREL H. B., ALAKOCA H., TEKBIYIK K., Kurt G. Z., AYYILDIZ C.
10th International Conference on Signal Processing and Communication Systems (ICSPCS), Surfers Paradise, Australia, 19 - 21 December 2016
- XIV. **CP and Pilot Jamming Attacks on SC-FDMA: Performance Tests with Software Defined Radios**
ALAKOCA H., TUGREL H. B., Kurt G. Z., AYYILDIZ C.
10th International Conference on Signal Processing and Communication Systems (ICSPCS), Surfers Paradise, Australia, 19 - 21 December 2016
- XV. **Identification of OFDM Signals using Cyclic Autocorrelation Function**
TEKBIYIK K., ALAKOCA H., TUGREL H. B., AYYILDIZ C., Kurt G. Z.
National Conference on Electrical, Electronics and Biomedical Engineering (ELECO), Bursa, Turkey, 1 - 03 December 2016, pp.622-626
- XVI. **Angle of Arrival (AoA) Estimation by using Software Defined Radios**
Tugrel H. B., Alakoca H., Karabulut Kurt G. Z., Ayyildiz C.
24th Signal Processing and Communication Application Conference (SIU), Zonguldak, Turkey, 16 - 19 May 2016, pp.1429-1432
- XVII. **Implementation of Pre-FFT Beamforming in MIMO-OFDM**
Gokceli S., Uslu M., Karabulut Kurt G. Z., ÖZBEK B., Alakoca H., Durmaz M. A.
9th International Conference on Electrical and Electronics Engineering (ELECO), Bursa, Turkey, 26 - 28 November 2015, pp.264-268
- XVIII. **Performance of TCP over 802.11ac based WLANs via Testbed Measurements**
Alakoca H., Karaca M., Karabulut Kurt G. Z.
12th International Symposium on Wireless Communication Systems (ISWCS), Brussels, Belgium, 25 - 28 August 2015
- XIX. **Design and Implementation of A Software Defined Radio Based OFDMA Network**
Gokceli S., Alakoca H., Karabulut Kurt G. Z.
23rd Signal Processing and Communications Applications Conference (SIU), Malatya, Turkey, 16 - 19 May 2015, pp.1236-1239
- XX. **The Impact of MAC Layer Parameters in System Performance of 802.11 ac Multi-hop Networks**
Alakoca H., Karaca M., Karabulut Kurt G. Z.
23rd Signal Processing and Communications Applications Conference (SIU), Malatya, Turkey, 16 - 19 May 2015, pp.1441-1444

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