

Asst. Prof. GÖKHAN MUZAFFER GÜVENSEN

Personal Information

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Biography

Dr. Gokhan M. Guvensen received his BS, MS, and Ph.D. degrees in electrical and electronics engineering from the Middle East Technical University (METU), Ankara, Turkey in 2006, 2009 and 2014, respectively. He worked as a postdoctoral fellow in the Center for Pervasive Communications and Computing (CPCC) in the University of California, Irvine (UCI), USA between 2015 and 2016, and he is currently a collaborator of the research group in UCI. In 2017, he joined the Electrical and Electronics Engineering Department at METU, where he is now an Assistant Professor.

His research interests include the design of digital communication systems and statistical signal processing with a particular focus on modulation theory, next-generation mobile communication techniques, iterative detection and equalization techniques, information theory, and radar signal processing.

Foreign Languages

English, C1 Advanced

Research Areas

Engineering and Technology

Academic Titles / Tasks

Assistant Professor, Middle East Technical University, Faculty Of Engineering, Department Of Electrical And Electronics Engineering, 2017 - Continues

Articles Published in Journals That Entered SCI, SSCI and AHCI Indexes

- **A Reduced-State Ungerboeck Type MAP Receiver with Bidirectional Decision Feedback for M-ary Quasi Orthogonal Signaling**
GÜVENSEN G. M. , TANIK Y., YILMAZ A. Ö.
IEEE TRANSACTIONS ON COMMUNICATIONS, vol.62, pp.552-566, 2014 (Journal Indexed in SCI)
- **A General Framework for Optimum Iterative Blockwise Equalization of Single Carrier MIMO Systems and Asymptotic Performance Analysis**
GÜVENSEN G. M. , YILMAZ A. Ö.
IEEE TRANSACTIONS ON COMMUNICATIONS, vol.61, pp.609-619, 2013 (Journal Indexed in SCI)
- **An Upper Bound for Limited Rate Feedback MIMO Capacity**
GÜVENSEN G. M. , YILMAZ A. Ö.
IEEE TRANSACTIONS ON WIRELESS COMMUNICATIONS, vol.8, pp.2748-2754, 2009 (Journal Indexed in SCI)

Refereed Congress / Symposium Publications in Proceedings

- **A subspace-aware Kelly's detector using reduced secondary data with fast and slow time preprocessing**
Saraç U. B. , Güvensen G. M.
2019 IEEE Radar Conference, RadarConf 2019, Massachusetts, United States Of America, 22 - 26 April 2019
- **A Nearly Optimal Hybrid Precoder Design for Downlink Single-Carrier Wideband Massive MIMO Channels**
Kilcioglu E., GÜVENSEN G. M.
30th IEEE Annual International Symposium on Personal, Indoor and Mobile Radio Communications (PIMRC), İstanbul, Turkey, 8 - 11 September 2019, pp.119-125
- **An Efficient Hybrid Beamforming and Channel Acquisition for Wideband mm-Wave Massive MIMO Channels**
KURT A., GÜVENSEN G. M.
IEEE International Conference on Communications (ICC), Shanghai, China, 20 - 24 May 2019
- **The Effect of Antenna Correlation in Single-Carrier Massive MIMO Transmission**
Beigiparast N., Güvensen G. M. , Ayanoglu E.
87th IEEE Vehicular Technology Conference, VTC Spring 2018, Porto, Portugal, 3 - 06 June 2018, pp.1-7
- **A Novel Transceiver Architecture for Highly Dispersive NOMA Channels**
Güvensen G. M. , Tanık Y., Yılmaz A. Ö.
2018 IEEE 87th Vehicular Technology Conference (VTC Spring), Porto, Portugal, 3 - 06 June 2018, pp.1-6
- **On the Impact of Fast-Time and Slow-Time Preprocessing Operations on Adaptive Target Detectors**
GÜVENSEN G. M. , CANDAN Ç.
IEEE Radar Conference, Oklahoma, United States Of America, 23 - 27 April 2018, pp.1183-1188
- **Beamspace Aware Adaptive Channel Estimation for Single-Carrier Time-varying Massive MIMO Channels**
Güvensen G. M. , Ayanoglu E.
IEEE International Conference on Communications (ICC), Paris, France, 21 - 25 May 2017
- **A Generalized Framework on Beamformer Design and CSI Acquisition for Single-Carrier Massive MIMO Systems in Millimeter Wave Channels**
Güvensen G. M. , Ayanoglu E.
IEEE-Communications-Society Global Communications Conference (IEEE GLOBECOM), Washington, Kiribati, 4 - 08 December 2016
- **On Generalized Eigenvector Space For Target Detection in Reduced Dimensions**
GÜVENSEN G. M. , CANDAN Ç., Koc S., ORGUNER U.
IEEE International Radar Conference (RadarCon), Virginia, United States Of America, 10 - 15 May 2015, pp.1316-1321
- **An efficient ungerboeck type MAP receiver for multi-user channel with M-Ary quasi orthogonal signaling M-Ary yaklaşık dikgen sinyalleşme ile çoklu erişim için etkin ungerboeck tipinde MAP alıcısı**
GÜVENSEN G. M. , TANIK Y., YILMAZ A. Ö.
2013 21st Signal Processing and Communications Applications Conference, SIU 2013, Haspolat, Turkey, 24 - 26 April 2013
- **An Efficient Ungerboeck Type MAP Receiver for Multi-User Channel with M - ary Quasi Orthogonal Signaling**
GÜVENSEN G. M. , TANIK Y., YILMAZ A. Ö.
21st Signal Processing and Communications Applications Conference (SIU), CYPRUS, 24 - 26 April 2013
- **Robust spread spectrum type communication with M-ary quasi orthogonal signaling for wireless fading channels M-ary yaklaşık dikgen sinyalleşme ile yayılı spektruma sahip sistemler için etkin telsiz haberleşme**
GÜVENSEN G. M. , TANIK Y., YILMAZ A. Ö.
2012 20th Signal Processing and Communications Applications Conference, SIU 2012, Fethiye, Muğla, Turkey, 18 -

20 April 2012

● **Diversity Analysis of Optimal SC-FDE MIMO Systems and Comparison with OFDM Based Transmission**
GÜVENSEN G. M. , YILMAZ A. Ö.

22nd IEEE International Symposium on Personal, Indoor and Mobile Radio Communications (PIMRC), Toronto, Canada, 11 - 14 September 2011, pp.1448-1453

● **On the Carrier Frequency Offset Estimation for Frequency Hopping Burst Mode Mobile Radio**
GÜVENSEN G. M. , TANIK Y., YILMAZ A. Ö.

MILCOM Military Communications Conference, San-Jose, Costa Rica, 31 October - 03 November 2010, pp.1244-1249

● **Cut-off Rate based Outage Probability Analysis of Frequency Hopping Mobile Radio under Jamming Conditions**

GÜVENSEN G. M. , TANIK Y., YILMAZ A. Ö.

MILCOM Military Communications Conference, San-Jose, Costa Rica, 31 October - 03 November 2010, pp.1684-1689

● **Iterative Frequency Domain Equalization for Single-Carrier Wideband MIMO Channels**

GÜVENSEN G. M. , YILMAZ A. Ö.

20th IEEE Symposium on Personal, Indoor and Mobile Radio Communications, Tokyo, Japan, 13 - 16 September 2009, pp.2661-2665

● **Probability of Full-Diversity for Simple Coded and Rotated Multidimensional Constellation Systems**
GÜVENSEN G. M. , Aktas T., YILMAZ A. Ö.

20th IEEE Symposium on Personal, Indoor and Mobile Radio Communications, Tokyo, Japan, 13 - 16 September 2009, pp.885-889

● **Iterative Decision Feedback Equalization and Decoding for Rotated Multidimensional Constellations in Block Fading Channels**

GÜVENSEN G. M. , YILMAZ A. Ö.

69th IEEE Vehicular Technology Conference, Barcelona, Spain, 26 - 29 April 2009, pp.1269-1274

Citations

Total Citations (WOS):28

h-index (WOS):2

Awards

Güvensen G. M. , LEOPOLD B FELSEN EXCELLENCE in ELECTROMAGNETICS AWARD, Leopold B Felsen Fund, August 2018