

Prof. CENK TOKER

Personal Information

Office Phone: [+90 312 297 7006](tel:+903122977006)

Office Phone: [+90 312 297 7000](tel:+903122977000)

Fax Phone: [+90 312 299 2125](tel:+903122992125)

Other Email: cenk.toker@ee.hacettepe.edu.tr

Web: <https://www.ee.hacettepe.edu.tr>

Address: Hacettepe Üniversitesi, Elektrik ve Elektronik Müh.Böl., Beytepe, 06800 Ankara

Education Information

Doctorate, University Of London-Kings College London, Division Of Engineering, Centre For Digital Signal Processing Research, United Kingdom 2002 - 2004

Post Graduate, Orta Doğu Teknik Üniversitesi, Risk Analizi A.B.D., Elektrik Ve Elektronik Müh.Böl., Telekomünikasyon A.B.D., Turkey 1995 - 1999

Under Graduate, Hacettepe Üniversitesi, Mühendislik Fakültesi, Elektrik Ve Elektronik Müh.Böl., Turkey 1991 - 1995

Foreign Languages

English, C1 Advanced

Research Areas

Atmospheric Sciences and Meteorological Engineering, Information Systems, Communication and Control Engineering, Communication Engineering, Wireless Communication, Modulation Methods, Telecommunication Applications, Signal Processing, Signal Processing for Communication, Engineering and Technology

Professional Experience

Erasmus Coordinator, Hacettepe Üniversitesi, Mühendislik Fakültesi, Elektrik-Elektronik Mühendisliği Bölümü, 2006 - Continues

Deputy Head of Department, Hacettepe Üniversitesi, Mühendislik Fakültesi, Elektrik-Elektronik Mühendisliği Bölümü, 2007 - 2010

Courses

ELE 450 Kablosuz İletişimin Temelleri, Under Graduate, 2017 - 2018

ELE 324 İletişim Kuramı I, Under Graduate, 2016 - 2017, 2017 - 2018

ELE 604 OPTİMİZASYON, Post Graduate, 2017 - 2018

ELE 630 SAYISAL İLETİŞİM I, Post Graduate, 2016 - 2017, 2017 - 2018

ELE 492 ÖZEL KONULAR II, Under Graduate, 2016 - 2017

ELE 407 Sayısal Sinyal İşleme, Under Graduate, 2016 - 2017

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

- I. **Rate maximizing OFDM parameter optimization on HF channels**
Ozdil O., TOKER C.
PHYSICAL COMMUNICATION, vol.45, 2021 (Journal Indexed in SCI)
- II. **Interference-aware resource allocation for multi-tier uplink NOMA under feedback constraints**
YÜKSEKKAYA B., TOKER C.
PHYSICAL COMMUNICATION, vol.35, 2019 (Journal Indexed in SCI)
- III. **Power and Interference Regulated Water-Filling for Multi-Tier Multi-Carrier Interference Aware Uplink**
YÜKSEKKAYA B., TOKER C.
IEEE WIRELESS COMMUNICATIONS LETTERS, vol.7, no.4, pp.494-497, 2018 (Journal Indexed in SCI)
- IV. **Observation of the solar eclipse of 20 March 2015 at the Pruhonice station**
MOŠNA Z., BOŠKA J., KNÍŽOVÁ P. K., Sindelafova T., KOUBA D., CHUM J., REJFEK L., POTUŽNÍKOVÁ K., ARIKAN F., TOKER C.
JOURNAL OF ATMOSPHERIC AND SOLAR-TERRESTRIAL PHYSICS, vol.171, pp.277-284, 2018 (Journal Indexed in SCI)
- V. **Antenna Port Selection in a Coordinated Cloud Radio Access Network**
BULU G., Ahmad T., Gohary R. H., TOKER C., Yanikomeroğlu H.
IEEE COMMUNICATIONS LETTERS, vol.21, no.3, pp.588-591, 2017 (Journal Indexed in SCI)
- VI. **Joint transceiver FIR filter design for multiuser MIMO channel shortening equalization and full equalization using channel duality**
YÜKSEKKAYA B., TOKER C.
TURKISH JOURNAL OF ELECTRICAL ENGINEERING AND COMPUTER SCIENCES, vol.25, no.5, pp.4077-4090, 2017 (Journal Indexed in SCI)
- VII. **Suboptimal recursive optimisation framework for adaptive resource allocation in spectrum-sharing networks**
Rahulamathavan Y., Lambbotharan S., TOKER C., GERSHMAN A. B.
IET SIGNAL PROCESSING, vol.6, no.1, pp.27-33, 2012 (Journal Indexed in SCI)
- VIII. **Blind, Adaptive Channel Shortening Equalizer Algorithm Which Can Provide Shortened Channel State Information (BACS-SI)**
TOKER C., ALTIN G.
IEEE TRANSACTIONS ON SIGNAL PROCESSING, vol.57, no.4, pp.1483-1493, 2009 (Journal Indexed in SCI)
- IX. **Joint transceiver design for MIMO channel shortening**
Toker C., LAMBOTHARAN S., CHAMBERS J. A.
IEEE TRANSACTIONS ON SIGNAL PROCESSING, vol.55, no.7, pp.3851-3866, 2007 (Journal Indexed in SCI)
- X. **Closed-loop space time block coding techniques for OFDM based broadband wireless access systems**
LAMBOTHARAN S., Toker C.
IEEE TRANSACTIONS ON CONSUMER ELECTRONICS, vol.51, no.3, pp.765-769, 2005 (Journal Indexed in SCI)
- XI. **Joint spatial and temporal channel-shortening techniques for frequency selective fading MIMO channels**
Toker C., LAMBOTHARAN S., CHAMBERS J., BAYKAL B.
IEE PROCEEDINGS-COMMUNICATIONS, vol.152, no.1, pp.89-94, 2005 (Journal Indexed in SCI)
- XII. **Closed-loop quasi-orthogonal STBCs and their performance in multipath fading environments and when combined with turbo codes**
Toker C., LAMBOTHARAN S., CHAMBERS J.
IEEE TRANSACTIONS ON WIRELESS COMMUNICATIONS, vol.3, no.6, pp.1890-1896, 2004 (Journal Indexed in SCI)

- I. **Energy-efficient rotary-wing UAV deployment under flight dynamics and QoS constraints**
DEMİR U., Ipek M. C. , TOKER C., EKİCİ Ö.
7th IEEE International Black Sea Conference on Communications and Networking, BlackSeaCom 2019, Sochi, Russia, 3 - 06 June 2019
- II. **Construction of TEC Maps Using Compressive Sensing**
SUNU C., TOKER C.
27th Signal Processing and Communications Applications Conference (SIU), Sivas, Turkey, 24 - 26 April 2019
- III. **Interference Aware Optimal Resource Allocation on V2X Networks**
DEMİR U., YÜKSEKKAYA B., TOKER C.
27th Signal Processing and Communications Applications Conference (SIU), Sivas, Turkey, 24 - 26 April 2019
- IV. **Jamming Performance Analysis of Chirp Jammers on DSSS Signals**
TOKER C., SUNU C., Gogusdere S.
27th Signal Processing and Communications Applications Conference (SIU), Sivas, Turkey, 24 - 26 April 2019
- V. **Sparse 2D-DCT Reconstruction of Total Electron Content Maps**
SUNU C., TOKER C.
9th International Conference on Recent Advances in Space Technologies (RAST), İstanbul, Turkey, 11 - 14 June 2019, pp.667-672
- VI. **Geniş Bant Yer Tabanlı bir VLF/LF Alıcı Sisteminin Analog Ön-uç Tasarımı**
DEMİR U., SARAÇOĞLU M. S. , TOKER C.
IX. URSI-Türkiye 2018 Bilimsel Kongresi Ulusal Genel Kurul Toplantısı, Turkey, 6 - 08 September 2018
- VII. **Fusion of ionosonde measurements and TEC estimations using statistical techniques**
KÖROĞLU O., ARIKAN F., TOKER C., ARTUNER H., Mošna Z.
The second VarSITI General Symposium (VarSITI-2017), Irkutsk, Russia, 10 - 15 July 2017
- VIII. **Spatial-Spectral Analysis of Ionospheric TEC Maps**
Yılmaz B., TOKER C.
25th Signal Processing and Communications Applications Conference (SIU), Antalya, Turkey, 15 - 18 May 2017
- IX. **Ionogram Generation in HF Band by Using Three Dimensional Ray Tracing**
Kabasakal M., TOKER C.
25th Signal Processing and Communications Applications Conference (SIU), Antalya, Turkey, 15 - 18 May 2017
- X. **Probability Distribution Extraction from TEC Estimates based on Kernel Density Estimation**
DEMİR U., Çenet D., TOKER C.
41st COSPAR Scientific Assembly, 30 July - 07 August 2016
- XI. **Statistical Analysis of the Ionosphere based on Singular Value Decomposition**
DEMİR U., Deviren M. N. , TOKER C., ARIKAN F.
41st COSPAR Scientific Assembly, 30 July - 07 August 2016
- XII. **Power Control for Two-Tier Uplink Under Feedback and Interference Constraints**
YÜKSEKKAYA B., DEMİR U., Inaltekin H., TOKER C.
24th Signal Processing and Communication Application Conference (SIU), Zonguldak, Turkey, 16 - 19 May 2016, pp.1545-1548
- XIII. **Under Feedback and Interference Constraints Uplink Power Control in Two-Tier Networks**
Demir U., Toker C., Haliloglu O., Inaltekin H.
24th Signal Processing and Communication Application Conference (SIU), Zonguldak, Turkey, 16 - 19 May 2016, pp.1397-1400
- XIV. **Optimum Transmission Frequency Selection on the HF Band Based on the IRI and ITS model**
Ozdil O., TOKER C.
39th International Conference on Telecommunications and Signal Processing (TSP), Vienna, Austria, 27 - 29 June 2016, pp.215-218
- XV. **Power Control for Two-Tier Multi-Carrier MAC Under Interference Constraints**
YÜKSEKKAYA B., Inaltekin H., TOKER C.
24th Signal Processing and Communication Application Conference (SIU), Zonguldak, Turkey, 16 - 19 May 2016, pp.1549-1552

- XVI. **Energy Efficient Power Control and Radio Resource Management in Multi-Connectivity Framework**
HALILOĞLU Ö., TOKER C., BULU G., YÜKSEKKAYA B., Yanikomeroglu H.
24th Signal Processing and Communication Application Conference (SIU), Zonguldak, Turkey, 16 - 19 May 2016,
pp.1101-1104
- XVII. **SPACE WEATHER STUDIES OF IONOLAB GROUP**
ARIKAN F., SEZEN U., TOKER C., ARTUNER H., BULU G., DEMİR U., ERDEM E., Arikan O., Tuna H., Karatay S., et al.
URSI Asia-Pacific Radio Science Conference (URSI AP-RASC), Seoul, South Korea, 21 - 25 August 2016, pp.1136-
1139
- XVIII. **Improved IONOLAB TEC Space Weather Service**
ARIKAN F., SEZEN U., TOKER C., BULU G., ARTUNER H., KARATAY S.
IRI 2015 Workshop KMITL, 9 - 13 November 2015
- XIX. **Online IRI Plas Interface Service by IONOLAB**
ARIKAN F., TL G., TOKER C., SEZEN U., ARTUNER H.
IRI 2015 Workshop KMITL, 9 - 13 November 2015
- XX. **Near-optimum power control for two-Tier SIMO uplink under power and interference constraints**
YÜKSEKKAYA B., Inaltekin H., TOKER C., YANIKOMEROGLU H.
16th IEEE International Workshop on Signal Processing Advances in Wireless Communications, SPAWC 2015,
Stockholm, Sweden, 28 June - 01 July 2015, pp.645-649
- XXI. **On Optimum Uplink Power Control at HetNets and Cognitive Radio**
DEMİR U., İNALTEKİN H., TOKER C.
IEEE ComSoc Summer School, 6 - 09 July 2015
- XXII. **Analysis of Clipping Noise in Visible Light Communications**
Fisne A., TOKER C.
23rd Signal Processing and Communications Applications Conference (SIU), Malatya, Turkey, 16 - 19 May 2015,
pp.1684-1687
- XXIII. **Doppler Shift Estimation for HF Channels Based on TEC Measurements**
TOKER C.
23rd Signal Processing and Communications Applications Conference (SIU), Malatya, Turkey, 16 - 19 May 2015,
pp.2482-2485
- XXIV. **Power control for two-tier SIMO-MIMO uplink under interference constraints İki Katmanlı TGÇÇ-
ÇGÇÇ Çoklu Erişim Kanalları için Girişim Kisitleri Altında Güç Kontrolü**
YÜKSEKKAYA B., Inaltekin H., TOKER C., YANIKÖMEROĞLU H.
2015 23rd Signal Processing and Communications Applications Conference, SIU 2015, Malatya, Turkey, 16 - 19
May 2015, pp.931-934
- XXV. **Optimal Power Control in Two-Tier Networks at Low-SNR Regime**
DEMİR U., TOKER C., Inaltekin H.
23rd Signal Processing and Communications Applications Conference (SIU), Malatya, Turkey, 16 - 19 May 2015,
pp.1817-1820
- XXVI. **MATHEMATICAL MODELING OF THE PLASMA FREQUENCY - HEIGHT PROFILE OF THE IONOSPHERE
FOR HF COMMUNICATIONS**
TOKER C., ARIKAN F., ARIKAN O.
22nd IEEE Signal Processing and Communications Applications Conference (SIU), Trabzon, Turkey, 23 - 25 April
2014, pp.1063-1066
- XXVII. **Energy Efficient Radio Resource Management in a Coordinated Multi-Cell Distributed Antenna
System**
HALILOĞLU Ö., TOKER C., BULU G., Yanikomeroglu H.
25th IEEE Annual International Symposium on Personal, Indoor, and Mobile Radio Communication (PIMRC),
Washington, Kiribati, 2 - 05 September 2014, pp.872-876
- XXVIII. **INVESTIGATION OF THE CHANNEL STRUCTURE IN VISIBLE LIGHT COMMUNICATION**
Fisne A., TOKER C.
22nd IEEE Signal Processing and Communications Applications Conference (SIU), Trabzon, Turkey, 23 - 25 April

2014, pp.1646-1649

- XXIX. **Optimal Power Control in Two-Tier Networks with DC Programming**
DEMİR U., TOKER C., Inaltekin H.
22nd IEEE Signal Processing and Communications Applications Conference (SIU), Trabzon, Turkey, 23 - 25 April 2014, pp.999-1002
- XXX. **REMOTE SENSING AND 2-D IMAGING OF IONOSPHERE BY IONOLAB GROUP**
ARIKAN F., TOKER C., SEZEN U., Deviren M. N. , Cilibas O., ARIKAN O.
22nd IEEE Signal Processing and Communications Applications Conference (SIU), Trabzon, Turkey, 23 - 25 April 2014, pp.1520-1523
- XXXI. **Generalized Coordinated Port Selection in a Multi-Cell Distributed Antenna System using Semidefinite Relaxation**
BULU G., Ahmad T., Gohary R., Yanikomeroglu H., TOKER C.
IEEE 24th International Symposium on Personal, Indoor and Mobile Radio Communications (PIMRC), London, Canada, 8 - 11 September 2013, pp.1029-1033
- XXXII. **Radio Resource Management in a Coordinated Cellular Distributed Antenna System By Using Particle Swarm Optimization**
HALILOĞLU Ö., TOKER C., BULU G., Yanikomeroglu H.
77th IEEE Vehicular Technology Conference (VTC), Dresden, Germany, 2 - 05 June 2013
- XXXIII. **Optimum Uplink Power Control Under Power and Interference Constraints**
YÜKSEKKAYA B., INALTEKIN H., TOKER C.
IEEE 78th Vehicular Technology Conference (VTC Fall), Nevada, United States Of America, 2 - 05 September 2013
- XXXIV. **Joint transceiver design for multiuser MIMO channel equalization Çok kullanıcıli MIMO kanal denkleştirme için ortak verici-alici tasarımı**
YÜKSEKKAYA B., TOKER C.
18th IEEE Signal Processing and Communications Applications Conference, SIU 2010, Diyarbakır, Turkey, 22 - 24 April 2010, pp.316-319
- XXXV. **A General Joint Transceiver Design for Multiuser MIMO Channel Equalization**
YÜKSEKKAYA B., TOKER C.
IEEE 72nd Vehicular Technology Conference Fall 2010, Ottawa, Canada, 6 - 09 September 2010
- XXXVI. **A general framework for joint transceiver design for multiuser MIMO channel shortening equalization**
YÜKSEKKAYA B., TOKER C.
2009 IEEE/SP 15th Workshop on Statistical Signal Processing, SSP '09, Cardiff, United Kingdom, 31 August - 03 September 2009, pp.105-108
- XXXVII. **Resource Allocation for OFDMA Systems**
Turgu C., TOKER C.
IEEE 17th Signal Processing and Communications Applications Conference, Antalya, Turkey, 9 - 11 April 2009, pp.790-793
- XXXVIII. **A LOW COMPLEXITY RESOURCE ALLOCATION ALGORITHM FOR OFDMA SYSTEMS**
Turgu C., TOKER C.
15th IEEE/SP Workshop on Statistical Signal Processing, Cardiff, England, 31 August - 03 September 2009, pp.688-691
- XXXIX. **A LOW COMPLEXITY ALGORITHM BASED ON GEOMETRIC PROGRAMMING FOR CALL ADMISSION CONTROL IN WIRELESS NETWORKS**
Ozcan M. K. , TOKER C.
15th IEEE/SP Workshop on Statistical Signal Processing, Cardiff, England, 31 August - 03 September 2009, pp.285-288
- XL. **RESOURCE ALLOCATION FOR MULTIUSER MIMO/OFDM SYSTEMS**
Turgu C., TOKER C.
IEEE 16th Signal Processing and Communications Applications Conference, Aydın, Turkey, 20 - 22 April 2008, pp.757-760

XLI. Blind, adaptive channel shortening equaliser design with state information (BACS-SI)

TOKER C., Altan G.

IEEE 15th Signal Processing and Communications Applications Conference, Eskişehir, Turkey, 11 - 13 June 2007, pp.104-107

Supported Projects

TOKER C., TUBITAK Project, Çok Elektrotlu Rezistivite Tomografi Cihazının Geliştirilmesi ve Üretilmesi, 2016 - Continues
TOKER C., Project Supported by Other Private Institutions, Radar Darbelerindeki İstemsiz Kiplenimin Sınıflandırılması, 2016 - Continues

TOKER C., HALİLOĞLU Ö., Project Supported by Higher Education Institutions, Çok Hücreli Dağıtık Anten Sisteminde Jain Adaletliliği Altında Ortak Kaynak Yönetimi ve Güç Kontrolü - Joint Radio Resource Management and Power Control in a MultiCell Cellular Distributed Antenna System with Jain Fairness, 2017 - 2019

TOKER C., Fişne A., Project Supported by Higher Education Institutions, Görünür Işıklı Haberleşmede Kırpma Gürültüsü Analizi, 2015 - 2017

TOKER C., TUBITAK Project, 0792 STZ 2011 - Otomatik Modülasyon Tanıma Algoritmalarının Geliştirilmesi ve Uygulanması, 2012 - 2014

TOKER C., TUBITAK Project, 109E055 - Bölgesel Otomatik TEİ Haritalaması ve Sürekli Gözlenmesi, 2009 - 2012

TOKER C., TUBITAK Project, 107E056 - MCM TABANLI HABERLEŞME SİSTEMLERİ İÇİN KANAL KISALTMA DENKLEŞTİRİCİ TASARIMI VE KAYNAK TAHSİSİ ALGORİTMALARININ GELİŞTİRİLMESİ, 2007 - 2010

Citations

Total Citations (WOS):84

h-index (WOS):5