

Prof. Lütfiye Durak Ata

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International Researcher IDs

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Biography

Lutfiye Durak-Ata received her BS, MS and PhD degrees all in Electrical Engineering Department of Bilkent University, Ankara, Turkey. She worked in the Statistical Signal Processing Laboratory of Korean Advanced Institute of Science and Technology, KAIST between 2004-2005, and in the Electronics and Communications Engineering Department of Yildiz Technical University, Istanbul, Turkey between 2005-2015. Since September 2015, she has been working in Informatics Institute of Istanbul Technical University, where she is currently a professor. She is an IEEE Senior Member since 2010. She is also a member of EURASIP and one of the Local Liaison Officers of Turkey since 2009. Her research interests are in time–frequency signal processing, statistical signal processing, and communications theory.

Education Information

Doctorate, İhsan Doğramacı Bilkent University, Faculty Of Engineering, Department Of Electrical And Electronics Engineering, Turkey 1999 - 2004

Postgraduate, İhsan Doğramacı Bilkent University, Faculty Of Engineering, Department Of Electrical And Electronics Engineering, Turkey 1996 - 1999

Undergraduate, İhsan Doğramacı Bilkent University, Faculty Of Engineering, Department Of Electrical And Electronics Engineering, Turkey 1992 - 1996

Foreign Languages

English, C1 Advanced

Dissertations

Doctorate, Novel Time-Frequency Analysis Techniques for Deterministic Signals, İhsan Doğramacı Bilkent Üniversitesi, Mühendislik Fakültesi, Elektrik-Elektronik Mühendisliği Bölümü, 2003

Postgraduate, Nanosecond Optical Parametric Oscillators Generating Eye-Safe Radiation, İhsan Doğramacı Bilkent Üniversitesi, Mühendislik Fakültesi, Elektrik-Elektronik Mühendisliği Bölümü, 1998

Research Areas

Information Systems, Communication and Control Engineering, Communication Engineering, Wireless Communication, Signal Processing, Signal Processing Theory and Methods, Engineering and Technology

Academic Titles / Tasks

Professor, Istanbul Technical University, Bilişim Enstitüsü, Bilişim Uygulamaları, 2017 - Continues

Associate Professor, Istanbul Technical University, Bilişim Enstitüsü, Bilişim Uygulamaları, 2015 - 2017

Associate Professor, Yıldız Technical University, Faculty Of Electrical & Electronics, Elektronik Ve Haberleşme Mühendisliği Bölümü, 2011 - 2015

Assistant Professor, Yıldız Technical University, Faculty Of Electrical & Electronics, Elektronik Ve Haberleşme Mühendisliği Bölümü, 2005 - 2011

Research Assistant, Ihsan Dogramaci Bilkent University, Faculty Of Engineering, Department Of Electrical And Electronics Engineering, 1996 - 2004

Academic and Administrative Experience

Director of The Institution, Istanbul Technical University, Bilişim Enstitüsü, 2018 - Continues

İstanbul Teknik Üniversitesi, Bilişim Enstitüsü, Bilişim Uygulamaları Anabilim Dalı, 2016 - 2018

İstanbul Teknik Üniversitesi, Bilişim Enstitüsü, Bilişim Uygulamaları Anabilim Dalı, 2016 - 2017

Yıldız Teknik Üniversitesi, Elektrik-Elektronik Fakültesi, Elektronik Ve Haberleşme Mühendisliği Bölümü, 2008 - 2010

Yıldız Teknik Üniversitesi, Elektrik-Elektronik Fakültesi, Elektronik Ve Haberleşme Mühendisliği Bölümü, 2006 - 2009

Courses

Mathematical Methods for Signal Processing, Postgraduate, 2016 - 2017

Published journal articles indexed by SCI, SSCI, and AHCI

- I. **Handover-Enabled Dynamic Computation Offloading for Vehicular Edge Computing Networks**
Maleki H., Basaran M., Durak Ata L.
IEEE Transactions on Vehicular Technology, vol.72, no.7, pp.9394-9405, 2023 (SCI-Expanded)
- II. **Classification of Cervical Precursor Lesions via Local Histogram and Cell Morphometric Features**
Calik N., Albayrak A., Akhan A., Turkmen I., Çapar A., Töreyn B. U., BİLGİN G., Muezzinoglu B., Durak Ata L.
IEEE Journal of Biomedical and Health Informatics, vol.27, no.4, pp.1747-1757, 2023 (SCI-Expanded)
- III. **AI-Empowered Fast Task Execution Decision for Delay-Sensitive IoT Applications in Edge Computing Networks**
Atan B., Basaran M., Calik N., Basaran S., Akkuzu G., Durak Ata L.
IEEE Access, vol.11, pp.1324-1334, 2023 (SCI-Expanded)
- IV. **Metasurface Manipulation Attacks: Potential Security Threats of RIS-Aided 6G Communications**
Alakoca H., Namdar M., Aldirmaz-Colak S., Basaran M., Basgumus A., Durak Ata L., Yanikomeroğlu H.
IEEE Communications Magazine, vol.61, no.1, pp.24-30, 2023 (SCI-Expanded)
- V. **RIS-Empowered Non-Linear Energy Harvesting Communications Over Nakagami-m Channels**
Alakoca H., Babaei M., Durak Ata L., Basar E.
IEEE COMMUNICATIONS LETTERS, vol.26, no.9, pp.2215-2219, 2022 (SCI-Expanded)
- VI. **Performance Analysis of Dual-Hop AF Relaying with Non-Linear/Linear Energy Harvesting**
Babaei M., Durak Ata L., Aygolu U.
SENSORS, vol.22, no.16, 2022 (SCI-Expanded)

- VII. **Iterative interference alignment with spatial hole sensing in MIMO cognitive radio networks**
 NAMDAR M., BAŞGÜMÜŞ 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)
- VIII. **Performance of FSO Communication Systems Employing Alamouti-Type Space-Time Encoding Over Malaga Channels With Pointing Errors**
 Ibrahim A. A., Ata S. O., Durak Ata L.
 IEEE PHOTONICS JOURNAL, vol.14, no.1, 2022 (SCI-Expanded)
- IX. **A whole-slide image grading benchmark and tissue classification for cervical cancer precursor lesions with inter-observer variability**
 Albayrak A., Akhan A. U., ÇALIK N., Çapar A., BİLGİN G., Töreyin B. U., Muezzinoglu B., Turkmen I., Durak Ata L.
 MEDICAL & BIOLOGICAL ENGINEERING & COMPUTING, vol.59, pp.1545-1561, 2021 (SCI-Expanded)
- X. **Intracell Frequency Band Exiling for Green Wireless Networks: Implementation, Performance Metrics, and Use Cases**
 Ozyurt A. B., Başaran M., Ardanuç M., Durak Ata L., Yanikomeroglu H.
 IEEE VEHICULAR TECHNOLOGY MAGAZINE, vol.16, no.2, pp.31-39, 2021 (SCI-Expanded)
- XI. **SCMA System Design With Index Modulation via Codebook Assignment**
 Tekce F., AYTEN U. E., Durak Ata L.
 IEEE TRANSACTIONS ON VEHICULAR TECHNOLOGY, vol.70, no.2, pp.1699-1708, 2021 (SCI-Expanded)
- XII. **BER Performance of Full-Duplex Cognitive Radio Network With Nonlinear Energy Harvesting**
 Babaei M., AYGÖLÜ H. Ü., Başaran M., DURAK ATA L.
 IEEE Transactions on Green Communications and Networking, vol.4, no.2, pp.448-460, 2020 (SCI-Expanded)
- XIII. **Performance analysis of free space optical communication systems over imprecise Málaga fading channels**
 Ibrahim A. A., Ata S. Ö., Erdoğan E., Durak-Ata L.
 Optics Communications, vol.457, 2020 (SCI-Expanded)
- XIV. **Multi-user shared access in massive machine-type communication systems via superimposed waveforms**
 Catak E., Tekce F., Dizdar O., Durak-Ata L.
 PHYSICAL COMMUNICATION, vol.37, 2019 (SCI-Expanded)
- XV. **Large-scale offline signature recognition via deep neural networks and feature embedding**
 Calik N., Kurban O. C., Yilmaz A. R., YILDIRIM T., Durak Ata L.
 NEUROCOMPUTING, vol.359, pp.1-14, 2019 (SCI-Expanded)
- XVI. **Signal Space Cognitive Cooperation**
 ERDOĞAN E., Afana A., Sokun H. U., Ikki S., Durak-Ata L., Yanikomeroglu H.
 IEEE TRANSACTIONS ON VEHICULAR TECHNOLOGY, vol.68, no.2, pp.1953-1957, 2019 (SCI-Expanded)
- XVII. **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)
- XVIII. **Adaptive filterbank based multi carrier waveform design for flexible data rates**
 CATAK E., DURAK ATA L.
 Computers & Electrical Engineering, vol.61, pp.184-194, 2017 (SCI-Expanded)
- XIX. **Enhanced LPI Waveform Representation by Ambiguity-Domain Elliptical Gaussian Filtering**
 GULUM T. O., ERDOGAN A. Y., Ata L., YILDIRIM T., Pace P. E.
 IEEE TRANSACTIONS ON AEROSPACE AND ELECTRONIC SYSTEMS, vol.53, no.2, pp.762-777, 2017 (SCI-Expanded)
- XX. **FMCW Signal Detection and Parameter Extraction by Cross Wigner-Hough Transform**
 ERDOGAN A. Y., GULUM T. O., Durak-Ata L., YILDIRIM T., Pace P. E.
 IEEE TRANSACTIONS ON AEROSPACE AND ELECTRONIC SYSTEMS, vol.53, no.1, pp.334-344, 2017 (SCI-Expanded)
- XXI. **High-resolution signal processing techniques for through-the-wall imaging radar systems**
 TÜRK A. S., Ozkan-Bakbak P., DURAK-ATA L., Orhan M., Unal M.
 International Journal of Microwave and Wireless Technologies, vol.8, no.6, pp.855-863, 2016 (SCI-Expanded)

Articles Published in Other Journals

- I. **Linear/Non-Linear Energy Harvesting Models via Multi-Antenna Relay Cooperation in V2V Communications**
Koşu S., Babaei M., Ata S. O., Durak Ata L., Yanikomeroglu H.
IEEE Transactions on Green Communications and Networking, vol.7, no.4, pp.1725-1738, 2023 (Scopus)
- II. **Üniversitelerde Sürdürülebilirlik Çalışmaları: İstanbul Teknik Üniversitesi Örneği**
ACUNER TÜRET E., MAÇİN K. E., ÖZCAN F. K., KARABULUT A. E., KÖSE MUTLU B., DURAK ATA L.
Çevre, İklim ve Sürdürülebilirlik, vol.24, no.2, pp.111-120, 2023 (Peer-Reviewed Journal)
- III. **Energy Efficiency Analysis in Heterogeneous Networks: A Stochastic Geometry Perspective**
Ardanuç M., Basaran M., Hmamouche Y., Durak Ata L., Yanikomeroglu H.
IEEE Open Journal of Vehicular Technology, vol.4, pp.438-443, 2023 (Scopus)

Refereed Congress / Symposium Publications in Proceedings

- I. **Multi-Resolution and Multi-Rate UWB ESM Receiver Design via Direct RF Sub-Nyquist Sampling**
Pinarçik A. B., Korucu A. B., Alp Y. K., Durak Ata L.
IEEE Radar Conference (RadarConf), Florence, Italy, 21 - 25 September 2020
- II. **On the Error Performance of Relay-Assisted Vehicular Communication Systems**
Koşu S., Ata S. O., Durak-Ata L.
2019 IEEE Microwave Theory and Techniques in Wireless Communications, MTTW 2019, Riga, Latvia, 1 - 02 October 2019, pp.68-71
- III. **BER Performance of Wireless-Powered Dual-Hop AF Relaying**
Babaei M., Aygolu U., Durak-Ata L.
2019 IEEE Microwave Theory and Techniques in Wireless Communications, MTTW 2019, Riga, Latvia, 1 - 02 October 2019, pp.43-46
- IV. **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
- V. **Aşırı yoğun heterojen ağlarda Poisson boşluk süreci ile enerji verimli baz istasyonu yerleşimi**
ARDANUÇ M., BAŞARAN M., DURAK ATA L.
IEEE 27. Sinyal İşleme ve İletişim Uygulamaları Kurultayı (SIU'2019), Sivas, Turkey, 24 - 26 April 2019
- VI. **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
- VII. **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
- VIII. **Performance of Selective Decode-and-Forward SWIPT Network in Nakagami-m Fading Channel**
BABAEİ M., AYGÖLÜ H. Ü., DURAK ATA L.
26th Telecommunications Forum TELFOR 2018, 20 - 21 November 2018
- IX. **Impact of Self-Configuration on Handover Performance in Green Cellular Networks**
Ozyurt A. B., Başaran M., Durak Ata L.
4th International Scientific Conference on Advances in Wireless and Optical Communications (RTUWO), Riga, Latvia, 15 - 16 November 2018, pp.194-197
- X. **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

- XI. **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
- XII. **Energy-Efficient utilization of different frequency bands for green cellular networks**
ÖZYURT A. B., HIZ A., DURAK ATA L.
26th Signal Processing and Communications Applications Conference (SIU), 2 - 05 May 2018
- XIII. **Performance of interference alignment in cognitive radio networks under interference leakage**
Bilişsel radyo ağlarında girişim kaçığı 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

Metrics

Publication: 130

Citation (WoS): 301

Citation (Scopus): 495

H-Index (WoS): 10

H-Index (Scopus): 12

Non Academic Experience

TÜBİTAK

University of Liverpool, İngiltere

Department of Electrical and Communications Engineering, University of Pittsburgh, ABD