

## Prof. Lütfiye Durak Ata

### Personal Information

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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 Üniversitesi, Mühendislik Fakültesi, Elektrik-Elektronik Mühendisliği Bölümü, Turkey 1999 - 2004

Postgraduate, İhsan Doğramacı Bilkent Üniversitesi, Mühendislik Fakültesi, Elektrik-Elektronik Mühendisliği Bölümü, Turkey 1996 - 1999

Undergraduate, İhsan Doğramacı Bilkent Üniversitesi, Mühendislik Fakültesi, Elektrik-Elektronik Mühendisliği Bölümü, 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, İstanbul Teknik Üniversitesi, Bilişim Enstitüsü, Bilişim Uygulamaları, 2017 - Continues  
Associate Professor, Istanbul Technical University, Bilişim Enstitüsü, Bilişim Uygulamaları, 2015 - 2017  
Associate Professor, Yıldız Teknik Üniversitesi, Elektrik-Elektronik Fakültesi, Elektronik Ve Haberleşme Mühendisliği Bölümü, 2011 - 2015  
Assistant Professor, Yıldız Teknik Üniversitesi, Elektrik-Elektronik Fakültesi, Elektronik Ve Haberleşme Mühendisliği Bölümü, 2005 - 2011  
Research Assistant, İhsan Doğramacı Bilkent Üniversitesi, Mühendislik Fakültesi, Elektrik-Elektronik Mühendisliği Bölümü, 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

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

- I. **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 (Journal Indexed in SCI)
- II. **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 (Journal Indexed in SCI)
- III. **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 (Journal Indexed in SCI)
- IV. **Signal Space Cognitive Cooperation**  
ERDOĞAN E., Afana A., Sokun H. U. , Ikki S., Durak-Ata L., Yanikomeroğlu H.  
IEEE TRANSACTIONS ON VEHICULAR TECHNOLOGY, vol.68, no.2, pp.1953-1957, 2019 (Journal Indexed in SCI)
- V. **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 (Journal Indexed in SCI)
- VI. **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 (Journal Indexed in SCI)
- VII. **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 (Journal Indexed in SCI)
- VIII. **FMCW Signal Detection and Parameter Extraction by Cross Wigner-Hough Transform**

ERDOĞAN 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 (Journal Indexed in SCI)

**IX. 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 (Journal Indexed in SCI)

## Articles Published in Other Journals

**I. 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 (Refereed Journals of Other Institutions)

## Refereed Congress / Symposium Publications in Proceedings

**I. Multi-Resolution and Multi-Rate UWB ESM Receiver Design via Direct RF Sub-Nyquist Sampling**

Pınarcık 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 ForumTELFOR 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

## Citations

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