

Prof.Dr. ASAF BEHZAT ŞAHİN

Kişisel Bilgiler

İş Telefonu: [+90 312 906 2258](tel:+903129062258)

E-posta: absahin@ybu.edu.tr

Web: <https://avesis.ybu.edu.tr/absahin>

Biyografi

Dr. Sahin received his B.S. degree in Electrical and Electronics Engineering from Middle East Technical University, Ankara, Turkey in 1996, and the M.S. and Ph.D. degrees from University of Southern California, Los Angeles, CA, USA in 1998 and 2003. He worked as a part time consultant on optical systems for several Silicon Valley companies until 2004. He joined the faculty of the Electrical-Electronics Engineering Department of Middle East Technical University in 2004, where he worked as an assistant professor until 2012. He also gave lectures in Air War College, İstanbul and Middle East Technical University Northern Cyprus Campus.

Since 2012, he has been with the Electrical and Electronics Engineering Department of the School of Engineering and Natural Sciences, Yildirim Beyazit University, Ankara. His major research interests are Fiber Optics, Communication, Quantum Cryptography, Terahertz, Millimeter waves, and Remote Imaging. He has 2 international patents in the field of optical communications, and more than 100 research publications and conference proceedings in various fields. He has participated in more than 40 R&D projects and is currently researcher and principal investigator in projects in the fields of terahertz spectrometry, non-destructive acoustic and optical testing for quality, millimeter and sub-millimeter wave remote imaging for security, millimeter wave and terahertz frequency communication systems, fiber optical distributed acoustic sensors, and mems integrated fiber microphone.

Eğitim Bilgileri

Doktora, University Of Southern California, Electrical Engineering, Amerika Birleşik Devletleri 1998 - 2003

Lisans, Orta Doğu Teknik Üniversitesi, Felsefe, Elektrik-Elektronik Mühendisliği Bölümü, Türkiye 1991 - 1996

Yabancı Diller

İngilizce, C1 İleri

Yaptığı Tezler

Doktora, Experimental demonstration of techniques to improve fiber optic microwave analog and digital communications, University Of Southern California, Electrical Engineering, 2003

Araştırma Alanları

Optik ve Fotonik, Elektromanyetik Dalgalar, Antenler ve Propagasyon

Akademik Unvanlar / Görevler

Doç.Dr., Yıldırım Beyazıt Üniversitesi, Mühendislik Ve Doğa Bilimleri Fakültesi, Elektrik-Elektronik Mühendisliği Bölümü, 2015 - Devam Ediyor

Yrd.Doç.Dr., Yıldırım Beyazıt Üniversitesi, Mühendislik Ve Doğa Bilimleri Fakültesi, Elektrik-Elektronik Mühendisliği Bölümü, 2012 - 2015

Yrd.Doç.Dr., Orta Doğu Teknik Üniversitesi, Felsefe, Elektrik-Elektronik Mühendisliği Bölümü, 2006 - 2012

Öğretim Görevlisi, Orta Doğu Teknik Üniversitesi, Felsefe, Elektrik-Elektronik Mühendisliği Bölümü, 2004 - 2006

Araştırma Görevlisi, University Of Southern California, Engineering, Electrical Systems, 1998 - 2003

Araştırma Görevlisi, Orta Doğu Teknik Üniversitesi, Felsefe, Elektrik-Elektronik Mühendisliği Bölümü, 1996 - 1997

Akademik İdari Deneyim

Yıldırım Beyazıt Üniversitesi, Mühendislik Ve Doğa Bilimleri Fakültesi, Elektrik-Elektronik Mühendisliği Bölümü, 2015 - Devam Ediyor

Verdiği Dersler

Graduation Project, Lisans, 2016 - 2017, 2017 - 2018

Telecommunications, Lisans, 2017 - 2018

Signals and Systems, Lisans, 2016 - 2017

Telecommunication Electronics, Lisans, 2016 - 2017

Yönetilen Tezler

ŞAHİN A. B. , Development and performance analysis of transmitter receiver structures for high data rate communication systems at 240 ghz, Yüksek Lisans, Ö.ERSOY(Öğrenci), 2017

ŞAHİN A. B. , Optical emission spectroscopic investigation of the millimeter/thz wave and magnetic field combined effect on the cold plasma abnormal region, Yüksek Lisans, A.ABDULMAJED(Öğrenci), 2017

ŞAHİN A. B. , Development of a 60W pulsed fiber laser amplifier for materials processing, Yüksek Lisans, Y.OZAN(Öğrenci), 2014

ŞAHİN A. B. , Determination of buried circular cylinder with ground penetrating radar using an optical fiber sensor, Yüksek Lisans, H.GONCA(Öğrenci), 2011

ŞAHİN A. B. , Down conversion and filtering of microwave signals in optical domain, Yüksek Lisans, G.SELÇUK(Öğrenci), 2008

SCI, SSCI ve AHCI İndekslerine Giren Dergilerde Yayınlanan Makaleler

- I. **Development of 15-dB gain conical horn antenna using 3D printing technology**
KARAKOÇ M. C. , ŞAHİN A. B.
Electrica, cilt.20, sa.2, ss.177-181, 2020 (SCI Expanded İndekslerine Giren Dergi)
- II. **Super-resolution algorithm applied to images acquired at millimeter wave frequency in single pixel and computational ghost imaging configurations**
ŞENGÜN ERMEYDAN E., ÇANKAYA İ., ŞAHİN A. B.
Journal of Electromagnetic Waves and Applications, cilt.33, sa.17, ss.2328-2340, 2019 (SCI Expanded İndekslerine Giren Dergi)
- III. **Time-Domain Characterization of the Radiation Pattern of the Terahertz Photoconductive Antennas**
Elmabruk K., Demir K., ALTAN H., Sahin A. B. , ÜNLÜ M.

JOURNAL OF INFRARED MILLIMETER AND TERAHERTZ WAVES, cilt.40, sa.6, ss.595-605, 2019 (SCI İndekslerine Giren Dergi)

- IV. **Stand-Off Through-the-Wall W-Band Millimeter-Wave Imaging Using Compressive Sensing**
Alkus U., ŞAHİN A. B. , ALTAN H.
IEEE GEOSCIENCE AND REMOTE SENSING LETTERS, cilt.15, sa.7, ss.1025-1029, 2018 (SCI İndekslerine Giren Dergi)
- V. **Characterization of a terahertz wave scanned imaging system for threat detection at standoff distances**
Yildirim I. O. , ÖZKAN V. A. , İDİKUT F., Takan T., ŞAHİN A. B. , ALTAN H.
OPTICAL AND QUANTUM ELECTRONICS, cilt.48, sa.7, 2016 (SCI İndekslerine Giren Dergi)
- VI. **Detection of far-infrared radiation using glow discharge detectors**
Takan T., Alasgarzade N., Uzun-Kaymak I. U. , ŞAHİN A. B. , ALTAN H.
OPTICAL AND QUANTUM ELECTRONICS, cilt.48, sa.5, 2016 (SCI İndekslerine Giren Dergi)
- VII. **Simulation of locating buried objects via fringe pattern-based measurements in an optical fiber sensor-integrated continuous-wave ground-penetrating radar system**
ŞAHİN A. B. , Bulur H. G.
TURKISH JOURNAL OF ELECTRICAL ENGINEERING AND COMPUTER SCIENCES, cilt.23, sa.1, ss.28-37, 2015 (SCI İndekslerine Giren Dergi)
- VIII. **Development of a rapid-scan fiber-integrated terahertz spectrometer**
Keskin H., ALTAN H., Yavas S., İLDAY F. Ö. , Eken K., ŞAHİN A. B.
OPTICAL AND QUANTUM ELECTRONICS, cilt.46, sa.4, ss.495-503, 2014 (SCI İndekslerine Giren Dergi)
- IX. **Spectrum-aware underwater networks: Cognitive acoustic communications**
Bicen A. O. , Sahin A. B. , Akan O. B.
IEEE Vehicular Technology Magazine, cilt.7, ss.34-40, 2012 (SCI Expanded İndekslerine Giren Dergi)
- X. **Performance optimization of RZ data format in WDM systems using tunable pulse-width management at the transmitter**
Yan L., Motaghian Nezam S., Sahin A. B. , McGeehan J., Luo T., Yu Q., Willner A. E.
Journal of Lightwave Technology, cilt.23, sa.3, ss.1063-1067, 2005 (SCI Expanded İndekslerine Giren Dergi)
- XI. **Doubling of bandwidth utilization using two orthogonal polarizations and power unbalancing in a polarization-division-multiplexing scheme**
Hayee M., Cardakli M., Sahin A. B. , Willner A.
IEEE Photonics Technology Letters, cilt.13, sa.8, ss.881-883, 2001 (SCI Expanded İndekslerine Giren Dergi)

Kitap & Kitap Bölümleri

- I. **Compressive Sensing Imaging at Sub-THz Frequency in Transmission Mode**
ÖZKAN V. A. , Menteşe Y., TAKAN T., ŞAHİN A. B. , ALTAN H.
THz for CBRN and Explosives Detection and Diagnosis, Mauro Pereira, Oleksiy Shulika, Editör, Springer Netherlands, Dordrecht, ss.49-55, 2017
- II. **Investigating Glow Discharge Detectors as a Millimeter-Wave/Terahertz Radiation Detection Tool**
Alasgarzade N., Nebioğlu M. A. , TAKAN T., UZUN KAYMAK İ. Ü. , ŞAHİN A. B. , ALTAN H.
THz for CBRN and Explosives Detection and Diagnosis, Mauro Pereira, Oleksiy Shulika, Editör, Springer Netherlands, Dordrecht, ss.179-187, 2017

Hakemli Kongre / Sempozyum Bildiri Kitaplarında Yer Alan Yayınlar

- I. **Investigation of faster than nyquist transmission for terahertz communication using harmonic receiver** Harmonik alıcı kullanılarak nyquist'ten daha hızlı iletimin terahertz haberleşmesi için incelenmesi

ERSOY Ö., KARAKOÇ M. C. , ŞAHİN A. B.

29th IEEE Conference on Signal Processing and Communications Applications, SIU 2021, Virtual, Istanbul, Türkiye, 9 - 11 Haziran 2021

- II. **Applications of Various Sensors for Detecting THz Waves in Adverse Conditions**
Şahin A. B. , Altan H., Aytaç B.
Millimetre Wave and Terahertz Sensors and Technology XII, Strasbourg, Fransa, 9 - 12 Eylül 2019
- III. **Radar Kesit Alanının Fourier Dönüşümünden Çıkarılan Öznitelikler Kullanılarak FMSD Radar ile Hedef Sınıflandırılması**
arık d. t. , ŞAHİN A. B.
27. IEEE Sinyal işleme ve iletişim uygulamaları kurultayı, Türkiye, 24 - 26 Nisan 2019
- IV. **Development of Stand-Off GHz Imaging Systems Using Low Cost Plasma Detectors**
AKBAR D., ALTAN H., PAVIA J. P. , RIBEIRO M., ŞAHİN A. B. , KUŞOĞLU SARIKAYA C.
Advanced Research Workshop-"Terahertz (THz), Mid Infrared (MIR) and Near Infrared (NIR) Technologies for Protection of Critical Infrastructures against Explosives and CBRN", Liblice, Çek Cumhuriyeti, 5 - 09 Kasım 2018
- V. **Effects of Reconstruction Algorithms on Imaging in Millimeter Wave Transmission System Based on Compressed Sensing**
ŞENGÜN ERMEYDAN E., Mete M., DEĞİRMENCİ A., ŞAHİN A. B. , ÇANKAYA İ.
3rd International Conference on Engineering Technology and Applied Sciences, ÜSKÜP, Makedonya, 17 - 21 Temmuz 2018, ss.499-504
- VI. **Millimeterwave imaging with compressed sensing: Effects of modulation frequency and data type**
Sikiştirilmiş algılama ile milimetredalga görüntüleme: modülasyon frekansı ve veri tipi etkileri
Erme ydan E., Mete M., ŞAHİN A. B. , ALTAN H., ÇANKAYA İ.
26th IEEE Signal Processing and Communications Applications Conference, SIU 2018, İzmir, Türkiye, 2 - 05 Mayıs 2018, ss.1-4
- VII. **TRay: active THz imaging autonomous biometric secured access control and tracking gate system**
Yildirim I. O. , Telli A., Colak T., Guray C., Demirsoy B., Osmanoglu T., Unal I., Beltekin G., ŞAHİN A. B. , ALTAN H.
Conference on Millimetre Wave and Terahertz Sensors and Technology XI, Berlin, Almanya, 10 - 11 Eylül 2018, cilt.10800
- VIII. **Investigation of radiant millimeter wave/terahertz radiation from low-infrared signature targets**
Aytaç B., Alkuş Ü., Sivashgil M., ŞAHİN A. B. , ALTAN H.
Millimetre Wave and Terahertz Sensors and Technology X, Warsaw, Poland, 11 - 14 Eylül 2017
- IX. **A study on neon indicator lamps for the purpose of THz-mm wave detection**
Alasgarzage N., ALTAN H., MANSUROĞLU D., ŞAHİN A. B. , UZUN KAYMAK İ. Ü.
19. Ulusal Optik, Elektro-Optik ve Fotonik Çalıştayı, Türkiye, 29 Eylül 2017
- X. **Design of a Phase Shifting Impedance Tuner for Terahertz Photomixers Arrays**
Celik S. B. , Demir K., Sahin A. B. , Unlu M.
International Symposium of IEEE-Antennas-and-Propagation-Society / USNC/URSI National Radio Science Meeting, California, Amerika Birleşik Devletleri, 9 - 14 Temmuz 2017, ss.1281-1282
- XI. **Modelling of Photonic Band Gap Filters for Terahertz Photoconductive Antennas and Photomixers**
Demir K., Sahin A. B. , Unlu M.
International Symposium of IEEE-Antennas-and-Propagation-Society / USNC/URSI National Radio Science Meeting, California, Amerika Birleşik Devletleri, 9 - 14 Temmuz 2017, ss.1279-1280
- XII. **EFFECTS OF THZ TRANSMISSION ON THE NARROW GAP DC GLOW DISCHARGE PLASMAS**
Alasgarzade N., ALTAN H., Mansuroglu D., Sahin A. B. , Uzun-Kaymak I. U.
44th IEEE International Conference on Plasma Science (ICOPS), New-Jersey, Amerika Birleşik Devletleri, 21 - 25 Mayıs 2017
- XIII. **Design of a Frequency Reconfigurable, Terahertz Folded Antenna for Photomixers**
Demir K., Sahin A. B. , Unlu M.
International Symposium of IEEE-Antennas-and-Propagation-Society / USNC/URSI National Radio Science Meeting, California, Amerika Birleşik Devletleri, 9 - 14 Temmuz 2017, ss.1753-1754
- XIV. **Design of a Terahertz Beam-Steering Photomixer Array**

Celik S. B. , Demir K., Sahin A. B. , Unlu M.

International Symposium of IEEE-Antennas-and-Propagation-Society / USNC/URSI National Radio Science Meeting, California, Amerika Birleşik Devletleri, 9 - 14 Temmuz 2017, ss.303-304

- XV. **Super-resolution image reconstruction applied to an active millimeter wave imaging system based on compressive sensing**
Alkus U., Ermeydan E. S. , ŞAHİN A. B. , ÇANKAYA İ., ALTAN H.
Millimetre Wave and Terahertz Sensors and Technology X 2017, Warszawa, Polonya, 11 Eylül 2017, cilt.10439
- XVI. **Design of Frequency Upconversion and Downconversion Blocks for 240 GHz Communication Systems**
Ersoy O., Sahin A. B. , Cicek A., Karakoc M. C. , Cavus E., Ozyurt S.
25th Signal Processing and Communications Applications Conference (SIU), Antalya, Türkiye, 15 - 18 Mayıs 2017
- XVII. **Terahertz Milimetre Bandı Bina içi Dağıtık Yüksek Hızlı Veri Aktarımı Deneysel Çalışmaları**
ŞAHİN A. B.
17. Ulusal Optik, Elektro-Optik ve Fotonik Çalıştayı Kitapçığı, Türkiye, 18 Eylül 2015, cilt.1, ss.11
- XVIII. **Design of a Frequency Reconfigurable, Terahertz Antenna for Photomixers**
Demir K., Bilgin H., ŞAHİN A. B. , Unlu M.
41st International Conference on Infrared, Millimeter, and Terahertz Waves (IRMMW-THz), Copenhagen, Danimarka, 25 - 30 Eylül 2016
- XIX. **Modulation and frequency response of GDDs in the millimeter wave THz region**
ŞAHİN A. B. , namıg A., TAKAN T., ALTAN H.
SPIE Security+ Defence, 21 - 23 Ekim 2015, cilt.1
- XX. **Varying Temperature Surface Reflection and its Effect on the Indoor Terahertz Wireless Communications**
ŞAHİN A. B.
International Conference on Semiconductor Mid-IR Materials and Optics, Prag, Çek Cumhuriyeti, 8 - 11 Nisan 2015, cilt.1, ss.59
- XXI. **Compressive sensing imaging through a drywall barrier at sub-THz and THz frequencies in transmission and reflection modes**
Takan T., ÖZKAN V. A. , İDİKUT F., Yildirim I. O. , ŞAHİN A. B. , ALTAN H.
Conference on Image and Signal Processing for Remote Sensing XX, Amsterdam, Hollanda, 22 - 24 Eylül 2014, cilt.9244
- XXII. **Image Reconstruction and Optimization Using a Terahertz Scanned Imaging System**
Yildirim I. O. , ÖZKAN V. A. , İDİKUT F., Takan T., ŞAHİN A. B. , ALTAN H.
Conference on Electro-Optical Remote Sensing, Photonic Technologies, and Applications VIII and Military Applications in Hyperspectral Imaging and High Spatial Resolution Sensing II, Amsterdam, Hollanda, 22 - 23 Eylül 2014, cilt.9250
- XXIII. **Comparison of terahertz technologies for detection and identification of explosives**
Beigang R., Biedron S. G. , Dyjak S., Ellrich F., Haakestad M. W. , Huebsch D., Kartaloglu T., Ozbay E., Ospald F., Palka N., et al.
Conference on Terahertz Physics, Devices, and Systems VIII - Advanced Applications in Industry and Defense, Massachusetts, Amerika Birleşik Devletleri, 5 - 06 Mayıs 2014, cilt.9102
- XXIV. **Characterization of a Glow Discharge Detector with Terahertz Time Domain Spectroscopy**
Cinar K., ALTAN H., ŞAHİN A. B.
38th International Conference on Infrared, Millimeter, and Terahertz Waves (IRMMW-THz), Mainz, Almanya, 1 - 06 Eylül 2013
- XXV. **System limitations due to chromatic dispersion and receiver bandwidth for 2 D time wavelength OCDMA systems**
ŞAHİN A. B. , willner a.
The 16th Annual Meeting of the IEEE Lasers and Electro-Optics Society, 2003. LEOS 2003., Tucson, AZ, USA, 5 - 07 Mayıs 2003
- XXVI. **Distance independent RF fading compensation using a tunable nonlinearly chirped FBG in a phase**

diversity configuration

alan w., olaf a., steven h., ŞAHİN A. B.

Optical Fiber Communication Conference, Baltimore, Maryland, Amerika Birleşik Devletleri, 7 - 10 Mart 2000, cilt.2, ss.323-325

XXVII. Enhanced Robustness of RZ WDM Systems Using Tunable Pulse-Width Management at the Transmitter

Şahin A. B.

2002 28TH European Conference on Optical Communication, Kobenhavn, Danimarka, 8 - 12 Eylül 2002, ss.115-116

XXVIII. Delayed self-heterodyne interferometer measurements of narrow linewidth fiber lasers

Şahin A. B.

Conference on Lasers and Electro-Optics, California, Amerika Birleşik Devletleri, 7 - 11 Mayıs 2000, ss.30-35

Desteklenen Projeler

ŞAHİN A. B. , Yükseköğretim Kurumları Destekli Proje, Elektrik ve Elektronik Mühendisliği Bölümü Merkezi Araştırma Laboratuvarı Altyapı Projesi, 2017 - 2019

ŞAHİN A. B. , Yükseköğretim Kurumları Destekli Proje, NATO Terahertz Sensor Grubu Saha çalışması, 2013 - 2015

ŞAHİN A. B. , Yükseköğretim Kurumları Destekli Proje, Yıldırım Beyazıt Üniversitesi Kablosuz Lazer Optik Haberleşme Laboratuvarı Kurulumu, 2013 - 2015

Atıflar

Toplam Atıf Sayısı (WOS):37

h-indeksi (WOS):3