

## Assoc. Prof. ABDURRAHMAN GÜNDAY

### Personal Information

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### International Researcher IDs

ScholarID: j12gYqsAAAAJ

ORCID: 0000-0002-3262-3494

Publons / Web Of Science ResearcherID: AAH-5448-2021

ScopusID: 55747963900

Yoksis Researcher ID: 207232

### Education Information

Doctorate, Bursa Uludağ University, FEN BİLİMLERİ ENSTİTÜSÜ, FEN BİLİMLERİ ENSTİTÜSÜ, Turkey 2010 - 2016

Postgraduate, Bursa Uludağ University, FEN BİLİMLERİ ENSTİTÜSÜ, FEN BİLİMLERİ ENSTİTÜSÜ, Turkey 2004 - 2007

Undergraduate, Bursa Uludağ University, MÜHENDİSLİK FAKÜLTESİ, ELEKTRİK-ELEKTRONİK MÜHENDİSLİĞİ, Turkey 1992 - 1998

### Foreign Languages

Italian, B1 Intermediate

German, B1 Intermediate

English, C1 Advanced

### Certificates, Courses and Trainings

Education Management and Planning, EĞİTİMDE İNOVASYON VE ETKİLEŞİM, BURSA ULUDAĞ UNIVERSITY, 2020

### Dissertations

Doctorate, ANALYSIS AND MODELLING OF THE THERMAL EFFECTS IN OPTICAL FIBER DISTRIBUTED SENSING SYSTEMS , Bursa Uludağ University, FEN BİLİMLERİ ENSTİTÜSÜ, Elektronik Mühendisliği (Dr), 2016

Postgraduate, Sensing simulations of the temperatures and strains occurred on power cable by the optical fiber sensors, Bursa Uludağ University, FEN BİLİMLERİ ENSTİTÜSÜ, Elektronik Mühendisliği (YI) (Tezli), 2007

### Research Areas

Optical Communication, Telecommunication Applications, Software, Electrical and Electronics Engineering, Sensing Devices and Transducers, Electronic Circuits, Optics and Photonics, Renewable energy, Optical Materials and Devices, Optoelectronic Materials and Devices, Engineering and Technology

## Academic Titles / Tasks

Assistant Professor, Bursa Uludağ University, MÜHENDİSLİK FAKÜLTESİ, ELEKTRİK-ELEKTRONİK MÜHENDİSLİĞİ, 2020  
- Continues

## Courses

Lidar and Radar Systems in Hybrid Electric Vehicles, Postgraduate, 2021 - 2022  
Photonic and Optical Switching Methods, Postgraduate, 2021 - 2022  
Optical Fiber Sensor Applications in Hybrid Electric Vehicles, Postgraduate, 2021 - 2022  
Optoelectronic Circuits, Postgraduate, 2021 - 2022  
OCCUPATIONAL HEALTH AND SAFETY, Undergraduate, 2020 - 2021  
OPTOELECTRONICS, Undergraduate, 2021 - 2022  
PHOTONICS CIRCUIT COMPONENTS, Undergraduate, 2020 - 2021  
COMMUNICATION ELECTRONICS, Undergraduate, 2020 - 2021  
ELECTRICAL MATERIALS, Undergraduate, 2020 - 2021  
Operational Amplifier and their Applications, Undergraduate, 2020 - 2021  
Integrated Communication Networks, Undergraduate, 2020 - 2021

## Jury Memberships

PhD Thesis Monitoring Committee Member, PhD Thesis Monitoring Committee Member, Bursa Uludağ University,  
January, 2024

## Published journal articles indexed by SCI, SSCI, and AHCI

- I. **Investigation of the effects of grating length, Bragg wavelength and wavelength shift on temperature sensitivity in fiber Bragg grating-based sensing systems**  
GÜNDAY A.  
Optical and Quantum Electronics, vol.56, no.3, 2024 (SCI-Expanded)
- II. **Influence of temperature on detectable minimum rotation rate in i-FOGs using Er-doped SFSs**  
Sag E., GÜNDAY A., YILMAZ G.  
JOURNAL OF ELECTRICAL ENGINEERING-ELEKTROTECHNICKY CASOPIS, vol.73, no.2, pp.146-151, 2022 (SCI-Expanded)
- III. **A method for distributed sensing of temperature, strain and weight formations employing the acoustic velocity and Bulk modulus of fused silica**  
GÜNDAY A.  
Optik, vol.252, 2022 (SCI-Expanded)
- IV. **Computational analysis of the core refractive index dependencies of Brillouin frequency shift and Brillouin power change in Brillouin coherent detection based distributed sensing systems**  
GÜNDAY A.  
OPTOELECTRONICS AND ADVANCED MATERIALS-RAPID COMMUNICATIONS, vol.12, pp.502-511, 2018 (SCI-Expanded)
- V. **Analysis of effects of Young modulus variations on Brillouin power and Brillouin frequency shift changes in optical fibers**  
GÜNDAY A., KARLIK S. E., YILMAZ G.  
JOURNAL OF OPTOELECTRONICS AND ADVANCED MATERIALS, vol.18, pp.1000-1006, 2016 (SCI-Expanded)
- VI. **THE IMPACT OF TEMPERATURE AND STRAIN FORMATIONS ON YOUNG AND SHEAR MODULI IN USAGE OF OPTICAL FIBER DISTRIBUTED SENSING FOR POWER CABLES**  
GÜNDAY A., KARLIK S. E., YILMAZ G.

## Articles Published in Other Journals

- I. **Optik Fiberlerde Kullanılan Yüksek Katkılı Silika Camın Dielektrik Sabitinin Polarizasyon Etkisi Altında Frekans ve Sıcaklıkla Değişimi**  
GÜNDAY A.  
Karadeniz Fen Bilimleri Dergisi, vol.14, no.1, pp.315-325, 2024 (Peer-Reviewed Journal)
- II. **PRESSURE DEPENDENCIES OF RELATIVE CHANGE IN ELECTRICAL RESISTANCE, GAGE FACTOR AND POISSON'S RATIO IN BARE OPTICAL FIBERS**  
Günday A.  
Konya mühendislik bilimleri dergisi (Online), vol.10, no.3, pp.613-622, 2022 (Peer-Reviewed Journal)
- III. **Analysis of variation of Brillouin and Rayleigh scattering coefficients with thermal strain in Landau-Placzek ratio based optical fiber distributed sensing for XLPE insulated power cables**  
GÜNDAY A., KARLIK S. E., YILMAZ G.  
International Review of Electrical Engineering, vol.8, no.2, pp.920-929, 2013 (Scopus)
- IV. **Optik Fiberli Dağılık Algılama Yöntemiyle Enerji Kablosunda Sıcaklık ve Gerginliğin Algılanması**  
**Temperature and Strain Sensing by the Method of Optical Fiber Distributed Sensing in Power Cable**  
GÜNDAY A., YILMAZ G., KARLIK S. E.  
Uludağ Üniversitesi Mühendislik-Mimarlık Fakültesi Dergisi (Uludağ University Journal of The Faculty of Engineering and Architecture), vol.12, no.2, pp.43-52, 2007 (Peer-Reviewed Journal)

## Books & Book Chapters

- I. **MATLAB Grafik Kullanıcı Arayüzü (GUI) Tabanlı Optik Fiber Dağılık Algılamalı Sistem Simülatörü**  
GÜNDAY A.  
in: Mühendislik Alanında Teori ve Araştırmalar II, Doç. Dr. Mihriban KALKANCI, Editor, Gece Publishing/ Gece Yayınevi, Ankara, pp.445-456, 2020
- II. **Silika Optik Fiberin Bağlı Direnç Değişiminin Brillouin Frekans Kayması ve Güç Değişimi Üzerindeki Etkileri**  
GÜNDAY A.  
in: Mühendislik Alanında Araştırma ve Değerlendirmeler – 2019 / Haziran, Mahmut Turhan, Editor, Gece Publishing /Gece Akademi, Ankara, pp.171-181, 2019
- III. **Electronics Workbench ve Devre Uygulamaları**  
GÜNDAY A.  
Ekin Yayınevi, Bursa, 2015

## Refereed Congress / Symposium Publications in Proceedings

- I. **Hava Lidarlarda Menzil ve Yansıtma Katsayısı Parametrelerinin LİDAR Kesit Alanı Üzerindeki Etkilerinin İncelenmesi**  
Günday A., Balabey A., Utar C., Yılmaz M. M., Demir M., Sipahi T.  
10. ULUSAL HAVACILIK ve UZAY KONFERANSI, Ankara, Turkey, 18 - 20 September 2024, pp.100-110
- II. **Distributed Sensing and Monitoring of Transformer Winding Temperature**  
Serinci Y., Tüter M., Günday A.  
UMTEB-XV International Scientific Research Congress, Jakarta, Indonesia, 24 - 25 March 2024, pp.210-217
- III. **Analysis of Temperature Formations Occurred in Li-Ion Batteries Using Fiber Bragg Grating Sensors**

Avcı A., Günday A.

HAGIA SOPHIA 7th INTERNATIONAL CONFERENCE ON MULTIDISCIPLINARY SCIENTIFIC STUDIES, İstanbul, Turkey, 3 - 05 February 2024, pp.758-763

- IV. **Investigation of the Relationship Between Euro 7 Brake Dust Emissions and Regenerative Breaking**  
Günday A., Küçükboşancı E.  
5. INTERNATIONAL MEDITERRANEAN CONGRESS, Mersin, Turkey, 13 - 14 January 2024, pp.1625-1631
- V. **Theoretical Investigation of the Effects Aluminium Composition Parameter on the Emission Performance of IR LEDs**  
Taşçı İ., Günday A., Yılmaz G.  
9th ASIA PACIFIC INTERNATIONAL MODERN SCIENCES CONGRESS, Baku, Azerbaijan, 16 - 18 January 2024, pp.259-266
- VI. **Analysis of the Change in Peak Emission Wavelength with Dopant Ratio and Temperature Variation in Ga<sub>1-x</sub>Al<sub>x</sub>As LEDs**  
Günday A., Taşçı İ.  
ANKARA INTERNATIONAL CONGRESS ON SCIENTIFIC RESEARCH-IX (9. ULUSLARARASI ANKARA BİLİMSEL ARAŞTIRMALAR KONGRESİ), Ankara, Turkey, 26 - 28 December 2023, pp.1383-1384
- VII. **On The Strain And Temperature Dependencies Of The Electric Susceptibility OF Silica Fiber Core**  
Günday A.  
8. INTERNATIONAL SCIENCES AND INNOVATION CONGRESS, Ankara, Turkey, 14 - 15 October 2023, pp.205-206
- VIII. **Variation of Relative Change in Peak Emission Wavelength, Spectral Linewidth and Energy Band Gap Parameters of AlGaAs LED with Junction Temperature**  
Günday A.  
EURASIA II. INTERNATIONAL SCIENTIFIC RESEARCH AND INNOVATION CONGRESS, Ankara, Turkey, 6 - 08 September 2023, pp.134-142
- IX. **Analysis of Effects of Random Wheel Slip Variations on Wheel and Engine Velocities in Mecanum Wheeled Unmanned Terrestrial Vehicles**  
Günday A., Odabaş S.  
CUKUROVA 9th INTERNATIONAL SCIENTIFIC RESEARCHES CONFERENCE, Adana, Turkey, 9 - 11 October 2022, pp.307-319
- X. **Phase BOTDR based Distributed Acoustic Sensing**  
Bilgen M., Günday A.  
ELECO - 13th INTERNATIONAL CONFERENCE on ELECTRICAL and ELECTRONICS ENGINEERING, Bursa, Turkey, 25 November 2021
- XI. **Effects of Photon-Shot and Excess Noises on Detectable Minimum Rotation Rate in I-FOG Design for Autonomous Vehicles**  
KILINÇARSLAN K., Sağ E., GÜNDAY A.  
The International Conference on Advanced Engineering, Technology and Applications (ICAETA-2021), İstanbul, Turkey, 09 July 2021
- XII. **Basınç Oluşumlarının Optik Fiberin Bulk Modülü ve Akustik Hız Değişimi Üzerindeki Etkisi**  
Günday A.  
Erasmus International Academic Research Symposium, İzmir, Turkey, 5 - 06 April 2019, pp.86-87
- XIII. **Optical Fiber Distributed Sensing of Temperature, Thermal Strain and Thermo-Mechanical Force Formations on OPGW Cables under Wind Effects**  
Günday A., Karlık S. E.  
8th International Conference on Electrical and Electronics Engineering (ELECO), Bursa, Turkey, 28 - 30 November 2013, pp.462-467
- XIV. **Landau Placzek Oranını Temel Alan Optik Fiberli Dağınık Algılamada Brillouin ve Rayleigh Saçılma Katsayılarının Sıcaklıkla Değişiminin Analizi**  
Günday A., Karlık S. E., Yılmaz G.  
ELECO 2012 Elektrik-Elektronik ve Bilgisayar Mühendisliği Sempozyumu, Bursa, Turkey, 29 November - 01 December 2012, pp.372-378

- XV. **Landau Placzek Oranını Temel Alan Optik Fiberli Dağılık Algılamada Brillouin ve Rayleigh Saçılma Katsayılarının Gerginlikle Değişiminin Analizi**  
Günday A., Karlık S. E., Yılmaz G.  
ELECO 2012 Elektrik-Elektronik ve Bilgisayar Mühendisliği Sempozyumu, Bursa, Turkey, 29 November - 01 December 2012, pp.678-684
- XVI. **Spontaneous Raman Power and Brillouin Frequency Shift Method Based Distributed Temperature and Strain Detection in Power Cables**  
Günday A., Yılmaz G., Karlık S. E.  
ELECO 2007 Fifth International Conference on Electrical and Electronics Engineering, Bursa, Turkey, 5 - 09 December 2007, pp.326-330

## Supported Projects

Günday A., TUBITAK Project, Raman Esaslı Dağılık Sıcaklık Sensörü (DTS) ile Transformatör Bobin Sıcaklıklarının Algılanması, MATLAB/Simulink ortamında modellenerek matematiksel analizlerinin yapılması, 2024 - 2025  
Günday A., TUBITAK Project, Giyilebilir Tekstile Entegre Raspberry Pi ile EKG Sinyalinin Algılanması, Geliştirilmiş Mobil Uygulamada Takibi ve Analizi, 2024 - 2025  
Günday A., TUBITAK Project, Lityum-İyon (Li-Ion) Batarya Sistemlerinde (Fiber Bragg Izgara) FBG Sensör ile Termal Analiz, 2023 - 2024  
Günday A., Project Supported by Defense Industry, Havacılık ve Uzayda LİDAR Uygulamaları (TUSAŞ - LIFT UP PROJESİ), 2023 - 2024

## Activities in Scientific Journals

International Journal of Sensors and Sensor Networks, Publication Committee Member, 2022 - Continues

## Memberships / Tasks in Scientific Organizations

Chamber of Electrical Engineering, Bursa Branch, Member, 2000 - Continues, Turkey

## Scientific Refereeing

Uludağ Üniversitesi Mühendislik Fakültesi Dergisi, National Scientific Refreed Journal, January 2022  
Journal Of Optoelectronics And Advanced Materials, SCI Journal, June 2017

## Scientific Consultations

TEKNOFEST 2024, Project Consultancy, Bursa Uludağ University, Mühendislik Fakültesi, Elektrik-Elektronik Mühendisliği, Turkey, 2024 - Continues  
Electrical-Electronics and Biomedical Engineering Conference, Scientific Consultancy, Bursa Uludağ University, MÜHENDİSLİK FAKÜLTESİ, ELEKTRİK-ELEKTRONİK MÜHENDİSLİĞİ, Turkey, 2022 - Continues

## Metrics

Publication: 30  
Citation (WoS): 14

Citation (Scopus): 33

H-Index (WoS): 3

H-Index (Scopus): 4

## **Non Academic Experience**

Business Establishment Private, VENES Electric and Cable Systems Ltd. Co., Plant Manager

Business Establishment Private, FICOSA Automotive Inc. Co. , Advanced Logistic

FICOSA International Otomotiv San. ve Tic. A.Ş.

Business Establishment Private, ISIŞAH Industrial Resistance and Heat Equipment Inc. Co., Planning and Logistic

ISIŞAH Endüstriyel Rezistans ve Isı Ekipmanları San. Tic. A.Ş.

Business Establishment Private, Yazaki Automotive Inc. Co., Engineering

YAZAKI Systems Technologies Turkey Otomotiv A.Ş.

Business Establishment Private, Türk Pirelli Cablo and Systems Inc. Co. , Technical Purchasing

TURK PIRELLI Kablo ve Sistemleri A.Ş.