

## Assoc. Prof. Zehra CAN

### Personal Information

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### International Researcher IDs

ORCID: 0000-0002-3039-7454

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### Education Information

Doctorate, Istanbul University, Institute Of Graduate Studies In Sciences, Turkey 1988 - 1992

Postgraduate, Istanbul University, Institute Of Graduate Studies In Sciences, Fen Fakültesi Bölümü, Turkey 1985 - 1987

Undergraduate, Istanbul University, Faculty Of Science, Department Of Physics, Turkey 1981 - 1985

### Research Areas

Physics, Interdisciplinary Physics and Related Science and Technology Areas, Natural Sciences

### Academic Titles / Tasks

Associate Professor, Yildiz Technical University, Faculty Of Arts & Science, Department Of Physics, 2010 - Continues

### Academic and Administrative Experience

İntibak Komisyonu, Yildiz Technical University, Faculty Of Arts & Science, Department Of Physics, 2022 - Continues

YÖK AK KOMİSYONU, Yildiz Technical University, Faculty Of Arts & Science, Department Of Physics, 2022 - Continues

### Courses

Bitirme Çalışması, Undergraduate, 2021 - 2022

Fizikte Diferansiyel Denklemler, Undergraduate, 2021 - 2022

Undergraduate, 2021 - 2022

Fizik 2, Undergraduate, 2018 - 2019

Klasik Elektromanyetik Teori 1, Undergraduate, 2018 - 2019

Fizikte Kısmi Türevli Diferansiyel denklemler, Undergraduate, 2017 - 2018

Fizik 1, Undergraduate, 2017 - 2018

YUKARI ATMOSFER FİZİĞİ 1, Postgraduate, 2011 - 2012

ELEKTROMAGNETİK TEORİ 1, Postgraduate, 2010 - 2011

FİZİKTE UYGULAMALI MATEMATİK METODLAR 1, Postgraduate, 2010 - 2011

## Advising Theses

Can Z., İyonosferik Toplam Elektron İçeriği (TEC) Değişiminin Belirlenmesi, Postgraduate, O.ÜNVER(Student), 2016  
Can Z., Güneş Aktivitelerinin Manyetosfer İyonosfer Dinamiklerine Etkisi \*Bu tez çalışması TÜBİTAK 2210-C Öncelikli Alanlara Yönelik Yurtiçi Yüksek Lisans Bursu tarafından desteklenmiştir., Postgraduate, S.Güyer(Student), 2016  
Can Z., GPS ile Konum Belirlemede İyonosferik Etkilerin İncelenmesi, Postgraduate, O.Gümrükçü(Student), 2016

## Jury Memberships

Doctoral Examination, Doctoral Examination, İstanbul Üniversitesi, June, 2022  
Doctorate, Doctorate, Marmara Üniversitesi, July, 2021  
Doctorate, Doctorate, İstanbul Üniversitesi, June, 2019  
Doctorate, Doctorate, Yıldız Teknik Üniversitesi, November, 2018

## Designed Lessons

Can Z., Yukarı Atmosfer Fiziği 1, Postgraduate, 2010 - 2011  
Can Z., Atmosfer Fiziği, Undergraduate, 2010 - 2011

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

- I. **Dirac constraint analysis and symplectic structure of anti-self-dual Yang-Mills equations**  
Camci U., Can Z., Nutku Y., Sucu Y., Yazici D.  
PRAMANA-JOURNAL OF PHYSICS, vol.67, pp.1043-1053, 2006 (Journal Indexed in SCI)
- II. **Wavelet transforms of meteorological parameters and gravity waves**  
Can Z., Aslan Z., Oguz O., Siddiqi A.  
ANNALES GEOPHYSICAE, vol.23, pp.659-663, 2005 (Peer-Reviewed Journal)
- III. **One-dimensional wavelet and reanalysis of gravity waves**  
Can Z., Aslan Z., Oğuz O.  
ARABIAN JOURNAL FOR SCIENCE AND ENGINEERING, vol.29, pp.33-42, 2004 (Journal Indexed in SCI)
- IV. **The variations of temperature, pressure and wind speed values: Effects on gravity waves**  
CAN Z., ASLAN Z., OĞUZ O.  
NUOVO CIMENTO DELLA SOCIETA ITALIANA DI FISICA C-GEOPHYSICS AND SPACE PHYSICS, vol.25, no.2, pp.137-145, 2002 (Journal Indexed in SCI)
- V. **Poincare-Lie algebra and noncommutative differential calculus**  
Güven Z., Can Z., Mir-Kasimov R., Oguz O.  
PHYSICS OF ATOMIC NUCLEI, vol.64, no.12, pp.2143-2145, 2001 (Journal Indexed in SCI)

## Articles Published in Other Journals

- I. **Calculation of Ionospheric Disturbances of Earthquakes in Europe with TEC Anomalies**  
Ökten M. B. , Can Z., Aydın Ö. F. , Dokur A., Aydın A.  
IEEE , no.978-1-6654-9986-6, pp.1-4, 2022 (Conference Book)
- II. **Disturbances during a geomagnetic storm: A case study on 7 October 2015**  
Erdag H. S. , Can Z.  
ADVANCES IN ASTRONOMY AND SPACE PHYSICS, vol.12, no.1-2, 2022 (Journal Indexed in ESCI)
- III. **The Ionospheric Refractivity Effects on the GPS Signals**  
Ünver O., Güyer S., Uzel T., Can Z.

IEEE, vol.6581316, pp.779-782, 2013 (Refereed Journals of Other Institutions)

- IV. **Analysis of Nao, Solar Flares and Sea-Level Changes**  
Can Z., Oğuz O., Aslan Z.  
INDIAN JOURNAL OF INDUSTRIAL AND APPLIED MATHEMATICS, vol.3, no.1, pp.73-95, 2012 (Refereed Journals of Other Institutions)
- V. **İyonosfer ile GPS Sinyallerinin Etkileşimi**  
CAN Z., Gümrükçü O.  
İstanbul Ticaret Üniversitesi Fen Bilimleri Dergisi, vol.8, no.15, pp.69-77, 2009 (Other Refereed National Journals)
- VI. **Orta Atmosferde Yatay Rüzgar Hızının Mevsimsel Değişimi ve Gravite Dalgaları Üzerindeki Etkileri**  
Can Z., Yazıcı D., Oğuz O., Aslan Z.  
İstanbul Ticaret Üniversitesi Dergisi, no.1, pp.253-264, 2002 (Other Refereed National Journals)
- VII. **The VLF Wave Propagation in the Spherical Shell between the Earth and Ionosphere**  
CAN Z.  
YTÜ Dergisi, vol.1, no.2, pp.47-55, 1997 (Other Refereed National Journals)
- VIII. **The Influence of Solar Flux X-Ray Events on VLF Propagation between Kandilli and Maladacline**  
CAN Z.  
İstanbul Üniversitesi Astronomi ve Fizik Dergisi, vol.58, pp.9-19, 1993 (Other Refereed National Journals)
- IX. **The Investigation of Ionospheric Electron Density Variation Over İstanbul in 1986-1987**  
Can Z., Başar G., Bulat T.  
İstanbul Üniversitesi Astronomi ve Fizik Dergisi, vol.58, pp.49-64, 1993 (Other Refereed National Journals)

## Books & Book Chapters

- I. **Wavelet Analysis of Tropospheric and Lower Stratospheric Gravity Waves**  
Can Z.  
in: Mathematical Models and Methods for Real World Systems, K.M. Furati, Zuhair Nashed, Abul Hasan Siddiqi, Editor, CRC, New York, New-York, pp.211-224, 2006

## Refereed Congress / Symposium Publications in Proceedings

- I. **Investigation of Ionospheric TEC Changes Over the Aegean Region**  
Aydın Ö. F., Ökten M. B., Can Z.  
Turkish Physical Society 38 the International Physics Congress, Muğla, Turkey, 31 August - 04 September 2022, pp.190
- II. **Study of the Upper Layers of the Earth And Mars in the Process of Geomagnetic Storms**  
Erdağ H. Ş., Can Z.  
Turkish Physical Society 38 the International Physics Congress, Muğla, Turkey, 31 August - 04 September 2022, pp.233
- III. **Two-Step Geomagnetic Storms and Their Effects on Space Weather**  
Erdağ H. Ş., Can Z.  
Turkish Physical Society 38 the International Physics Congress, Muğla, Turkey, 31 August - 04 September 2022, pp.234
- IV. **Nonlinear Effects of Solar Eclipses on the Ionospheric F2 Region**  
Ökten M. B., Can Z.  
Turkish Physical Society 38 the International Physics Congress, Muğla, Turkey, 31 August - 04 September 2022, pp.188
- V. **July 16, 2017 Ionospheric Storms Formed in the Geomagnetic Storm Process**  
Bayhan C., Can Z.  
Turkish Physical Society 38 the International Physics Congress, Muğla, Turkey, 31 August - 04 September 2022,

pp.180

- VI. **The Dependence of Ionospheric Peak Height of F2 Layer over Jang Bogo Station at Antarctica to Solar Zenith Angle During Southern Summer**  
Ökten M. B., Can Z.  
10th SCAR Open Science Conference, Haidarabad, India, 1 - 10 August 2022, pp.2
- VII. **Ionospheric Response at Different Locations to the Compression of the Magnetopause During 14 January 2022 Geomagnetic Storm**  
Ökten M. B., Can Z.  
44th COSPAR Scientific Assembly 2022, Athens, Greece, 16 - 24 July 2022, pp.2-3
- VIII. **Calculation of Ionospheric Disturbances of Earthquakes in Europe with TEC Anomalies**  
Ökten M. B., Aydın Ö. F., Aydın A., Dokur A., Can Z.  
3rd URSI Atlantic Radio Science Meeting AT-AP-RASC 2022, Granada, Spain, 29 May - 03 June 2022, pp.1-2
- IX. **Latitudinal Variation of the Relationship of Ionospheric Slab Thickness with the Height of the Peak Electron Density of F2 Layer**  
Ökten M. B., Can Z.  
Space Weather Workshop 2022,UCAR/NOAA/NASA/NSF, Colorado, United States Of America, 26 - 28 April 2022, pp.17-18
- X. **Effect of June 1, 2011 Partial Solar Eclipse On Ionospheric TEC Change in the Arctic Regions**  
Ökten M. B., Aktaş E. N., Can Z.  
5. Ulusal Kutup Bilimleri Çalıştayı, Kocaeli, Turkey, 30 November - 01 December 2021, pp.20-21
- XI. **Analysis of TEC Anomalies Caused by the 30 October 2020 Aegean Earthquake**  
Ökten M. B., Dokur A., Aydın A., Aydın Ö. F., Can Z.  
TURKISH PHYSICAL SOCIETY 37 th INTERNATIONAL PHYSICS CONGRESS, Muğla, Turkey, 1 - 05 September 2021, pp.140-141
- XII. **Effect of the Earth's Magnetosphere on the Lunar Wake**  
Ökten M. B., Can Z.  
URSI GASS2021, Rome, Italy, 28 August - 04 September 2021, pp.8
- XIII. **CALCULATION OF AURORAL OVAL LENGTH COMPONENTS OF THE GEOMAGNETIC STORM DATED 26 AUGUST 2018**  
Ökten M. B., Can Z.  
4. Ulusal Kutup Çalıştayı, Kocaeli, Turkey, 22 - 23 October 2020, pp.85-86
- XIV. **Lunar Effects on the Solar Wind Flow in the Nearby New Moon Phases at Earth's Magnetopause**  
Ökten M. B., Can Z.  
URSI GASS 2020, 29 August - 05 September 2020, pp.801
- XV. **Observation of Kinetic Alfvén Waves and Mirror Mode Structure by THEMIS in Central Plasma Sheet**  
Guyer S., Can Z.  
7th International Conference on Recent Advances in Space Technologies (RAST), İstanbul, Turkey, 16 - 19 June 2015, pp.509-513
- XVI. **The Ionospheric Refractivity Effects on the GPS Signals**  
Unver O., Guyer S., Uzel T., CAN Z.  
6th International Conference on Recent Advances in Space Technologies (RAST), İstanbul, Turkey, 12 - 14 June 2013, pp.779-782
- XVII. **SOLAR FLARE EFFECTS ON THE IONOSPHERE**  
Guyer S., Can Z.  
6th International Conference on Recent Advances in Space Technologies (RAST), İstanbul, Turkey, 12 - 14 June 2013, pp.729-733
- XVIII. **Wavelet Analysis of Air Pollution and Climate Variability**  
CAN Z., Tokgözlü A., Oğuz O., Aslan Z.  
International Workshop on Applications of Wavelets, 01 July 2005
- XIX. **Climatic Changing Effects on Hazelnut Production and Biomass Energy of Wasts**  
CAN Z., Oğuz O.

AGRO ENVIRON, 01 October 2004

- XX. **Wavelet Analysis of Tropospheric and Lower Stratospheric Gravity Waves**  
CAN Z., Aslan Z., Siddiqi A. H.  
ICIAM, 01 July 2003
- XXI. **Quasi-Variational Wavelet Transforms of Meteorological Parameters and Gravity Waves**  
CAN Z., Oğuz O.  
ICIAM, 01 July 2003
- XXII. **The Very Low Frequency Waves and Their Interactions with the Environments**  
CAN Z., Aslan Z., Oğuz O.  
Agroenviron, 01 October 2002
- XXIII. **Relativistic Quantum Mechanics and Non-Commutative Differential Calculus**  
CAN Z., Kasimov R., Oğuz O.  
XV International Seminar on High Energy Physics Problems, Relativistic Nuclear Physics and Quantum Chromodynamics, 01 April 2002
- XXIV. **Gravity Waves Induced Ionization Layers in The F Region Over İstanbul**  
Yazıcı D., Can Z., Aslan Z., Oğuz O.  
Geophysical Research Abstracts, Amsterdam, Netherlands, 07 July 1999, vol.1, no.3, pp.624
- XXV. **Gezici İyonosfer Bozuklukları ve Es Tabakası**  
OĞUZ O., YAZICI D., CAN Z.  
Türk Fizik Derneği, 17. Fizik Kongresi, Alanya, Turkey, 27 - 31 October 1998
- XXVI. **Changes of the Reflection Coefficient of the Ionosphere at Very Low Frequencies**  
CAN Z.  
URSI, 01 September 1990
- XXVII. **Yüksek Frekans (HF) Bandında Elektromagnetik Dalgaların Uzak Mesafelere İyonosferden Yansıtılarak Gönderilmesi**  
Abacı G., CAN Z.  
Elektrik Mühendisliği II. Ulusal Kongresi
- XXVIII. **Investigation of interactions of GPS Signals with Ionosphere in Marmara Region**  
CAN Z., Bozkurt K., Elçin B., Oğuz O., Kutlu K.  
URSI
- XXIX. **Ionospheric TEC Model Derived from GPS Data**  
Ünver O., CAN Z., Bozkurt K., Kutlu K.
- XXX. **Determination of Ionospheric TEC Changes Using Cors-Tr Data**  
CAN Z., Gülal E., Eren K., Uzel T., Kutlu K.
- XXXI. **İyonosfer Yeryüzü Geçidinde Çok Alçak Frekanslı Elektromagnetik Dalgaların Yayılması**  
CAN Z.  
TFD
- XXXII. **Gravity Wave Induced Ionization Layers in the F Region Over İstanbul**  
Aslan Z., CAN Z., Yazıcı D.  
Geophysical Research

## Supported Projects

Can Z., Ökten M. B., Aydın A., Aydın Ö. F., Dokur A., TUBITAK Project, 2010-2020 Yılları Arasında Türkiye ve Avrupa Kıtası'nın Orta Enlem Bölgesinde Gerçekleşen M6 Üstü Depremlerin İyonosferik Etkilerinin Araştırılması, 2021 - 2022

Can Z., Dokur A., Aydın A., Ökten M. B., Aydın Ö. F., Project Supported by Other Official Institutions, KATAY, 2020 - 2021

Can Z., Bozkurt K., Gülal V. E., Gümrükçü O., Project Supported by Other Official Institutions, Konum Belirlenmesinde Önemli Bir Rol Oynayan GPS Sinyallerinin İyonosferle Etkileşimi, 2007 - 2009

Yazıcı D., Kaya R., Can Z., Project Supported by Higher Education Institutions, Kütle çekim Dalgaları, 2000 - 2004

Bulat T., Can Z., Başar G., Project Supported by Other Official Institutions, İyonosferde Elektron Yoğunluğunun Yükseklik

ve Zaman İinde Deęişiminin İncelenmesi, 1986 - 1988

## **Memberships / Tasks in Scientific Organizations**

Türk Fizik Derneęi, Member, 1986 - Continues

## **Scientific Refereeing**

Turkish Journal Of Electrical Engineering And Computer Sciences, SCI Journal, December 2021

Advances in Space Research, SCI Journal, February 2016

RAST, SCI Journal, June 2015

6th. International Conference Recent Advances in Space Technologies, SCI Journal, April 2013

YTÜ SİGMA Mühendislik ve Fen Bilimleri Dergisi, National Scientific Refreed Journal, March 2006

## **Tasks In Event Organizations**

Can Z., RAST, Scientific Congress, İstanbul, Turkey, Haziran 2019

## **Metrics**

Publication: 47

Citation (WoS): 21

Citation (Scopus): 32

H-Index (WoS): 2

H-Index (Scopus): 3