

Asst. Prof. HIDIR DÜZKAYA

Personal Information

Office Phone: [+90 312 582 3313](tel:+903125823313)

Email: hduzkaya@gazi.edu.tr

Web: <https://avesis.gazi.edu.tr/hduzkaya>

Address: Gazi Üniversitesi Mühendislik Fakültesi Elektrik Elektronik Mühendisliği Bölümü Oda No: 313 Eti Mah. Yükseliş Sk. N 5, 06570 Çankaya / Ankara

International Researcher IDs

ScholarID: PP0sbZAAAAAJ

ORCID: 0000-0002-2157-0438

Publons / Web Of Science ResearcherID: R-5804-2019

ScopusID: 35770599300

Yoksis Researcher ID: 115977

Biography

Hidir Duzkaya was born in Elazig, Turkey, in 1983. He received his B.Sc., M.Sc. and Ph.D. degrees in electrical engineering from Gazi University, Ankara, in 2005, 2008 and 2019, respectively. currently, he is with the Department of Electrical and Electronics Engineering, Gazi University, as a research assistant. He worked as a post-doctoral researcher at the Ecole Centrale de Lyon from 2020 and 2021. His research focuses on high voltage engineering, liquids dielectrics, gas-insulated systems, and gaseous dielectrics. He has authored/coauthored more than 15 technical articles, including more than 10 refereed journal articles, and a book chapter.

Education Information

Doctorate, Gazi University, Fen Bilimleri Enstitüsü, Electrical Electronic Engineering, Turkey 2008 - 2019

Postgraduate, Gazi University, Sosyal Bilimler Enstitüsü, Social Structure and Social Work (MSc), Turkey 2013 - 2016

Postgraduate, Gazi University, Fen Bilimleri Enstitüsü, Electrical Electronic Engineering, Turkey 2005 - 2008

Undergraduate, Gazi University, Mühendislik Fakültesi, Elektrik - Elektronik Mühendisliği, Turkey 2000 - 2005

Foreign Languages

French, A1 Beginner

English, C1 Advanced

Dissertations

Doctorate, Calculation and Measurement of Electrical Discharge Parameters in SF₆-CF₄-AR Gas Mixture, Gazi University, Fen Bilimleri Enstitüsü, Electrical Electronic Engineering, 2019

Postgraduate, Integration and Employment Policies of Syrian Refugees in Turkey, Gazi University, Sosyal Bilimler Enstitüsü, Social Structure and Social Work (MSc), 2016

Postgraduate, Electrical Gas Breakdown Analysis at Non-Uniform Geometries, Gazi University, Fen Bilimleri Enstitüsü, Electrical Electronic Engineerin (MSc), 2008

Research Areas

Electric Power Transmission, Distribution and Protection, High Voltage Technique

Academic Titles / Tasks

Assistant Professor, Gazi University, Mühendislik Fakültesi, Elektrik - Elektronik Mühendisliği, 2022 - Continues

Research Assistant, Gazi University, Mühendislik Fakültesi, Elektrik - Elektronik Mühendisliği, 2010 - 2022

Researcher, Ecole Centrale de Lyon, Ampere Laboratory, 2020 - 2021

Academic and Administrative Experience

Fakülte Kurulu Üyesi, Gazi University, Mühendislik Fakültesi, 2022 - Continues

Deputy Head of Department, Gazi University, Mühendislik Fakültesi, Elektrik - Elektronik Mühendisliği, 2022 - 2023

Assistant Manager of Research and Application Center, Gazi University, 2016 - 2019

Courses

Energy Distribution II, Undergraduate, 2021 - 2022

Engineering Design II, Undergraduate, 2021 - 2022

Engineering Design I, Undergraduate, 2021 - 2022

Power System Analysis II, Undergraduate, 2020 - 2021

Circuit Theory II, Undergraduate, 2020 - 2021

Circuit Theory I , Undergraduate, 2021 - 2022, 2019 - 2020, 2018 - 2019

Numerical Analysis, Undergraduate, 2018 - 2019

Energy Distribution I, Undergraduate, 2019 - 2020

Published journal articles indexed by SCI, SSCI, and AHCI

I. Molecular Orbital Properties and Insulation Characteristics of Flaxseed Oil

Doganer M., DÜZKAYA H., TEZCAN S. S., Dincer S., Dincer M. S.

Electric Power Components and Systems, vol.52, no.8, pp.1341-1351, 2024 (SCI-Expanded)

II. Swarm Parameters and Critical Breakdown Fields in CO₂ Subjected to Time-Invariant Uniform \$E\$ x \$B\$ Fields

Düzkaya H., Kavalcioglu C., Dincer M. S.

IEEE TRANSACTIONS ON PLASMA SCIENCE, vol.50, pp.3644-3651, 2022 (SCI-Expanded)

III. Synergism analysis in dielectric strength of CO₂+N₂+O₂ ternary mixtures

Dincer M. S., Tezcan S. S., Düzkaya H., Dinçer S.

Alexandria Engineering Journal, vol.61, pp.3747-3756, 2022 (SCI-Expanded)

IV. AC and Lightning Impulse Breakdown Voltages of Natural Ester Based Fullerene Nanofluids

Beroual A., DÜZKAYA H.

IEEE TRANSACTIONS ON DIELECTRICS AND ELECTRICAL INSULATION, vol.28, no.6, pp.1996-2003, 2021 (SCI-Expanded)

V. Statistical Analysis of AC Dielectric Strength of Natural Ester-Based ZnO Nanofluids

Düzkaya H., Beroual A.

ENERGIES, vol.14, no.1, 2021 (SCI-Expanded)

VI. Determination of Electron Swarm Parameters and Limiting Electrical Field during Martian Dust Storm Season Using Boltzmann Analysis

- Dincer M. S., Tezcan S. S., Duzkaya H., Dincer S.
 ACTA PHYSICA POLONICA A, vol.138, no.3, pp.368-376, 2020 (SCI-Expanded)
- VII. **Theoretical investigation of neutral decomposition by-products of SF₆ + CO(2)mixture in the existence of H₂O**
 Duzkaya H., Dincer S., Dincer M. S., Tezcan S. S.
 ELECTRICAL ENGINEERING, vol.102, no.3, pp.1451-1467, 2020 (SCI-Expanded)
- VIII. **Electron Swarm Parameters in Methane-Nitrogen Mixtures**
 Tezcan S. S., DÜZKAYA H., Dincer S., Dincer M. S.
 ACTA PHYSICA POLONICA A, vol.135, no.3, pp.495-500, 2019 (SCI-Expanded)
- IX. **Boltzmann analysis of electron swarm parameters in CHF₃+CF₄ mixtures**
 DÜZKAYA H., TEZCAN S. S.
 TURKISH JOURNAL OF ELECTRICAL ENGINEERING AND COMPUTER SCIENCES, vol.27, no.1, pp.615-622, 2019 (SCI-Expanded)
- X. **Suppression of Electron Avalanches in Ultra-Dilute SF₆-N₂ Mixtures Subjected to Time-Invariant Crossed Fields**
 Dincer M. S., TEZCAN S. S., DÜZKAYA H.
 ENERGIES, vol.11, no.12, 2018 (SCI-Expanded)
- XI. **Magnetic insulation in nitrogen subjected to crossed fields**
 Dincer M. S., TEZCAN S. S., DÜZKAYA H.
 AIP ADVANCES, vol.8, no.9, 2018 (SCI-Expanded)
- XII. **Assessment of Electron Swarm Parameters and Limiting Electric Fields in SF₆+CF₄+Ar Gas Mixtures**
 Tezcan S. S., DÜZKAYA H., Dincer M. S., Hiziroglu H. R.
 IEEE TRANSACTIONS ON DIELECTRICS AND ELECTRICAL INSULATION, vol.23, no.4, pp.1996-2005, 2016 (SCI-Expanded)

Articles Published in Other Journals

- I. **Investigation of Three-Phase Electrical Endurance Test Results of Vacuum Circuit Breaker**
 CEYHUNİ S. A., UC H., KILIC O., OCAK A., DÜZKAYA H., TEZCAN S. S.
 The European Journal of Research and Development, vol.3, no.4, pp.186-194, 2023 (Peer-Reviewed Journal)
- II. **Environmental and Physicochemical Properties of Gaseous Dielectrics Alternatives to SF₆**
 DÜZKAYA H., TEZCAN S. S., ACARTÜRK A., YILMAZ M.
 El-Cezeri Fen ve Mühendislik Dergisi, vol.7, no.3, pp.1460-1470, 2020 (Scopus)
- III. **Ionization, Attachment and Positive Synergism in CF₃ICF₄Ar Gas Mixtures with Dilute CF₃I Components**
 TEZCAN S. S., DİNÇER M. S., DÜZKAYA H.
 Gazi University Journal of Science, vol.32, no.1, pp.175-184, 2019 (Scopus)
- IV. **Ionization, Attachment and Positive Synergism in CF₃I+CF₄+Ar Gas Mixtures with Dilute CF₃I Components**
 TEZCAN S. S., Dincer M. S., DÜZKAYA H.
 GAZI UNIVERSITY JOURNAL OF SCIENCE, vol.32, no.1, pp.175-184, 2019 (ESCI)
- V. **Türkiye'de Orta Büyüklükteki Kentlerde Raylı Sistem Uygulamaları Erzincan Cadde Tramvayı Örneği**
 DÜZKAYA H., Akdemir F., ULVİ H., ORMAN A., SIVAT S.
 El-Cezeri Journal of Science and Engineering, vol.5, no.2, pp.403-415, 2018 (Peer-Reviewed Journal)
- VI. **Multi-Criteria Evaluation by Means of Using the Analytic Hierarchy Process in Transportation Master Plans: Scenario Selection in the Transportation Master Plan of Ankara**
 Orman A., DÜZKAYA H., ULVİ H., Akdemir F.
 GAZI UNIVERSITY JOURNAL OF SCIENCE, vol.31, no.2, pp.381-397, 2018 (ESCI)
- VII. **Misafirlilikten Vatandaşlığa Türkiye'xxdeki Suriyeli-lerin Hukuki Statüsü: Türkiye ve Avrupa Birliği Mevzuatı Ekseninde Karşılaştırmalı Bir Değer-lendirme**

- YAZICI E., DÜZKAYA H.
HAK-İŞ Uluslararası Emek ve Toplum Dergisi, vol.6, no.16, pp.419-456, 2017 (Peer-Reviewed Journal)
- VIII. **CF4 Gaz Karışımlarında Delinme Geriliminin Ölçülmesi ve Hesaplanması**
DÜZKAYA H., TEZCAN S. S.
Gazi Üniversitesi Fen Bilimleri Dergisi Part: C Tasarım ve Teknoloji, vol.5, no.3, pp.185-195, 2017 (Peer-Reviewed Journal)
- IX. **Dünya Kalkınma Raporu 2015 Perspektifinden Yoksulluk Çocuk Gelişimi Ev İdaresi ve Verimliliğe Yeniden Bakış**
YAZICI E., DÜZKAYA H.
Türkiye Sosyal Araştırmalar Dergisi (Turkish Journal of Social Research), vol.20, no.3, pp.611-631, 2016 (Peer-Reviewed Journal)
- X. **Endüstri Devriminde Dördüncü Dalga ve Eğitim Türkiye Dördüncü Dalga Endüstri Devrimine Hazır Mı**
YAZICI E., DÜZKAYA H.
Eğitim ve İnsani Bilimler Dergisi: Teori ve Uygulama, vol.7, no.13, pp.49-88, 2016 (Peer-Reviewed Journal)

Books & Book Chapters

- I. **Analysis of partial differential equations in time dependent problems using finite difference methods and the applications on electrical engineering**
DÜZKAYA H., TEZCAN S. S., TAPLAMACIOĞLU M. C.
in: Numerical Methods for Energy Applications, N.M. Tabatabaei, N. Bizon, Editor, Springer International Publishing, pp.37-60, 2021
- II. **Ulaşım Modeli ve Kalibrasyonu**
ULVİ H., DÜZKAYA H.
in: Türkiye'de Ulaşım Planlaması Deneyimi Ankara Örneği, Hayri Ulvi, Editor, Nobel Akademi, Konya, pp.309-328, 2019
- III. **Senaryo Alternatiflerinin Belirlenmesi ve AHP Kullanılarak Seçimi**
DÜZKAYA H.
in: Türkiye'de Ulaşım Planlama Deneyimi: Ankara Örneği, Ulvi Hayri, Editor, Atlas Akademi, Konya, pp.288-306, 2019
- IV. **Ulaşım Planlama Çalışmalarında Veri Analiz Yöntemleri: Çok-Disiplinli Bir Mühendislik Yaklaşımı ve Ankara Ulaşım Ana Planı Örneği**
ORMAN A., DÜZKAYA H.
in: Türkiye'de Ulaşım Planlama Deneyimi: Ankara Örneği, Ulvi Hayri, Editor, Atlas Akademi, pp.94-122, 2019
- V. **Ulaşım Modeli ve Kalibrasyonu**
ULVİ H., DÜZKAYA H.
in: Türkiye'de Ulaşım Planlama Deneyimi: Ankara Örneği, Ulvi Hayri, Editor, Atlas Akademi, pp.308-326, 2019
- VI. **Sanayileşme ve İktisadi Gelişme (1946-2010)**
DÜZKAYA H.
in: Geçmişten Günümüze Türkiye'nin İktisadi Yapısı, Yazıcı Erdinç, Editor, Akçağ Yayınevi, Ankara, pp.151-182, 2017
- VII. **Post-Modern Süreçte İş Kavramının Değişimi ve Yeni İşgücü Politikaları**
DÜZKAYA H.
in: Klasikten Küresele Endüstri İlişkileri, Erdinç Yazıcı, Editor, Orion Kitabevi, Ankara, pp.329-349, 2015

Refereed Congress / Symposium Publications in Proceedings

- I. **Investigation of Mechanical Operation Test Results of Vacuum Circuit Breaker**
CEYHUNİ S. A., KILIC O., OCAK A., UC H., DÜZKAYA H., TEZCAN S. S.

International Conference: International Conference on Academic Studies in Science, Engineering, and Technology (ICASET), İstanbul, Turkey, 21 - 24 December 2023, pp.148-155

II. Investigation of the Effect of Variable Parameters on Comprehensive Maximum Error of Active Electricity Meters by Test Results

TAŞÇI M., DÜZKAYA H.

12th International Conference on Renewable Energy Research and Applications (ICRERA), Oshawa, Canada, 29 August 2023

III. Experimental Electromagnetic Compatibility Test on a Fault Line Indicator Prototype in MV Distribution Networks

ÖZDEMİR O., ŞAHİN H., UCAR G., DEMİRCİ M., DÜZKAYA H., TAPLAMACIOĞLU M. C.

2023 the 13th IEEE International Conference on Power, Energy and Electrical Engineering (CPEEE 2023), Tokyo, Japan, 25 February 2023

IV. SF₆ Alternatif Sentez Gazlarının AC Delinme Gerilimi Ölçümlerinin İncelenmesi

DÜZKAYA H., TEZCAN S. S., KAYMAK F., KAYAN V.

ELECO 2022 Elektrik-Elektronik ve Biyomedikal Mühendisliği Konferansı, Bursa, Turkey, 24 November 2022

V. Vakumlu Devre Kesicinin Üç Fazlı Kablo ve Hat Şarj Akımı Anahtarlama Testleri Sonuçlarının İncelenmesi

CEYHUNİ S. A., KILIC O., OCAK A., DÜZKAYA H., TEZCAN S. S.

ELECO 2022 Elektrik-Elektronik ve Biyomedikal Mühendisliği Konferansı, Bursa, Turkey, 24 November 2022

VI. Comparison of Electromechanical Properties of Medium Voltage SF₆ and Vacuum Circuit Breakers

DÜZKAYA H., TEZCAN S. S., OCAK A., OZMEN K., KILIC O., AKBUCAK V.

2022 International Symposium on Multidisciplinary Studies and Innovative Technologies (ISMSIT), Ankara, Turkey, 20 October 2022

VII. Electromagnetic Interference Investigation of Two Overhead Lines with a Natural Buried Gas Pipeline: An Investigation on the Agri-Horasan Region in Turkey

Cetin O., DÜZKAYA H., TAPLAMACIOĞLU M. C.

CIGRE Session 2022, Paris, France, 28 August 2022

VIII. Theoretical Analysis of the Synergism in the Dielectric Strength for SF₆+Ar and SF₆+CO₂ Mixtures

DÜZKAYA H., TEZCAN S. S., DİNÇER M. S., DİNÇER S.

2022 IEEE International Conference on Environment and Electrical Engineering and 2022 IEEE Industrial and Commercial Power Systems Europe (EEEIC / I&CPS Europe), Prague, Czech Republic, 28 June 2022

IX. Statistical Investigation of AC Dielectric Strength of Flaxseed Oil

DOGANER M., DİNÇER S., DİNÇER M. S., DÜZKAYA H., TEZCAN S. S.

2022 IEEE 21st International Conference on Dielectric Liquids (ICDL), Sevilla, Spain, 29 May 2022

X. Influence of Fullerene Nanoparticles on AC and LI Breakdown Voltages of Natural Ester

DÜZKAYA H., BEROUAL A.

2022 IEEE 21st International Conference on Dielectric Liquids (ICDL), Sevilla, Spain, 29 May 2022

XI. Molecular Orbital Properties of C₄-PFN and C₅-PKF with DFT Analysis

DÜZKAYA H., TEZCAN S. S., DİNÇER S., DİNÇER M. S.

2021 IEEE Electrical Power and Energy Conference (EPEC), Toronto, Canada, 22 October 2021

XII. Analysis of Transmission Line Electromagnetic Interference on Touch and Step Voltages on Buried Gas Pipeline under Different Shielding and Resistivity Conditions

Cetin O., Dürkaya H., Taplamacıoğlu M. C.

13th International Conference on Electronics, Computers and Artificial Intelligence, ECAI 2021, Pitesti, Romania, 1 - 03 July 2021

XIII. DFT Analysis of neutral decomposition by-products in SF₆-CO₂ mixture

DİNÇER M. S., DİNÇER S., DÜZKAYA H., TEZCAN S. S.

2020 IEEE International Conference on Environment and Electrical Engineering and 2020 IEEE Industrial and Commercial Power Systems Europe (EEEIC / ICPS Europe), Madrid, Spain, 9 - 12 June 2020

XIV. Analysis of Molecular Orbital Properties of SF₆ with Density Functional Theory (DFT)

DİNÇER S., DİNÇER M. S., DÜZKAYA H., TEZCAN S. S.

2019 3rd International Symposium on Multidisciplinary Studies and Innovative Technologies (ISMSIT), Ankara, Turkey, 11 - 13 October 2019

XV. Analysis of Insulation and Environmental Properties of Decomposition Products in S6-N2 Mixtures in the Presence of H₂O

DİNÇER S., DÜZKAYA H., TEZCAN S. S., DİNÇER M. S.

2019 IEEE International Conference on Environment and Electrical Engineering and 2019 IEEE Industrial and Commercial Power Systems Europe (EEEIC / ICPS Europe), Genova, Italy, Italy, 11 - 14 June 2019

XVI. Assessing Urban Sprawl Effect of Transportation Investments using Remote Sensing Data and GIS Methods: The case of Ankara Protocol Road

Dincer S. E., Akdemir F., ULVİ H., DÜZKAYA H.

3rd World Multidisciplinary Civil Engineering, Architecture, Urban Planning Symposium (WMCAUS), Prague, Czech Republic, 18 - 22 June 2018, vol.471

XVII. Analysis of Insulation and Environmental Properties of Decomposition Products in SF6-N-2 Mixtures in the Presence of H₂O

Dincer S., DÜZKAYA H., Tezcan S. S., Dincer M. S.

19th IEEE International Conference on Environment and Electrical Engineering (EEEIC) / 3rd IEEE Industrial and Commercial Power Systems Europe Conference (I and CPS Europe), Genoa, Italy, 10 - 14 June 2019

XVIII. Insulation and Molecular Properties of Alternative Gases to SF6

Dincer S., Tezcan S. S., DÜZKAYA H., Dincer M. S.

2nd International Symposium on Multidisciplinary Studies and Innovative Technologies (ISMSIT), Kizilcahamam, Turkey, 19 - 21 October 2018, pp.14-17

XIX. Avalanche Inhibition in Ultra-dilute SF6-N-2 Mixtures Subjected to Crossed Fields

Dincer M. S., Tezcan S. S., DÜZKAYA H.

IEEE International Conference on Environment and Electrical Engineering (EEEIC) / IEEE Industrial and Commercial Power Systems Europe (I&CPS Europe), Palermo, Italy, 12 - 15 June 2018

XX. New Pursuits on Public Transport Policies for Middle-sized Cities in Turkey Erzincan as an Example Specific to Rail Systems

DÜZKAYA H., ULVİ H., ORMAN A.

International Symposium on Electrical Railway Transportation Systems, ERUSIS, Eskişehir, Turkey, 27 October - 28 January 2017

XXI. PREDICTION OF POSITIVE CORONA ONSET VOLTAGES USINGFINITE ELEMENT METHOD AND ARTIFICIAL NEURAL NETWORKS

DÜZKAYA H., TEZCAN S. S., ÇEKMEN Z., DİNÇER M. S.

The 5th International Conference of Technical and Physical Problems of Electrical Engineering (ICTPE 2009), 3 - 05 September 2009

XXII. Calculation of Partial Discharge Inception Voltages in Ultradilute SF6 + N-2 Gas Mixtures

DÜZKAYA H., Dincer M. S., Hiziroglu H. R.

Annual Report Conference on Electrical Insulation and Dielectric Phenomena, Virginia, United States Of America, 18 - 21 October 2009, pp.5-7

XXIII. ELECTRON SWARM PARAMETERS PREDICTION USING ARTIFICIAL NEURAL NETWORKS

TEZCAN S. S., DÜZKAYA H., ÇEKMEN Z., DİNÇER M. S.

4th International Conference on Technical and Physical Problems of Power Engineering (ICTPE 2008), 4 - 06 September 2008

Supported Projects

Düzkaya H., Taplamacıoğlu M. C., Project Supported by Other Private Institutions, Design and Development of 170 kV Silicone Body Arc Spaced EGLA Type Surge Arrester, 2023 - 2024

DÜZKAYA H., SÖNMEZGÖZ Y. E., BULUT D., SAYDAM A., TURAL A., ERTEM G., DEMİREL T., Project Supported by Higher Education Institutions, Model Uydu Sistemleri, 2023 - 2023

Düzkaya H., Taplamacıoğlu M. C., Tezcan S. S., Demirci M., Project Supported by Other Private Institutions, Design and Development of Medium Voltage 36kV Disconnectors Using SF6 Alternative Gases, 2022 - 2023

Taplamacıoğlu M. C., Tezcan S. S., Demirci M., Düzkaya H., Project Supported by Other Private Institutions, SF6 Alternatif Gazların Kullanıldığı Orta Gerilim 36kV Yük Ayırıcı Tasarımı ve Geliştirilmesi, 2022 - 2023

Tezcan S. S., Düzkaya H., TUBITAK Project, 36 kV / 25kA / 1250 A & 2500 A Vacuum Circuit Breaker Design and Production, 2022 - 2023

Düzkaya H., Tezcan S. S., Project Supported by Other Private Institutions, Medium Voltage (36 kV) Metal Clad Switchgear Design with Vacuum Circuit Breaker, 2021 - 2023

Düzkaya H., TUBITAK Project, Measurement of formative time lags in vegetable oils subjected to step-function approximated impulse voltages: Effect of dissolved electronegative gases and some nanoparticles, 2020 - 2021

Tezcan S. S., TUBITAK Project, SF6 CF4 Ve SF6 CF4 Ar Gaz Karışımında Kritik Elektrik Alan Değerlerinin Ölçülmesi Ve Boltzmann Denklemlerinin Çözülmesi ile Elektron Çığ Parametrelerinin Hesaplanması Proje Kodu 113E493, 2014 - 2015

Scientific Refereeing

Gazi University Jounal of Science , Journal Indexed in ESCI, September 2021

JOURNAL OF THE FACULTY OF ENGINEERING AND ARCHITECTURE OF GAZI UNIVERSITY, SCI Journal, May 2021

IEEE ACCESS, SCI Journal, March 2021

IEEE ACCESS, SCI Journal, September 2020

EMO Bilimsel Dergi, National Scientific Refreed Journal, July 2020

Metrics

Publication: 53

Citation (WoS): 105

Citation (Scopus): 156

H-Index (WoS): 5

H-Index (Scopus): 6

Non Academic Experience

Ecole Centrale de Lyon