

# Prof. Doğa Doğan

## Personal Information

**Email:** [dusunur@itu.edu.tr](mailto:dusunur@itu.edu.tr)

**Web:** <https://avesis.itu.edu.tr/dusunur>

## International Researcher IDs

ScholarID: e2Cw1w8AAAAJ

ORCID: 0000-0001-5678-1879

ScopusID: 23018596300

Yoksis Researcher ID: 200778

## Education Information

Doctorate, Institut de Physique du Globe (IPG) de Paris, Geosciences Marines, France 2004 - 2008

Postgraduate, Istanbul Technical University, Fen Bilimleri Enstitüsü, Jeofizik Mühendisliği (YI) (Tezli), Turkey 2001 - 2004

Undergraduate, Istanbul Technical University, Maden Fakültesi, Jeofizik Mühendisliği Bölümü, Turkey 1996 - 2000

## Foreign Languages

English

## Dissertations

Doctorate, Thermal Structure of Mid-Ocean Ridges (Lucky Strike Mid-Atlantic Ridge) and Magma Chambers, Institut De Physique Du Globe (Ipg) De Paris, Geosciences Marines, 2008

Postgraduate, Orta Marmara Havzası'nın aktif tektonik yapısının deniz jeofiziği akustik yöntemleriyle araştırılması, İstanbul Teknik Üniversitesi, Fen Bilimleri Enstitüsü, Jeofizik Mühendisliği (YI) (Tezli), 2004

## Research Areas

Technical Sciences, Geophysical Engineering

## Academic Titles / Tasks

Associate Professor, Istanbul Technical University, Maden, Jeofizik Mühendisliği, 2015 - Continues

Assistant Professor, Istanbul Technical University, Maden, Jeofizik Mühendisliği, 2012 - 2015

Lecturer PhD, Istanbul Technical University, Maden, Jeofizik Mühendisliği, 2010 - 2012

Research Assistant, Institut de Physique du Globe (IPG) de Paris, Geoscience Marine, 2005 - 2008

Research Assistant, Istanbul Technical University, Maden, Jeofizik Mühendisliği, 2002 - 2005

## Academic and Administrative Experience

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

- I. **An integrated geophysical, hydrological, thermal approach to finite volume modelling of fault-controlled geothermal fluid circulation in Gediz Graben**  
Uner S., Dogan D.  
Geothermics, vol.90, 2021 (SCI-Expanded)
- II. **Fault-controlled deep hydrothermal flow in a back-arc tectonic setting, SE Tyrrhenian Sea**  
Loreto M. F., Dusunur-Dogan D., Uner S., Iscan-Alp Y., Ocakoglu N., Cocchi L., Muccini F., Giordano P., Ligi M.  
SCIENTIFIC REPORTS, vol.9, 2019 (SCI-Expanded)
- III. **Numerical simulation of groundwater flow and temperature distribution in Aegean Coast of Turkey**  
Dusunur-Dogan D., Uner S.  
JOURNAL OF EARTH SYSTEM SCIENCE, vol.128, no.6, 2019 (SCI-Expanded)
- IV. **Three-dimensional geometry of axial magma chamber roof and faults at Lucky Strike volcano on the Mid-Atlantic Ridge**  
Combiér V., SEHER T., SINGH S. C., CRAWFORD W. C., CANNAT M., ESCARTIN J., DUSUNUR D.  
JOURNAL OF GEOPHYSICAL RESEARCH-SOLID EARTH, vol.120, no.8, pp.5379-5400, 2015 (SCI-Expanded)
- V. **Lucky Strike seamount: Implications for the emplacement and rifting of segment-centered volcanoes at slow spreading mid-ocean ridges**  
Escartin J., SOULE S. A., CANNAT M., FORNARI D. J., DUSUNUR D., GARCIA R.  
GEOCHEMISTRY GEOPHYSICS GEOSYSTEMS, vol.15, no.11, pp.4157-4179, 2014 (SCI-Expanded)
- VI. **Investigation of fault-related small-scale fluid flow in geothermal fields by numerical modeling**  
Dogan D.  
TURKISH JOURNAL OF EARTH SCIENCES, vol.23, no.1, pp.67-79, 2014 (SCI-Expanded)
- VII. **Heat-flow and hydrothermal circulation at the ocean-continent transition of the eastern gulf of Aden**  
Lucazeau F., LEROY S., ROLANDONE F., D'ACREMONT E., WATREMEZ L., BONNEVILLE A., GOUTORBE B., DUSUNUR D.  
EARTH AND PLANETARY SCIENCE LETTERS, vol.295, pp.554-570, 2010 (SCI-Expanded)
- VIII. **Crustal velocity structure of the Lucky Strike segment of the Mid-Atlantic Ridge at 37 degrees N from seismic refraction measurements**  
Seher T., CRAWFORD W. C., SINGH S. C., CANNAT M., COMBIER V., DUSUNUR D.  
JOURNAL OF GEOPHYSICAL RESEARCH-SOLID EARTH, vol.115, 2010 (SCI-Expanded)
- IX. **Post-rift volcanism and high heat-flow at the ocean-continent transition of the eastern Gulf of Aden**  
Lucazeau F., LEROY S., AUTIN J., BONNEVILLE A., GOUTORBE B., WATREMEZ L., D'ACREMONT E., DUESUENUR D., ROLANDONE F., HUCHON P., et al.  
TERRA NOVA, vol.21, no.4, pp.285-292, 2009 (SCI-Expanded)
- X. **Seismological constraints on the thermal structure along the Lucky Strike segment (Mid-Atlantic Ridge) and interaction of tectonic and magmatic processes around the magma chamber**  
Dusunur D., ESCARTIN J., COMBIER V., SEHER T., CRAWFORD W., CANNAT M., SINGH S. C., Matias L. M., Miranda J. M.  
MARINE GEOPHYSICAL RESEARCHES, vol.30, no.2, pp.105-120, 2009 (SCI-Expanded)
- XI. **Persistent thermal activity at the Eastern Gulf of Aden after continental break-up**  
Lucazeau F., LEROY S., BONNEVILLE A., GOUTORBE B., ROLANDONE F., D'ACREMONT E., WATREMEZ L., DUSUNUR D., TUCHAIS P., HUCHON P., et al.  
NATURE GEOSCIENCE, vol.1, no.12, pp.854-858, 2008 (SCI-Expanded)
- XII. **Constructing a 3D structural block diagram of the Central Basin in Marmara Sea by means of bathymetric and seismic data**  
Demirbag E., KURT H., DUESUENUR D., SARIKAVAK K., Cetin S.  
MARINE GEOPHYSICAL RESEARCHES, vol.28, no.4, pp.343-353, 2007 (SCI-Expanded)

- XIII. **Constructing a 3D Structural Block Diagram of the Central Basin in Marmara Sea by Means of Bathymetric and Seismic Data Marine Geophysical Research**  
Demirbağ M. E., KURT H., DOĞAN D., KERİM S., ÇETİN S.  
MARINE GEOPHYSICAL RESEARCHES, vol.0, 2007 (SCI-Expanded)
- XIV. **Discovery of a magma chamber and faults beneath a Mid-Atlantic Ridge hydrothermal field**  
Singh S. C., CRAWFORD W. C., CARTON H., SEHER T., COMBIER V., CANNAT M., CANALES J. P., DUESUENUER D., ESCARTIN J., MIRANDA J. M.  
NATURE, vol.442, no.7106, pp.1029-1032, 2006 (SCI-Expanded)

### Articles Published in Other Journals

- I. **JEOTERMAL SAHALARDA FAYLARIN EĞİMİNİN VE PERMEABİLİTE KONTRASTININ SICAKLIK VE AKIŞ DAĞILIMINA ETKİSİNİN SAYISAL MODELLENMESİ**  
Orta D., güvem b., Üzüm Y., DOĞAN D.  
YERBİLİMLERİ = EARTH SCIENCES, vol.44, no.3, pp.234-249, 2023 (Scopus)
- II. **A study on the effects of fault architecture on fluid circulation in the Gediz Graben by the finite volume method**  
Doğan D.  
Solid Earth Sciences, vol.8, no.2, pp.146-159, 2023 (Scopus)
- III. **DENİZ TABANI BATİMETRİSİNİN HİDROTERMAL DOLAŞIM ÜZERİNDEKİ ETKİSİNİN ARAŞTIRILMASI: LUCKY STRIKE ÖRNEĞİ**  
Erçetin E., Doğan D.  
İstanbul Yerbilimleri Dergisi (E.A:İstanbul Üniversitesi Mühendislik Fakültesi Yerbilimleri Dergisi), vol.2021, no.1, pp.1-10, 2021 (Peer-Reviewed Journal)
- IV. **HESAPLAMALI AKIŞKANLAR DİNAMİĞİ ÇÖZÜCÜSÜ ANSYS FLUENT PROGRAMININ KARŞILAŞTIRILMALI ÇÖZÜMÜ VE YERBİLİMLERİNDE UYGULAMASI**  
ÜNER S., DOĞAN D.  
istanbul üniversitesi yerbilimleri, vol.30, no.1, pp.4, 2019 (Peer-Reviewed Journal)
- V. **Thermal Modeling of Slow Spreading Mid Ocean Ridges in the Presence of Magma Chamber**  
DOĞAN D., escartin j.  
Yerbilimleri, 2012 (Peer-Reviewed Journal)

### Books & Book Chapters

- I. **Crustal Structure, Magma Chamber, and Faulting Beneath the Lucky Strike Hydrothermal Vent Field**  
Doğan D.  
in: Diversity of Hydrothermal Systems on Slow Spreading Ocean Ridges, Rona,P.A.aEmail Author,Devey,C.W.bEmail Author,Dyment,J.c,Murton,B.J.d, Editor, John Wiley & Sons, West Sussex, UK , New-Jersey, pp.113-132, 2013

### Refereed Congress / Symposium Publications in Proceedings

- I. **Temperature and fluid flow modeling of gas bearing sediments in Offshore Antarctic Peninsula South Shetland Islands.**  
türkdoğan s., DOĞAN D., ÜNER S., ALTAN Z., OCAKOĞLU GÖKAŞAN N., GÖRÜM T., Tinivella U., Giustiniani M.  
International Earth Science Colloquim on the Aegean Regeion IESCA-2019, 7 - 11 October 2019
- II. **A Benchmark study: numerical fluid flow and temperature modeling of Basin and Range geothermal system**  
ÜNER S., DOĞAN D., türkdoğan s.

International Earth Science Colloquim on the Aegean Regeion IESCA-2019, 7 - 11 October 2019

- III. **Tracing the Hisarcık Fault with 2D VES Inversion and Numerical Fluid Flow and Temperature Simulations**  
ÜNER S., özür lan g., DOĞAN D.  
New Trends in Geophysics and Engineering, İstanbul, Turkey, 7 - 09 November 2018
- IV. **Fault-controlled hydrothermal flow over a deep magmatic intrusion inferred by numerical modelling in a back-arc tectonic setting, SE Tyrrhenian Sea**  
loreto m. f., DOĞAN D., ÜNER S., işcan alp y., OCAKOĞLU GÖKAŞAN N., Le C., Muccini F., Ligi L., Giordano P.  
SGI-SIMP, Catania, Italy, 12 - 14 September 2018
- V. **Antarktika Kitası Güney Shetland Şelf Alanının Morfotektonik Özelliklerinin ve Yeraltı Akışkan Hareketlerinin Jeofizik Yöntemler ile Araştırılması**  
OCAKOĞLU GÖKAŞAN N., DOĞAN D., GÖRÜM T., ALTAN Z., ÜNER S., Tinivella U., Giustiniani M.  
İTÜ PolReC 2. Kutup Bilimleri Çalıştayı, Turkey, 12 - 13 September 2018
- VI. **Simulation of the Effect of a Geothermal Production Well on Water Wells in Balçova, İzmir**  
aksu p., önder i. c., DOĞAN D., ÜNER S.  
Yer bilimlerinde Öğrenci Bitirme Tasarım Projeleri ve Sergisi, 11 - 12 June 2018
- VII. **Fluid Flow Pattern within a buried volcanic structure, Southeast Tyrrhenian Sea. 9th Congress of Balkan Geophysical Society, BGS2017**  
DOĞAN D., Loreto M. F., ÜNER S., Alp Y. İ., OCAKOĞLU GÖKAŞAN N., Giordano P.  
9th Congress of Balkan Geophysical Society, BGS2017, 5 - 07 November 2017
- VIII. **Fluid Flow Pattern Within A Buried Volcanic Structure, Southeast Tyrrhenian Sea**  
DOĞAN D., loreto m. f., ÜNER S., işcan alp y., OCAKOĞLU GÖKAŞAN N., Patrizia g.  
9th Congress of the Balkan Geophysical Society, Antalya, Turkey, 5 - 09 November 2017
- IX. **Fault Dip Angle Controlled Temperature And Fluid Flow Modelling**  
ÜNER S., DOĞAN D.  
:9th Congress of the Balkan Geophysical Society, 5 - 09 November 2017
- X. **Numerical Temperature And Fluid-flow Modelling For The Topographic Effects On Hydrothermal Circulation A Case Study In Lucy Strike Vent Field**  
Erçetin E., DOĞAN D.  
General Assembly and Congress European Geoscience Union, 8 - 13 April 2017
- XI. **Numerical Temperature And Fluid-flow Modelling For The Topographic Effects On Hydrothermal Circulation A Case Study In Lucy Strike Vent Field**  
Erçetin E., DOĞAN D.  
General Assembly and Congress European Geoscience Union, 8 - 13 April 2017
- XII. **Controls of topographic highs on fluid circulation**  
DOĞAN D.  
International Scientific Conference on Applied Sciences, 8 - 13 April 2017

## Supported Projects

Bashir Y., Mohammadı A., Döner Z., Doğan D., Karaman A., MOUSSAVİ ALASHLOO S. Y., ABDUL LATİFF A. H., Project Supported by Higher Education Institutions, Integrated Geo-Seismic Modeling for Hydrocarbon Reservoir Delineation in the Complex Structural Region of Turkish Basins, 2023 - Continues

Doğan D., Güvem B., Orta D., Project Supported by Higher Education Institutions, Karadenizde Gaz Hidratların

Duraylılığını Etkileyen Faktörlerin Sonlu Hacimler Yöntemi Kullanılarak Araştırılması, 2023 - Continues

Doğan D., TUBITAK Project, Gediz Grabeni Sıyrılma Fayının Bölgedeki Jeotermal Akışkan Hareketi ve Sıcaklık Rejimi Üzerine Olan Etkisinin Sayısal Modellenmesi, 2018 - 2020

Doğan D., Project Supported by Higher Education Institutions, Temperature and Fluid Flow Calculations in the Gulf of İzmir, Turkey, 2014 - 2018

Doğan D., Project Supported by Higher Education Institutions, İzmir Bölgesinin Jeotermal Potansiyelinin Çok Disiplinli

Yöntemlerle Araştırılması ve Faylarla İlişkili Yeriçi Sıcaklık Dağılımının Modellenmesi, 2013 - 2018

Doğan D., Project Supported by Higher Education Institutions, Jeotermal Alanlarda Faylanmalar Kaynaklı Taşınım Modellenmesi, 2012 - 2018

## **Metrics**

Publication: 38

Citation (WoS): 402

Citation (Scopus): 490

H-Index (WoS): 8

H-Index (Scopus): 9