

## Prof. Hande Demirel

### Personal Information

**Office Phone:** [+90 212 285 6562](tel:+902122856562)

**Fax Phone:** [+90 +90 212 285 6562](tel:+902122856562)

**Email:** demirelha@itu.edu.tr

**Web:** <http://akademi.itu.edu.tr/demirelha/>

**Address:** İTÜ, İnşaat Fakültesi, Geomatik Mühendisliği Bölümü, 34469, Maslak-Istanbul

### International Researcher IDs

ORCID: 0000-0003-0338-791X

ScopusID: 55236174600

Yoksis Researcher ID: 153954

### Education Information

Doctorate, Technische Universitaet Berlin, Bauingenieurwesen Und Angewandte Geowissenschaften , Inst F. Geoinformatik, Germany 1998 - 2002

Postgraduate, Istanbul Technical University, İnşaat Fakültesi, Jeodezi Ve Fotogrametri Mühendisliği Bölümü, Turkey 1996 - 1998

Undergraduate, Istanbul Technical University, İnşaat Fakültesi, Jeodezi Ve Fotogrametri Mühendisliği Bölümü, Turkey 1991 - 1996

### Foreign Languages

German, C1 Advanced

Spanish, B2 Upper Intermediate

English, C1 Advanced

### Certificates, Courses and Trainings

Quality Management, Avrupa Birliği Proje Değerlendirmesi, Avrupa Birliği, 2017

Quality Management, MÜDEK değerlendiricisi, MÜDEK, 2005

### Dissertations

Doctorate, An integrated approach to the Conceptual Data modelling of an Entire Highway Agency Geographic Information System (GIS), Technische Universitaet Berlin, Inst F. Geoinformatik, 2002

Postgraduate, Digital ortofotolarda sayısal arazi modellerinin doğruluğu, İstanbul Teknik Üniversitesi, İnşaat Fakültesi, Jeodezi Ve Fotogrametri Mühendisliği Bölümü, 1998

### Research Areas

Atmospheric Sciences and Meteorological Engineering, Climate, Climate Change and Climate Modeling, Environmental

Engineering, Environmental Technology, Environmental Impact Assessment, Environmental Risk Assessment, Geotechnical Engineering, Geographic Information Systems, Environmental Information Systems, City Information Systems, Spatial Data Infrastructures, Photogrammetry, Overhead Photogrammetry, Geodesy and Photogrammetry, Computer Sciences, Database and Data Structures, Data Representation and Storage, Data Structures, Database Systems, Civil Engineering, 3D-Modeling, Multi-Criteria Decision Making Analysis, Engineering and Technology

## Academic Titles / Tasks

Professor, Istanbul Technical University, İnşaat, Geomatik Mühendisliği, 2019 - Continues

## Courses

Introduction to programming (Python), Undergraduate, 2016 - 2017

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

- I. **Impedance measures in evaluating accessibility change**  
Shoman W., Demirel H.  
GEOCARTO INTERNATIONAL, vol.37, no.12, pp.3642-3657, 2022 (SCI-Expanded)
- II. **Spatio-temporal evaluation of transport accessibility of the Istanbul metrobus line**  
Shoman W., Demirel H.  
GEOCARTO INTERNATIONAL, vol.35, no.6, pp.602-622, 2020 (SCI-Expanded)
- III. **Sea-level rise in ports: a wider focus on impacts**  
Christodoulou A., Christidis P., Demirel H.  
MARITIME ECONOMICS & LOGISTICS, vol.21, no.4, pp.482-496, 2019 (SSCI)
- IV. **A comparative analysis of gridding systems for point-based land cover/use analysis**  
Shoman W., Algancı U., Demirel H.  
GEOCARTO INTERNATIONAL, vol.34, pp.867-886, 2019 (SCI-Expanded)
- V. **SPATIO- TEMPORAL DETECTION OF ACCESSIBILITY CHANGE ON HEALTH CARE: A CASE STUDY FOR ISTANBUL**  
Shoman W., Demirel H.  
FRESENIUS ENVIRONMENTAL BULLETIN, vol.28, no.2, pp.700-704, 2019 (SCI-Expanded)
- VI. **DYNAMIC MONITORING OF LAND COVER CHANGE: A RECENT STUDY FOR ISTANBUL METROPOLITAN AREA**  
Shoman W., Korkutan M., Algancı U., Tanık A. G., Demirel H.  
FRESENIUS ENVIRONMENTAL BULLETIN, vol.28, pp.688-693, 2019 (SCI-Expanded)
- VII. **ANALYZING GRIDGING SYSTEMS FOR LAND COVER/LAND USE INFORMATION: A STUDY CONDUCTED FOR GREEN AREAS**  
Shoman W., Algancı U., Demirel H.  
FRESENIUS ENVIRONMENTAL BULLETIN, vol.28, pp.694-699, 2019 (SCI-Expanded)
- VIII. **Exploring possible impacts of sea level rise: the case of Izmir, Turkey**  
Aksoy H., Demirel H., Şeker D. Z.  
INTERNATIONAL JOURNAL OF GLOBAL WARMING, vol.13, pp.398-410, 2017 (SCI-Expanded)
- IX. **ENHANCING INDIVIDUAL'S CARBON FOOTPRINT ESTIMATION VIA SPATIAL DATA**  
Demirel H., KAZAN O., Şeker D. Z.  
FRESENIUS ENVIRONMENTAL BULLETIN, vol.26, no.1, pp.107-112, 2017 (SCI-Expanded)
- X. **The impact of measuring internal travel distances on self-potentials and accessibility**  
Condeco Melhorado A. M., Demirel H., KOMPIL M., NAVAJAS E., CHRISTIDIS P.

EUROPEAN JOURNAL OF TRANSPORT AND INFRASTRUCTURE RESEARCH, vol.16, no.2, pp.300-318, 2016 (SSCI)

- XI. **A framework to analyze the vulnerability of European road networks due to Sea Level Rise SLR and sea storm surges**  
Demirel H., Kompil M., Nemry F.  
TRANSPORTATION RESEARCH PART A-POLICY AND PRACTICE, vol.81, pp.62-76, 2015 (SCI-Expanded)
- XII. **Multi criteria decision analysis Approach for sustainable urban transport**  
Toraman D., Demirel H.  
Fresenius Environmental Bulletin, vol.23, no.11, 2014 (SCI-Expanded)
- XIII. **MULTI-CRITERIA DECISION ANALYSIS: A SPATIAL APPROACH FOR SUSTAINABLE URBAN TRANSPORT**  
Toraman D., Demirel H.  
FRESENIUS ENVIRONMENTAL BULLETIN, vol.23, no.12, pp.3088-3094, 2014 (SCI-Expanded)
- XIV. **Modelling and Simulation of Urban Dynamics**  
Demirel H.  
Fresenius Environmental Bulletin, vol.9, no.10, 2010 (SCI-Expanded)
- XV. **Exploring impacts on environment: of road transportation a spatial approach**  
Demirel H., Sertel E., KAYA Ş., SEKER D. Z.  
DESALINATION, vol.226, pp.279-288, 2008 (SCI-Expanded)
- XVI. **A Novel Approach for Determining the Impacts of Road Transportation on Air Quality**  
Demirel H.  
FRESENIUS ENVIRONMENTAL BULLETIN, vol.15, no.8, 2006 (SCI-Expanded)
- XVII. **Designing an information system for supporting integrated coastal zone management (ICZM) - A case study**  
Alkan R. M., Seker D. Z., Demirel H., Kalkan Y., Kabdasli S.  
FRESENIUS ENVIRONMENTAL BULLETIN, vol.15, pp.829-834, 2006 (SCI-Expanded)
- XVIII. **A Dynamic Multi Dimensional Conceptual Data Model Proposal for the Transportation Applications**  
Demirel H.  
ISPRS JOURNAL OF PHOTOGRAMMETRY AND REMOTE SENSING, vol.58, 2004 (SCI-Expanded)
- XIX. **A Distinctive Conceptual Data Model for Spatial Highway Information Systems**  
Demirel H.  
PHOTOGRAMMETRIE FERNERKUNDUNG GEOINFORMATION, vol.2, pp.133-141, 2004 (SCI-Expanded)

## Articles Published in Other Journals

- I. **Açık Kaynak Kodlu Ağ Analiz Algoritmaları ve Arazi Örtüsü/Kullanımı Simülâtörü**  
AKIN Ö., EROĞLU A., DEMİREL H.  
Harita Dergisi, no.163, pp.29-37, 2020 (Peer-Reviewed Journal)
- II. **Indoor Navigation System of Faculty of Civil Engineering, ITU: A BIM Approach**  
Tarihmen B., Diyarbakirli B., Kanbur M. O., Demirel H.  
BALTIC JOURNAL OF MODERN COMPUTING, vol.8, no.2, pp.359-369, 2020 (ESCI)
- III. **Yapı Bilgi Modellerinde Mekansal Verilerin Rolü**  
AKIN Ö., MERT B., EROĞLU O., ARSLAN M., ŞEKER D. Z., DEMİREL H.  
İğdır Üniversitesi Fen Bilimleri Enstitüsü Dergisi, vol.8, no.3, pp.137-143, 2018 (Peer-Reviewed Journal)
- IV. **MODELING LAND USE SIMULATION OF ISTANBUL FOR 2023 WITH LOGISTIC REGRESSION**  
Aldogan C. F., Akin Ö., Eroglu A., Demirel H.  
SIGMA JOURNAL OF ENGINEERING AND NATURAL SCIENCES-SIGMA MUHENDISLIK VE FEN BILIMLERI DERGISI, vol.9, no.3, pp.349-354, 2018 (ESCI)
- V. **GEOGRAPHIC INFORMATION SYSTEM (GIS) BASED ACCESSIBILITY ANALYSIS FOR HIGHWAY TRANSPORTATION**  
DEMİREL H., KORKUTAN M., SHOMAN W., ALGANCI U.  
SIGMA JOURNAL OF ENGINEERING AND NATURAL SCIENCES-SIGMA MUHENDISLIK VE FEN BILIMLERI DERGISI,

vol.8, pp.339-344, 2017 (Peer-Reviewed Journal)

**VI. Spatio-Temporal Analyses for Dynamic Urban Road Network Management**

DEMİREL H., SHOMAN W.

Transport Research procedia, vol.22, pp.519-528, 2017 (Scopus)

**VII. Drought Conditions in Turkey Between 2004 and 2013 Via Drought Indices Derived from Remotely Sensed Data**

Molavizadeh N., Sertel E., Demirel H.

Energy, Transportation and Global Warming, pp.113-121, 2016 (Scopus)

**VIII. Çıkış Mülakatı Tekniğinin Geomatik Mühendisliği Programı Eğitim Kalitesini Arttırmak Amacıyla Kullanımı**

Şeker D. Z., Uluğtekin N. N., Göksel Ç., Demirel H., Doğru A. Ö., Özerman M. U., İpbüker C., Tarı E.

hkm Jeodezi, Jeoinformasyon ve Arazi Yönetimi Dergisi, no.105, pp.28-32, 2011 (Peer-Reviewed Journal)

## Supported Projects

Demirel H., TUBITAK Project, ZAMAN MEKÂNSAL HARİTALAMA YÖNTEMİ İLE ÜNİVERSİTE YERLEŞKERİNDE DIŞ MEKÂNLARIN KULLANIM SONRASI DEĞERLENDİRMESİ, 2015 - Continues

Demirel H., Shoman W., Project Supported by Higher Education Institutions, İstanbul, Türkiye'de Erişilebilirliğin Zamansal-Mekansal Boyutu, 2018 - 2020

Demirel H., Algancı U., Tanık A. G., TUBITAK Project, Coğrafi Bilgi Sistemleri (CBS) Tabanlı Karayolu Ulaşımı Erişilebilirlik Analizi, 2016 - 2018

Demirel H., EU Supported Other Project, Adaptation of transport to climate change, 2016 - 2018

Demirel H., Project Supported by Higher Education Institutions, ÇOK MODLU KENTİÇİ ULAŞTIRMA AĞLARINDA ERİŞİLEBİLİRLİĞİN AZALMASININ ANALİZİ, 2015 - 2018

Demirel H., Project Supported by Higher Education Institutions, Ulaştırma Politikalarında Tahminlerin Rolü ve Tahmin Sanatı Kavramsal Yanılgılar İlüzyonlar ve Bilişsel Hatalar, 2013 - 2018

Demirel H., Project Supported by Higher Education Institutions, İSTANBUL AVRUPA YAKASININ ARAZİ KULLANIMININ TAHMİNİ, 2010 - 2018

Demirel H., Project Supported by Higher Education Institutions, MODELLİNG URBAN DYNAMİCS TROUGH CELLULAR AUTOMATA, 2009 - 2018

Demirel H., Project Supported by Higher Education Institutions, Zaman ve Mekanın İncelenmesi: Ulaştırma ve Çevre Etkileşimi, 2008 - 2018

Demirel H., Project Supported by Higher Education Institutions, Ulaştırma altyapılarının hava kalitesi üzerindeki etkilerinin araştırılması için yeni bir yaklaşım, 2005 - 2018

Demirel H., H2020 Project, Impacts of Climate Change on transport a focus on road and rail transport infrastructures, 2012 - 2014

## Metrics

Publication: 101

Citation (WoS): 103

Citation (Scopus): 119

H-Index (WoS): 5

H-Index (Scopus): 5

## Non Academic Experience

İstanbul Teknik Üniversitesi

Mühendislik Eğitim Programları Değerlendirme ve Akredistasyon Derneği (MÜDEK)

Other, Avrupa Komisyonu Ortak Araştırma Enstitüsü, Enerji, İklim Değişikliği Ve Ulaştırma Sektörlerinin Ekonomik Değerlendirilmesi

Avrupa Birliği, Ortak Araştırma Enstitüsü, İleri Teknolojiler, İklim Değişikliği, Enerji ve Ulaştırma Ekonomisi  
İnformatik A.Ş