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Education Information

Doctorate, Istanbul Technical University, Fen Bilimleri Enstitüsü, Geomatik Mühendisliği (Dr), Turkey 2016 - 2016
Postgraduate, Istanbul Technical University, Fen Bilimleri Enstitüsü, Geomatik Mühendisliği (Yl), Turkey 2014 - 2016
Undergraduate, Istanbul Technical University, İnşaat Fakültesi, Geomatik Mühendisliği Bölümü, Turkey 2010 - 2014

Foreign Languages

English

Dissertations

Postgraduate, An investigation on the contribution of GOCE satellite mission to regional geoid modelling in Turkey, İstanbul Teknik Üniversitesi, Fen Bilimleri Enstitüsü, Geomatik Mühendisliği (Yl), 2016

Research Areas

Geodesy and Photogrammetry, Earth Observations (Remote Sensing)

Academic Titles / Tasks

Research Assistant, Istanbul Technical University, İnşaat, Geomatik Mühendisliği, 2016 - Continues

Published journal articles indexed by SCI, SSCI, and AHCI

I. **Improving Road Segmentation by Combining Satellite Images and LiDAR Data with a Feature-Wise Fusion Strategy**
   Öztürk O., Işık M. S., Kada M., Şeker D. Z.

APPLIED SCIENCES, vol.13, no.10, pp.6161-6179, 2023 (SCI-Expanded)

II. **Explainable Artificial Intelligence for Cotton Yield Prediction With Multisource Data**
Çelik M. F., Işık M. S., Taşkın G., Erten E., Camps-Valls G.
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III. **Soil Moisture Prediction from Remote Sensing Images Coupled with Climate, Soil Texture and Topography via Deep Learning**
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IV. **Geoid modeling with least squares modification of Hotine's integral using gravity disturbances in Turkey**
Işık M. S., Erol B., Çevikalp M. R., Erol S.
EARTH SCIENCE INFORMATICS, vol.15, no.3, pp.1889-1904, 2022 (SCI-Expanded)

V. **Investigation of the Geoid Model Accuracy Improvement in Turkey**
Işlk M. S., Erol S., Erol B.
Journal of Surveying Engineering, vol.148, no.3, 2022 (SCI-Expanded)

VI. **Generation of Istanbul road data set using Google Map API for deep learning-based segmentation**
Öztürk O., Işık M. S., Sarıtürk B., Şeker D. Z.
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VII. **Colorado geoid computation experiment: overview and summary**
Wang Y. M., Sanchez L., Agren J., Huang J., Forsberg R., Abd-Elmotaal H. A., Ahlgren K., Barzaghi R., Basic T., Carrion D., et al.
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VIII. **High-resolution geoid modeling using least squares modification of Stokes and Hotine formulas in Colorado**
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IX. **Assessment of Gridded Gravity Anomalies for Precise Geoid Modeling in Turkey**
Erol B., Işık M. S., Erol S.
JOURNAL OF SURVEYING ENGINEERING, vol.146, no.3, 2020 (SCI-Expanded)

X. **An Assessment of the GOCE High-Level Processing Facility (HPF) Released Global Geopotential Models with Regional Test Results in Turkey**
Erol B., Işık M. S., Erol S.
REMOTE SENSING, vol.12, no.3, 2020 (SCI-Expanded)

XI. **Preliminary results of GOCE-based height system unification between Greece and Turkey over marine and land areas**
Vergos G. S., Erol B., Natsıopoulos D. A., Grıgorıadıs V. N., Işık M. S., Tzıavos I. N.
Acta Geodaetica et Geophysica, vol.53, no.1, pp.61-79, 2018 (SCI-Expanded)

Articles Published in Other Journals

I. **Improvement of GOCE-Based Global Geopotential Models for Gravimetric Geoid Modeling in Turkey**
IŞIK M. S., ÇEVİKALP M. R., EROL B., EROL S.
GEOSCIENCES (Basel), vol.12, 2022 (ESCI)

II. **Global ve Bölgesel (Yüksek Çözünürlüklü) Sayısal Yükseklik Modellerinin Doğruluk Analizi Üzerine Bir İnceleme**
EROL B., IŞIK M. S., EROL S.
Afyon Kocatepe Üniversitesi Fen ve Mühendislik Bilimleri Dergisi, vol.20, no.4, pp.598-612, 2020 (Peer-Reviewed Journal)

Refereed Congress / Symposium Publications in Proceedings

I. **Uydu Gravite Misyonları Verilerinin Türkiye'de Bölgesel Gravite Alanının Modellenmesine Katkısının İncelenmesi**
Çevikalp M. R., Işık M. S., Erol B.
Türkiye Ulusal Jeodezi Komisyonu (TUJK) Çalıştayı 2022, Kocaeli, Turkey, 02 November 2022

II. **Yüksek Çözünürlüklü Gravimetrik Geoit Modellemede Gravite Verilerinin Ön İşlemesi Üzerine Bir İnceleme**
Erol B., Simav M., Işık M. S., Erol S., Akdoğan Y. A., Akpınar İ., Çevikalp M. R.
Türkiye Ulusal Jeodezi Komisyonu 2022 Yılı Bilimsel Toplantısı, Kocaeli, Turkey, 02 November 2022

III. **GNSSpy: Python Toolkit for GNSS Data**
Işık M. S., Özbey V., Erol S., Tarı E.
2021 IEEE International Geoscience and Remote Sensing Symposium IGARSS, Brussels, Belgium, 11 - 16 July 2021, pp.8550-8553

IV. **An Investigation on the Geoid-Quasigeoid Separation with the Case Study in Colorado, U.S.**
IŞIK M. S., EROL B., ÇEVİKALP M. R., EROL S.
Scientific Assembly of the International Association of Geodesy (IAG), IAG2021, 28 June 2021

V. **Gravimetric Geoid Modelling Using the Least Squares Modification of Hotine Integral in Turkey**
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VI. **The ITU quasi-geoid based on Least Squares modification of Stokes integral with additive corrections for the Colorado Experiment: ColLSMSA2020**
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International Service for the Geoid (ISG) Repository, Milan, Italy, 31 March 2021

VII. **The ITU geoid based on Least Squares modification of Stokes integral with additive corrections for the Colorado Experiment: ColLSMSA2020.**
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IŞIK M. S., EROL B., EROL S., SAKIL F. F.
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X. **Advances in the realisation of the International Height Reference System**
Sánchez L., Ågren J., Huang J., Wang Y. M., Abd-Elmotaal H. A., Ahlgren K., Barzaghi R., Bašic T., Carrion D., Claessens S., et al.
GGOS Days 2019 (SIRGAS2019), Rio de Janeiro, Brazil, 12 November 2019

XI. **Advances in the realisation of the International Height Reference System**
Sanchez L., Agren J., Huang J., Wang J., EROL B., EROL S., IŞIK M. S.
Symposium SIRGAS2019, Munich, Germany, 11 November 2019

XII. **On the Use of DEM by Unmanned Aerial Vehicle and Airborne LIDAR Data in Local Geoid Model Determination and Validation**
KUÇAK R. A., EROL S., özögel e., IŞIK M. S., EROL B.
XXVIII INTERNATIONAL SYMPOSIUM ONMODERN TECHNOLOGIES, EDUCATION AND PROFESSIONAL PRACTICEIN GEODESY AND RELATED FIELDS, 8 - 09 November 2018

XIII. **AN OVERVIEW THE 2017 JULY 20 MW 6.6 BODRUM–KOS EARTHQUAKE BY MEANS OF GEODETIC AND GEOPHYSICAL DATA ANALYSES**
EROL S., köz i., gür y. ö., IŞIK M. S., EROL B.

XXVIII INTERNATIONAL SYMPOSIUM ONMODERN TECHNOLOGIES, EDUCATION AND PROFESSIONAL PRACTICEIN GEODESY AND RELATED FIELDS, 8 - 09 November 2018

XIV. **Validation of Mediterranean Sea MSS and Marine Geoid using Recent Global and Regional Models, Local Tide Gauge and Coastal Altimetry Products**
KOÇ Ö., EROL S., IŞIK M. S., EROL B.
GGHS2018-Gravity, Geoid and Height Systems-2, 17 - 21 September 2018

XV. **Methodology Assessment of High Resolution Geoid Modeling Using The GRAV-D Data Over Colorado**
EROL B., IŞIK M. S., EROL S.
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XVI. **Comparison of Least Squares Modifications of Stokes's and Hotine's Formula Using Point-wise and Gridded Gravity Data**
SAKİL F. F., EROL S., IŞIK M. S., EROL B.
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XVII. **Data Quality Assessments for High-frequency Geoid Modeling in Turkey**
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XVIII. **High-resolution geoid modelling in Turkey using Stokes-Helmert approach**
İNCE E. S., EROL B., IŞIK M. S., EROL S., Huang J.
IX HOTINE-MARUSSI SYMPOSIUM, 18 - 22 June 2018

XIX. **Vertical Reference System and Geoid Modeling Studies in Turkey, XXVII International Symposium on Modern Technologies**
EROL B., EROL S., IŞIK M. S.
XXVII International Symposium on Modern Technologies, Education and Professional Practice in Geodesy and Related Fields, Sofija, Bulgaria, 9 - 10 November 2017

XX. **Web-based Geoid Calculation for Practical Height Transformation in Turkey**
ÖZEN B., IŞIK M. S., EROL B.
International Symposium on GIS Applications in Geography and Geosciences (ISGGG 2017), Çanakkale, Turkey, 18 - 21 October 2017

XXI. **Comparison of Geostatistical Kriging and Least Squares Collocation in Gravity Field Data Interpolation**
IŞIK M. S., EROL B., EROL S.
International Symposium on GIS Applications in Geography and Geosciences (ISGGG 2017), Çanakkale, Turkey, 18 - 21 October 2017

XXII. **Analysis on the Quality of High-Resolution Global Digital Terrain Models (DTM) using GPS/leveling Data in Turkey**
Işık M. S., Erol S., Erol B.
INTERNATIONAL SYMPOSIUM ON GIS APPLICATIONS IN GEOGRAPHY & GEOSCIENCES, Çanakkale, Turkey, 18 - 21 October 2017, pp.1-7

XXIII. **GOCE Uydu Verileri Ile Hesaplanan Global Jeopotansiyel Modellerin Yersel Veriler İle Dogruluklarının Değerlendirilmesi**
IŞIK M. S., EROL B.
Türkiye Ulusal Jeodezi Komisyonu Bilimsel Toplantısı, İstanbul, Turkey, 3 - 04 November 2016

XXIV. **Bölgesel Geoit Modellerinin Hesaplanmasında Veri Katkısı ve Hesaplama Yöntemlerinin Model Doğruluğuna Etkisi**
EROL B., İnce E. S., ABBAK R. A., EROL S., IŞIK M. S., FEİZABADİ M.
Türkiye Ulusal Jeodezi Komisyonu Bilimsel Toplantısı, İstanbul, Turkey, 3 - 04 November 2016

XXV. **An Investigation on the Improvement of Regional Geoid Model in Turkey with Contribution of Methodology and Recent Satellite Missions Data**
IŞIK M. S., İnce E. S., EROL B.
International Symposium on Gravity, Geoid and Height Systems (GGHS) 2016, Selanik, Greece, 19 - 23 September 2016

XXVI. **Wavelet Analysis and Reconstruction of GOCE GRACE Geopotential Models using GPS Leveling Data in Turkey**
EROL S., EROL B., Işık M. S.
1st Joint Commission-2 and IGFS Meeting-International Symposium on Gravity, Geoid and Height Systems (GGHS) 2016, Selanik, Greece, 19 - 23 September 2016

XXVII. **GOCE based Comparison and Unification of the Greek and Turkish Height Systems with special emphasis on the Aegean Sea and the Terrestrial border Territories**
Vergos G., EROL B., Natsiopoulos D., Grigoriadis V., IŞIK M. S., Tziavos I.
International Symposium on Gravity, Geoid and Height Systems, Selanik, Greece, 19 September 2016

XXVIII. **Assessment and Improvement of GOCE based Global Geopotential Models Using Wavelet Decomposition**
EROL S., EROL B., IŞIK M. S.
COSPAR 41st Scientific Assembly 2016, İstanbul, Turkey, 30 July - 07 August 2016

XXIX. **Geoid Determination Using GOCE Based Models in Turkey**
IŞIK M. S., EROL B.
EGU General Assembly 2016, Viyana, Austria, 17 - 22 April 2016

XXX. **GOCE based height system unification between Greece and Turkey First considerations over marine and land areas**
VERGOS G., EROL B., NATSİOPOULOS D., GRİGORİADİS V., IŞIK M. S., TZİAVOS I.
EGU General Assembly 2016, Viyana, Austria, 17 - 22 April 2016

XXXI. **Assessments on GOCE-based Gravity Field Model Comparisons with Terrestrial Data Using Wavelet Decomposition and Spectral Enhancement Approaches**
Erol S., Işık M. S., Erol B.
EGU General Assembly 2016, Viyana, Austria, 17 - 22 April 2016, pp.1

XXXII. **Geoid Modelling in Turkey Using Remove Compute Restore and Least Squares Modication of Stokes Integral Methods**
IŞIK M. S., EROL B.
International Union of Geodesy and Geophysics General Assembly, Prag, Czech Republic, 22 June - 02 July 2015

XXXIII. **Geomatik Mühendisliği Uygulamalarında Dönüşüm Yöntemleri**
FEİZABADİ M., Işık M. S., İpbüker C.
15. Harita Kurultayı, Ankara, Turkey, 25 - 28 March 2015, pp.1-8

XXXIV. **Comparison of Remove Compute Restore and KTH Method for Gravimetric Geoid Determination in the Northwest of Turkey**
IŞIK M. S., EROL B.
XXIV International Symposium on ModernTechnologies, Education and Professional Practice in Geodesy and Related Fields, Sofya, Bulgaria, 6 - 07 November 2014

Supported Projects

Erol S., Işık M. S., Erol B., Project Supported by Higher Education Institutions, Yerel Geoit Modellerinin Geliştirilmesinde Yöntem Araştırması ve Model Sınırlarında Doğruluğun İyileştirilmesine Yönelik İncelemeler, 2018 - 2024
Erol B., Işık M. S., Erol S., Project Supported by Higher Education Institutions, Gravite Ölçülerine Topografik Etkinin Hesaplanmasında Optimal Sayısal Arazi Modeli (SAM) Mekansal Çözünürlüğünün Araştırılması, 2018 - 2023

Metrics

Publication: 49
Citation (WoS): 86
Citation (Scopus): 96

H-Index (WoS): 5
H-Index (Scopus): 6

Awards

Işık M. S., Turkish National Geodetic Commission - Incentive Award, Türkiye Ulusal Jeodezi Komisyonu (Tujk), November 2022
Işık M. S., En İyi Poster Sunumu, Türkiye Ulusal Jeodezi Komisyonu, November 2016