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Education Information

Doctorate, Yildiz Technical University, Graduate School Of Natural And Applied Sciences, -, Turkey 2020 - Continues
Postgraduate, Yildiz Technical University, Graduate School Of Natural And Applied Sciences, Uzaktan Algilama Ve Cbs Programi, Turkey 2017 - 2020

Undergraduate, Yildiz Technical University, Faculty Of Civil Engineering, Geomatic Engineering, Turkey 2013 - 2017

Research Areas

Geotechnical Engineering, Photogrammetry, Engineering and Technology

Academic Titles / Tasks

Research Assistant, Yildiz Technical University, Faculty Of Civil Engineering, Geomatic Engineering, 2019 - Continues

Published journal articles indexed by SCI, SSCI, and AHCI

- I. **Evaluation of Machine Learning Algorithms for Classification of Infrastructure Elements in Complex Structures**
Yilmaz Y., Bayrak O. C., Soycan A.
KSCE JOURNAL OF CIVIL ENGINEERING, vol.1, no.1, pp.1-17, 2024 (SCI-Expanded)
- II. **Analyzing Coastal Vulnerability Using Analytic Hierarchy Process and Best–Worst Method: A Case Study of the Marmara Gulf Region**
Arda T., Bayrak O. C., Uzar M.
ARABIAN JOURNAL FOR SCIENCE AND ENGINEERING, vol.2024, pp.0-19, 2024 (SCI-Expanded)
- III. **Machine learning approach for GNSS geodetic velocity estimation**
ÖZARPACI S., KILIÇ B., BAYRAK O. C., TAŞKIRAN M., DOĞAN U., Floyd M.
GPS Solutions, vol.28, no.2, 2024 (SCI-Expanded)
- IV. **Unveiling the impact of machine learning algorithms on the quality of online geocoding services: a case study using COVID-19 data**
Kılıç B., Bayrak O. C., Gülgen F., Gürtürk M., Abay P.
Journal of Geographical Systems, 2024 (SSCI)
- V. **Evaluating the effects of texture features on Pinus sylvestris classification using high-resolution**

aerial imagery

Erdem F., BAYRAK O. C.

Ecological Informatics, vol.78, 2023 (SCI-Expanded)

- VI. **Comparative analysis of the optimum cluster number determination algorithms in clustering GPS velocities**
ÖZARPACI S., KILIÇ B., BAYRAK O. C., ÖZDEMİR A., YILMAZ Y., Floyd M.
Geophysical Journal International, vol.232, no.1, pp.70-80, 2023 (SCI-Expanded)
- VII. **Role of machine learning algorithms in predicting the treatment outcome of uterine fibroids using high-intensity focused ultrasound ablation with an immediate nonperfused volume ratio of at least 90%**
Akpınar E., Bayrak O. C., Nadarajan C., Müslümanoğlu M. H., Duc N. M., Keserci B.
EUROPEAN REVIEW FOR MEDICAL AND PHARMACOLOGICAL SCIENCES, no.23, pp.1-19, 2022 (SCI-Expanded)
- VIII. **An ensemble deep learning based shoreline segmentation approach (WaterNet) from Landsat 8 OLI images**
Erdem F., BAYRAM B., Bakirman T., BAYRAK O. C., AKPINAR B.
ADVANCES IN SPACE RESEARCH, vol.67, no.3, pp.964-974, 2021 (SCI-Expanded)
- IX. **Implementation of ultra-light UAV systems for cultural heritage documentation**
Bakirman T., Bayram B., Akpınar B., Karabulut M. F., Bayrak O. C., Yigitoglu A., Şeker D. Z.
JOURNAL OF CULTURAL HERITAGE, vol.44, pp.174-184, 2020 (SCI-Expanded)

Articles Published in Other Journals

- I. **Performance analysis of YOLO versions for automatic vehicle detection from UAV images**
Uzar A. M., Öztürk Ş., Bayrak O. C., Arda T., Tunahoglu Öcalan N.
Advanced Remote Sensing, vol.1, no.1, pp.16-30, 2021 (Peer-Reviewed Journal)
- II. **A deep learning integrated mobile application for historic landmark recognition: A case study of Istanbul**
Bayram B., Kiliç B., Ozoglu F., Erdem ., Bakirman T., Sivri S., Bayrak O. C., Delen A.
Mersin Photogrammetry Journal, vol.2, no.2, pp.38-50, 2020 (Peer-Reviewed Journal)

Refereed Congress / Symposium Publications in Proceedings

- I. **AUTOMATIC POINT CLOUD CLASSIFICATION OF UNDER-REPRESENTED POLE-LIKE OBJECTS BASED ON HIERARCHICAL DIRECTED GRAPH**
Ma Z., Bayrak O. C., Remondino F.
IEEE International Symposium on Geoscience and Remote Sensing (IGARSS), Athens, Greece, 7 - 12 July 2024, pp.1-4
- II. **AUTOMATIC ANNOTATION OF 3D MULTISPECTRAL LIDAR DATA FOR LAND COVER CLASSIFICATION**
Taktkesha N., Bayrak O. C., Mandlbürger G., Remondino F., Kukko A., Hyypä J.
IEEE International Symposium on Geoscience and Remote Sensing (IGARSS), Athens, Greece, 7 - 12 July 2024, pp.1-4
- III. **ESTATE: A Large Dataset of Under-Represented Urban Objects for 3D Point Cloud Classification**
Bayrak O. C., Ma Z., Farella E. M., Remondino F., Uzar A. M.
ISPRS TC II Mid-term Symposium "The Role of Photogrammetry for a Sustainable World", Nevada, United States Of America, 11 - 14 June 2024, pp.25-32
- IV. **Kıyasal Kırılgenliğin Makine Öğrenmesi Yöntemleri ile İncelenmesi: Marmara Kıyıları Örneği**
Arda T., Bilgili A., Bayrak O. C., Uzar A. M.
YTU Grad Colloquium'24, İstanbul, Turkey, 04 June 2024, pp.1
- V. **Operationalize large-scale point cloud classification: potentials and challenges**

Bayrak O. C., Ma Z., Farella E. M., Remondino F.

EUROPEAN GEOSCIENCE UNION - 24, Vienna, Austria, 14 - 19 April 2024, pp.1-2

- VI. **Şubat 2023 Depremlerinin Bölgede Oluşturduğu Etkiler ve Yapay Zeka ile Afet Yönetim Planlaması**
Doğan U., Yüzer N., Acar U., Akbaba M. F., Akbulut M. T., Akgün C., Akın O., Akkaya H. C., Akpınar B., Aktaş Z., et al.
Türkiye Ulusal Jeodezi Komisyonu (TUJK) XXII. Sempozyumu 2023, Trabzon, Turkey, 29 November - 01 December 2023, pp.5-6
- VII. **A NEW DATASET AND METHODOLOGY FOR URBAN-SCALE 3D POINT CLOUD CLASSIFICATION**
Bayrak O. C., Uzar A. M., Remondino F.
2nd GEOBENCH Workshop on Evaluation and BENCHMARKING of Sensors, Systems and GEOspatial Data in Photogrammetry and Remote Sensing, Krakow, Poland, 23 October - 24 November 2023, pp.1-8
- VIII. **DEEP LEARNING BASED AERIAL IMAGERY CLASSIFICATION FOR TREE SPECIES IDENTIFICATION**
Bayrak O. C., Erdem F., Uzar A. M.
The International Archives of the Photogrammetry, Remote Sensing and Spatial Information Sciences, Volume XLVIII-M-1-2023 39th International Symposium on Remote Sensing of Environment (ISRSE-39) "From Human Needs to SDGs", Antalya, Turkey, 24 - 28 April 2023, pp.471-476
- IX. **UAV DETECTION WITH DEEP LEARNING**
Şahin E., Uzar A. M., Bayrak O. C.
10th INTERNATIONAL ZEUGMA CONFERENCE ON SCIENTIFIC RESEARCH, Gaziantep, Turkey, 25 - 26 June 2023, pp.260-261
- X. **FOTOGRAMETRİK NOKTA BULUTLARINDAN MAKİNE ÖĞRENMESİ YÖNTEMİ İLE BİNA ÇIKARIMI**
Bayrak O. C., Uzar A. M.
VIII. UZAL-CBS 2022, Ankara, Turkey, 17 - 18 November 2022, pp.1-4
- XI. **The Role of Boosting based Machine Learning Algorithms in Predicting the Outcome of HIFU Ablation of Uterine Fibroids**
Akpınar E., Bayrak O. C., Keserci B.
International Symposium on Therapeutic Ultrasound, Toronto, Canada, 7 - 10 June 2022
- XII. **Derin Öğrenme Yöntemleri ile Uydu Görüntülerinden Orman Yangını Tespiti: Muğla Örneği**
Bayrak O. C., Arda T., Uzar A. M.
TUFUAB 2022, Mersin, Turkey, 12 - 14 May 2022, pp.28-32
- XIII. **Comparative Analysis of Two Object-Based Techniques for Shoreline Extraction from Digital Orthophotos: A Case Study in Riga, Latvia.**
Selbesoğlu M. O., Bayram B., Varna İ., Bakırman T., Jamil A., Bayrak O. C., Şeker D. Z.
International Symposium on Applied Geoinformatics (ISAG-2019) , İstanbul, Turkey, 7 - 09 November 2019, pp.66
- XIV. **Direct Geo-referencing of UAV images for Orthophoto Generation based on RTK GNSS Positioning**
Akpınar B., Selbesoğlu M. O., Aykut N. O., Bayrak O. C., Bayram B.
XXIX International Symposium on Modern Technologies, Education and Professional Practice in Geodesy and Related Fields, İstanbul, Turkey, 5 - 06 November 2019, pp.55
- XV. **Derin Öğrenme ile Obje Tanıma İşlemi Üzerine Bir İnceleme**
Bayram B., Kılıç B., Özoğlu F., Erdem F., Sivri S., Delen A., Bayrak O. C.
10. Türkiye Ulusal Fotogrametri ve Uzaktan Algılama Birliği Teknik Sempozyumu (TUFUAB 2019), Aksaray, Turkey, 25 April 2019, pp.304-308

Supported Projects

OKTAY D., YEŞİLYURT İ., UYSAL M., YÜZER N., GÜLGEN F., CANPOLAT O., ACAR U., SARI ERKAN H., ÖZDOĞRU E., ÖZEN Ö. C., et al., Project Supported by Higher Education Institutions, Müsilajdan Elde Edilecek Bakteriler ile Kendi Kendini Onaran Nano Kil Katkılı Geopolimer Malzemelerin 3B Baskı Yöntemi ile Üretilebilirliğinin Araştırılması, 2024 - Continues
Uzar A. M., Musaoğlu N., Kılıç B., Bayrak O. C., Bilgili A., Arda T., TUBITAK Project, Using Generative Artificial Intelligence Models for Damage Assessment in a Possible Istanbul Earthquake and Deriving Information for Post-Disaster Activity Planning through Integration with Geographic Information Systems, 2024 - 2026

Balık Şanlı F., Bayrak O. C., Acar U., Abdikan S., Bayık Ç., TUBITAK Project, Derin Öğrenme Temelli Kıyı Çizgisi ve Deniz Üstü Buzul Sınıflarının Otomatik Tespiti : Antarktika Örneği, 2023 - 2025
Yüzer N., Yardım M. S., Turgut S., Yılmaz Genç S., Dikçınar Sel B., Erdem Okumuş D., Kılıç B., Özarpacı S., Bayrak O. C., Sakarya A., et al, Project Supported by Higher Education Institutions, Şubat 2023 Depremlerinin Bölgede Oluşturduğu Etkiler ve Yapay Zeka ile Afet Yönetim Planlaması, 2023 - 2024
Yılmaz Y., Soycan M., Soycan A., Bayrak O. C., Project Supported by Higher Education Institutions, Accuracy and Applicability Research for 3D Modeling with Low Cost Imaging Systems, 2022 - 2024
Keserci B., TUBITAK Project, Deep Learning Advancement for Image Guided Classification: Applied to Gynecology, 2020 - 2023

Scientific Refereeing

SCIENTIFIC REPORTS, SCI Journal, November 2024
Advances in Geodesy and Geoinformation, Journal Indexed in ESCI, October 2024
EARTH SCIENCE INFORMATICS, Journal Indexed in SCI-E, October 2024
IET COMPUTER VISION, Journal Indexed in SCI-E, October 2024
EUROPEAN JOURNAL OF REMOTE SENSING, SCI Journal, September 2024
ARTIFICIAL INTELLIGENCE REVIEW, SCI Journal, September 2024
SCIENTIFIC REPORTS, SCI Journal, August 2024
SCIENTIFIC REPORTS, SCI Journal, August 2024
SCIENTIFIC REPORTS, SCI Journal, August 2024
EARTH SCIENCE INFORMATICS, SCI Journal, July 2024
SCIENTIFIC REPORTS, SCI Journal, June 2024
Advanced Remote Sensing, Other journals, November 2023

Metrics

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Citation (Scopus): 93
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