

## **Res. Asst. Cemali ALTUNTAŞ**

### **Personal Information**

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### **International Researcher IDs**

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Publons / Web Of Science ResearcherID: GYQ-7856-2022

ScopusID: 57222185577

Yoksis Researcher ID: 296781

### **Biography**

He was born in 1994 in Ankara. He completed his primary, secondary and high school education in the same city. He received his undergraduate degree from Yıldız Technical University in 2017. In 2018, he started his graduate education at Hacettepe University, Institute of Science and Technology, Department of Geomatics Engineering. At the end of 2018, he was appointed as a Research Assistant to the Division of Surveying Technique in the Department of Geomatic Engineering at Yıldız Technical University. At the beginning of 2019, he moved as a student from Hacettepe University to Yıldız Technical University. In January 2021, he completed his master's thesis titled "Examination of the Global Navigation Satellite Systems Reflectometry Method with Signal to Noise Ratio Data". He still continues his work and doctorate education here.

He worked on GPS-PPP, VLBI and repeatability criteria during his time at Hacettepe University. Nowadays, the focus of his work is on GNSS Interferometric Reflectometry (GNSS-IR).

### **Education Information**

Doctorate, Yıldız Technical University, Faculty Of Civil Engineering, Geomatic Engineering, Turkey 2021 - Continues

Postgraduate, Yıldız Technical University, Graduate School Of Natural And Applied Sciences, Harita Mühendisliği / Geomatik, Turkey 2019 - 2021

Postgraduate, Hacettepe University, Fen Bilimleri Enstitüsü, Geomatik Mühendisliği, Turkey 2018 - 2019

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

### **Foreign Languages**

English, C1 Advanced

### **Dissertations**

Postgraduate, Examination of the Global Navigation Satellite Systems Reflectometry Method with Signal to Noise Ratio Data, Yıldız Technical University, Faculty of Civil Engineering, Geomatic Engineering, 2021

## **Research Areas**

Geotechnical Engineering, GPS-GNSS, Earth Observations (Remote Sensing), Measuring Technique, Engineering and Technology

## **Academic Titles / Tasks**

Research Assistant, Yildiz Technical University, Faculty Of Civil Engineering, Geomatic Engineering, 2018 - Continues

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

- I. **Enhancing snow depth estimations through iterative satellite elevation range selection in GNSS-IR to account for terrain variation**  
Altuntaş C., Tunalioğlu N.  
IEEE TRANSACTIONS ON GEOSCIENCE AND REMOTE SENSING, vol.61, pp.1-9, 2023 (SCI-Expanded)
- II. **A systematic approach for identifying optimal azimuth and elevation angle masks in GNSS-IR: validation through a sea level experiment**  
Altuntaş C., Tunalioğlu N.  
GPS SOLUTIONS, vol.27, pp.1-13, 2023 (SCI-Expanded)
- III. **Machine learning-based snow depth retrieval using GNSS signal-to-noise ratio data**  
Altuntaş C., İban M. C., Şentürk E., Durdağ U. M., Tunalioğlu N.  
GPS SOLUTIONS, vol.26, pp.1-12, 2022 (SCI-Expanded)
- IV. **An experimental test for detecting effective reflector height with GPS SNR data**  
Tunalioğlu N., Altuntaş C.  
EARTH SCIENCES RESEARCH JOURNAL, vol.26, no.1, pp.13-22, 2022 (SCI-Expanded)
- V. **GIRAS: an open-source MATLAB-based software for GNSS-IR analysis**  
Altuntaş C., Tunalioğlu N.  
Gps Solutions, vol.26, no.1, pp.1-8, 2022 (SCI-Expanded)
- VI. **Feasibility of retrieving effective reflector height using GNSS-IR from a single-frequency android smartphone SNR data**  
Altuntaş C., Tunalioğlu N.  
Digital Signal Processing, pp.1-10, 2021 (SCI-Expanded)

## **Articles Published in Other Journals**

- I. **Statistical Analysis of Covid-19 Outbreak with Benford's Law**  
Doğan A. H., Altuntaş C., Gül C., Tunalioğlu N., Erdoğan B.  
Yönetim ve Ekonomi Araştırmaları Dergisi, vol.21, no.2, pp.120-133, 2023 (Peer-Reviewed Journal)
- II. **Rapid Characterization of the February 2023 Kahramanmaraş, Türkiye, Earthquake Sequence**  
Goldberg D. E., Taymaz T., Reitman N. G., Hatem A. E., Yolsal Çevikbilen S., Barnhart W. D., Irmak T. S., Wald D. J., Öcalan T., Yeck W. L., et al.  
The Seismic Record, vol.3, no.2, pp.156-167, 2023 (Peer-Reviewed Journal)
- III. **Sub- and super-shear ruptures during the 2023 Mw 7.8 and Mw 7.6 earthquake doublet in SE Türkiye**  
Melgar D., Taymaz T., Ganas A., Crowell B., Öcalan T., Kahraman M., Tsironi V., Yolsal Çevikbilen S., Valkaniotis S., Irmak T. S., et al.  
Seismica, vol.2, no.3, pp.1-10, 2023 (Peer-Reviewed Journal)
- IV. **An investigation on the use of GNSS-IR method for determining sea level changes and its accuracy**

## **analysis**

Altuntaş C., Tunalioğlu N.

GEOMATIK, vol.7, no.3, pp.187-196, 2022 (ESCI)

### **V. Yalın Bir Sanat Eleştirisi: Yapı(t)söküm**

Altuntaş C.

Telakki Sosyal Bilimler Dergisi, vol.1, no.1, pp.61-62, 2022 (Peer-Reviewed Journal)

### **VI. Retrieving the SNR metrics with different antenna configurations for GNSS-IR**

Altuntaş C., Tunalioğlu N.

Turkish Journal of Engineering, vol.6, no.1, pp.87-94, 2022 (Peer-Reviewed Journal)

### **VII. ESTIMATION PERFORMANCE OF SOIL MOISTURE WITH GPS-IR METHOD**

Altuntaş C., Tunalioğlu N.

Sigma Journal of Engineering and Natural Sciences, vol.38, no.4, pp.2217-2230, 2020 (ESCI)

## **Refereed Congress / Symposium Publications in Proceedings**

### **I. Assessment of the accuracy of point clouds obtained with a smartphone LiDAR sensor**

Altuntaş C., Arıcan D., Yılmaz O.

Türkiye Ulusal Jeodezi Komisyonu (TUJK) XXII. Sempozyumu 2023, Trabzon, Turkey, 29 November - 01 December 2023, pp.1-2

### **II. Determination of sea level changes based on GNSS-IR on Türkiye coastlines**

Altuntaş C., Tunalioğlu N., Öcalan T., Keskin İ. H., Özel Ö., Sezen E., Kurt A. İ.

Türkiye Ulusal Jeodezi Komisyonu (TUJK) XXII. Sempozyumu 2023, Trabzon, Turkey, 29 November - 01 December 2023, pp.1-2

### **III. Analysis of GNSS-IR-based sea level estimations using epoch-based and daily average approaches**

Altuntaş C., Tunalioğlu Öcalan N.

19. Türkiye Harita Bilimsel ve Teknik Kurultayı, Ankara, Turkey, 4 - 06 October 2023, pp.1-2

### **IV. 3D Modelling of Historical Buildings via Social Media Data**

Arıcan D., Tunalioğlu N., Doğan A. H., Altuntaş C., Erdoğan B.

Türkiye Ulusal Fotogrametri ve Uzaktan Algılama Birliği (TUFUAB) XII. Teknik Sempozyumu, Sivas, Turkey, 24 - 26 May 2023, pp.1

### **V. A Research on 3D Modeling Facilities based on Instant-NeRF**

Polat A., Tunalioğlu N., Altuntaş C., Doğan A. H., Öcalan T.

Türkiye Ulusal Fotogrametri ve Uzaktan Algılama Birliği (TUFUAB) XII. Teknik Sempozyumu, Sivas, Turkey, 24 - 26 May 2023, pp.1

### **VI. An investigation on the analysis of multi-frequency multi-GNSS data with GNSS-IR method**

Altuntaş C., Tunalioğlu N.

Türkiye Ulusal Jeodezi Komisyonu (TUJK) 2022 Yılı Bilimsel Toplantısı, Kocaeli, Turkey, 2 - 04 November 2022, pp.1-2

### **VII. Investigation of Long-term Snow Depth Retrieval Performance of GNSS-IR Method**

Altuntaş C., Tunalioğlu N., Erdoğan B.

Türkiye Ulusal Jeodezi Komisyonu (TUJK) 2021 Yılı Bilimsel Toplantısı, Ankara, Turkey, 25 - 27 November 2021, pp.1

### **VIII. Türkiye Kıyılarında Deniz Seviyesi Değişimlerinin GNSS-IR Yöntemi ile Belirlenebilirliğinin Araştırılması: Tekirdağ (TEKR) Sabit GNSS İstasyonu Örneği**

Altuntaş C., Tunalioğlu N.

18. Türkiye Harita Bilimsel ve Teknik Kurultayı, Ankara, Turkey, 26 - 29 May 2021, pp.1

### **IX. An experimental study on the effect of antenna orientation on GNSS-IR**

Altuntaş C., Tunalioğlu N.

Intercontinental Geoinformation Days, 25 - 26 November 2020, pp.244-247

### **X. GPS Sinyal Gürültü Oranı (SNR) Kullanılarak Genlik Değişimlerinin İncelenmesi**

- Doğan A. H., Tunaloğlu N., Durdağ U. M., Erdoğan B., Öcalan T., Altuntaş C.  
17. Türkiye Harita Bilimsel ve Teknik Kurultayı, Ankara, Turkey, 25 April 2019, pp.1
- XI. **IWS-CONT17 Süresince VLBI ve GNSS (PPP) Tekniklerinden Elde Edilen Günlük Koordinat ve Baz Uzunluğu Tekrarlanabilirlikleri**  
Altuntaş C., Öcal M. F., Teke K.  
17. Türkiye Harita Bilimsel ve Teknik Kurultayı, Ankara, Turkey, 25 April 2019, pp.1

## Supported Projects

Tunalioğlu Öcalan N., Erdoğan B., Öcalan T., Altuntaş C., Gül C., Arda T., Arıcan D., Project Supported by Higher Education Institutions, Kültürel Miras Envanteri için Kitle Kaynaklı Sosyal Medya Veri Entegrasyonu ile 3 Boyutlu Modelleme, 2023 - 2024

Türk T., Öcalan T., Bahadur B., TUBITAK Project, İnsansız Hava Aracı (İHA) Fotogrametrisi ile Elde Edilen Ürünlerin Doğruluğunun Çoklu-GNSS PPP Çözümleri Kullanılarak Araştırılması, 2022 - 2024

Tunalioğlu N., Öcalan T., Altuntaş C., Özel Ö., Keskin İ. H., Project Supported by Other Official Institutions, Türkiye Kıyılarında Deniz Seviyesi Değişiminin SNR Verileri ile GNSS-IR Yöntemine Dayalı Olarak İzlenmesi ve Doğruluk Araştırması, 2021 - 2023

Tunalioğlu N., Altuntaş C., TUBITAK Project, Çift Frekanslı Çoklu-GNSS Çipine Sahip Android Tabanlı Akıllı Telefonlar ile SNR Metriklerinin Kestiriminin Araştırılması, 2021 - 2022

Tunalioğlu N., Altuntaş C., Erdoğan B., Project Supported by Higher Education Institutions, Mevsimsel Kar Kalınlığı Değişimlerinin GNSS-IR Yöntemi ile İzlenmesi ve Doğruluk Analizi, 2021 - 2022

## Scientific Refereeing

ADVANCES IN SPACE RESEARCH, SCI Journal, April 2024

ACTA GEODAETICA ET GEOPHYSICA, Journal Indexed in SCI-E, February 2024

SN APPLIED SCIENCES, Journal Indexed in ESCI, December 2023

JOURNAL OF ENGINEERING AND APPLIED SCIENCE, National Scientific Refreed Journal, June 2023

SPATIAL AND SPATIO-TEMPORAL EPIDEMIOLOGY, Journal Indexed in ESCI, May 2023

IEEE TRANSACTIONS ON GEOSCIENCE AND REMOTE SENSING, Journal Indexed in SCI-E, April 2023

SCIENTIFIC REPORTS, Journal Indexed in SCI-E, March 2023

## Metrics

Publication: 24

## Awards

Altuntaş C., 16. TÜRKİYE HARITA BİLİMSEL VE TEKNİK KURULTAYI HARİTA/GEOMATİK MÜHENDİSLİĞİ BÖLÜMLERİ LİSANS ÖĞRENCİLERİ POSTER YARIŞMASI BİRİNCİLİĞİ, Harita Ve Kadastro Mühendisleri Odası, May 2017