

Assoc. Prof. ESRA TUNÇ GÖRMÜŞ

Personal Information

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International Researcher IDs

ORCID: 0000-0002-3334-2061

Publons / Web Of Science ResearcherID: V-5658-2017

ScopusID: 55576389900

Yoksis Researcher ID: 151286

Education Information

Doctorate, University of Bristol, Electrical And Electronic Engineering , Image And Signal Processing (Visual Information Laboratory), United Kingdom 2007 - 2013

Postgraduate, Karadeniz Technical University, Fen Bilimleri, Uzaktan Algilama Ve Fotogrametri, Turkey 2000 - 2003

Undergraduate, Karadeniz Technical University, Mühendislik Mimarlık Fakültesi, Harita Mühendisliği Bolumu, Turkey 1996 - 2000

Foreign Languages

English, C1 Advanced

Dissertations

Doctorate, Improved classification of remote sensing imagery using image fusion techniques, University of Bristol, Department Of Electrical And Electronic Engineering, Image And Signal Processing, 2013

Postgraduate, Yakın resim fotogrametrisinde ağ tasarımı ve optimizasyonun incelenmesi , Karadeniz Technical University, Harita Mühendisliği Bolumu, Fotogrametri, 2003

Research Areas

Remote sensing, Image Processing, Earth Observations (Remote Sensing)

Academic Titles / Tasks

Assistant Professor, Karadeniz Technical University, Mühendislik Fakültesi, Harita Mühendisliği, 2018 - Continues

Assistant Professor, Karadeniz Technical University, Mühendislik Fakültesi, Harita Mühendisliği, 2015 - 2018

Courses

Synthetic Aperture Radar Images, Undergraduate, 2020 - 2021

Sayısal Görüntü İşleme, Undergraduate, 2017 - 2018

Uzaktan Algılama, Undergraduate, 2015 - 2016

Hiper Bantlı Uzaktan Algılama, Postgraduate, 2015 - 2016

Sayısal Çözümleme, Undergraduate, 2015 - 2016

Advising Theses

TUNÇ GÖRMÜŞ E., DAİMİ YANSITICI InSAR (PSInSAR) TEKNİĞİ İLE HEYELANLARIN TESPİT EDİLMESİ VE İZLENMESİ, Postgraduate, B.Volkan(Student), 2019

Published journal articles indexed by SCI, SSCI, and AHCI

- I. **Reviews and syntheses: Remotely sensed optical time series for monitoring vegetation productivity**
Kooistra L., Berger K., Brede B., Graf L. V., Aasen H., Roujean J., Machwitz M., Schlerf M., Atzberger C., Prikaziuk E., et al.
BIOGEOSCIENCES, vol.21, no.2, pp.473-511, 2024 (SCI-Expanded)
- II. **Estimating Mediterranean stand fuel characteristics using handheld mobile laser scanning technology**
COŞKUNER K. A., Vatandaşlar C., ÖZTÜRK M., HARMAN İ., BİLGİLİ E., KARAHALİL U., BERBER T., TUNÇ GÖRMÜŞ E.
INTERNATIONAL JOURNAL OF WILDLAND FIRE, vol.32, no.9, pp.1347-1363, 2023 (SCI-Expanded)
- III. **Seasonal monitoring of urban heat island based on the relationship between land surface temperature and land use/cover: a case study of Kabul City, Afghanistan**
Sahak A. S., Karşlı F., Tunç Görmüş E., Ahmadi K.
EARTH SCIENCE INFORMATICS, vol.16, no.1, pp.845-861, 2023 (SCI-Expanded)
- IV. **Multi-sensor spectral synergies for crop stress detection and monitoring in the optical domain: A review**
Berger K., Machwitz M., Kycko M., Kefauver S. C., Van Wittenberghe S., Gerhards M., Verrelst J., Atzberger C., van der Tol C., Damm A., et al.
REMOTE SENSING OF ENVIRONMENT, vol.280, 2022 (SCI-Expanded)
- V. **SpectralSWIN: a spectral-swin transformer network for hyperspectral image classification**
AYAS S., Tunc-Gormus E.
INTERNATIONAL JOURNAL OF REMOTE SENSING, vol.43, no.11, pp.4025-4044, 2022 (SCI-Expanded)
- VI. **Land use/land cover mapping from airborne hyperspectral images with machine learning algorithms and contextual information**
AKAR Ö., TUNÇ GÖRMÜŞ E.
GEOCARTO INTERNATIONAL, vol.37, no.14, pp.3963-3990, 2022 (SCI-Expanded)
- VII. **Investigating persistent scatterer InSAR (PSInSAR) technique efficiency for landslides mapping: a case study in Artvin dam area, in Turkey**
Yazici B. V., TUNÇ GÖRMÜŞ E.
GEOCARTO INTERNATIONAL, vol.37, no.8, pp.2293-2311, 2022 (SCI-Expanded)
- VIII. **An Efficient Pan Sharpening via Texture Based Dictionary Learning and Sparse Representation**
AYAS S., TUNÇ GÖRMÜŞ E., EKİNCİ M.
IEEE JOURNAL OF SELECTED TOPICS IN APPLIED EARTH OBSERVATIONS AND REMOTE SENSING, vol.11, no.7, pp.2448-2460, 2018 (SCI-Expanded)
- IX. **Dimensionality Reduction of Hyperspectral Images Using Empirical Mode Decompositions and Wavelets**
Gormus E. T., Canagarajah N., Achim A.
IEEE JOURNAL OF SELECTED TOPICS IN APPLIED EARTH OBSERVATIONS AND REMOTE SENSING, vol.5, no.6,

pp.1821-1830, 2012 (SCI-Expanded)

- X. **Three dimensional monitoring of urban development by means of ortho-rectified aerial photographs and high-resolution satellite images**
Ayhan E., Erden O., Gormus E.
ENVIRONMENTAL MONITORING AND ASSESSMENT, vol.147, pp.413-421, 2008 (SCI-Expanded)

Articles Published in Other Journals

- I. **Estimation of Turbidity in the Cheney Reservoir Using Landsat 8 Images: A Comparison of Regression, MARS, and TreeNet Methods**
DİLMEN Ö., NACAR S., GÖRMÜŞ E. T., BAYRAM A.
Türk Uzaktan Algılama ve CBS Dergisi, vol.5, no.2, pp.172-185, 2024 (Peer-Reviewed Journal)
- II. **Exploiting hyperspectral and multispectral images in the detection of tree species: A review**
Yel S. G., TUNÇ GÖRMÜŞ E.
FRONTIERS IN REMOTE SENSING, vol.4, 2023 (ESCI)
- III. **Headwall Hyperspec VNIR Kamerası İle Elde Edilen Hiperspektral Hava Fotoğrafı İçin Boyut İndirgeme Yöntemlerinin Performanslarının Analizi**
TUNÇ GÖRMÜŞ E., AKAR Ö.
Geomatik, vol.4, no.3, pp.201-214, 2019 (Peer-Reviewed Journal)
- IV. **Göktürk-2 ve Hyperion EO-1 Uydu Görüntülerinden Rastgele Orman Sınıflandırıcısı ve Destek Vektör Makineleri ile Arazi Kullanım Haritalarının Üretilmesi**
AKAR Ö., TUNÇ GÖRMÜŞ E.
Geomatik, vol.4, no.1, pp.68-81, 2019 (Peer-Reviewed Journal)
- V. **Ampirik Kip Ayrışımı ve Dalgacık Dönüşümü Kullanarak Hiperspektral Görüntülerin Boyutlarının Azaltılması**
TUNÇ GÖRMÜŞ E., CANAGARAJAH N., ACHIM A.
Afyon Kocatepe Üniversitesi Fen ve Mühendislik Bilimleri Dergisi, vol.17, pp.204-214, 2017 (Peer-Reviewed Journal)

Refereed Congress / Symposium Publications in Proceedings

- I. **Digital Orthophoto Generation with Aerial Photos and Satellite Images and Analyzing of Factors Which Affect Accuracy**
AYHAN E., Erden O., Atay G., TUNÇ GÖRMÜŞ E.
XXIII FIG Congress, Germany, pp.1
- II. **Genelleştirilmiş DLT Metodu ile Dijital Kamera Geometrik Kalibrasyonu**
KARSLI F., AYHAN E., TUNÇ GÖRMÜŞ E.
9. Türkiye Harita Bilimsel ve Teknik Kurultayı, Ankara, Turkey, pp.541
- III. **LAND USE MAPPING OF BERGAMA TEST AREA USING HEADWALL HYPERSPEC VNIR IMAGES**
TUNÇ GÖRMÜŞ E., AKAR Ö.
INTERNATIONAL SYMPOSIUM ON APPLIED GEOINFORMATICS, 7 - 09 November 2019
- IV. **Doku Bilgisinin Hiperspektral Görüntülerin Sınıflandırılmasına Olan Etkisinin Araştırılması**
SARALIOĞLU E., TUNÇ GÖRMÜŞ E.
26. IEEE SİNYAL İŞLEME ve İLETİŞİM UYGULAMALARI KURULTAYI, İzmir, Turkey, 2 - 05 May 2018, pp.1-4
- V. **Öğrenilmiş Sözlük Üzerinden Seyrek Gösterim Aracılığıyla Yeni Bir Pan Keskinleştirme Yöntemi**
AYAS S., TUNÇ GÖRMÜŞ E., EKİNCİ M.
26. IEEE Sinyal İşleme ve İletişim Uygulamaları Kurultayı, İzmir, Turkey, 2 - 05 May 2018, pp.1-4
- VI. **A Novel Pan Sharpening Method via Sparse Representation over Learned Dictionary**
AYAS S., TUNÇ GÖRMÜŞ E., EKİNCİ M.

- 26th IEEE Signal Processing and Communications Applications Conference (SIU), İzmir, Turkey, 2 - 05 May 2018
- VII. **Investigating the Affect of Texture Information on the Classification of Hyperspectral Images**
SARALIOĞLU E., TUNÇ GÖRMÜŞ E.
26th IEEE Signal Processing and Communications Applications Conference (SIU), İzmir, Turkey, 2 - 05 May 2018
- VIII. **Landslide Susceptibility Assessment of Hopa (Artvin) District Using GIS-based Frequency Ratio Method**
AKINCI H., TUNÇ GÖRMÜŞ E., YAVUZ ÖZALP A., KILIÇOĞLU C.
UCTEA International Geographical Information Systems Congress 2017, Adana, Turkey, 15 - 18 November 2017, pp.108-109
- IX. **Texture Based Classification of Hyperspectral Images with Support Vector Machines Classifier**
ŞERİFOĞLU YILMAZ Ç., TUNÇ GÖRMÜŞ E., GÜNGÖR O.
INTERNATIONAL SYMPOSIUM ON GIS APPLICATIONS IN GEOGRAPHY & GEOSCIENCES (ISGGG), Çanakkale, Turkey, 18 - 20 October 2017, pp.88
- X. **Ampirik Kip Ayrışımı ve Dalgacık Dönüşümü Kullanarak Hiperspektral Görüntülerin Boyutlarının Azaltılması**
TUNÇ GÖRMÜŞ E., ACHIM A., CANAGARAJAH N.
IX. TUFUAB Teknik Sempozyumu Türkiye Ulusal Fotogrametri Ve Uzaktan Algılama Birliği, Turkey, 27 - 29 April 2017
- XI. **Exploiting texture information in diagnosing Glaucoma**
TUNÇ GÖRMÜŞ E., ACHIM A., CANAGARAJAH N.
2017 25th Signal Processing and Communications Applications Conference, 15 - 18 May 2017
- XII. **Seyrek Gösterim Tabanlı Pan Keskinleştirme**
AYAS S., TUNÇ GÖRMÜŞ E., EKİNCİ M.
25. Sinyal İşleme ve İletişim Uygulamaları Kurultayı, Antalya, Turkey, 15 - 18 May 2017, pp.1-4
- XIII. **Pan-Sharpning Based on Sparse Representation**
AYAS S., TUNÇ GÖRMÜŞ E., EKİNCİ M.
25th Signal Processing and Communications Applications Conference (SIU), Antalya, Turkey, 15 - 18 May 2017
- XIV. **Regional flood risk management framework for sustainable flood management: A case study in Giresun, Turkey**
KAYA Ç. M., GÜNGÖR O., TUNÇ GÖRMÜŞ E.
PRONASEM 2016, Bükreş, Romania, 11 - 13 November 2016, pp.1-7
- XV. **Mineral Exploration with Hyperspectral Image Fusion**
Sarahoglu E., TUNÇ GÖRMÜŞ E., GÜNGÖR O.
24th Signal Processing and Communication Application Conference (SIU), Zonguldak, Turkey, 16 - 19 May 2016, pp.1281-1284
- XVI. **A NOVEL DECISION FUSION APPROACH TO IMPROVING CLASSIFICATION ACCURACY OF HYPERSPECTRAL IMAGES**
Gormus E., Canagarajah N., Achim A.
IEEE International Geoscience and Remote Sensing Symposium (IGARSS), Munich, Germany, 22 - 27 July 2012, pp.4158-4161
- XVII. **DIMENSIONALITY REDUCTION OF HYPERSPECTRAL IMAGES WITH WAVELET BASED EMPIRICAL MODE DECOMPOSITION**
Gormus E., Canagarajah N., Achim A.
18th IEEE International Conference on Image Processing (ICIP), Brussels, Belgium, 11 - 14 September 2011, pp.1709-1712
- XVIII. **Exploiting spatial domain and wavelet domain cumulants for fusion of SAR and optical images**
TUNÇ GÖRMÜŞ E., Canagarajah N., Achim A.
International Conference on Image Processing (ICIP), Hongkong, Hong Kong, 18 - 22 October 2010, pp.1209-1212
- XIX. **3D Photo – Texture Documentation of Buildings for the Heritage Conservation by Using Photogrammetry and GIS: A Case Study in KTU Campus**
KARSLI F., AYHAN E., TUNÇ GÖRMÜŞ E.

The First International Conference on Architectural Conservation Between Theory and Practice, Dubai, United Arab Emirates, 14 - 16 March 2004, pp.407-415

XX. **Building 3D Photo – Texture Model Integrated with GIS for Architectural Heritage Conservation**
KARSLI F., AYHAN E., TUNÇ GÖRMÜŞ E.

XIX CIPA Symposium, New Perspectives to Save the Cultural Heritage, Antalya, Turkey, 30 September - 06 October 2003, pp.1-6

XXI. **Optimizing point networks for close-range Photogrammetry: First test results**

TUNÇ GÖRMÜŞ E., Friedrich j., KARSLI F., AYHAN E.

ISPRS Commission V Symposium Close Range Imaging – Long Range Vision, Corfu, Greece, 2 - 06 September 2002, pp.1-4

Memberships / Tasks in Scientific Organizations

COST Action CA17109, Member, 2019 - Continues

COST Action CA18107, Board Member, 2019 - Continues

COST Action CA18135, Board Member, 2019 - Continues

COST Action CA17134, Board Member, 2019 - Continues

Scientific Refereeing

Geoscience and Remote Sensing Letters, SCI Journal, March 2015

IEEE TRANSACTIONS ON IMAGE PROCESSING, SCI Journal, February 2015

IEEE Journal of Selected Topics in Applied Earth Observations and Remote Sensing, SCI Journal, January 2012

Metrics

Publication: 39

Citation (WoS): 127

Citation (Scopus): 142

H-Index (WoS): 6

H-Index (Scopus): 6

Congress and Symposium Activities

GIS-Day 2019 (Web Conference with Lithuania-Kaunas College), Invited Speaker, Trabzon, Turkey, 2019

COST MEETING - CA17109, Attendee, Tallinn, Estonia, 2019

International symposium on Applied Geoinformatics (ISAG2019), Attendee, İstanbul, Turkey, 2019

Scholarships

The G.Vernon Hobson Bequest, Official Institutions of Foreign Countries, 2010 - Continues

The Sir Richard Stapley Educational Trust, Official Institutions of Foreign Countries, 2010 - Continues

Bosthworth Smith Trust, Official Institutions of Foreign Countries, 2009 - Continues

Edgar Pam Fellowship, Other International Organizations, 2008 - Continues

TUBİTAK 2214-A - Yurt Dışı Doktora Sırası Araştırma Burs Programı, TUBİTAK, 2007 - Continues

Non Academic Experience

KUMI Analytics

EU COST Aksiyonu: CA17134 "Optical synergies for spatiotemporal SENSing of Scalable ECOphysiological traits"
(SENSECO)

National Technical University of Athens, School of Rural and Surveying Engineering.

University of Bristol, Department of Electrical & Electronic Engineering ,Visual Information Laboratory

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