

**Mustafa Üstüner, PhD (Assistant Professor)**

CONTACT INFORMATION	Artvin Çoruh Üniversitesi Harita Mühendisliği Bölümü 08100, Seyitler Artvin, Türkiye	<i>E-mail:</i> mustuner@artvin.edu.tr <i>Web:</i> <a href="https://mustuner.github.io/">https://mustuner.github.io/</a> <i>ORCID:</i> 0000-0003-0553-2682 <i>Twitter:</i> mustuner2
RESEARCH INTERESTS	<b>SAR/Hyperspectral Remote Sensing, Machine Learning, Agriculture, Geographic Inf. Systems</b>	
CURRENT POSITION	<b>Assistant Professor</b> , Dept. of Geomatic Engineering, Artvin Coruh Uni      November 2021 to present	
PREVIOUS POSITIONS	<b>Research Assistant</b> , Dept. of Geomatic Engineering, Artvin Coruh Uni      June 2020 to November 2021 <b>Research Assistant</b> , Dept. of Geomatic Engineering, Yildiz Tech University      March 2011 to June 2020 <b>Research Assistant</b> , Dept. of Geomatic Engineering, Artvin Coruh Uni      August 2010 to March 2011	
EDUCATION	<b>Yildiz Technical University</b> , Istanbul, Turkey  Ph.D., Remote Sensing and GIS & Geomatic Engineering      February 2020 • Supervisors: Prof. Dr. Fusun Balik Sanli & Prof. Dr. Gokhan Bilgin  M.S., Remote Sensing and GIS & Geomatic Engineering      January 2014 • Supervisor: Prof. Dr. Fusun Balik Sanli  <b>Karadeniz Technical University</b> , Trabzon, Turkey  B.S., Geodesy and Photogrammetry Engineering,      June 2010	
VISITING RESEARCH	<b>Friedrich Schiller University</b> , Jena, Germany  Visiting Scholar, Institute of Geography, Department of Earth Observation,      April 2018 – Feb. 2019  <b>University of South Florida St. Petersburg (USFSP)</b> , St. Petersburg, FL, USA  Visiting Scholar, Geo-Spatial Analytics Lab,      May – July 2013	
EDITORIAL BOARD	<ul style="list-style-type: none"> <li>• European Journal of Remote Sensing (SCI-Expanded and Scopus)</li> <li>• Revue Internationale de Géomatique (RIG) (Emerging Source Citation Index)</li> <li>• Arabian Journal of Geosciences</li> <li>• Remote Sensing (MDPI) (SI Guest Editor)</li> <li>• Frontiers in Remote Sensing (SI Guest Editor)</li> <li>• Turkish Journal of Remote Sensing and GIS</li> </ul>	
ACADEMIC METRICS	<ul style="list-style-type: none"> <li>• Google Scholar (Citations= 833, h-index= 12) as of December 4, 2023</li> </ul>	
PLENARY SPEECH	<ul style="list-style-type: none"> <li>• 2023 IEEE Asia-Pacific Conference on Geoscience, Electronics and Remote Sensing Technology</li> </ul>	
PROFESSIONAL MEMBERSHIPS	<ul style="list-style-type: none"> <li>• IEEE Geoscience and Remote Sensing (IEEE GRSS) - Conference and Symposia Liaison</li> <li>• International Society for Photogrammetry and Remote Sensing (ISPRS)</li> <li>• IEEE GRSS Turkiye Chapter (Young Professional Representative)</li> </ul>	
ORGANIZING COMMITTEE MEMBER	<ul style="list-style-type: none"> <li>• 2020 IEEE International Geoscience and Remote Sensing Symposium</li> <li>• Mediterranean Geoscience Union Annual Meeting 2021</li> <li>• IEEE Mediterranean and Middle-East Geoscience and Remote Sensing Symposium 2022</li> <li>• 2023 IEEE International Geoscience and Remote Sensing Symposium</li> <li>• IEEE Mediterranean and Middle-East Geoscience and Remote Sensing Symposium 2024</li> </ul>	

- AWARDS
- Top 1% of Reviewers in Geosciences - Publons Peer Review Awards 2018
- SCIENTIFIC COMMITTEE MEMBER
- 10th International Conference on Recent Advances in Air and Space Technologies (RAST2023)
  - GeoAdvances 2024, 8th International Conference on GeoInformation Advances
  - International XXIII Conference of PhD Students and Young Scientists
- JOURNAL PUBLICATIONS
- See my **Google Scholar**, **ORCID**, and **Scopus**
- [1] Q. Zhao, A. Pepe, V. Zamparelli, P. Mastro, F. Falabella, C. Serio, G. Masiello, S. Abdikan, C. Bayik, F. B. Sanli, **M. Ustuner**, N. B. Avsar, J. Wang, P. Chen, Z. Li, A. T. Devlin and F. Calò. Innovative Remote Sensing Methodologies and Applications in Coastal and Marine Environments *Geo-Spatial Information Science*, 2023, doi:10.1080/10095020.2023.2244006
  - [2] N. H. Zakaria, N. A. Ishak, S. A. Salleh , N. A. Isa, E. Suhana, M. C. G. Ooi, Z. A. Latif and **M. Ustuner**. Conceptualizing Spatial Heterogeneity of Urban Composition Impacts on Precipitation Within Tropics *International Journal of Sustainable Construction Engineering and Technology*, 2023, Retrieved from <https://penerbit.uthm.edu.my/ojs/index.php/IJSCET/article/view/13987>
  - [3] **M. Ustuner**. Çekirdek Tabanlı Aşırı Öğrenme Makinesi ile Hiperspektral Görüntü Sınıflandırma (Kernel Extreme Learning Machine for Hyperspectral Image Classification) *Turkish Journal of Remote Sensing and GIS*, September, 2023.
  - [4] A. Ertürk, G. Taskin, A. Ö. Ok, **M. Ustuner** and K. Kayabol. 2021 IEEE GRSS Turkey Chapter Activities [Chapters] *IEEE Geoscience and Remote Sensing Magazine*, vol. 10, no. 1, pp. 352-354, March 2022  
doi:10.1109/MGRS.2022.3146186
  - [5] **M. Ustuner** and F. B. Sanli. Crop classification from multi-temporal PolSAR data with regularized greedy forest, *Advanced Remote Sensing*,1(1):10-15, December 2021
  - [6] **M. Ustuner** ve F. B. Sanli. Hafif Gradyan Artırma Makineleri ile Tarımsal Ürünlerin Sınıflandırılması (Crop Classification Using Light Gradient Boosting Machines), *Turkish Journal of Remote Sensing and GIS*, September 2020.
  - [7] **M. Ustuner** ve F. B. Sanli. Çok zamanlı polarimetrik SAR verileri ile tarımsal ürünlerin sınıflandırılması (Crop classification using multi-temporal polarimetric SAR data) *Journal of Geodesy and Geoinformation*, 7(1):1-10, May 2020.  
doi:10.9733/JGG.2020R0001.T
  - [8] **M. Ustuner** and F. B. Sanli. Polarimetric Target Decompositions and Light Gradient Boosting Machine for Crop Classification: A Comparative Evaluation. *ISPRS International Journal of Geo-Information*,8(2):97, February 2019  
doi:10.3390/ijgi8020097
  - [9] R. Nasirzadehdizaji, F. B. Sanli, S. Abdikan, Z. Cakir, A.I. Sekertekin and **M. Ustuner**. Sensitivity Analysis of Multi-Temporal Sentinel-1 SAR Parameters to Crop Height and Canopy Coverage. *Applied Sciences*, 9(4):655, February 2019  
doi:10.3390/app9040655
  - [10] M. T. Esetlili, F. B. Balcik, F. B. Sanli, **M. Ustuner**, K. Kalkan, C. Goksel, C. Gazioglu, and Y. Kurucu. Comparison of Object and Pixel-Based Classifications For Mapping Crops Using Rapideye Imagery: A Case Study Of Menemen Plain, Turkey. *International Journal of Environment and Geoinformatics*, 5(2):231-243, August 2018  
doi:10.30897/ijegeo.442002
  - [11] **M. Ustuner** and F. B. Sanli. Evaluating Training Data For Crop Type Classification Using Support Vector Machines And Random Forests. *Geodetski Glasnik*, 48(1):125-133, November 2017
  - [12] **M. Ustuner**, M. T. Esetlili, F. B. Sanli, S. Abdikan, and Y. Kurucu. Comparison of Crop Classification Methods for the Sustainable Agriculture Management. *Journal of Environmental Protection and Ecology*, 17(2):648–655, July 2016

- [13] **M. Ustuner.**, F. B. Sanli, and B. Dixon. Application of Support Vector Machines for Landuse Classification Using High-Resolution RapidEye Images: A Sensitivity Analysis. *European Journal of Remote Sensing*, 48(1):403–422, November 2015, doi:10.5721/EuJRS20154823
- [14] S. Abdikan., G. Bilgin, F. B. Sanli, E. Uslu, and **M. Ustuner.** Enhancing land use classification with fusing dual-polarized TerraSAR-X and multispectral RapidEye data *Journal of Applied Remote Sensing*, 9(1):096054, May 2015, doi:10.1117/1.JRS.9.096054
- CONFERENCE PUBLICATIONS & ABSTRACTS [15] **M. Ustuner.** Randomized Principal Component Analysis for Hyperspectral Image Classification (submitted) In: *Mediterranean and Middle-East Geoscience and Remote Sensing Symposium 2024 (M2GARSS 2024)*, Oran, Algeria, April 15 – 17, 2024
- [16] **M. Ustuner.** Synergistic Use of Optical and Synthetic Aperture Radar Data for Improving Land Cover Classification: a case study for Munich In: *8th International Scientific Conference “Telecommunications, Informatics, Energy and Management” – TIEM 2023*, Bandırma, Turkey, December 1 – 3, 2023
- [17] **M. Ustuner.** Classification of Urban Areas Using Gaofen-3 SAR Data By LightGBM In: *XXIII Conference of PhD Students and Young Scientists*, Wrocław, Poland, June 13 – 15, 2023.
- [18] **M. Ustuner.** Polarimetrik SAR Görüntülerinin Rotasyon Orman Algoritması ile Sınıflandırılması (Classification of Polarimetric SAR Images with Rotation Forest Algorithm). In: *TUFUAB 12. Teknik Sempozyumu*, 24-26 May, 2023.
- [19] S.R. Reyes, C. Cruz, **M. Ustuner**, C. Jjuuko and S. Guliyeva. Creative Strategies in Navigating the New Normal: Advancing the Contributions of the ISPRS Student Consortium as an International Organization In: *2021 24th ISPRS Congress on Imaging Today, Foreseeing Tomorrow, Commission V and Youth Forum*, 5-9 July, 2021. doi:10.5194/isprs-annals-V-5-2021-23-2021
- [20] A. Acar Sahin,**M. Ustuner**, and N. M. Pinar. The impact of environmental factors and tree cover density on allergenic Cupressaceae and Platanuspollen exposure in urbanized region: Ankara case. In: *7th European Symposium on Aerobiology*, 16-20 November, 2020.
- [21] S. Abdikan, C. Bayik, **M. Ustuner**, and F. B. Sanli. Repeat-pass interferometric and backscatter analysis of X-band PAZ satellite-First results. In: *2020 24th ISPRS Congress - Technical Commission III*, 31 August- 2 September, 2020. doi:10.5194/isprs-archives-XLIII-B3-2020-253-2020
- [22] S.R. Reyes, A.K.M. Jaojoco, C. Cruz, C. Jjuuko, **M. Ustuner**, J.C.K. Chow and S. Guliyeva. The ISPRS Student Consortium: Sustaining Relevance and Creating Shared Visions for the Youth. In: *2020 24th ISPRS Congress - Technical Commission V (TC-V) on Education and Outreach - Youth Forum*, 31 August- 2 September, 2020. doi:10.5194/isprs-annals-V-5-2020-39-2020
- [23] **M. Ustuner** and F. B. Sanli. Multitemporal SAR Classification of Urban Areas using Extremely Randomized Trees. In: *Abstract book of International Symposium on Applied Geoinformatics (ISAG-2019)*, Published in November, 2019. (Only abstract published)
- [24] **M. Ustuner** and F. B. Sanli. Regularized Greedy Forests for Polarimetric SAR Image Classification. In: *Abstract book of XXIX International Symposium on Modern Technologies, Education and Professional Practice in Geodesy and Related Fields*, Published in November, 2019. (Only abstract published)
- [25] **M. Ustuner**, F. B. Sanli, S. Abdikan, G. Bilgin and C. Goksel. A booster analysis of extreme gradient boosting for crop classification using PolSAR imagery. In: *8th International Conference on Agro-Geoinformatics, Agro-Geoinformatics 2019*, July 16-19, 2019. doi:10.1109/Agro-Geoinformatics.2019.8820698
- [26] S. Abdikan, C. Bayik, **M. Ustuner**, and F. B. Sanli. An Assessment of Urban Area Extraction Using ALOS-2 Data. In: *9th International Conference on Recent Advances in Space Technologies, RAST2019*, June 11-14, 2019. doi:10.1109/RAST.2019.8767819

- [27] **M. Ustuner.**, S. Abdikan, and F. B. Sanli. Classification of Forested Areas Using Morphological Profiles in Dual Polarised ALOS/PALSAR Data. In: *Proceedings of the IX Conference of the Italian Society of Remote Sensing (AIT2018)*, Published in July, 2019. doi:10.978.88944687/17
- [28] **M. Ustuner**, F. B. Sanli, S. Abdikan, E. Erten and C. Lopez-Martinez. Evaluating the Cloude-Pottier Decomposition for Crop Classification using Multi-Temporal Radarsat-2 Data. In: *POLinSAR 2019, 9th International Workshop on Science and Applications of SAR Polarimetry and Polarimetric Interferometry*, January 28-February 1, 2019 (Only extended abstract published)
- [29] F. B. Sanli, A. Delen, **M. Ustuner**, C. Bayik and S. Abdikan. Monitoring Urban Green Space Using Göktürk-2 Data: A Case Study For Edirne City. In: *The 2nd International Urban, Environment and Health Congress*, 2018 (Only abstract published)
- [30] **M. Ustuner**, F. B. Sanli, S. Abdikan, and G. Bilgin. An Application of Roll-invariant Polarimetric Features For Crop Classification From Multi-temporal RADARSAT-2 SAR Data. In: *Proceedings of the ISPRS TC I Midterm Symposium Innovative Sensing - From Sensors to Methods and Applications*, October 10-12, 2018, doi:10.5194/isprs-archives-XLII-1-451-2018
- [31] S. Abdikan, AI. Sekertekin, **M. Ustuner**, and F. B. Sanli. Backscatter Analysis Using Multi-Temporal Sentinel-1 SAR Data for crop growth of maize in Konya Basin, Turkey. In: *Proceedings of the ISPRS Technical Commission III Symposium on "Developments, Technologies and applications in Remote Sensing"*, May 7–10, 2018 doi:10.5194/isprs-archives-XLII-3-9-2018
- [32] U. Gokdag, **M. Ustuner**, G. Bilgin, and F. B. Sanli. Kernel Extreme Learning Machines for PolSAR Image Classification using Spatial Features. In: *Proceedings of the IEEE 26th Signal Processing and Communications Applications Conference (SIU2018)*, May,2018. doi:10.1109/SIU.2018.8404282
- [33] **M. Ustuner**, U. Gokdag, G. Bilgin, and F. B. Sanli. Comparing the Classification Performances of Supervised Classifiers with Balanced and Imbalanced SAR Data Sets. In: *Proceedings of the IEEE 26th Signal Processing and Communications Applications Conference (SIU2018)*, May,2018. doi:10.1109/SIU.2018.8404183
- [34] **M. Ustuner.**, G. Bilgin, and F. B. Sanli. Classification of Sentinel-1A SAR Data Using Principal Component Analysis and Kernel Principal Component Analysis. In: *Proceedings of the International Symposium on GIS Applications in Geography and Geosciences (ISGGG 17)*, October 18–21, 2017.
- [35] **M. Ustuner.**, F. B. Sanli, G. Bilgin, and S. Abdikan. Land use and cover classification of Sentinel-1A SAR imagery: A case study of Istanbul. In: *Proceedings of the IEEE 25th Signal Processing and Communications Applications Conference (SIU2017)*, May 15–18, 2017. doi:10.1109/SIU.2017.7960373
- [36] Abdikan, S., **M. Ustuner**, F. B. Sanli, and G. Bilgin. Combining Landsat and ALOS data for land cover mapping. In: *Proceedings of the IEEE 25th Signal Processing and Communications Applications Conference (SIU2017)*, May 15–18, 2017. doi:10.1109/SIU.2017.7960379
- [37] **M. Ustuner** ve F. B. Sanli. LANDSAT-8 Uydu Görüntüsü ile Arazi Örtüsü Sınıflandırmasında Makine Öğrenme Algoritmalarının Kullanımı. In: *16.TÜRKİYE HARİTA BİLİMSEL VE TEKNİK KURULTAYI*, 3-6 Mayıs, 2017.
- [38] **M. Ustuner.**, F. B. Sanli, and S. Abdikan. Balanced vs Imbalanced Training Data: Classifying Rapideye Data With Support Vector Machines. In: *Proceedings of the XXIII ISPRS Congress (ISPRS 16)*, July 12–19, 2016. doi:10.5194/isprs-archives-XLI-B7-379-2016
- [39] Abdikan, S., F. B. Sanli, **M. Ustuner**, and F. Calo. Land Cover Mapping Using Sentinel-1 SAR Data. In: *Proceedings of the XXIII ISPRS Congress (ISPRS 16)*, July 12–19, 2016. doi:10.5194/isprs-archives-XLI-B7-757-2016
- [40] **M. Ustuner**, F. B. Sanli ve S. Abdikan. Bitki Örtüsü İndekslerinin Tarımsal Ürün Deseni Tespitindeki Etkisinin Araştırılması. In: *6. Uzaktan Algılama Ve Coğrafi Bilgi Sistemleri Sempozyumu (Uzal-Cbs 2016)*, 5-7 Ekim, 2016.

- [41] **M. Ustuner** and G. Bilgin. Mitosis detection on histopathological images using statistical detection algorithms. In: *Proceedings of the IEEE 23rd Signal Processing and Communications Applications Conference (SIU2015)*, pp. 540-543, May 16–19, 2015. doi:10.1109/SIU.2015.7129880.
- [42] F. B. Sanli, **M. Ustuner**, F. B. Balcik, and C. Goksel. Investigating the Influence of Training Set Size for Crop Type Classification using RapidEye. In: *Proceedings of the 27th International Cartographic Conference (ICC 2015)*, August, 2015.
- [43] Balcik, F. B., F. B. Sanli, C. Goksel, and **M. Ustuner**. Coastal Zone Detection in Istanbul using Landsat 8 OLI Image. In: *Proceedings of the 27th International Cartographic Conference (ICC 2015)*, August, 2015. [Full Text](#)
- [44] **M. Ustuner**., and F. B. Sanli. Testing the Sensitivity of Vegetation Indices for Crop Type Classification using RapidEye Imagery In: *Proceedings of the FIG Working Week 2015 (FIG 2015)*, May 17–21, 2015.
- [45] Polat, Z.A, **M. Ustuner**, and M. Alkan. On the Way to Vision of Cadastre 2034: Cadastre 2014 Performance of Turkey In: *Proceedings of the FIG Working Week 2015 (FIG 2015)*, May 17–21, 2015.
- [46] **M. Ustuner**, F. B. Sanli ve S. Abdikan. Spektral Band ve Bitki İndeksi Seçiminin Ürün Deseni Sınıflandırma Doğruluğuna Etkisi: Karşılaştırmalı Analiz. In: *TUFUAB 8. Teknik Sempozyumu*, 21-23 Mayıs, 2015.
- [47] **M. Ustuner**., and F. B. Sanli. Crop Pattern Mapping Using Winner Takes All Classification In: *Wavelength 2015. RSPSoc* April, 2015.
- [48] **M. Ustuner**., F. B. Sanli, S. Abdikan, T. Esetlili, and Y. Kurucu. Crop Type Classification Using Vegetation Indices of RapidEye Imagery. In: *Proceedings of the ISPRS Technical Commission VII Symposium*, September 29– October 2, 2014. doi:10.5194/isprsarchives-XL-7-195-2014
- [49] T. Bakırman, G. Bilgin, F. B. Şanlı, E. Uslu and **M. Ustuner**. Fusion and classification of synthetic aperture radar and multispectral satellite data. In: *Proceedings of the 2014 22nd Signal Processing and Communications Applications Conference (SIU2014)*, pp. 754-757, April 23–25, 2014. doi:10.1109/SIU.2014.6830339
- [50] **M. Ustuner**, F. B. Sanli, S. Abdikan, T. Esetlili, and Y. Kurucu. Kırmızı-kenar ve Yakın Kızılötesi Bantlarının Tarımsal Ürün Deseni Sınıflandırma Doğruluğuna olan Etkisinin Araştırılması: RapidEye Örneği. 5. *Uzaktan Algılama-CBS Sempozyumu (UZAL-CBS 2014)*, 2014.
- [51] Sanli, F. B., S. Abdikan, T. Esetlili, **M. Ustuner**, and F. Sunar. Fusion of terrasars-x and rapideye data: a quality analysis. In: *Proceedings of the ISPRS Conference on Serving Society with Geoinformatics (ISPRS2013-SSG)*, November 11– 17, 2013. doi:10.5194/isprsarchives-XL-7-W2-27-2013
- [52] **M. Ustuner**, F. B. Sanli, F.B. Balçık and T. Esetlili. Destek Vektör Makineleri Tekniği ile Sınıflandırma: RAPIDEYE Örneği *Türkiye Ulusal Fotogrametri ve Uzaktan Algılama Birliği VII. Teknik Sempozyumu (TUFUAB 2013)* , 2013.
- [53] B. Bayram and **M. Ustuner**. Yeniden Örnekleme Sınıflandırma Sonucuna Etkisi *Türkiye Ulusal Fotogrametri ve Uzaktan Algılama Birliği VII. Teknik Sempozyumu (TUFUAB 2013)*, 2013.
- [54] **M. Ustuner**., and F. B. Sanli. Comparison of Neural Network and ISODATA Classifiers for Land Cover Assessment Using Optical Data In: *Proceedings of the FIG Commission 3 Workshop 2012 Spatial Information, Informal Development, Property and Housing*, December 10– 14, 2012.

#### PROJECTS

- (Supported by TUBITAK - 2502 - Research Projects- Bilateral Cooperation Support Program with Bulgarian Academy of Sciences (BAS) ) **[International]** as Active Researcher, Project Title: Monitoring Rice Fields by Joint Use of Multi-temporal SAR and Optical Data for Yield and Growth Estimation, Project Start-End Date: 2023-2025, Principal Investigator: Assoc. Prof. Dr. Saygın Abdikan, Hacettepe University **[Continue]**

- PEER REVIEWS (JOURNALS)
- IEEE Transactions on Geoscience and Remote Sensing
  - IEEE Journal of Selected Topics in Applied Earth Observations and Remote Sensing
  - IEEE Geoscience and Remote Sensing Letters
  - International Journal of Remote Sensing
  - International Journal of Applied Earth Observation and Geoinformation
  - Remote Sensing Letters
  - Journal of Applied Remote Sensing
  - European Journal of Remote Sensing
  - Computers and Electronics in Agriculture
  - IEEE Access
  - Remote Sensing
  - Sensors
  - IET Image Processing
  - Geo-Spatial Information Science
  - SN Applied Sciences
  - Geocarto International

- REFERENCES
- Dr. Fusun Balik Sanli, Professor** (e-mail: fbalik@yildiz.edu.tr)
- Yildiz Technical University, TURKEY
- Dr. Barnali Dixon, Professor** (e-mail: bdixon@mail.usf.edu)
- University of South Florida, USA
- Dr. Fabiana Calo** (e-mail: calo.f@irea.cnr.it)
- National Research Council of Italy (CNR)
- Dr. Helmi Zuhaidi Bin Mohd Shafri, Professor** (e-mail: helmi@upm.edu.my)
- Universiti Putra Malaysia, Malaysia
- Dr. Pedram Ghamisi, Head of Machine Learning Group** (e-mail: p.ghamisi@gmail.com)
- Helmholtz Institute Freiberg for Resource Technology, Germany