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RESEARCH INTERESTS

Remote Sensing, Polarimetric SAR (Synthetic Aperture Radar), Applied Machine Learning

CURRENT POSITION

Research Assistant, Artvin Coruh University — July 2020 to present

EDUCATION

Yildiz Technical University, Istanbul, Turkey

Ph.D., Remote Sensing and GIS & Geomatic Engineering — February 2020

- Supervisors: Prof. Dr. Fusun Balik Sanli & Assoc. Prof. Dr. Gokhan Bilgin

M.S., Remote Sensing and GIS & Geomatic Engineering — January 2014

- Supervisor: Prof. Dr. Fusun Balik Sanli

Karadeniz Technical University, Trabzon, Turkey

B.S., Geodesy and Photogrammetry Engineering, — June 2010

VISITING RESEARCH

Friedrich Schiller University, Jena, Germany

Visiting Scholar, Institute of Geography, Department of Earth Observation, — April 2018–Feb. 2019

University of South Florida St. Petersburg (USFSP), St. Petersburg, FL, USA

Visiting Scholar, Geo-Spatial Analytics Lab, — May–July 2013

JOURNAL PUBLICATIONS

See my **Google Scholar**, **ORCID**, and **Scopus**

[1] **M. Ustuner** and F. B. Sanli. Crop Classification using Light Gradient Boosting Machines *Turkish Journal of Remote Sensing and GIS*, September 2020. [In Turkish]

[2] **M. Ustuner** and F. B. Sanli. Crop classification using multi-temporal polarimetric SAR data. *Journal of Geodesy and Geoinformation*, 7(1):1-10, May 2020 [in Turkish]
doi:10.9733/JGG.2020R0001.T

[3] **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

[4] 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

[5] 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

[6] **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

[7] **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

[8] **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

[9] 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

[10] **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)

[11] **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)

[12] **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

[13] 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

[14] **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

[15] **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)

[16] **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

[17] 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

[18] 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

[19] **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

[20] **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.

[21] **M. Ustuner**., F. B. Sanli, G. Bilgin, and S. Abdikan. Land use and cover classification of Sentinel-IA 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

[22] 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

[23] **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

[24] 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

[25] 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.

[26] 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

[27] **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.

[28] 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.

[29] **M. Ustuner**., and F. B. Sanli. Crop Pattern Mapping Using Winner Takes All Classification In: *Wavelength 2015. RSPSoc* April, 2015.

[30] **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

[31] Sanli, F. B., S. Abdikan, T. Esetlili, **M. Ustuner**, and F. Sunar. Fusion of terrasar-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

[32] **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.

EDITORIAL BOARD MEMBERSHIP

- Arabian Journal of Geosciences (Science Citation Index Expanded)
- Turkish Journal of Remote Sensing

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

PROFESSIONAL MEMBERSHIPS
- IEEE Geoscience and Remote Sensing (IEEE GRSS)
- International Society for Photogrammetry and Remote Sensing (ISPRS)

AWARDS
- Top 1% of Reviewers in Geosciences - Publons Peer Review Awards 2018

VOLUNTARY WORK
- Social Media Chair for IEEE GRSS
- Social Media Coordinator for ISPRS Student Consortium
- Publicity Co-Chair for IGARSS2020
- Publicity Chair for M2GARSS 2022

REFERENCES

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