Emre Akturk

Associate Professor

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Education

Ph.D. in Forestry

Kastamonu University, Department of Forest Engineering, TÜRKİYE

Sep. 2014 - Apr. 2019

M.S. in Forest and Natural Resources

Clemson University, Department of Forestry and Environmental Conservation, SC, USA

Dec. 2011 - Dec. 2013

B.S. in Forest Engineering

Zonguldak Karaelmas University, Bartin Forest Faculty

Dec. 2011 - Dec. 2013

Languages

English ★★★★★

Turkish ★★★★★

Biography

Dr. Emre Aktürk is an Associate Professor at Kastamonu University, Chair of the Department of Nature Conservation and Biodiversity Management, and Director of the Geographic Information Systems and Remote Sensing Research and Application Center. His research focuses on remote sensing, GIS, land cover dynamics, and forest monitoring. He has worked on several international projects and was a visiting scientist at Texas A&M University. He currently leads several LiDAR-based measurement projects.

Work Experiences

- **2025-**
  Associate Professor at Kastamonu University
- **2025-**
  Head of the Department of Nature Conservation and Biodiversity Management
- **2024-**
  Director of Kastamonu University Geographic Information Systems and Remote Sensing Research and Application Center
- **2024-2025**
  Assistant Professor at Kastamonu University
- **2022-2023**
  Visiting Scientist at Texas A&M University
- **2014-2024**
  Research Assistant at Kastamonu University

Skills

- ✓ Extensive knowledge of ArcGIS software package including ArcGIS Pro and ArcGIS Online.
- ✓ Advance level knowledge about Google Earth Pro, Google Earth Engine, Collect, and Collect Earth software.
- ✓ Having a professional UAV pilot licence.
- ✓ Analyzing abilities of UAV imagery and LIDAR data.
- ✓ Moderate level knowledge of Python and JavaScript programming language.

Publications (SCI, SCI Expanded & International Articles)

- **Akturk, E.** (2025). ViitGEE: an open-source tool for visual image interpretation and reference data collection in google earth engine. *Earth Science Informatics*, 18(4), 1-11.
- Altunel, A. O., **Akturk, E.**, & Okolie, C. J. (2025). ICESat-2 for evaluating space-borne and national digital elevation models across forest and non-forest landscapes in Kastamonu, Türkiye. *Advances in Space Research,* 76(5), 2813-2836.
- **Akturk, E.**, & Guney, K. (2025). Spatiotemporal forest cover change monitoring of phytogeographic regions of Türkiye with a machine learning hybrid classification method. *International Journal of Image and Data Fusion*, 16(1), 2473715.
- **Aktürk, E.** (2024). Seasonal Vegetation Trends in Biomes of Türkiye: A Decade-Long (2014-2023) Analysis Using NDVI Time Series. *Bartın Orman Fakültesi Dergisi*, 26(3), 1-1.
- **Akturk, E.**, Guney, K., Aydin, M., Yildiz, F., & Kaya, O. (2024). Land cover dynamics and environmental implications in Türkiye's riparian zones: a comprehensive seven-year study. *Forests*, 15(7), 1177.
- Şen, G., **Aktürk, E.** (2024). Spatiotemporal forest and land cover change in Türkiye: The role of economic factors in driving environmental transformations. *Turkish Journal of Forestry*, 25(2), 176-189.
- Bulut, A., **Aktürk, E.** (2024) Temporal Analysis of Riparian Buffer Zones and Demographic Trends in the Coastal Districts of Kastamonu. *Kastamonu University Journal of Forestry Faculty*, 24(2), 197-208.
- **Aktürk, E.** (2023). Monitoring forest canopy cover change with ICESat-2 Data in fire-prone areas: A case study in Antalya, Türkiye. *Annals of Forest Research*, 66(2).
- **Akturk, E.** (2023). Assessing the Influence of Acquisition Time in Forest Canopy Cover Estimation Using ICESat-2 ATL08 Dataset. *Kastamonu University Journal of Forestry Faculty*, 23(3), 220-229.
- **Akturk, E.**, Popescu, S. C., & Malambo, L. (2023). ICESat-2 for Canopy Cover Estimation at Large-Scale on a Cloud-Based Platform. *Sensors*, 23(7), 3394.
- **Akturk, E.**, Altunel, A. O., Atesoglu, A., Seki, M., & Erpay, S. (2023). How good is TanDEM-X 50 m forest/non-forest map? Product validation using temporally corrected geo-browser supplied imagery through Collect Earth. *International Journal of Geographical Information Science*, 37(5), 1041-1068.
- **Akturk, E.,** Guney, K. (2021). Vegetation Cover Change Analysis of Phytogeographic Regions of Turkey Based on CORINE Land Cover Datasets from 1990 to 2018. *Kastamonu University Journal of Forestry Faculty*, 21-2.
- Atesoglu, A., **Akturk, E.**, Rasouli, A., Erpay, S., & Ozel, H. B. (2020). Monitoring of land-cover/land-use changes in Syria by involving the Collect Earth methodology approach. *Frasenius Environmental Bulletin,* 29 (12/2020), 11032-11041.
- **Aktürk, E.**, Altunel, A.O., Kara, F. (2020). Investigation of the 18-Year Status and Changes of Mixed Stands in Europe. *Bartın Orman Fakültesi Dergisi,* 22-3: 929-938.
- **Akturk, E.**, Post, C., & Mikhailova, E. A. (2020). Modeling and monitoring riparian buffer zones using LiDAR data in South Carolina. *Environmental Monitoring and Assessment*, 192, 1-10.
- Altunel, A. O., **Akturk, E.**, & Altunel, T. (2020). Examining the PALSAR-2 Global forest/non-forest maps through Turkish afforestation practices. *International Journal of Remote Sensing*, 1-18.
- Evcin, O., Kucuk, O., & **Akturk, E.** (2019). Habitat suitability model with maximum entropy approach for European roe deer (Capreolus capreolus) in the Black Sea Region. *Environmental monitoring and assessment*, 191(11), 669.
- **Akturk, E.**, & Altunel, A. O. (2019), Accuracy assessment of a low-cost UAV derived digital elevation model (DEM) in a highly broken and vegetated terrain. *Measurement*, 136, 382-386.
- Güney, K., Küçük, Ö., **Aktürk, E.**, & Evcin, Ö. (2017), Biodiversity of Gavurdag Wildlife Development Area. *Indian Journal of Pharmaceutical Education and Research*, 51 (3), 398-402.
- Küçük, Ö., Güney, K., Evcin, Ö., & **Aktürk, E.** (2017), Threat analysis and proposed solutions for Elekdag Wildlife Development Area. *Indian Journal of Pharmaceutical Education and Research*, 51 (3), 368-372.
- Post, C., Ritter, B., **Akturk, E.**, Breedlove, A., Buchanan, R., Che, C., Qiao, X. (2015). Analysis of factors contributing to abandoned residential developments using remote sensing and geographic information systems (GIS).*Urban ecosystems*, 18(3), 701-713.
- Güney, K., Yiğit, N., Seki, N., Öztürk, A., & **Aktürk, E.** (2015), Assessment of endemic plant taxa in Kastamonu province and classification by IUCN categories. *IOSR Journal of Environmental Science, Toxicology and Food Technology (IOSR-JESTFT),* Volume 9, Issue 12.

Publications (Selected Conference Papers)

- **Aktürk, E.** (2024). *A geospatial approach to vegetation monitoring: multi-indices analysis with Landsat 8 via Google Earth Engine*. 9th Advance Engineering Days, 235-237, Tebriz, IRAN.
- **Aktürk E.** (2023). *Assessing the Performance of Various Vegetation Indices to Estimate Forest Canopy Cover*. BİLTEK-VIII International Symposium On Current Developments In Science, Technology And Social Sciences, 77-78, Paris, France.
- **Aktürk E.** (2020). I*nvestigation of Forest Assets of Turkey and Provinces by using TanDEM-X FNF Data*. 1. International Forestry and Nature Tourism Congress, 34-34, Kastamonu.
- **Aktürk, E.**, Küçük, Ö., Evcin, Ö., & Güney, K. (2018), *Investigation of the effects of land cover change on wildlife, the case study of West Black Sea Region*. International Conference on Science and Technology (ICONST), Prizren.
- **Aktürk, E.**, Gencal, B., Güney, K., Evcin, Ö., Küçük, Ö., & Karadeniz, M. (2018), *Land cover-use change analysis for Bursa Karacabey Karadağı-Ovakorusu Wildlife Development Area with using pixel-based classification method*. International Ecology Symposium, Kastamonu.
- **Aktürk, E.**, Güney, K., & Altunel, A. O. (2017), *Application potientality of LIDAR derived DEM & DSM data in forestry. International Symposium of New Horizons in Forestry (ISFOR)*, Isparta.

Research Experience

- **Hunnicutt Creek Intelligent River Project, Clemson University, (2011 - 2013)**

  My primary responsibility in this project was to estimate the structural properties of the riparian forests along Hunnicutt Creek. Airborne LiDAR data and high-resolution UAV imagery were employed to assess key forest attributes, including tree height, crown diameter, canopy closure, and vegetation density within the riparian zone.

- **Global Forest Survey Project (Dryland Assessment for Middle East Region), Food and Agriculture Organization of United Nations (FAO), (2015)**

  Assessed the current land cover status of Middle Eastern countries using the Collect Earth methodology.

- **Keltepe Floristic Investigation Project, Kastamonu University, (2015 - 2017)**

  Analyzed and mapped the flora composition of the Keltepe region, creating interactive plant species maps.

- **Modelling Distribution of Wolf (Canis lupus) in Sinop Province Project, Kastamonu University (2018 - 2020)**

  Conducted analysis and mapping of the flora composition in the Keltepe region, generating interactive maps of plant species.

- **Africa DEAL (Data for the Environment, Agriculture, and Land) Project, Food and Agriculture Organization of United Nations (FAO), (2019)**

  Assessed land cover status of African countries using the Collect Earth methodology.

- **Pan-European Network of Green Deal Agriculture and Forestry Earth Observation Science (PANGEOS) (COST Action), (2023 -)**

  Member of two working groups in this COST Action: WG1 (Field Phenotyping) and WG3 (Sustainable Land Management).

- **european Network on Extreme fiRe behaviOr (NERO) (COST Action), (2023 -)**

  Member of WG2 (Process-based Analysis of Extreme Fire Behavior), COST Action.

- **Kastamonu Virtual Forest Project: Innovative Solutions for Lidar-Supported Forestry Education and Nature Tourism (KASOP) (Specialization Project), (2025 -)**

  Principal Investigator – Developed high-precision 3D forest models with LiDAR and integrated them into VR platforms to support forest inventory, education, and nature tourism.