

Asst. Prof. KEMAL GÖKKAYA

Personal Information

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TÜRKİYE

International Researcher IDs

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Publons / Web Of Science ResearcherID: AFG-8344-2022

Yoksis Researcher ID: 299771

Biography

I'm an ecologist specializing in spatial aspects of ecological processes to understand and characterize ecosystems. I work at the interface of ecology, plant and forest ecology and physiology, soil science and geography. As such, my research interests range from field based studies to desktop/computer-based analyses, which involve using geospatial technologies such as Remote Sensing (RS) and Geographic Information Systems (GIS) and modeling.

I conducted field work in temperate wetlands and forests of Northeastern USA, boreal forests in Canada, agricultural fields in the midwestern USA and the arctic tundra in Alaska, USA. Completed research projects are

- Effect of phosphorus (P) on symbiotic nitrogen (N) fixation by speckled alder in wetlands of New York State
- Characterization and modelling of foliar nutrients (N, P, potassium, calcium and magnesium) and chlorophyll in a boreal forest canopy using hyperspectral remote sensing and Light Detection and Ranging (LiDAR)
- Identifying subsurface tile drainage in agricultural fields with synergistic use of RS and GIS
- Geographic analysis of earthquake damage across Turkey between 1900 and 2012

Students who are interested in working with me should have interest and willingness to learn and use RS and GIS to address an ecological problem. Students from other disciplines including geography, soil and water science, forestry, engineering who have a genuine interest in ecology also are welcome to contact me for research opportunities.

Education Information

Doctorate, Virginia Polytechnic Institute and State University, College of Natural Resources and Environment,
Department of Forest Resources and Environmental Conservation, United States Of America 2008 - 2012

Postgraduate, State University of New York at Buffalo, College of Arts and Sciences, Geography, United States Of America
2006 - 2008

Postgraduate, State University of New York College of Environmental Science and Forestry, Environmental and Forest
Biology, Environmental and Forest Biology, United States Of America 2000 - 2003

Undergraduate, Middle East Technical University, Faculty Of Arts And Sciences, Department Of Biology, Turkey 1995 -
1999

Foreign Languages

Spanish, A2 Elementary

German, A1 Beginner

English, C2 Mastery

Certificates, Courses and Trainings

Personal Evolution, Future Professoriate Graduate Certificate, Virginia Polytechnic and State University, 2010

Research Areas

Remote Sensing and GIS in Forestry, Forest Ecology, Ecosystem Information, Soil and Water Protection, Geographic Information Systems, Remote sensing, Plant Physiology, Environmental Biology, Ecology, Soil Knowledge

Academic Titles / Tasks

Assistant Professor, Canakkale Onsekiz Mart University, Fen Fakültesi, Biyoloji, 2019 - Continues

Research Assistant, Virginia Polytechnic Institute and State University, Natural Resources and Environment, Department of Forest Resources and Environmental Conservation, 2008 - 2012

Research Assistant, University of Florida, College of Agricultural and Life Sciences, Soil and Water Sciences, 2004 - 2005

Research Assistant, State University of New York College of Environmental Science and Forestry, Environmental and Forest Biology, Environmental and Forest Biology, 2000 - 2003

Courses

Coğrafi Bilgi Sistemleri, Undergraduate, 2022 - 2023, 2021 - 2022

Uzaktan Algılama, Undergraduate, 2022 - 2023

Terrestrial Ecosystems, Undergraduate, 2022 - 2023

Doğal Kaynaklar için Coğrafi Bilgi Sistemleri ve Uygulamaları, Postgraduate, 2023 - 2024, 2022 - 2023, 2021 - 2022, 2020 - 2021, 2019 - 2020

CBS ve Uzaktan Algılama, Undergraduate, 2022 - 2023, 2021 - 2022, 2020 - 2021

Ecology, Undergraduate, 2023 - 2024

Coğrafi Bilgi Sistemlerine Giriş, Undergraduate, 2022 - 2023, 2021 - 2022

Doğal Kaynaklar için Uzaktan Algılama ve Uygulamaları, Postgraduate, 2020 - 2021, 2019 - 2020

Coğrafi Bilgi Sistemleri, Undergraduate, 2021 - 2022

Introduction to Spatial Methods in Biology, Undergraduate, 2020 - 2021

Bitki Ekolojisi, Undergraduate, 2020 - 2021

Bitki Coğrafyası, Undergraduate, 2019 - 2020

Bitki Coğrafyası , Undergraduate, 2019 - 2020

Jury Memberships

PhD Thesis Monitoring Committee Member, PhD Thesis Monitoring Committee Member, Canakkale Onsekiz Mart University, December, 2023

Committee Of Expert, Committee Of Expert, Canakkale Onsekiz Mart University, September, 2023

Doctorate, Doctorate, Çanakkale Onsekiz Mart Üniversitesi, August, 2023

PhD Thesis Monitoring Committee Member, PhD Thesis Monitoring Committee Member, Çanakkale Onsekiz Mart Üniversitesi, June, 2023

Committee Of Expert, Committee Of Expert, Canakkale Onsekiz Mart University, April, 2023

PhD Thesis Monitoring Committee Member, PhD Thesis Monitoring Committee Member, Çanakkale Onsekiz Mart Üniversitesi, December, 2022

PhD Thesis Monitoring Committee Member, PhD Thesis Monitoring Committee Member, Çanakkale Onsekiz Mart Üniversitesi, June, 2022

PhD Thesis Monitoring Committee Member, PhD Thesis Monitoring Committee Member, Çanakkale Onsekiz Mart Üniversitesi, December, 2021

PhD Thesis Monitoring Committee Member, PhD Thesis Monitoring Committee Member, Çanakkale Onsekiz Mart Üniversitesi, June, 2021

PhD Thesis Monitoring Committee Member, PhD Thesis Monitoring Committee Member, Çanakkale Onsekiz Mart Üniversitesi, September, 2020

PhD Thesis Monitoring Committee Member, PhD Thesis Monitoring Committee Member, Çanakkale Onsekiz Mart Üniversitesi, January, 2020

Published journal articles indexed by SCI, SSCI, and AHCI

- I. **Subsurface tile drained area detection using GIS and remote sensing in an agricultural watershed**
Gokkaya K., Budhathoki M., Christopher S. F., Hanrahan B. R., Tank J. L.
Ecological Engineering, vol.108, pp.370-379, 2017 (SCI-Expanded)
- II. **Geographic analysis of earthquake damage in Turkey between 1900 and 2012**
Gokkaya K.
Geomatics, Natural Hazards and Risk, vol.7, no.6, pp.1948-1961, 2016 (SCI-Expanded)
- III. **Prediction of Macronutrients at the Canopy Level Using Spaceborne Imaging Spectroscopy and LiDAR Data in a Mixedwood Boreal Forest**
Goekkaya K., Thomas V., Noland T. L., McCaughey H., Morrison I., Treitz P.
REMOTE SENSING, vol.7, no.7, pp.9045-9069, 2015 (SCI-Expanded)
- IV. **Mapping continuous forest type variation by means of correlating remotely sensed metrics to canopy N:P ratio in a boreal mixedwood forest**
Goekkaya K., Thomas V., Noland T., McCaughey H., Morrison I., Treitz P.
APPLIED VEGETATION SCIENCE, vol.18, no.1, pp.143-157, 2015 (SCI-Expanded)
- V. **Testing the robustness of predictive models for chlorophyll generated from spaceborne imaging spectroscopy data for a mixedwood boreal forest canopy**
Goekkaya K., Thomas V., Noland T., McCaughey H., Treitz P.
INTERNATIONAL JOURNAL OF REMOTE SENSING, vol.35, no.1, pp.218-233, 2014 (SCI-Expanded)
- VI. **An efficient remote sensing solution to update the NCWI**
Stein B. R., Zheng B., Kokkinidis L., Kayastha N., Seigler T., Gökaya K., Gopalakrishnan R., Hwang W. H.
Photogrammetric Engineering and Remote Sensing, vol.78, no.6, pp.537-547, 2012 (SCI-Expanded)
- VII. **Symbiont nitrogenase, alder growth, and soil nitrate response to phosphorus addition in alder (Alnus incana ssp rugosa) wetlands of the Adirondack Mountains, New York State, USA**
Gokkaya K., Hurd T., Raynal D.
ENVIRONMENTAL AND EXPERIMENTAL BOTANY, vol.55, no.1-2, pp.97-109, 2006 (SCI-Expanded)
- VIII. **Nitrogen sources in adirondack wetlands dominated by nitrogen-fixing shrubs**
Hurd T. M., Gökaya K., Kiernan B. D., Raynal D. J.
Wetlands, vol.25, no.1, pp.192-199, 2005 (SCI-Expanded)

Articles Published in Other Journals

- I. **Spatiotemporal analysis of fatal earthquakes between 1800 and 2015 at a global scale**
Gökaya K.

Turkish Journal of Geographic Information Systems, vol.5, no.2, pp.92-100, 2023 (Peer-Reviewed Journal)

II. Burned Area and Fire Severity Prediction of a Forest Fire Using a Sentinel 2-Derived Spectral Index in Çanakkale, Turkey

Gökkaya K.

Turkish Journal of Bioscience and Collections, vol.6, no.2, pp.37-44, 2022 (Peer-Reviewed Journal)

Books & Book Chapters

I. Foliar chemistry estimation with imaging spectroscopy and LiDAR data

Gökkaya K.

LAP Lambert Academic Publishing, Saarbrücken, 2016

Student Project

Other, Orman Yangını Sonrası Bitki Örtüsü ve Avifaunada Meydana Gelen Değişiklikler: Çanakkale, Gelibolu Örneği, Canakkale Onsekiz Mart University, Fen Fakültesi, Biyoloji, Turkey, 2023 - Continues

Scientific Refereeing

PLANTS, SCI Journal, December 2023

REMOTE SENSING, SCI Journal, March 2023

REMOTE SENSING, SCI Journal, September 2022

ECOLOGICAL INDICATORS, SCI Journal, June 2022

ENVIRONMENTAL POLLUTION, SCI Journal, October 2021

REMOTE SENSING, SCI Journal, December 2020

AGRICULTURE-BASEL, SCI Journal, June 2020

ECOLOGICAL INDICATORS, SCI Journal, April 2019

ENVIRONMENTAL MONITORING AND ASSESSMENT, SCI Journal, April 2018

PRECISION AGRICULTURE, SCI Journal, February 2018

REMOTE SENSING LETTERS, SCI Journal, January 2018

Global Change Biology, SCI Journal, November 2017

Environments, Journal Indexed in ESCI, October 2017

CANADIAN JOURNAL OF FOREST RESEARCH-REVUE CANADIENNE DE RECHERCHE FORESTIERE, SCI Journal, April 2017

COMPUTERS AND ELECTRONICS IN AGRICULTURE, SCI Journal, February 2017

REMOTE SENSING, SCI Journal, August 2016

ECOLOGICAL INDICATORS, SCI Journal, July 2015

Metrics

Publication: 12

Citation (WoS): 64

Citation (Scopus): 107

H-Index (WoS): 5

H-Index (Scopus): 7

Scholarships

Graduate Research Assistantship, University, 2008 - 2012

Graduate Research Assistantship, University, 2004 - 2005

Graduate Research Assistantship, University, 2000 - 2003

Awards

Gökkaya K., 1st place at ASPRS GeoLeague Challenge , American Society For Photogrammetry And Remote Sensing (Asprs), April 2012

Gökkaya K., 3rd place poster award (\$100) at the Virginia Tech GIS and Remote Sensing Research Symposium, The Virginia Tech Graduate Student Assembly, April 2011

Gökkaya K., Travel fund (\$270) awarded by the Virginia Tech Graduate Student Assembly, Virginia Polytechnic Institute And State University, March 2011

Gökkaya K., Global Perspectives Program - visiting and exploring trends and issues of higher education institutions in Switzerland and Italy). All travel and accommodation costs were covered by the Virginia Tech Graduate School, Virginia Polytechnic Institute And State University Graduate School, May 2010