

Asst. Prof. Ömer Yetemen

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Publons / Web Of Science ResearcherID: A-9037-2009

ScopusID: 24462767700

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Biography

Omer joined in Eurasia Institute of Earth Sciences at Istanbul Technical University in December 2019. His research interests are ecohydrology, geomorphology, and landscape evolution modeling.

Education Information

Doctorate, University of Washington, Civil Engineering, United States Of America 2009 - 2014

Postgraduate, University of Nebraska-Lincoln, Geosciences, United States Of America 2006 - 2008

Postgraduate, Istanbul Technical University, Fen Bilimleri Enstitüsü, Geological Engineering, Turkey 2005 - 2007

Undergraduate, Istanbul Technical University, Maden, Jeoloji Mühendisliği, Turkey 1998 - 2005

Dissertations

Doctorate, Modeling the ecohydrologic role of solar radiation on catchment development in semiarid ecosystems, University of Washington, 2014

Postgraduate, Afyon ili Ömer-Gecek jeotermal sahasının enerji kullanım davranışının incelenmesi, Istanbul Technical University, Fen Bilimleri Enstitüsü, Geological Engineering, 2006

Research Areas

Environmental Engineering, Geological Engineering, Civil Engineering

Academic Titles / Tasks

Assistant Professor, Istanbul Technical University, Avrasya Yer Bilimleri Enstitüsü, İklim Ve Deniz Bilimleri, 2019 - Continues

Assistant Professor, University of Newcastle, 2016 - 2019

Research Assistant PhD, University of Saskatchewan, 2014 - 2016

Research Assistant, University of Washington, 2009 - 2014

Research Assistant, The University of Nebraska-Lincoln, 2006 - 2009

Courses

Hydrology, Undergraduate, 2019 - 2020, 2018 - 2019, 2017 - 2018, 2016 - 2017

Environmental Engineering Project - II, Undergraduate, 2018 - 2019, 2017 - 2018, 2016 - 2017

Published journal articles indexed by SCI, SSCI, and AHCI

- I. **Future drought risk and adaptation of pastoralism in Eurasian rangelands**
Nandintsetseg B., Chang J., Şen O. T., Reyer C. P. O., Kong K., Yetemen Ö., Ciais P., Davaadalai J.
npj Climate and Atmospheric Science, vol.7, no.1, 2024 (SCI-Expanded)
- II. **Early warning signals of grassland ecosystem degradation: A case study from the northeast Qinghai-Tibetan Plateau**
Wang Y., Liu H., Zhao W., Jiang J., He Z., Yu Y., Guo L., Yetemen Ö.
Catena, vol.239, 2024 (SCI-Expanded)
- III. **Effect of Solar Farms on Soil Erosion in Hilly Environments: A Modeling Study From the Perspective of Hydrological Connectivity**
Liu H., Wu C., Yu Y., Zhao W., Liu J., Yu H., Zhuang Y., Yetemen Ö.
Water Resources Research, vol.59, no.12, 2023 (SCI-Expanded)
- IV. **Ecohydrological insight: Solar farms facilitate carbon sink enhancement in drylands**
Wu C., Liu H., Yu Y., Zhao W., Guo L., Liu J., Yetemen Ö.
Journal of Environmental Management, vol.342, 2023 (SCI-Expanded)
- V. **The merit of the North Sea-Caspian pattern in explaining climate variability in the Euro-Mediterranean region**
Çağlar F., Yetemen Ö., Chun K. P., Şen Ö. L.
International Journal of Climatology, vol.43, no.10, pp.4648-4661, 2023 (SCI-Expanded)
- VI. **Strategies of Parameter Optimization and Soil Moisture Sensor Deployment for Accurate Estimation of Evapotranspiration Through a Data-driven Method**
Chai Y., Liu H., Yu Y., Yang Q., Zhang X., Zhao W., Guo L., Yetemen Ö.
Agricultural and Forest Meteorology, vol.331, 2023 (SCI-Expanded)
- VII. **Identifying the Impacts of Land-Use Spatial Patterns on Street-Network Accessibility Using Geospatial Methods**
Fan P. Y., Chun K. P., Mijic A., Tan M. L., Zhai W., Yetemen Ö.
Geographical Analysis, 2023 (SSCI)
- VIII. **Editorial: Hydrological connectivity and sustainable watershed management in a changing environment**
Yu Y., Moreno-De-Las-Heras M., Liu H., Shi P., Yetemen Ö., Saco P.
Frontiers in Environmental Science, vol.11, 2023 (SCI-Expanded)
- IX. **The effect of post-wildfire management practices on vegetation recovery: Insights from the Sapadere fire, Antalya, Türkiye**
Yıldız C., Çömert R., Tanyaş H., Yılmaz A., AKBAŞ A., Akay S. S., Yetemen Ö., Görüm T.
Frontiers in Earth Science, vol.11, 2023 (SCI-Expanded)
- X. **The spatial configuration of local climate zones reveals effects on wayfinding in human walking**
Fan P. Y., Chun K. P., Tan M. L., Mah D. N., Mijic A., Strickert G., Yetemen Ö.
PloS one, vol.18, no.9, 2023 (SCI-Expanded)
- XI. **Simulating the potential forest ranges in an old land: the case for Turkey's forests**
Ekberzade B., Yetemen Ö., Şen Ö. L., Dalfes H. N.

BIODIVERSITY AND CONSERVATION, vol.31, no.13-14, pp.3217-3236, 2022 (SCI-Expanded)

- XII. **Revisiting Soil Water Potential: Towards a Better Understanding of Soil and Plant Interactions**
Ma Y., Liu H., Yu Y., Guo L., Zhao W., Yetemen Ö.
WATER, vol.14, no.22, 2022 (SCI-Expanded)
- XIII. **Impact of climate change and socioeconomic factors on domestic energy consumption: The case of Hong Kong and Singapore**
Lam C. K. C., He Q., Cheng K., Fan P. Y., Chun K. P., Choi B., Mah D. N., Cheung D. M., Lo K., Yetemen Ö.
ENERGY REPORTS, vol.8, pp.12886-12904, 2022 (SCI-Expanded)
- XIV. **Regional distribution and characteristics of major badland landscapes in Turkey**
Avcioglu A., Görüm T., AKBAŞ A., Moreno-de las Heras M., Yıldırım C., Yetemen Ö.
CATENA, vol.218, 2022 (SCI-Expanded)
- XV. **Cosmogenic ^{36}Cl surface exposure dating of glacial landforms on Mt. Barla (SW Turkey)**
Altınay O., Sarıkaya M. A., Çiner T. A., Zebre M., Stepisnik U., Yıldırım C., Yetemen Ö., Wilcken K. M.
GEOMORPHOLOGY, vol.416, 2022 (SCI-Expanded)
- XVI. **Investigating and predicting spatiotemporal variations in vegetation cover in transitional climate zone: a case study of Gansu (China)**
He Q., Chun K. P., Dieppois B., Chen L., Fan P. Y., Toker E., Yetemen Ö., Pan X.
THEORETICAL AND APPLIED CLIMATOLOGY, vol.150, no.1-2, pp.283-307, 2022 (SCI-Expanded)
- XVII. **Influence of orographic precipitation on coevolving landforms and vegetation in semi-arid ecosystems**
Srivastava A., Yetemen O., Saco P. M., Rodriguez J. F., Kumari N., Chun K. P.
EARTH SURFACE PROCESSES AND LANDFORMS, vol.47, no.12, pp.2846-2862, 2022 (SCI-Expanded)
- XVIII. **Integrating the Budyko framework with the emerging hot spot analysis in local land use planning for regulating surface evapotranspiration ratio**
Fan P. Y., Chun K. P., Mijic A., Tan M. L., Yetemen Ö.
JOURNAL OF ENVIRONMENTAL MANAGEMENT, vol.316, 2022 (SCI-Expanded)
- XIX. **Impact of the North Sea-Caspian pattern on meteorological drought and vegetation response over diverging environmental systems in western Eurasia**
He Q., Xu B., Dieppois B., Yetemen Ö., Şen Ö. L., Klaus J., Schoppach R., Caglar F., Fan P. Y., Chen L., et al.
ECOHYDROLOGY, vol.15, no.5, 2022 (SCI-Expanded)
- XX. **A framework to evaluate the accessibility, visibility, and intelligibility of green-blue spaces (GBSs) related to pedestrian movement**
Fan P. Y., Chun K. P., Mijic A., Tan M. L., Liu M. S., Yetemen Ö.
URBAN FORESTRY & URBAN GREENING, vol.69, 2022 (SCI-Expanded)
- XXI. **Ecohydrological effects of photovoltaic solar farms on soil microclimates and moisture regimes in arid Northwest China: A modeling study**
Wu C., Liu H., Yu Y., Zhao W., Liu J., Yu H., Yetemen Ö.
SCIENCE OF THE TOTAL ENVIRONMENT, vol.802, 2022 (SCI-Expanded)
- XXII. **Spatially-heterogeneous impacts of surface characteristics on urban thermal environment, a case of the Guangdong-Hong Kong-Macau Greater Bay Area**
Fan P. Y., Chun K. P., Mijic A., Mah D. N., He Q., Choi B., Lam C. K. C., Yetemen Ö.
URBAN CLIMATE, vol.41, 2022 (SCI-Expanded)
- XXIII. **A history of *Pistacia lentiscus* and *Pinus brutia* trees and their ecological changes in the Güllük Bay (Muğla, SW Turkey) during the last 400 years**
Biltekin D., Schwamborn G. J., Eriş K. K., Acar D., Ekberzade B., Hashemi Z., Yakupoğlu N., Mohammadı A., Yetemen Ö.
Turkish Journal of Earth Sciences, vol.31, no.5, pp.438-451, 2022 (SCI-Expanded)
- XXIV. **Mapping groundwater-dependent ecosystems in arid Central Asia: Implications for controlling regional land degradation**
Liu C., Liu H., Yu Y., Zhao W., Zhang Z., Guo L., Yetemen Ö.
SCIENCE OF THE TOTAL ENVIRONMENT, vol.797, 2021 (SCI-Expanded)
- XXV. **Quantifying land use heterogeneity on drought conditions for mitigation strategies development in**

the Dongjiang River Basin, China

Fan P. Y., Chun K. P., Mijic A., Tan M. L., He Q., Yetemen Ö.

ECOLOGICAL INDICATORS, vol.129, 2021 (SCI-Expanded)

- XXVI. **Tropical drought patterns and their linkages to large-scale climate variability over Peninsular Malaysia**
He Q., Chun K. P., Tan M. L., Dieppois B., Juneng L., Klaus J., Fournier M., Massei N., Yetemen Ö.
HYDROLOGICAL PROCESSES, vol.35, no.9, 2021 (SCI-Expanded)
- XXVII. **Global Analysis of Atmospheric Transmissivity Using Cloud Cover, Aridity and Flux Network Datasets**
Srivastava A., Rodriguez J. F., Saco P. M., Kumari N., Yetemen Ö.
REMOTE SENSING, vol.13, no.9, 2021 (SCI-Expanded)
- XXVIII. **The role of landscape morphology on soil moisture variability in semi-arid ecosystems**
Srivastava A., Saco P. M., Rodriguez J. F., Kumari N., Chun K. P., Yetemen O.
HYDROLOGICAL PROCESSES, vol.35, no.1, 2021 (SCI-Expanded)
- XXIX. **The Grass Is Not Always Greener on the Other Side: Seasonal Reversal of Vegetation Greenness in Aspect-Driven Semiarid Ecosystems**
Kumari N., Saco P. M., Rodriguez J. F., Johnstone S. A., Srivastava A., Chun K. P., Yetemen Ö.
GEOPHYSICAL RESEARCH LETTERS, vol.47, 2020 (SCI-Expanded)
- XXX. **Gravimetry-based water storage shifting over the China-India border area controlled by regional climate variability**
Chun K. P., He Q., Fok H. S., Ghosh S., Yetemen Ö., Chen Q., Mijic A.
SCIENCE OF THE TOTAL ENVIRONMENT, vol.714, 2020 (SCI-Expanded)
- XXXI. **Ecohydrology Controls the Geomorphic Response to Climate Change**
Yetemen Ö., Saco P. M., Istanbuluoglu E.
GEOPHYSICAL RESEARCH LETTERS, vol.46, no.15, pp.8852-8861, 2019 (SCI-Expanded)
- XXXII. **The influence of meteorological conditions and atmospheric circulation types on PM10 levels in western Turkey**
Baltaci H., AKKOYUNLU B. O., Arslan H., Yetemen Ö., Ozdemir E. T.
ENVIRONMENTAL MONITORING AND ASSESSMENT, vol.191, no.7, 2019 (SCI-Expanded)
- XXXIII. **Mapping landscape-level hydrological connectivity of headwater wetlands to downstream waters: A catchment modeling approach - Part 2**
Yeo I., Lee S., Lang M. W., Yetemen Ö., McCarty G. W., Sadeghi A. M., Evenson G.
SCIENCE OF THE TOTAL ENVIRONMENT, vol.653, pp.1557-1570, 2019 (SCI-Expanded)
- XXXIV. **Mapping landscape-level hydrological connectivity of headwater wetlands to downstream waters: A geospatial modeling approach - Part 1**
Yeo I., Lang M. W., Lee S., McCarty G. W., Sadeghi A. M., Yetemen Ö., Huang C.
SCIENCE OF THE TOTAL ENVIRONMENT, vol.653, pp.1546-1556, 2019 (SCI-Expanded)
- XXXV. **Solar radiation as a global driver of hillslope asymmetry: Insights from an ecogeomorphic landscape evolution model**
Yetemen Ö., Istanbuluoglu E., Duvall A. R.
WATER RESOURCES RESEARCH, vol.51, no.12, pp.9843-9861, 2015 (SCI-Expanded)
- XXXVI. **Ecohydrologic role of solar radiation on landscape evolution**
Yetemen Ö., Istanbuluoglu E., Flores-Cervantes J. H., Vivoni E. R., Bras R. L.
WATER RESOURCES RESEARCH, vol.51, no.2, pp.1127-1157, 2015 (SCI-Expanded)
- XXXVII. **The implications of geology, soils, and vegetation on landscape morphology: Inferences from semi-arid basins with complex vegetation patterns in Central New Mexico, USA**
Yetemen Ö., Istanbuluoglu E., Vivoni E. R.
GEOMORPHOLOGY, vol.116, pp.246-263, 2010 (SCI-Expanded)
- XXXVIII. **Local warming of groundwaters caused by the urban heat island effect in Istanbul, Turkey**
Yalcin T., Yetemen Ö.
HYDROGEOLOGY JOURNAL, vol.17, no.5, pp.1247-1255, 2009 (SCI-Expanded)
- XXXIX. **Climatic parameters and evaluation of energy consumption of the Afyon geothermal district heating**

system, Afyon, Turkey

Yetemen Ö., Yalcin T.

RENEWABLE ENERGY, vol.34, no.3, pp.706-710, 2009 (SCI-Expanded)

XL. Eco-geomorphic implications of hillslope aspect: Inferences from analysis of landscape morphology in central New Mexico

Istanbulluoglu E., Yetemen Ö., Vivoni E. R., Gutierrez-Jurado H. A., Bras R. L.

GEOPHYSICAL RESEARCH LETTERS, vol.35, no.14, 2008 (SCI-Expanded)

Articles Published in Other Journals

I. Flash Flood and Tornado Disaster in Bodrum: Case Study of November 29, 2018

Özdemir E. T., Kolay O., Yetemen Ö.

JOURNAL OF ANATOLIAN ENVIRONMENTAL AND ANIMAL SCIENCES, vol.5, no.4, pp.491-497, 2020 (Peer-Reviewed Journal)

II. Meteorological Analysis of Lake Enhanced Snow in Istanbul, On February 17-19, 2015

, Özdemir E. T., Yetemen Ö.

JOURNAL OF ANATOLIAN ENVIRONMENTAL AND ANIMAL SCIENCES, vol.4, no.2, pp.115-121, 2019 (Peer-Reviewed Journal)

III. A Case Study of Rural Area Hail Storm in Yomra, Trabzon, on August 31, 2017

Özdemir E. T., Kolay O., Yetemen Ö.

JOURNAL OF ANATOLIAN ENVIRONMENTAL AND ANIMAL SCIENCES, vol.4, no.2, pp.243-250, 2019 (Peer-Reviewed Journal)

IV. Vegetation and soil degradation in drylands: Non linear feedbacks and early warning signals

Saco P. M., Moreno-de las Heras M., Keesstra S., Baartman J., Yetemen Ö., Rodríguez J. F.

Current Opinion in Environmental Science and Health, vol.5, pp.67-72, 2018 (Scopus)

Refereed Congress / Symposium Publications in Proceedings

I. Efficiency Analysis of Solar Farms through UAV-Based Thermal Monitoring

ÖZCAN O., AKAY S. S., ÖZCAN O., YETEMEN Ö.

AGU Fall Meeting 2023, 11 - 15 December 2023, vol.1

II. BÜYÜK ORMAN YANGINI SONRASI YAMAÇ EROZYONUNUN SEZYUM-137 KULLANILARAK BELİRLENMESİ

Yıldız C., Görüm T., Hacıyakupoğlu S., Özcan O., Erbay O., Yetemen Ö.

Uluslararası Jeomorfoloji Sempozyumu, Manisa, Turkey, 6 - 08 October 2022, pp.92-93

III. Assessment of Increased Debris Flow Hazard After Wildfires: Lessons from the Dalaman Fire, Eastern Mediterranean, Turkey

GÖRÜM T., Yıldız C., ÖZCAN O., ÇÖMERT R., YETEMEN Ö.

10th International Conference on Geomorphology, 12 September 2022

IV. Late Quaternary paleoclimate and paleoenvironment changes in Lake Urmia, NW Iran

Ertunç G., MOHAMMADI A., ÇİNER T. A., Lak R., BİLTEKİN D., YETEMEN Ö.

EGU General Assembly, Viyana, Austria, 23 May 2022

V. Late Quaternary paleoclimate and paleoenvironment changes in Lake Urmia, NW Iran; a multi-proxy approach derived from a 25 m sediment core

Ertunç G., ÇİNER T. A., ERİŞ K. K., MOHAMMADI A., Lak R., BİLTEKİN D., YETEMEN Ö.

MeDGU 21, Turkey, 25 November 2021

VI. Urmie Gölü'nün (KB iran) Geç Kuvaterner paleoklim ve paleoortam değişimleri

Ertunç G., ERİŞ K. K., MOHAMMADI A., ÇİNER T. A., Lak R., BİLTEKİN D., YETEMEN Ö.

Sedimentoloji Çalışma Grubu 2020 Çalıştayı, Balıkesir, Turkey, 02 September 2021

- VII. **Queensland Townsville Floods in Australia in Feb 2019**
Yavuz V., Yetemen Ö., Deniz A.
ATMOS'19 (9. Atmosfer Bilimleri Sempozyumu), İstanbul, Turkey, 23 - 26 October 2019, pp.80-87
- VIII. **The spatio-temporal ndvi analysis for two different Australian catchments**
Kumari N., Yetemen Ö., Srivastava A., Rodriguez J. F., Saco P. M.
23rd International Congress on Modelling and Simulation - Supporting Evidence-Based Decision Making: The Role of Modelling and Simulation, MODSIM 2019, Canberra, Australia, 1 - 06 December 2019, pp.958-964
- IX. **Aspect-controlled spatial and temporal soil moisture patterns across three different latitudes**
Srivastava A., Yetemen Ö., Kumari N., Saco P.
23rd International Congress on Modelling and Simulation - Supporting Evidence-Based Decision Making: The Role of Modelling and Simulation, MODSIM 2019, Canberra, Australia, 1 - 06 December 2019, pp.979-985
- X. **Evolution of wetland monitoring from inventory to functional assessment and modelling: A case study from a US catchment**
Yeo I., Lang M., Lee S., Huang C., Yetemen Ö.
22nd International Congress on Modelling and Simulation: Managing Cumulative Risks through Model-Based Processes, MODSIM 2017 - Held jointly with the 25th National Conference of the Australian Society for Operations Research and the DST Group led Defence Operations Research Symposium, DORS 2017, Hobart, Australia, 3 - 08 December 2017, pp.1537-1543

Metrics

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H-Index (Scopus): 15

Awards

Yetemen Ö., Outstanding Reviewer Award, Environmental Research Letters, March 2019

Yetemen Ö., Water Resources Research Editor's Choice Award, American Geophysical Union, December 2016

Yetemen Ö., Farouk El-Baz Student Research Award, Geological Society Of America, May 2012