

Assoc. Prof. HÜSEYİN AKAY

Personal Information

Office Phone: [+90 312 202 0000](tel:+903122020000)

Email: hakay@gazi.edu.tr

Web: <https://avesis.gazi.edu.tr/hakay>

International Researcher IDs

ScholarID: BJXZ6G4AAAAJ

Yoksis Researcher ID: 110852

Education Information

Doctorate, Gazi University, Fen Bilimleri Enstitüsü, İnşaat Mühendisliği (Dr), Turkey 2011 - 2018

Postgraduate, Gazi University, Fen Bilimleri Enstitüsü, İnşaat Mühendisliği (YI) (Tezli), Turkey 2008 - 2011

Undergraduate, Gazi University, Mühendislik Fakültesi, İnşaat Mühendisliği Bölümü, Turkey 2003 - 2008

Dissertations

Doctorate, Türkiye'xxdeki akarsu köprüleri için güvenlik-değerlendirme yöntemi geliştirilmesi, Gazi University, Fen Bilimleri Enstitüsü, İnşaat Mühendisliği (Dr), 2018

Postgraduate, Analitik yöntemle çoklu su alma ağzları için kritik batıklığın bulunması, Gazi University, Fen Bilimleri Enstitüsü, İnşaat Mühendisliği (YI) (Tezli), 2011

Research Areas

Civil Engineering, Hydraulic, Surface Water Engineering, Hydrology, Bridge Hydraulics

Academic Titles / Tasks

Associate Professor, Gazi University, Mühendislik Fakültesi, İnşaat Mühendisliği, 2022 - Continues

Research Assistant PhD, Gazi University, Mühendislik Fakültesi, İnşaat Mühendisliği, 2018 - 2022

Research Assistant, Gazi University, Mühendislik Fakültesi, İnşaat Mühendisliği, 2009 - 2018

Academic and Administrative Experience

Deputy Head of Department, Gazi University, Mühendislik Fakültesi, İnşaat Mühendisliği, 2023 - Continues

Courses

Fundamentals of Hydrological Design, Undergraduate, 2023 - 2024

GRADUATION PROJECT, Undergraduate, 2023 - 2024, 2022 - 2023

Hydrology, Undergraduate, 2023 - 2024

Statistics for Civil Engineers, Undergraduate, 2024 - 2025, 2023 - 2024
Water Resources Engineering I, Undergraduate, 2024 - 2025
Graduation Project, Undergraduate, 2023 - 2024
Geographic Information Systems in Hydrology, Postgraduate, 2023 - 2024
Numerical Methods in Civil Engineering, Postgraduate, 2022 - 2023
Special Topics (Hydraulics), Undergraduate, 2023 - 2024, 2022 - 2023
Technical Drawing for Civil Engineering, Undergraduate, 2021 - 2022, 2020 - 2021, 2018 - 2019
Technical Drawing for Civil Engineering, Undergraduate, 2019 - 2020

Published journal articles indexed by SCI, SSCI, and AHCI

- I. **Delineation of Groundwater Potential Using the Bivariate Statistical Models and Hybridized Multi-Criteria Decision-Making Models**
Baduna Koçyiğit M., Akay H.
WATER, vol.16, no.22, 2024 (SCI-Expanded)
- II. **Flood Susceptibility Mapping Using Information Fusion Paradigm Integrated with Decision Trees**
Akay H.
WATER RESOURCES MANAGEMENT, vol.38, no.13, pp.5365-5383, 2024 (SCI-Expanded)
- III. **Investigation of Flood Hazard Susceptibility Using Various Distance Measures in Technique for Order Preference by Similarity to Ideal Solution**
AKAY H., BADUNA KOÇYIĞIT M.
APPLIED SCIENCES-BASEL, vol.14, no.16, 2024 (SCI-Expanded)
- IV. **Towards Linking the Sustainable Development Goals and a Novel-Proposed Snow Avalanche Susceptibility Mapping**
AKAY H.
WATER RESOURCES MANAGEMENT, vol.36, pp.6205-6222, 2022 (SCI-Expanded)
- V. **Spatial modeling of snow avalanche susceptibility using hybrid and ensemble machine learning techniques**
AKAY H.
CATENA, vol.206, 2021 (SCI-Expanded)
- VI. **An Approach for Determination of the Drainage Network Effect on GIUH Using Hesitant Probabilistic Fuzzy Linguistic Sets**
Akay H., Baduna Koçyiğit M.
WATER RESOURCES MANAGEMENT, vol.35, no.11, pp.3873-3902, 2021 (SCI-Expanded)
- VII. **Flood hazards susceptibility mapping using statistical, fuzzy logic, and MCDM methods**
AKAY H.
SOFT COMPUTING, vol.25, no.14, pp.9325-9346, 2021 (SCI-Expanded)
- VIII. **Mitigation of scour failure risk of a river bridge located in an ungauged basin**
Akay H.
Baltic Journal of Road and Bridge Engineering, vol.16, no.1, pp.37-56, 2021 (SCI-Expanded)
- IX. **Evaluation of morphometric analysis of flash flood potential of Eastern Mediterranean Basin using principle component analysis**
Baduna Koçyiğit M., Akay H., Babalban E.
JOURNAL OF THE FACULTY OF ENGINEERING AND ARCHITECTURE OF GAZI UNIVERSITY, vol.36, no.3, pp.1670-1685, 2021 (SCI-Expanded)
- X. **Flash flood potential prioritization of sub-basins in an ungauged basin in Turkey using traditional multi-criteria decision-making methods**
Akay H., Baduna Koçyiğit M.
SOFT COMPUTING, vol.24, no.18, pp.14251-14263, 2020 (SCI-Expanded)
- XI. **Experimental investigation of the effect of skew angle on partially or fully submerged deck scour**

- Baduna Koçyiğit M., Koçyiğit Ö., Akay H., Demir G.
CANADIAN JOURNAL OF CIVIL ENGINEERING, vol.47, no.9, pp.1027-1036, 2020 (SCI-Expanded)
- XII. **Hydrologic Assessment Approach for River Bridges in Western Black Sea Basin, Turkey**
Akay H., Baduna Koçyiğit M.
JOURNAL OF PERFORMANCE OF CONSTRUCTED FACILITIES, vol.34, no.1, 2020 (SCI-Expanded)
- XIII. **Development of a Safety-Inspection Method for River Bridges in Turkey**
Akay H., Baduna Koçyiğit M., Yanmaz A. M.
WATER, vol.11, 2019 (SCI-Expanded)
- XIV. **Effect of using multiple stream gauging stations on calibration of hydrologic parameters and estimation of hydrograph of ungauged neighboring basin**
Akay H., Baduna Koçyiğit M., Yanmaz A. M.
ARABIAN JOURNAL OF GEOSCIENCES, vol.11, no.11, 2018 (SCI-Expanded)
- XV. **Estimation of potential flash flood risk in a basin using morphometric parameters: A case study of Akcay Basin**
Baduna Koçyiğit M., Akay H.
JOURNAL OF THE FACULTY OF ENGINEERING AND ARCHITECTURE OF GAZI UNIVERSITY, vol.33, no.4, pp.1321-1332, 2018 (SCI-Expanded)
- XVI. **Effect of watershed partitioning on hydrologic parameters and estimation of hydrograph of an ungauged basin: a case study in Gokirmak and Kocanaz, Turkey**
Baduna Koçyiğit M., Akay H., Yanmaz A. M.
ARABIAN JOURNAL OF GEOSCIENCES, vol.10, no.15, 2017 (SCI-Expanded)
- XVII. **Critical submergence for multiple pipe intakes by the potential flow solution**
Yildirim N., AKAY H., TAŞTAN K.
JOURNAL OF HYDRAULIC RESEARCH, vol.49, no.1, pp.117-121, 2011 (SCI-Expanded)

Articles Published in Other Journals

- I. **Effect of various flow, sediment and geometrical parameters on partially or fully submerged deck scour**
Baduna Koçyiğit M., Karakurt O., Akay H.
SN APPLIED SCIENCES, vol.3, no.3, 2021 (ESCI)
- II. **Hidrolojik Parametrelerin Pik Debi Üzerindeki Duyarlılıklarının İncelenmesi**
Akay H.
Firat Üniversitesi Mühendislik Bilimleri Dergisi, vol.32, no.1, pp.235-242, 2020 (Peer-Reviewed Journal)
- III. **Akım Ölçümü Alınmayan İki Alt Havzanın Dolaysız Akış Hidrograflarının Anlık Birim Hidrograf Yaklaşımıyla Karşılaştırılması**
Akay H., Baduna Koçyiğit M.
Doğal Afetler ve Çevre Dergisi, vol.5, no.2, pp.327-334, 2019 (Peer-Reviewed Journal)
- IV. **Baraj Yıkılması Taşkın Dalgası Yayılımının 1-Boyutlu Sayısal Simülasyonlarla İncelenmesi: Rahmanlar Baraj Örneği**
Palamut Kemaloğlu N., Baduna Koçyiğit M., Akay H.
Gazi Üniversitesi Fen Bilimleri Dergisi Part C: Tasarım ve Teknoloji, vol.7, no.1, pp.97-111, 2019 (Peer-Reviewed Journal)
- V. **Estimation of Hydrologic Parameters of Kocanaz Watershed by a Hydrologic Model**
Baduna Koçyiğit M., Akay H., Yanmaz A. M.
International Journal Of Engineering Applied Sciences, vol.9, no.4, pp.42-50, 2017 (Peer-Reviewed Journal)
- VI. **Flooding and Its Effects on River Bridges in Western Black Sea Region**
Baduna Koçyiğit M., Akay H., Yanmaz A. M.
Disaster Science and Engineering, vol.2, no.1, pp.29-35, 2016 (Peer-Reviewed Journal)

Refereed Congress / Symposium Publications in Proceedings

- I. **Snow Avalanche Susceptibility Mapping Using Weight of Evidence Method: A Study from Uzungöl Basin**
Akay H.
14th International Congress on Advances in Civil Engineering, İstanbul, Turkey, 6 - 08 September 2021, pp.765-772
- II. **INVESTIGATION OF THE EFFECT OF DRAINAGE NETWORK ON HYDROLOGIC MODEL RESULTS**
Akay H., Baduna Koçyiğit M.
MAS INTERNATIONAL EUROPEAN CONFERENCEON MATHEMATICS-ENGINEERING-NATURALMEDICAL SCIENCES-IX, Bursa, Turkey, 8 - 10 November 2019
- III. **EVALUATION OF SUB-BASINS OF KOZCAĞIZ BASIN ACCORDING TO THEIR FLASH FLOOD POTENTIAL**
Baduna Koçyiğit M., Akay H.
MAS INTERNATIONAL EUROPEAN CONFERENCEON MATHEMATICS-ENGINEERING-NATURALMEDICAL SCIENCES-IX, Bursa, Turkey, 8 - 10 November 2019
- IV. **TÜRKİYE'DE AKARSU KÖPRÜLERİ İÇİN GELİŞTİRİLMİŞ GÜVENLİK-DEĞERLENDİRME YÖNTEMİ VE UYGULAMASI**
Baduna Koçyiğit M., Akay H., Yanmaz A. M.
4. Köprüler ve Viyadükler Sempozyumu, Ankara, Turkey, 1 - 02 November 2019
- V. **AKIM ÖLÇÜMÜ OLMAYAN AKARSULAR ÜZERİNDE YER ALAN KÖPRÜLERİN GÖÇME RİSKİNİN DEĞERLENDİRİLMESİ**
AKAY H.
4. Köprüler ve Viyadükler Sempozyumu, Ankara, Turkey, 1 - 02 November 2019
- VI. **Investigation of the Effect of Number of Sub-basins on the Results of Hydrologic Model**
Akay H., Baduna Koçyiğit M.
International Science and Engineering Applications Symposium on Hazards 2019, Karabük, Turkey, 25 - 27 September 2019
- VII. **Estimation of Flash Flood Potential of Gökırmak Basin Using Morphometric Parameters**
BADUNA KOÇYİĞİT M., AKAY H.
International Science and Engineering Applications Symposium on Hazards 2019, Karabük, Turkey, 25 - 27 September 2019
- VIII. **Experimental Investigation of Bed Scour Beneath A Skewed Bridge Under Weir Type of Flow Condition**
Baduna Koçyiğit M., Akay H.
International Science and Engineering Applications Symposium on Hazards 2019, Karabük, Turkey, 25 - 27 September 2019
- IX. **Comparison of Clark and Nash Based Instantaneous Unit Hydrograph Methods**
Akay H., Baduna Koçyiğit M.
International Science and Engineering Applications Symposium on Hazards 2019, Karabük, Turkey, 20 - 25 September 2019
- X. **Akarsu Köprülerinde Oyulma Riski Analizi: Bartın III Köprüsü Örneği**
Baduna Koçyiğit M., Akay H.
International Engineering and Technology Symposium, Batman, Turkey, 3 - 05 May 2018
- XI. **Verevli Akarsu Köprülerinde Taban Oyulmalarının İncelenmesi**
Baduna Koçyiğit M., Akay H.
3. Uluslararası Mesleki ve Teknik Bilimler Kongresi, Gaziantep, Turkey, 21 - 22 June 2018
- XII. **Ölçüm Alınmayan Bir Havzada Yağış Akış İlişkisinin Bir Hidrolojik Model Yardımıyla Belirlenmesi: Akçay Havzası Örneği**
Akay H., Baduna Koçyiğit M.
3. Uluslararası Mesleki ve Teknik Bilimler Kongresi, Gaziantep, Turkey, 21 - 22 June 2018
- XIII. **A CASE STUDY FOR DETERMINATION OF HYDROLOGICAL PARAMETERS IN HEC HMS IN COMPUTING**

DIRECT RUNOFF

Akay H., Baduna Koçyiğit M., Yanmaz A. M.

12th INTERNATIONAL CONGRESS ON ADVANCES IN CIVIL ENGINEERING, İstanbul, Turkey, 21 - 23 September 2016

XIV. Estimation of rainfall runoff relation using HEC HMS for a basin in Turkey

Akay H., Baduna Koçyiğit M., Yanmaz A. M.

4th IAHR Europe Congress, Liege, Belgium, 27 - 29 July 2016, pp.411-415

XV. TAŞKINLAR VE AKARSU KÖPRÜLERİNE ETKİLERİ

Baduna Koçyiğit M., Akay H., Yanmaz A. M.

Uluslararası Doğal Afetler ve Afet Yönetimi Sempozyumu 2016, Karabük, Turkey, 2 - 04 March 2016, pp.525-530

XVI. AKARSU KÖPRÜLERİNDE GÖZLE MUAYENE VE GÜVENLİK DEĞERLENDİRME ÇALIŞMALARI

Akay H., Baduna Koçyiğit M.

4. SU YAPILARI SEMPOZYUMU, Antalya, Turkey, 19 - 21 November 2015, pp.205-214

Metrics

Publication: 39

Citation (WoS): 183

Citation (Scopus): 237

H-Index (WoS): 7

H-Index (Scopus): 8

Scholarships

Proje Bursiyeri, TUBITAK, 2014 - 2017

Awards

Akay H., En Başarılı Doktora Tez İkinciliği, Gazi Üniversitesi, December 2021

Akay H., Outstanding Reviewer 2020, Asce, June 2021