

# **Prof. Abdüsselam Altunkaynak**

## **Personal Information**

**Email:** altunkay@itu.edu.tr

**Web:** <https://avesis.itu.edu.tr/altunkay>

## **International Researcher IDs**

ORCID: 0000-0001-7134-1820

ScopusID: 35612650900

Yoksis Researcher ID: 154459

## **Education Information**

Doctorate, İstanbul Technical University, İnşaat Fakültesi, İnşaat Mühendisliği Bölümü, Turkey 2000 - 2011

Postgraduate, İstanbul Technical University, İnşaat Fakültesi, İnşaat Mühendisliği Bölümü, Turkey 1998 - 2010

Undergraduate, İstanbul Technical University, İnşaat Fakültesi, İnşaat Mühendisliği Bölümü, Turkey 1994 - 2000

## **Dissertations**

Doctorate, Doğrusal olmayan yeraltı su akımlarının incelenmesi, İstanbul Teknik Üniversitesi, İnşaat Fakültesi, İnşaat Mühendisliği Bölümü, 2005

Postgraduate, Çözülebilen maddelerin dalga etkisi ile boyuna turbülans difüzyonu ve dispersiyonu, İstanbul Teknik Üniversitesi, İnşaat Fakültesi, İnşaat Mühendisliği Bölümü, 2000

## **Research Areas**

Hydraulic, Surface Water Engineering, Hydrology, Water Resources Planning and Management, Hydraulic Structures, Pipeline Hydraulics, Open Channel Flow, Groundwater Engineering, Engineering and Technology

## **Academic Titles / Tasks**

Associate Professor, İstanbul Technical University, İnşaat Fakültesi, İnşaat Mühendisliği Bölümü, 2011 - Continues

## **Published journal articles indexed by SCI, SSCI, and AHCI**

- I. Optimal Significant Wave Height Monitoring Network Identification via Empirical Orthogonal Function Analysis with QR Column Pivoting Algorithm  
Çelik A., Altunkaynak A.  
Journal of Waterway, Port, Coastal and Ocean Engineering, vol.149, no.6, 2023 (SCI-Expanded)
- II. Cylindrical frontwall entrance geometry optimization of an oscillating water column for utmost hydrodynamic performance  
Mandev M. B., Altunkaynak A.  
Energy, vol.280, 2023 (SCI-Expanded)
- III. Accurate extended time horizon drought prediction via wavelet-season-fuzzy models

- Altunkaynak A., Çelik A.  
Applied Soft Computing, vol.143, 2023 (SCI-Expanded)
- IV. **Hourly significant wave height prediction via singular spectrum analysis and wavelet transform based models**  
Altunkaynak A., Çelik A., Mandev M. B.  
Ocean Engineering, vol.281, 2023 (SCI-Expanded)
- V. **Enhanced rainfall prediction performance via hybrid empirical-singular-wavelet-fuzzy approaches**  
Küllahçı K., Altunkaynak A.  
ENVIRONMENTAL SCIENCE AND POLLUTION RESEARCH, vol.11356, no.023, pp.0-23, 2023 (SCI-Expanded)
- VI. **Transfer precipitation learning via patterns of dependency matrix-based machine learning approaches**  
Altunkaynak A., Küllahçı K.  
NEURAL COMPUTING & APPLICATIONS, vol.34, no.24, pp.22177-22196, 2022 (SCI-Expanded)
- VII. **A novel Geno-fuzzy based model for hydrodynamic efficiency prediction of a land-fixed oscillating water column for various front wall openings, power take-off dampings and incident wave steepnesses**  
Altunkaynak A., Celik A.  
RENEWABLE ENERGY, vol.196, pp.99-110, 2022 (SCI-Expanded)
- VIII. **A novel Geno-Nonlinear formula for oscillating water column efficiency estimation**  
Altunkaynak A., Celik A.  
ENERGY, vol.241, 2022 (SCI-Expanded)
- IX. **Extended lead time accurate forecasting of palmer drought severity index using hybrid wavelet-fuzzy and machine learning techniques**  
Altunkaynak A., Jalilzadnezamabad A.  
JOURNAL OF HYDROLOGY, vol.601, 2021 (SCI-Expanded)
- X. **An in depth experimental investigation into effects of incident wave characteristics front wall opening and PTO damping on the water column displacement and air differential pressure in an OWC chamber**  
Celik A., Altunkaynak A.  
ENERGY, vol.230, 2021 (SCI-Expanded)
- XI. **Transfer sea level learning in the Bosphorus Strait by wavelet based machine learning methods**  
Altunkaynak A., Kartal E.  
OCEAN ENGINEERING, vol.233, 2021 (SCI-Expanded)
- XII. **Prediction of the Incipient Motion of Sediment Entrainment via a Novel Hybrid Geno-Fuzzy Approach with Experimental Investigations**  
Bizimana H., Altunkaynak A.  
JOURNAL OF IRRIGATION AND DRAINAGE ENGINEERING, vol.147, no.5, 2021 (SCI-Expanded)
- XIII. **Physical experimental investigation of the horizontal water flow patterns in the Golden Horn under different scenarios with the presence of various structures**  
Altunkaynak A., Eruçar S.  
OCEAN ENGINEERING, vol.215, 2020 (SCI-Expanded)
- XIV. **Modeling the initiation of sediment motion under a wide range of flow conditions using a Geno-Mamdani Fuzzy Inference System method**  
Bizimana H., Altunkaynak A.  
INTERNATIONAL JOURNAL OF SEDIMENT RESEARCH, vol.35, no.5, pp.467-483, 2020 (SCI-Expanded)
- XV. **Estimation of Water Column Surface Displacement of a Fixed Oscillating Water Column by Simple Mechanical Model with Determination of Hydrodynamic Parameters via Physical Experimental Model**  
Çelik A., Altunkaynak A.  
JOURNAL OF WATERWAY PORT COASTAL AND OCEAN ENGINEERING, vol.146, no.5, 2020 (SCI-Expanded)
- XVI. **Determination of hydrodynamic parameters of a fixed OWC by performing experimental and numerical free decay tests**

- Celik A., Altunkaynak A.  
OCEAN ENGINEERING, vol.204, 2020 (SCI-Expanded)
- XVII. **Determination of damping coefficient experimentally and mathematical vibration modelling of OWC surface fluctuations**  
Celik A., Altunkaynak A.  
RENEWABLE ENERGY, vol.147, pp.1909-1920, 2020 (SCI-Expanded)
- XVIII. **Spatio-temporal evaluation of various global circulation models in terms of projection of different meteorological drought indices**  
Balov M., Altunkaynak A.  
ENVIRONMENTAL EARTH SCIENCES, vol.79, no.6, 2020 (SCI-Expanded)
- XIX. **Comparison of Experimental and Numerical Model Results of Oscillating Water Column System Under Regular Wave Conditions**  
MAHNAMFAR F., Altunkaynak A., Abdollahzadehmoradi Y.  
IRANIAN JOURNAL OF SCIENCE AND TECHNOLOGY-TRANSACTIONS OF CIVIL ENGINEERING, vol.44, no.1, pp.299-315, 2020 (SCI-Expanded)
- XX. **The impacts of climate change on the runoff volume of Melen and Munzur Rivers in Turkey based on calibration of WASMOD model with multiobjective genetic algorithm**  
Nuri Balov M., Altunkaynak A.  
METEOROLOGY AND ATMOSPHERIC PHYSICS, vol.132, no.1, pp.85-98, 2020 (SCI-Expanded)
- XXI. **Modeling groundwater flow and seawater intrusion in the Terkos Lake aquifer due to Canal Istanbul excavation**  
Ahmed K. A., Altunkaynak A.  
ARABIAN JOURNAL OF GEOSCIENCES, vol.13, no.1, 2020 (SCI-Expanded)
- XXII. **Experimental investigations on the performance of a fixed-oscillating water column type wave energy converter**  
Celik A., Altunkaynak A.  
ENERGY, vol.188, 2019 (SCI-Expanded)
- XXIII. **Trend Analyses of Extreme Precipitation Indices Based on Downscaled Outputs of Global Circulation Models in Western Black Sea Basin, Turkey**  
Balov M. N., Altunkaynak A.  
IRANIAN JOURNAL OF SCIENCE AND TECHNOLOGY-TRANSACTIONS OF CIVIL ENGINEERING, vol.43, no.4, pp.821-834, 2019 (SCI-Expanded)
- XXIV. **Modeling the effect of urbanization on flood risk in Ayamama Watershed, Istanbul, Turkey, using the MIKE 21 FM model**  
Nigussie T. A., Altunkaynak A.  
NATURAL HAZARDS, vol.99, no.2, pp.1031-1047, 2019 (SCI-Expanded)
- XXV. **A novel approach for the prediction of the incipient motion of sediments under smooth, transitional and rough flow conditions using Geno-Fuzzy Inference System model**  
Bizimana H., Altunkaynak A.  
JOURNAL OF HYDROLOGY, vol.577, 2019 (SCI-Expanded)
- XXVI. **Performance comparison of continuous Wavelet-Fuzzy and discrete Wavelet-Fuzzy models for water level predictions at northern and southern boundary of Bosphorus**  
Altunkaynak A., Kartal E.  
OCEAN ENGINEERING, vol.186, 2019 (SCI-Expanded)
- XXVII. **Predicting Water Level Fluctuations in Lake Van Using Hybrid Season-Neuro Approach**  
Altunkaynak A.  
JOURNAL OF HYDROLOGIC ENGINEERING, vol.24, no.8, 2019 (SCI-Expanded)
- XXVIII. **Frequency analyses of extreme precipitation events in Western Black Sea Basin (Turkey) based on climate change projections**  
Balov M. N., Altunkaynak A.  
METEOROLOGICAL APPLICATIONS, vol.26, no.3, pp.468-482, 2019 (SCI-Expanded)

- XXIX. **Optimized Numerical Model Based Assessment of Wave Power Potential of Marmara Sea**  
 Abdollahzadehmoradi Y., Özger M., Altunkaynak A.  
 JOURNAL OF OCEAN UNIVERSITY OF CHINA, vol.18, no.2, pp.293-304, 2019 (SCI-Expanded)
- XXX. **Impacts of climate change on the trends of extreme rainfall indices and values of maximum precipitation at Olimpiyat Station, Istanbul, Turkey**  
 Nigussie T. A., Altunkaynak A.  
 THEORETICAL AND APPLIED CLIMATOLOGY, vol.135, pp.1501-1515, 2019 (SCI-Expanded)
- XXXI. **Experimental and analytical investigation on chamber water surface fluctuations and motion behaviours of water column type wave energy converter**  
 Celik A., Altunkaynak A.  
 OCEAN ENGINEERING, vol.150, pp.209-220, 2018 (SCI-Expanded)
- XXXII. **Investigation Anthropogenic Impacts and Climate Factors on Drying up of Urmia Lake using Water Budget and Drought Analysis**  
 Ghale Y. A. G., Altunkaynak A., Ünal A.  
 WATER RESOURCES MANAGEMENT, vol.32, no.1, pp.325-337, 2018 (SCI-Expanded)
- XXXIII. **Monthly water demand prediction using wavelet transform, first-order differencing and linear detrending techniques based on multilayer perceptron models**  
 Altunkaynak A., Nigussie T. A.  
 URBAN WATER JOURNAL, vol.15, no.2, pp.177-181, 2018 (SCI-Expanded)
- XXXIV. **Monthly Water Consumption Prediction Using Season Algorithm and Wavelet Transform-Based Models**  
 Altunkaynak A., Nigussie T. A.  
 JOURNAL OF WATER RESOURCES PLANNING AND MANAGEMENT, vol.143, no.6, 2017 (SCI-Expanded)
- XXXV. **Deducing a Drain Spacing Formula by Applying Dimensional Analysis and Self-Similarity Theory**  
 Elmazoghi H. G., Altunkaynak A.  
 JOURNAL OF IRRIGATION AND DRAINAGE ENGINEERING, vol.143, no.6, 2017 (SCI-Expanded)
- XXXVI. **Modeling Urbanization of Istanbul under Different Scenarios Using SLEUTH Urban Growth Model**  
 Nigussie T. A., Altunkaynak A.  
 JOURNAL OF URBAN PLANNING AND DEVELOPMENT, vol.143, no.2, 2017 (SCI-Expanded)
- XXXVII. **Comparison of numerical and experimental analyses for optimizing the geometry of OWC systems**  
 Mahnamfar F., Altunkaynak A.  
 OCEAN ENGINEERING, vol.130, pp.10-24, 2017 (SCI-Expanded)
- XXXVIII. **Prediction of longitudinal dispersion coefficient in natural streams by prediction map**  
 Altunkaynak A.  
 JOURNAL OF HYDRO-ENVIRONMENT RESEARCH, vol.12, pp.105-116, 2016 (SCI-Expanded)
- XXXIX. **Assessing the Hydrological Response of Ayamama Watershed from Urbanization Predicted under Various Landuse Policy Scenarios**  
 Nigussie T. A., Altunkaynak A.  
 WATER RESOURCES MANAGEMENT, vol.30, no.10, pp.3427-3441, 2016 (SCI-Expanded)
- XL. **Comparison of Discrete and Continuous Wavelet-Multilayer Perceptron Methods for Daily Precipitation Prediction**  
 Altunkaynak A., OZGER M.  
 JOURNAL OF HYDROLOGIC ENGINEERING, vol.21, no.7, 2016 (SCI-Expanded)
- XLI. **OWC-Type Wave Chamber Optimization Under Series of Regular Waves**  
 Mahnamfar F., Altunkaynak A.  
 ARABIAN JOURNAL FOR SCIENCE AND ENGINEERING, vol.41, no.4, pp.1543-1549, 2016 (SCI-Expanded)
- XLII. **Performance Comparison of SAS-Multilayer Perceptron and Wavelet-Multilayer Perceptron Models in Terms of Daily Streamflow Prediction**  
 Altunkaynak A., NIGUSSIE T. A.  
 JOURNAL OF HYDROLOGIC ENGINEERING, vol.21, no.1, 2016 (SCI-Expanded)
- XLIII. **Neuro-fuzzy models for prediction of breach formation time of embankment dams**

- Altunkaynak A., ELMAZOGHI H. G.  
 JOURNAL OF INTELLIGENT & FUZZY SYSTEMS, vol.31, no.3, pp.1929-1940, 2016 (SCI-Expanded)
- XLIV. Prediction of daily rainfall by a hybrid wavelet-season-neuro technique**  
 Altunkaynak A., NIGUSSIE T. A.  
 JOURNAL OF HYDROLOGY, vol.529, pp.287-301, 2015 (SCI-Expanded)
- XLV. Prediction of significant wave height using spatial function**  
 Altunkaynak A.  
 OCEAN ENGINEERING, vol.106, pp.220-226, 2015 (SCI-Expanded)
- XLVI. Fuzzy logic-based attenuation relationships of strong motion earthquake records**  
 Ahumada A., Altunkaynak A., AYOUB A.  
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- XLVII. Extended wave power formulation by perturbation theory and its applications**  
 Altunkaynak A.  
 OCEAN ENGINEERING, vol.88, pp.46-54, 2014 (SCI-Expanded)
- XLVIII. Fuzzy-logic based inelastic displacement ratios of degrading RC structures**  
 Ozkul S., AYOUB A., Altunkaynak A.  
 ENGINEERING STRUCTURES, vol.75, pp.590-603, 2014 (SCI-Expanded)
- XLIX. Predicting Water Level Fluctuations in Lake Michigan-Huron Using Wavelet-Expert System Methods**  
 Altunkaynak A.  
 WATER RESOURCES MANAGEMENT, vol.28, no.8, pp.2293-2314, 2014 (SCI-Expanded)
- L. Prediction of significant wave height using geno-multilayer perceptron**  
 Altunkaynak A.  
 OCEAN ENGINEERING, vol.58, pp.144-153, 2013 (SCI-Expanded)
- LI. Prediction of temperature variation within a snowpack in open areas and under different canopy covers**  
 Altunkaynak A., Aydin A.  
 HYDROLOGICAL PROCESSES, vol.26, no.26, pp.4015-4028, 2012 (SCI-Expanded)
- LII. Theoretical derivation of wind power probability distribution function and applications**  
 Altunkaynak A., ERDIK T., DABANLI I., SEN Z.  
 APPLIED ENERGY, vol.92, pp.809-814, 2012 (SCI-Expanded)
- LIII. Estimation of significant wave height in shallow lakes using the expert system techniques**  
 Altunkaynak A., Wang K.  
 EXPERT SYSTEMS WITH APPLICATIONS, vol.39, no.3, pp.2549-2559, 2012 (SCI-Expanded)
- LIV. Comparative Case Study of Rainfall-Runoff Modeling between SWMM and Fuzzy Logic Approach**  
 Wang K., Altunkaynak A.  
 JOURNAL OF HYDROLOGIC ENGINEERING, vol.17, no.2, pp.283-291, 2012 (SCI-Expanded)
- LV. Wind Velocity Vertical Extrapolation by Extended Power Law**  
 Sen Z., Altunkaynak A., ERDIK T.  
 ADVANCES IN METEOROLOGY, 2012 (SCI-Expanded)
- LVI. Steady state flow with hydraulic conductivity change around large diameter wells**  
 Altunkaynak A., SEN Z.  
 HYDROLOGICAL PROCESSES, vol.25, no.11, pp.1778-1783, 2011 (SCI-Expanded)
- LVII. A comparative study of hydrodynamic model and expert system related models for prediction of total suspended solids concentrations in Apalachicola Bay**  
 Altunkaynak A., Wang K.  
 JOURNAL OF HYDROLOGY, vol.400, pp.353-363, 2011 (SCI-Expanded)
- LVIII. Suspended sediment concentration prediction by Geno-Kalman filtering**  
 Altunkaynak A.  
 EXPERT SYSTEMS WITH APPLICATIONS, vol.37, no.12, pp.8583-8589, 2010 (SCI-Expanded)
- LIX. A predictive model for well loss using fuzzy logic approach**  
 Altunkaynak A.

- HYDROLOGICAL PROCESSES, vol.24, no.17, pp.2400-2404, 2010 (SCI-Expanded)
- LX. **Triple diagram models for prediction of suspended solid concentration in Lake Okeechobee, Florida**  
Altunkaynak A., Wang K.  
JOURNAL OF HYDROLOGY, vol.387, pp.165-175, 2010 (SCI-Expanded)
- LXI. **Prediction of specific permeate flux during crossflow microfiltration of polydispersed colloidal suspensions by fuzzy logic models**  
Altunkaynak A., CHELLAM S.  
DESALINATION, vol.253, pp.188-194, 2010 (SCI-Expanded)
- LXII. **A predictive tool by fuzzy logic for outcome of patients with intracranial aneurysm**  
Hatiboglu M. A., Altunkaynak A., OZGER M., IPLIKDOGLU A. C., Cosar M., TURGUT N.  
EXPERT SYSTEMS WITH APPLICATIONS, vol.37, no.2, pp.1043-1049, 2010 (SCI-Expanded)
- LXIII. **Discussion of fuzzy logic model to predict hydraulic jump aeration efficiency by S.Küçükali and §. Çokgör**  
Altunkaynak A.  
Water Management, vol.0, no.163, pp.98-99, 2010 (SCI-Expanded)
- LXIV. **Streamflow estimation using optimal regional dependency function**  
Altunkaynak A.  
HYDROLOGICAL PROCESSES, vol.23, no.25, pp.3525-3533, 2009 (SCI-Expanded)
- LXV. **A predictive model for reach morphology classification in mountain streams using multilayer perceptron methods**  
Altunkaynak A., STROM K. B.  
WATER RESOURCES RESEARCH, vol.45, 2009 (SCI-Expanded)
- LXVI. **Fuzzy system modelling of drinking water consumption prediction**  
Sen Z., Altunkaynak A.  
EXPERT SYSTEMS WITH APPLICATIONS, vol.36, no.9, pp.11745-11752, 2009 (SCI-Expanded)
- LXVII. **Sediment load prediction by genetic algorithms**  
Altunkaynak A.  
ADVANCES IN ENGINEERING SOFTWARE, vol.40, no.9, pp.928-934, 2009 (SCI-Expanded)
- LXVIII. **Adaptive estimation of wave parameters by Geno-Kalman filtering**  
Altunkaynak A.  
OCEAN ENGINEERING, vol.35, pp.1245-1251, 2008 (SCI-Expanded)
- LXIX. **Estimation of streamflow by slope regional dependency function**  
Altunkaynak A.  
HYDROLOGY AND EARTH SYSTEM SCIENCES, vol.4, no.12, pp.1121-1127, 2008 (SCI-Expanded)
- LXX. **Fuzzy logic model of lake water level fluctuations in Lake Van, Turkey**  
Altunkaynak A., SEN Z.  
THEORETICAL AND APPLIED CLIMATOLOGY, vol.90, pp.227-233, 2007 (SCI-Expanded)
- LXXI. **Forecasting surface water level fluctuations of lake van by artificial neural networks**  
Altunkaynak A.  
WATER RESOURCES MANAGEMENT, vol.21, no.2, pp.399-408, 2007 (SCI-Expanded)
- LXXII. **Steady-state groundwater flow model with variable hydraulic conductivity**  
Altunkaynak A.  
HYDROLOGICAL SCIENCES JOURNAL-JOURNAL DES SCIENCES HYDROLOGIQUES, vol.52, no.1, pp.221-229, 2007 (SCI-Expanded)
- LXXIII. **Fuzzy logic model for equilibrium scour downstream of a dam's vertical gate**  
Uyumaz A., Altunkaynak A., OEZGER M.  
Journal of Hydraulic Engineering, vol.132, no.10, pp.1069-1075, 2006 (SCI-Expanded)
- LXXIV. **Space-time interpolation by combining air pollution and meteorologic variables**  
Sen Z., Altunkaynak A., OEZGER M.  
Pure and Applied Geophysics, vol.163, no.7, pp.1435-1451, 2006 (SCI-Expanded)
- LXXV. **A comparative fuzzy logic approach to runoff coefficient and runoff estimation**

- Sen Z., Altunkaynak A.  
HYDROLOGICAL PROCESSES, vol.20, no.9, pp.1993-2009, 2006 (SCI-Expanded)
- LXXVI. **Fuzzy logic modeling of the dissolved oxygen fluctuations in Golden Horn**  
Altunkaynak A., OZGER M., CAKMAKCI M.  
ECOLOGICAL MODELLING, vol.189, pp.436-446, 2005 (SCI-Expanded)
- LXXVII. **Spatial significant wave height variation assessment and its estimation**  
Altunkaynak A., OZGER M.  
JOURNAL OF WATERWAY PORT COASTAL AND OCEAN ENGINEERING-ASCE, vol.131, no.6, pp.277-282, 2005 (SCI-Expanded)
- LXXVIII. **Regional streamflow estimation by standard regional dependence function approach**  
Altunkaynak A., OZGER M., SEN Z.  
JOURNAL OF HYDRAULIC ENGINEERING-ASCE, vol.131, no.11, pp.1001-1006, 2005 (SCI-Expanded)
- LXXIX. **Water consumption prediction of Istanbul City by using fuzzy logic approach**  
Altunkaynak A., OZGER M., CAKMAKCI M.  
WATER RESOURCES MANAGEMENT, vol.19, no.5, pp.641-654, 2005 (SCI-Expanded)
- XXX. **Variable discharge type curve solutions for confined aquifers**  
Sen Z., Altunkaynak A.  
JOURNAL OF THE AMERICAN WATER RESOURCES ASSOCIATION, vol.40, no.5, pp.1189-1196, 2004 (SCI-Expanded)
- LXXXI. **El nino southern oscillation (ENSO) templates and streamflow prediction**  
Sen Z., Altunkaynak A., OZGER M.  
JOURNAL OF HYDROLOGIC ENGINEERING, vol.9, no.5, pp.368-374, 2004 (SCI-Expanded)
- LXXXII. **Stochastic wave energy calculation formulation**  
Ozger M., Altunkaynak A., SEN Z.  
RENEWABLE ENERGY, vol.29, no.10, pp.1747-1756, 2004 (SCI-Expanded)
- LXXXIII. **Sediment concentration and its prediction by perceptron Kalman filtering procedure**  
Sen Z., Altunkaynak A., OZGER M.  
JOURNAL OF HYDRAULIC ENGINEERING-ASCE, vol.130, no.8, pp.816-826, 2004 (SCI-Expanded)
- LXXXIV. **Statistical investigation of expected wave energy and its reliability**  
Ozger M., Altunkaynak A., SEN Z.  
ENERGY CONVERSION AND MANAGEMENT, vol.45, pp.2173-2185, 2004 (SCI-Expanded)
- LXXXV. **Temporal significant wave height estimation from wind speed by perceptron Kalman filtering**  
Altunkaynak A., OZGER M.  
OCEAN ENGINEERING, vol.31, no.10, pp.1245-1255, 2004 (SCI-Expanded)
- LXXXVI. **El Niño Southern Oscillation (ENSO) templates and streamflow prediction**  
Sen Z., Altunkaynak A., Özger M.  
Journal of Hydrologic Engineering, vol.9, no.5, pp.368-374, 2004 (SCI-Expanded)
- LXXXVII. **Fuzzy awakening in rainfall runoff modeling**  
Sen Z., Altunkaynak A.  
NORDIC HYDROLOGY, vol.0, 2004 (SCI-Expanded)
- LXXXVIII. **Autorun persistence of hydrologic design**  
Sen Z., Altunkaynak A., OZGER M.  
JOURNAL OF HYDROLOGIC ENGINEERING, vol.8, no.6, pp.329-338, 2003 (SCI-Expanded)
- LXXXIX. **Increasing water supply by mixing of fresh and saline ground waters**  
Sen Z., SAUD A., Altunkaynak A., OZGER M.  
JOURNAL OF THE AMERICAN WATER RESOURCES ASSOCIATION, vol.39, no.5, pp.1209-1215, 2003 (SCI-Expanded)
- XC. **Triple diagram model of level fluctuations in Lake Van, Turkey**  
Altunkaynak A., ÖZGER M., ŞEN Z.  
HYDROLOGY AND EARTH SYSTEM SCIENCES, vol.7, no.2, pp.235-244, 2003 (SCI-Expanded)
- XCI. **Discussion of "Development of exceedance probability streamflow forecast" by Thomas C. Piechota, Francis H. S. Chiew, John A. Dracup, and Thomas A. McMahon**  
ŞEN Z., Altunkaynak A.

## Articles Published in Other Journals

- I. **Investigating the Effects of Bed Roughness on Incipient Motion in Rigid Boundary Channels with Developed Hybrid Geno-Fuzzy versus Neuro-Fuzzy Models**  
Bizimana H., Altunkaynak A.  
GEOTECHNICAL AND GEOLOGICAL ENGINEERING, vol.39, no.4, pp.3171-3191, 2021 (ESCI)
- II. **DALGACIK K-EN YAKIN KOMŞULUK YÖNTEMİ İLE HAVA KİRLİLİĞİ TAHMİNİ**  
Altunkaynak A., Başakın E. E., Kartal E.  
Uludağ University Journal of The Faculty of Engineering, vol.25, no.3, pp.1547-1556, 2020 (Peer-Reviewed Journal)
- III. **Zaman Serileri Kullanılarak Nehir Akım Tahmini ve Farklı Yöntemlerle Karşılaştırılması**  
Altunkaynak A., Başakın E. E.  
Erzincan Üniversitesi Fen Bilimleri Enstitüsü Dergisi, vol.11, no.1, pp.92-101, 2018 (Peer-Reviewed Journal)

## Supported Projects

Altunkaynak A., Project Supported by Higher Education Institutions, Dalga enerji dönüştürücü yapısının nümerik ve deneysel olarak modellenmesi, 2016 - Continues  
Altunkaynak A., Project Supported by Higher Education Institutions, Kıyı Üzerinde Dalga Enerjisi Dönüşüm Sistemi Tasarımı ve Optimize Edilmesi, 2014 - 2018

## Metrics

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