

## Prof. Abdüsselam Altunkaynak

### Personal Information

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### Education Information

Doctorate, İstanbul Teknik Üniversitesi, İnşaat Fakültesi, İnşaat Mühendisliği Bölümü, Turkey 2000 - 2011

Postgraduate, İstanbul Teknik Üniversitesi, İnşaat Fakültesi, İnşaat Mühendisliği Bölümü, Turkey 1998 - 2010

Undergraduate, İstanbul Teknik Üniversitesi, 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, Çözülebilir maddelerin dalga etkisi ile boyuna türbülans difüzyonu ve dispersiyonu, İstanbul Teknik Üniversitesi, İnşaat Fakültesi, İnşaat Mühendisliği Bölümü, 2000

### Academic Titles / Tasks

Associate Professor, İstanbul Teknik Üniversitesi, İnşaat Fakültesi, İnşaat Mühendisliği Bölümü, 2011 - Continues

### Articles Published in Journals That Entered SCI, SSCI and AHCI Indexes

- I. **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 (Journal Indexed in SCI)
- II. **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**  
Celik A., Altunkaynak A.  
JOURNAL OF WATERWAY PORT COASTAL AND OCEAN ENGINEERING, vol.146, no.5, 2020 (Journal Indexed in SCI)
- III. **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 (Journal Indexed in SCI)
- IV. **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 (Journal Indexed in SCI)
- V. **Experimental investigations on the performance of a fixed-oscillating water column type wave energy converter**  
Celik A., Altunkaynak A.  
ENERGY, vol.188, 2019 (Journal Indexed in SCI)
- VI. **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 (Journal Indexed in SCI)

- VII. **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 (Journal Indexed in SCI)
- VIII. **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 (Journal Indexed in SCI)
- IX. **Predicting Water Level Fluctuations in Lake Van Using Hybrid Season-Neuro Approach**  
Altunkaynak A.  
JOURNAL OF HYDROLOGIC ENGINEERING, vol.24, no.8, 2019 (Journal Indexed in SCI)
- X. **Optimized Numerical Model Based Assessment of Wave Power Potential of Marmara Sea**  
Abdollahzadeh moradi Y., Özger M., Altunkaynak A.  
JOURNAL OF OCEAN UNIVERSITY OF CHINA, vol.18, no.2, pp.293-304, 2019 (Journal Indexed in SCI)
- XI. **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 (Journal Indexed in SCI)
- XII. **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 (Journal Indexed in SCI)
- XIII. **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 (Journal Indexed in SCI)
- XIV. **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 (Journal Indexed in SCI)
- XV. **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 (Journal Indexed in SCI)
- XVI. **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 (Journal Indexed in SCI)
- XVII. **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 (Journal Indexed in SCI)
- XVIII. **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 (Journal Indexed in SCI)
- XIX. **Prediction of longitudinal dispersion coefficient in natural streams by prediction map**  
Altunkaynak A.  
JOURNAL OF HYDRO-ENVIRONMENT RESEARCH, vol.12, pp.105-116, 2016 (Journal Indexed in SCI)
- XX. **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 (Journal Indexed in SCI)
- XXI. **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 (Journal Indexed in SCI)
- XXII. **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 (Journal Indexed in SCI)
- XXIII. **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 (Journal Indexed in SCI)
- XXIV. **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 (Journal Indexed in SCI)
- XXV. **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 (Journal Indexed in SCI)
- XXVI. **Prediction of significant wave height using spatial function**  
Altunkaynak A.  
OCEAN ENGINEERING, vol.106, pp.220-226, 2015 (Journal Indexed in SCI)
- XXVII. **Fuzzy logic-based attenuation relationships of strong motion earthquake records**  
Ahumada A., Altunkaynak A., AYOUB A.  
EXPERT SYSTEMS WITH APPLICATIONS, vol.42, no.3, pp.1287-1297, 2015 (Journal Indexed in SCI)
- XXVIII. **Fuzzy-logic based inelastic displacement ratios of degrading RC structures**  
Ozkul S., AYOUB A., Altunkaynak A.  
ENGINEERING STRUCTURES, vol.75, pp.590-603, 2014 (Journal Indexed in SCI)
- XXIX. **Extended wave power formulation by perturbation theory and its applications**  
Altunkaynak A.  
OCEAN ENGINEERING, vol.88, pp.46-54, 2014 (Journal Indexed in SCI)
- XXX. **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 (Journal Indexed in SCI)
- XXXI. **Prediction of significant wave height using geno-multilayer perceptron**  
Altunkaynak A.  
OCEAN ENGINEERING, vol.58, pp.144-153, 2013 (Journal Indexed in SCI)
- XXXII. **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 (Journal Indexed in SCI)
- XXXIII. **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 (Journal Indexed in SCI)
- XXXIV. **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 (Journal Indexed in SCI)

## Articles Published in Other Journals

**I. 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 (International Refereed University Journal)

**II. 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 (International Refereed University Journal)

## **Supported Projects**

Altunkaynak A., Project Supported by Higher Education Institutions, Kıyı Üzerinde Dalga Enerjisi Dönüşüm Sistemi Tasarımı ve Optimize Edilmesi, 2014 - 2018

## **Citations**

Total Citations (WOS):907

h-index (WOS):18