

Prof. AYŞE BURCU ALTAN SAKARYA

Personal Information

Office Phone: [+90 0312 210 2477](tel:+9003122102477)

Email: burcuas@metu.edu.tr

Web: <https://avesis.metu.edu.tr/burcuas>

Education Information

Doctorate, Arizona State University, Civil And Environmental Engineering, United States Of America 1996 - 1998

Post Graduate, Middle East Technical University, Faculty of Engineering, Department of Civil Engineering, Turkey 1991 - 1994

Foreign Languages

English, C1 Advanced

Dissertations

Doctorate, Optimal Operation of Water Distribution Systems for Water Quality Purposes, Arizona State University, Civil And Environmental Engineering, 1998

Post Graduate, Numerical Simualtion of A-Type Hydraulic Jumps at Positive Steps, Middle East Technical University, Faculty of Engineering, Department of Civil Engineering, 1994

Research Areas

Civil Engineering, Hydraulic, Engineering and Technology

Academic Titles / Tasks

Professor, Middle East Technical University, Faculty of Engineering, Department of Civil Engineering, 2014 - Continues
Associate Professor, Middle East Technical University, Faculty of Engineering, Department of Civil Engineering, 2008 - 2014

Assistant Professor, Middle East Technical University, Faculty of Engineering, Department of Civil Engineering, 2000 - 2008

Lecturer, Middle East Technical University, Faculty of Engineering, Department of Civil Engineering, 1999 - 2000

Research Assistant, Arizona State University, Engineering , Civil And Environmental Engineering, 1996 - 1998

Research Assistant, Middle East Technical University, Faculty of Engineering, Department of Civil Engineering, 1992 - 1996

Advising Theses

ALTAN SAKARYA A. B. , Leakage optimization of water distribution networks by pressure control, Doctorate,

E.KÖKER(Student), 2018

ALTAN SAKARYA A. B. , Determination of optimum cropping pattern of irrigation fields, Post Graduate,

C.ÖZCAN(Student), 2017

ALTAN SAKARYA A. B. , Optimization of water distribution networks using mixed-integer linear programming, Post Graduate, E.UZUN(Student), 2016

ALTAN SAKARYA A. B. , Maximizing energy generation of a cascade hydropower system, Post Graduate,

V.KARAEREN(Student), 2014

ALTAN SAKARYA A. B. , Numerical modelling of contracted sharp crested weirs, Post Graduate, A.DURU(Student), 2014

ALTAN SAKARYA A. B. , Determination of optimum capacity and operation of reservoirs for irrigation purposes, Post Graduate, T.EMRE(Student), 2014

ALTAN SAKARYA A. B. , Chance constrained optimization of booster disinfection in water distribution networks, Post Graduate, E.KÖKER(Student), 2011

ALTAN SAKARYA A. B. , Optimal management of coastal aquifers using heuristic algorithms, Doctorate,

K.DEMİRBAŞ(Student), 2011

ALTAN SAKARYA A. B. , Booster disinfection in water distribution networks, Post Graduate, Ç.SERT(Student), 2009

ALTAN SAKARYA A. B. , AYDIN İ., Experimental investigation on sharp crested rectangular weirs, Post Graduate,

H.ÇİĞDEM(Student), 2009

ALTAN SAKARYA A. B. , Optimum design of slurry pipelines, Post Graduate, B.YILDIZ(Student), 2009

ALTAN SAKARYA A. B. , Optimization of multireservoir systems by genetic algorithm, Doctorate, O.HINÇAL(Student), 2008

ALTAN SAKARYA A. B. , Optimal channel design, Post Graduate, B.AKSOY(Student), 2003

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

- **Numerical modelling of contracted sharp-crested weirs and combined weir and gate systems**
Altan-Sakarya A. B. , KÖKPİNAR M. A. , Duru A.
IRRIGATION AND DRAINAGE, 2020 (Journal Indexed in SCI)
- **Optimal scheduling of booster disinfection in water distribution networks**
Sert C., ALTAN SAKARYA A. B.
CIVIL ENGINEERING AND ENVIRONMENTAL SYSTEMS, vol.34, pp.278-297, 2017 (Journal Indexed in SCI)
- **Assessment of sediment yield estimations for large watershed areas: a case study for the Seyhan, Demirkopru and Hirfanli reservoirs in Turkey**
Kokpınar M. A. , Altan-Sakarya A. B. , KUMCU Ş. Y. , GÖĞÜŞ M.
HYDROLOGICAL SCIENCES JOURNAL-JOURNAL DES SCIENCES HYDROLOGIQUES, vol.60, pp.2189-2203, 2015 (Journal Indexed in SCI)
- **Weir velocity formulation for sharp-crested rectangular weirs**
GHARAJEH S., AYDIN İ., Altan-Sakarya A. B.
FLOW MEASUREMENT AND INSTRUMENTATION, vol.41, pp.50-56, 2015 (Journal Indexed in SCI)
- **Chance Constrained Optimization of Booster Chlorination in Water Distribution Networks**
Köker E., Altan-Sakarya A. B.
Clean - Soil, Air, Water, vol.43, pp.717-723, 2015 (Journal Indexed in SCI)
- **Optimum design of slurry pipelines by genetic algorithm**
Yildiz B., ALTAN SAKARYA A. B. , Ger A. M.
CIVIL ENGINEERING AND ENVIRONMENTAL SYSTEMS, vol.31, pp.311-330, 2014 (Journal Indexed in SCI)
- **Computation of discharge for simultaneous flow over weirs and below gates (H-weirs)**
ALTAN SAKARYA A. B. , Kokpınar M. A.
FLOW MEASUREMENT AND INSTRUMENTATION, vol.29, pp.32-38, 2013 (Journal Indexed in SCI)
- **Optimal dewatering of an excavation site**
Demirbas K., Altan-Sakarya A. B. , Önder H.
Proceedings of the Institution of Civil Engineers: Water Management, vol.165, pp.327-337, 2012 (Journal Indexed

in SCI)

● **Discharge formula for rectangular sharp-crested weirs**

AYDIN İ., Altan-Sakarya A. B. , ŞİŞMAN Ç.

FLOW MEASUREMENT AND INSTRUMENTATION, vol.22, pp.144-151, 2011 (Journal Indexed in SCI)

● **Optimization of Multireservoir Systems by Genetic Algorithm**

Hinçal O., Altan-Sakarya A. B. , Ger A. M.

Water Resources Management, vol.25, pp.1465-1487, 2011 (Journal Indexed in SCI)

● **Local energy losses at positive and negative steps in subcritical open channel flows**

Tokyay N. D. , Altan-Sakarya A. B.

Water SA, vol.37, pp.237-244, 2011 (Journal Indexed in SCI)

● **Application of a flow-measurement structure for sediment-laden streams**

GÖĞÜŞ M., Gerek Cüneyt A., Burcu Altan-Sakarya A. B.

Canadian Journal of Civil Engineering, vol.36, pp.1539-1543, 2009 (Journal Indexed in SCI)

● **Numerical simulation of minimum B-jumps at abrupt drops**

Tokyay N. D. , Altan-Sakarya A. B. , Eski E.

International Journal for Numerical Methods in Fluids, vol.56, pp.1605-1623, 2008 (Journal Indexed in SCI)

● **Discussion of "Uniform and critical flow computations" by Ramappa G. Patil, J. S. R. Murthy, and L. K. Ghosh**

Altan-Sakarya A. B.

JOURNAL OF IRRIGATION AND DRAINAGE ENGINEERING, vol.132, pp.634, 2006 (Journal Indexed in SCI)

● **Performance of slit weir**

AYDIN İ., Altan-Sakarya A. B. , Ger A. M.

Journal of Hydraulic Engineering, vol.132, pp.987-989, 2006 (Journal Indexed in SCI)

● **Optimal lined channel design**

Aksoy B., Altan-Sakarya A. B.

Canadian Journal of Civil Engineering, vol.33, pp.535-545, 2006 (Journal Indexed in SCI)

● **Discussion of "Generalized head-discharge equation for flow over sharp-crested inclined inverted V-notch weir" by M. N. Shesha prakash and A. V Shivapur**

Altan-Sakarya A. B.

JOURNAL OF IRRIGATION AND DRAINAGE ENGINEERING, vol.132, pp.80-81, 2006 (Journal Indexed in SCI)

● **Closure to "optimal operation of water distribution pumps considering water quality"**

ALTAN SAKARYA A. B. , Mays L. W.

Journal of Water Resources Planning and Management, vol.129, pp.82, 2003 (Journal Indexed in SCI)

● **Discussion of Combined free Flow Over Weirs and Below Gates**

ALTAN SAKARYA A. B. , AYDIN İ., GER A. M.

JOURNAL OF HYDRAULIC RESEARCH, vol.42, pp.557-560, 2002 (Journal Indexed in SCI Expanded)

● **Optimal operation of water distribution pumps considering water quality**

Sakarya A. B. , Mays L. W.

Journal of Water Resources Planning and Management, vol.126, pp.210-220, 2000 (Journal Indexed in SCI)

● **Numerical simulation of A-type hydraulic jumps at positive steps**

Sakarya A. B. , TOKYAY N.

Canadian Journal of Civil Engineering, vol.27, pp.805-813, 2000 (Journal Indexed in SCI)

Books & Book Chapters

● **Optimal Operation of Water Distribution Systems**

Goldman F. E. , Altan Sakarya A. B. , Mays L. W.

in: Urban Water Supply Management Tools, Larry W. Mays, Editor, McGraw-Hill Companies , New-York, pp.1-29, 2004

● **Optimal Operation of Water Systems**

Goldman F. E. , Altan Sakarya A. B. , Mays L. W.

in: Urban Water Supply Handbook, Larry W. Mays, Editor, McGraw-Hill Companies , New-York, pp.1-39, 2002

● **Reliability Analysis for Design**

Goulter I., Walski T. M. , Mays L. W. , Altan Sakarya A. B. , Bouchart F., Tung Y. K.

in: Water Distribution Systems Handbook, Larry W. Mays, Editor, McGraw-Hill Companies , New-York, pp.1-52, 2000

● **Optimization Models for Operations**

Goldman F., Altan Sakarya A. B. , Ormsbee L. E. , Uber J. G. , Mays L. W.

in: Water Distribution Systems Handbook, Larry W. Mays, Editor, McGraw-Hill Companies , New-York, pp.1-47, 2000

Refereed Congress / Symposium Publications in Proceedings

● **Kaskat Baraj Sistemlerinde Kısa Dönemli Taşkın Kontrolü İçin Metasezgisel Bir Yöntem**

ALTAN SAKARYA A. B. , buhan s., güvengir u., SAVAŞANERİL TÜFEKÇİ S.

39. Yöneylem Araştırması ve Endüstri Mühendisliği (YAEM) Ulusal Kongresi, Ankara, Turkey, 12 - 14 June 2019

● **Optimization of booster disinfection stations in water distribution networks**

SERT Ç., ALTAN SAKARYA A. B.

Euro 2018 The Association of European Operational Research, 8 - 11 July 2018

● **Numerical modelling of contracted sharp crested weirs**

Duru A., Altan-Sakarya A. B. , Kokpınar M.

4th European Congress of the International Association of Hydroenvironment engineering and Research, IAHR 2016, Liege, Belgium, 27 - 29 July 2016, pp.601-608

● **Optimization of Leakage in Water Distribution Networks Using Pressure Reducing Valve**

KÖKER E., ALTAN SAKARYA A. B.

Euro The Association of European Operational Research Societies, 3 - 06 July 2016

● **Experimental Investigation of the Anti Vortex Devices of Beyhan 1 Dam and Hydroelectric Power Plant Water Intake Structure**

GÖĞÜŞ M., ALTAN SAKARYA A. B. , KÖKEN M.

World Multidisciplinary Civil Engineering-Architecture-Urban Planning Symposium 2016, WMCAUS 2016, PRAG, Czech Republic, 13 - 17 June 2016

● **Experimental Investigation of the Original Project of Yukari Kaleköy Dam and Hydroelectric Power Plant Spillway**

GÖĞÜŞ M., ALTAN SAKARYA A. B. , KÖKEN M.

World Multidisciplinary Civil Engineering-Architecture-Urban Planning Symposium 2016, WMCAUS 2016, PRAG, Czech Republic, 13 - 17 June 2016

● **Experimental Investigation of the Original Project of Yukari Kaleköy Dam and Hydroelectric Power Plant Spillway**

GÖĞÜŞ M., Altan-Sakarya A. B. , KÖKEN M.

World Multidisciplinary Civil Engineering-Architecture-Urban Planning Symposium (WMCAUS), Prague, Czech Republic, 13 - 17 June 2016, vol.161, pp.313-317

● **Sulama Amaçlı Rezervuarlarda İşletme Çalışması Yapılması ve Optimum Rezervuar Kapasitesinin Belirlenmesi**

ERDİN T. E. , ALTAN SAKARYA A. B.

IMO 4. SU YAPILARI SEMPOZYUMU, Antalya, Turkey, 19 - 21 November 2015

● **Yukarı Kaleköy Barajı HES Dolusavak Hidrolik Model Deneyleri**

GÖĞÜŞ M., ALTAN SAKARYA A. B. , KÖKEN M., DİNÇER A. E. , YAVUZ C., HASPOLAT E.

IMO Su Yapıları Sempozyumu, Turkey, 19 - 21 November 2015

● **MAXIMIZING ENERGY GENERATION OF A CASCADE HYDROPOWER SYSTEM**

Karaeren V., ALTAN SAKARYA A. B.

- 36th IAHR World Congress, Delft, Netherlands, 28 June - 03 July 2015, pp.1336-1347
Experimental Investigation of Flow Conditions over Cambasi Dam Spillway
ALTAN SAKARYA A. B. , AYDIN İ., GÖĞÜŞ M., KÖKEN M.
35th World Congress of the International-Association-for-Hydro-Environment-Engineering-and-Research (IAHR), Chengdu, China, 8 - 13 September 2013, pp.5748-5755
- **Reservoir Sedimentation in the Demirköprü Dam, Turkey**
Altan Sakarya A. B. , Göğüş M., Kokpınar M. A. , Kumcu Ş. Y.
River Flow 2010, International Conference on Fluvial Hydraulics, September 8-10, 2010, Braunschweig, Germany, 8 - 10 September 2010
- **Combined simulation-optimization of a coastal aquifer by using Genetic Algorithm**
DEMİRBAŞ K., ALTAN SAKARYA A. B. , Onder H.
6th International Symposium on Environmental Hydraulics, Athens, Greece, 23 - 25 June 2010, vol.2, pp.661-666
- **Optimal operation of water distribution systems for water quality purposes**
Sakarya A. B. , Mays L. W.
29th Annual Water Resources Planning and Management Conference, WRPMD 1999, Tempe, AZ, United States Of America, 6 - 09 June 1999
- **New methodologies for optimal operation of water distribution systems for water quality purposes**
Sakarya A. B. , Goldman F., Mays L.
7th International Conference on Hydraulic Engineering Software (Hydrosoft 98), VILLA OLMO, Italy, 01 September 1998, vol.4, pp.101-110

Supported Projects

Buhan S., Altan Sakarya A. B. , Savaşaneril Tüfekci S., Project Supported by Other Official Institutions, Akım Tahmin ve Havza Optimizasyon Modeli, 2018 - 2019

Muhammetoğlu H., Muhammetoğlu A., Karadirek İ. E. , Altan Sakarya A. B. , TUBITAK Project, Turistik Bölgelerde Otomatik Okuma Sayaçları Kullanılarak Fiziki Su Kayıplarının Yüksek Hassasiyetle Belirlenmesi ve Yönetimi Antalya Kaleiçi Uygulaması, 2014 - 2018

ALTAN SAKARYA A. B. , Project Supported by Other Private Institutions, YUKARI KALEKÖY BARAJI VE HES DOLUSAVAK HİDROLİK MODEL ÇALIŞMALARI 2, 2014 - 2015

Citations

Total Citations (WOS):244

h-index (WOS):8