

ALPHANUMERIC JOURNAL

Volume 5, Issue 2, 2017

*The Journal of Operations Research, Statistics, Econometrics and
Management Information Systems*

Editors

Bahadır Fatih YILDIRIM

bahadirfyildirim@alphanumericjournal.com

Production Editor

Hüseyin BURGAZOĞLU

h.burgazoglu@alphanumericjournal.com

Sümeýra UZUN

sumeyrauzun@alphanumericjournal.com

ISSN 2148-2225

<http://www.alphanumericjournal.com/>

<http://dergipark.gov.tr/alphanumeric>



**Alphanumeric Journal is a “Peer-Reviewed
International Journal”.**

**The journal is semiannually published
in June and December.**

Alphanumeric Journal indexed by,



and accessible from,



ALPHANUMERIC JOURNAL

Volume 5, Issue 2, 2017

EDITORIAL BOARD

Honorary Editors

- [David F. McAllister](#), *NC State University, USA*
- [Lyn Thomas](#), *University of Southampton, UK*
- [Myron Hlynka](#), *University of Windsor, Ontario, Canada*

Advisory Editors

- [Ignacio Castillo](#), *Wilfrid Laurier University, Ontario, Canada*
- [Jaya Bishwal](#), *University of North Carolina at Charlotte, Charlotte, USA*
- [Jose Luis Alfaro Navarro](#), *University of Castilla-La Mancha, Real, Spain*
- [Konrad Kulakowski](#), *AGH University of Science and Technology, Kraków, Poland*
- [Miguel Ángel Goberna Torrent](#), *University of Alicante, Spain*
- [Mohd Lazim Abdullah](#), *Universiti Malaysia Terengganu, Malaysia*
- [Lapo Governi](#), *Università degli Studi di Firenze, Italy*
- [Qinan Wang](#), *Nanyang Technological University, Singapore*
- [Rajmund Mirdala](#), *Technical University of Kosice, Kosice, Slovak Republic*
- [Rocco Furferi](#), *University of Florence, Firenze, Italy*
- [S. Senthil](#), *Kamaraj College of Engineering and Technology, Virudhunagar, India*
- [Tadashi Dohi](#), *Hiroshima University, Japan*
- [Zeshui Xu](#), *Sichuan University, Chengdu, P. R. China*

Area Editors

- [A. Neyran ORHUNBİLGE](#), *Istanbul University, Istanbul, Turkey*
- [Bilge ACAR BOLAT](#), *Istanbul University, Istanbul, Turkey*
- [Burak GÜRİŞ](#), *Istanbul University, Istanbul, Turkey*
- [Burcu ADIGÜZEL MERCANGÖZ](#), *Istanbul University, Istanbul, Turkey*
- [Burcu KIRAN](#), *Istanbul University, Istanbul, Turkey*
- [Cavit YEŞİLYURT](#), *Atatürk University, Kars, Turkey*
- [Cengiz KAHRAMAN](#), *Istanbul Technical University, Istanbul, Turkey*
- [Coşkun HAMZAÇEBİ](#), *Karadeniz Technical University, Trabzon, Turkey*
- [Çiğdem ARICIGİL ÇİLAN](#), *Istanbul University, Istanbul, Turkey*
- [Dilek ALTAŞ](#), *Marmara University, Istanbul, Turkey*
- [Emine Ebru AKSOY](#), *Gazi University, Ankara, Turkey*
- [Emrah ÖNDER](#), *Istanbul University, Istanbul, Turkey*
- [Erdoğan ÖZTÜRK](#), *Suleyman Demirel University, Isparta, Turkey*
- [Ergün EROĞLU](#), *Istanbul University, Istanbul, Turkey*
- [Erhan ÖZDEMİR](#), *Istanbul University, Istanbul, Turkey*
- [Esma Nur ÇİNİCİOĞLU](#), *Istanbul University, Istanbul, Turkey*

- Fatih ÇEMREK, *Eskişehir Osmangazi University, Eskişehir, Turkey*
- Fatih ECER, *Afyon Kocatepe University, Afyon, Turkey*
- H. Öner ESEN, *Istanbul University, Istanbul, Turkey*
- H. Zafer YÜKSEL, *University of Massachusetts Boston, USA*
- Hakan DEMİRGİL, *Suleyman Demirel University, Isparta, Turkey*
- Halim KAZAN, *Istanbul University, Istanbul, Turkey*
- Hamdi EMEÇ, *Dokuz Eylül University, Izmir, Turkey*
- İlker Murat AR, *Karadeniz Technical University, Trabzon, Turkey*
- İrfan ERTUĞRUL, *Pamukkale University, Denizli, Turkey*
- Koorosh Gharehbaghi, *RMIT University, Australia*
- L. Sinem SARUL, *Istanbul University, Istanbul, Turkey*
- M. Erdal BALABAN, *Istanbul University, Istanbul, Turkey*
- M. Vedat PAZARLIOĞLU, *Dokuz Eylül University, Izmir, Turkey*
- Mahmut ERDOĞAN, *Gumushane University, Gumushane, Turkey*
- Mahmut ZORTUK, *Dumlupınar University, Kutahya, Turkey*
- Mehpare TİMOR, *Istanbul University, Istanbul, Turkey*
- Miguel Angel Bautista Martin, *University of Barcelona, Spain*
- Mustafa CAN, *Istanbul University, Istanbul, Turkey*
- Nazif ÇALIŞ, *Adiyaman University, Adiyaman, Turkey*
- Necmi GÜRSAKAL, *Uludağ University, Bursa, Turkey*
- Neslihan FİDAN, *Istanbul University, Istanbul, Turkey*
- Nezh Metin ÖZMUTAF, *Izmir Katip Celebi University, Izmir, Turkey*
- Nihat TAŞ, *Istanbul University, Istanbul, Turkey*
- Nilgün ÇİL, *Istanbul University, Istanbul, Turkey*
- Oğuz AKBİLGİÇ, *University of Tennessee, Canada*
- Ötüken SENGER, *Kafkas University, Kars, Turkey*
- Özgür ÇAKIR, *Marmara University, Istanbul, Turkey*
- Özlem KUVAT, *Balikesir University, Balikesir, Turkey*
- Rauf NİŞEL, *Marmara University, Istanbul, Turkey*
- Reşat KASAP, *Gazi University, Ankara, Turkey*
- Sadi Evren ŞEKER, *Istanbul Medeniyet University, Istanbul, Turkey*
- Seda TOLUN, *Istanbul University, Istanbul, Turkey*
- Selahattin GÜRİŞ, *Marmara University, Istanbul, Turkey*
- Selim BAŞAR, *Ataturk University, Erzurum, Turkey*
- Seung Hyun BAEK, *Hanyang University, South Korea*
- Seyhan NİŞEL, *Istanbul University, Istanbul, Turkey*
- Sinan SARAÇLI, *Afyon Kocatepe University, Afyon, Turkey*
- Sona MARDİKYAN, *Bogazici University, Istanbul, Turkey*
- Şakir ESNAF, *Istanbul University, Istanbul, Turkey*
- Şebnem AKAL, *Marmara University, Istanbul, Turkey*
- Şebnem ER, *University of Cape Town, South Africa*
- Tunçhan CURA, *Istanbul University, Istanbul, Turkey*
- U. Tuğba ŞİMŞEK GÜRSOY, *Istanbul University, Istanbul, Turkey*
- Ulaş AKKÜÇÜK, *Bogazici University, Istanbul, Turkey*
- Vincent F. YU, *National Taiwan University of Science and Technology, Taiwan*
- Yeliz YALÇIN, *Gazi University, Ankara, Turkey*

ALPHANUMERIC JOURNAL

Volume 5, Issue 2, 2017

CONTENTS

171-190

[Multi Criteria Decision Making Methods Approach to Asynchronous Electric Motor Selection](#)

Asenkron Elektrik Motoru Seçimine Çok Kriterli Karar Verme Teknikleri Yaklaşımı

Gökce Yüce, İzzettin Temiz

191-206

[The Relationship between Socio-Economic Development, Corruption and Health Indicators: Application of Partial Least Squares Structural Equation Modeling](#)

Sosyo-Ekonomik Kalkınma, Yolsuzluk ve Sağlık Göstergeleri Arasındaki İlişki: Kısmi En Küçük Kareler Yapısal Eşitlik Modeli Uygulaması

Özlem Yorulmaz

207-214

[Returned Product Acquisition Pricing by Adaptive Neuro Fuzzy Inference System](#)

Adaptif Sinir Ağına Dayalı Bulanık Çıkarım Sistemi İle Dönen Ürünlerin Fiyatlandırılması

Yusuf Kuvvetli

215-228

[Determination of The Factors Affecting The Success of The Students of Econometry Department: Manisa Celal Bayar University Sample](#)

Ekonometri Bölümü Öğrencilerinin Başarılarını Etkileyen Faktörlerin Belirlenmesi: Manisa Celal Bayar Üniversitesi Örneği

Rıdvan Keskin, Aynur İncekırık

229-270

[Current Application Fields of ELECTRE and PROMETHEE: A Literature Review](#)

ELECTRE ve PROMETHEE'nin Güncel Uygulama Alanları: Bir Alanyazın Taraması

Hasan Durucasu, Ahmet Aytekin, Bilal Saraç, Erhan Orakçı

271-282

[Determination of Optimal Vehicle Selection of Logistics Companies with AHP-ARAS Hybrid Method](#)

AHP-ARAS Hibrit Yöntemi ile Lojistik İşletmelerinin En Uygun Araç Seçimi

Hakan Murat Aslan

283-292

[Classification of Gene Samples Using Pair-Wise Support Vector Machines](#)

Gen Örneklerinin Eşli Destek Vektör Makinesi ile Sınıflandırılması

Engin Taş

293-308

[Investigation of Turkey's Provinces by Sexual Crimes](#)

Türkiye'deki İllerin Cinsel Suçlar Açısından İncelenmesi

Hülya Şen, Kübra Yazıcı

309-316

[Examination of Affecting Variables for Youth Unemployment with Cointegration Analysis](#)

Eşbütünlük Analizi İle Genç İşsizliği Etkileyen Değişkenlerin Araştırılması

Erkan Arı, Ayşegül Yıldız

317-328

[A Hybrid Multi-Criteria Analysis Approach for the Assessment of Renewable Energy Resources Under Uncertainty](#)

Yenilenebilir Enerji Kaynaklarının Belirsizlik Altında Değerlendirilmesi İçin Bir Hibrit Çok Kriterli Analiz Yaklaşımı

Fatih Tüysüz

ALPHANUMERIC JOURNAL

Volume 5, Issue 2, 2017

CONTENTS

329-338

[Application of Seasonal and Multivariable Grey Prediction Models for Short-Term Load Forecasting](#)

Kısa Dönem Yük Tahmini için Mevsimsel ve Çok Değişkenli Gri Tahmin Modellerinin Uygulanması

Tuncay Özcan

339-352

[The Evaluation of Container Terminal Efficiency Using by Cluster and Data Envelopment Analysis \(DEA\)](#)

Kümeleme ve Veri Zarflama Analizi (VZA) ile Konteyner Terminal Etkinliklerinin Belirlenmesi

Aynur Acer, Mehpere Timor