

## **Assoc. Prof. BURCU ÇAĞLAR GENÇOSMAN**

### **Personal Information**

**Office Phone:** [+90 224 294 0916](tel:+902242940916)

**Email:** burcucaglar@uludag.edu.tr

**Web:** <https://avesis.uludag.edu.tr/burcucaglar>

### **International Researcher IDs**

ScholarID: So8W9GAAAAAJ

ORCID: 0000-0003-0159-8529

Publons / Web Of Science ResearcherID: AAG-8600-2021

ScopusID: 56263661900

Yoksis Researcher ID: 156677

### **Education Information**

Doctorate, Bursa Uludağ University, FEN BİLİMLERİ ENSTİTÜSÜ, Endüstri Mühendisliği (Dr), Turkey 2009 - 2014

Postgraduate, Bursa Uludağ University, FEN BİLİMLERİ ENSTİTÜSÜ, Endüstri Mühendisliği (YI) (Tezli), Turkey 2006 - 2009

Undergraduate, Bursa Uludağ University, MÜHENDİSLİK FAKÜLTESİ, Endüstri Mühendisliği Bölümü, Turkey 2002 - 2006

### **Foreign Languages**

English, C2 Mastery

### **Dissertations**

Doctorate, Ardışık makinelerde çoklu operasyona sahip işlerin eş zamanlı çizelgelenmesi, Bursa Uludağ University, FEN BİLİMLERİ ENSTİTÜSÜ, Endüstri Mühendisliği (Dr), 2014

Postgraduate, İnternet madenciliğinde istatistiksel metodların uygulanması, Bursa Uludağ University, FEN BİLİMLERİ ENSTİTÜSÜ, Endüstri Mühendisliği (YI) (Tezli), 2009

### **Research Areas**

Computer Vision, Computer Learning, Pattern Recognition and Image Processing, Neural Networks, Optimization Theory and Methods, Linear Programming, Heuristic Methods, Integer and Mixed Integer Programming, Scheduling, Optimization

### **Academic Titles / Tasks**

Research Assistant, Bursa Uludağ University, MÜHENDİSLİK FAKÜLTESİ, ENDÜSTRİ MÜHENDİSLİĞİ, 2006 - Continues

## Courses

- Constraint Programming, Postgraduate, 2021 - 2022  
Araştırma Teknikleri ve Yayın Etiği , Postgraduate, 2021 - 2022  
Applied Mathematical Modeling, Undergraduate, 2020 - 2021  
VERİMLİLİK VE DEĞER ANALİZİ, Undergraduate, 2017 - 2018  
OPERATIONS RESEARCH I, Undergraduate, 2017 - 2018

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

- I. **Exact optimization and decomposition approaches for shelf space allocation**  
ÇAĞLAR GENÇOSMAN B., Begen M. A.  
European Journal of Operational Research, vol.299, pp.432-447, 2022 (SCI-Expanded)
- II. **Characterization of Syrian refugees with work permit applications in Turkey: A data mining based methodology**  
Gencosman B. C., İNKAYA T.  
EXPERT SYSTEMS WITH APPLICATIONS, vol.180, 2021 (SCI-Expanded)
- III. **Prediction of Polycyclic Aromatic Hydrocarbons (PAHs) Removal from Wastewater Treatment Sludge Using Machine Learning Methods**  
ÇAĞLAR GENÇOSMAN B., EKER ŞANLI G.  
WATER AIR AND SOIL POLLUTION, vol.232, no.3, 2021 (SCI-Expanded)
- IV. **Hybrid radial basis function neural networks for urban traffic signal control**  
Çağlar Gençosman B.  
JOURNAL OF ENGINEERING RESEARCH, vol.8, no.4, pp.153-168, 2020 (SCI-Expanded)
- V. **Scheduling Methods for Efficient Stamping Operations at an Automotive Company**  
ÇAĞLAR GENÇOSMAN B., Begen M. A., ÖZMUTLU H. C., Yilmaz I. O.  
PRODUCTION AND OPERATIONS MANAGEMENT, vol.25, no.11, pp.1902-1918, 2016 (SCI-Expanded)
- VI. **Character n-gram application for automatic new topic identification**  
ÇAĞLAR GENÇOSMAN B., ÖZMUTLU H. C., ÖZMUTLU S.  
INFORMATION PROCESSING & MANAGEMENT, vol.50, no.6, pp.821-856, 2014 (SCI-Expanded)
- VII. **Introducing the MCHF/OVRP/SDMP: Multicapacitated/Heterogeneous Fleet/Open Vehicle Routing Problems with Split Deliveries and Multiproducts**  
YILMAZ EROĞLU D., ÇAĞLAR GENÇOSMAN B., ÇAVDUR F., ÖZMUTLU H. C.  
SCIENTIFIC WORLD JOURNAL, 2014 (SCI-Expanded)

## Articles Published in Other Journals

- I. **Advancing Workplace Safety: A Proactive Approach with Convolutional Neural Network for Hand Pose Estimation in Press Machine Operations**  
Atmaca Ş. A., Hamad H., Çağlar Gençosman B.  
The European Journal of Research and Development, vol.3, no.4, pp.66-75, 2023 (Peer-Reviewed Journal)
- II. **Raf Atama Yönetimi için Tamsayılı Programlama Destekli Meta-Sezgisel Algoritmalar**  
Bayazıt B., uçarkuş g., ÇAĞLAR GENÇOSMAN B., Beğen M.  
Avrupa Bilim ve Teknoloji Dergisi, no.41, pp.100-117, 2022 (Peer-Reviewed Journal)
- III. **ARITMA ÇAMURLARINDA POLİSİKLİK AROMATİK HİDROKARBONLARIN (PAH'LARIN) GİDERİMLERİNİN VERİ MADENCİLİĞİ YÖNTEMLERİ İLE TAHMİNİ**  
Çağlar Gençosman B., Eker Şanlı G.  
Uludağ University Journal of The Faculty of Engineering, vol.26, no.1, pp.233-252, 2021 (Peer-Reviewed Journal)
- IV. **Bir Otomasyon Teknolojileri Üreticisinde Standart Zaman Hesaplama ve Montaj Hattı Dengeleme Yazılımı Geliştirilmesi**  
ATAHAN A., KAPUAĞASI M., KOÇ Ü. N., ÇAĞLAR GENÇOSMAN B., İNKAYA T.

- Uludağ University Journal of The Faculty of Engineering, vol.23, pp.263-284, 2018 (Peer-Reviewed Journal)
- V. **Radyal Tabanlı Fonksiyon Ağları Ile Adaptif Trafik Sinyal Kontrolü**  
**ÇAĞLAR GENÇOSMAN B.**  
Journal of Current Researches on Engineering, Science and Technology, 2017 (Peer-Reviewed Journal)
- VI. **DENEYSEL TASARIM İLE SULU ÇÖZELTİLERDEN METAL AYRIŞIMINA ETKİ EDEN FAKTORLERİN OPTİMİZASYONU**  
**ÇAĞLAR GENÇOSMAN B., ORBAK A. Y., ORBAK İ.**  
Uludağ Üniversitesi Mühendislik Fakültesi Dergisi, 2015 (Peer-Reviewed Journal)
- VII. **DENEYSEL TASARIM İLE SULU ÇÖZELTİLERDEN METAL AYRIŞIMINA ETKİ EDEN FAKTORLERİN OPTİMİZASYONU**  
**ÇAĞLAR GENÇOSMAN B., ORBAK A. Y., ORBAK İ.**  
Uludağ University Journal of The Faculty of Engineering, vol.20, no.1, pp.39-49, 2015 (Peer-Reviewed Journal)
- VIII. **Arama Motorlarında Yeni Konu Tanılamada Karakter N gram ve Yapay Sinir Ağları Uygulaması**  
**ÇAĞLAR GENÇOSMAN B., ÖZMUTLU H. C.**  
Mühendislik-Mimarlık Fakültesi Dergisi, vol.2, 2009 (Peer-Reviewed Journal)

## Books & Book Chapters

- I. **Solution Methods for Generalized Flowshop Problems**  
**ÇAĞLAR GENÇOSMAN B.**  
LAP LAMBERT Academic Publishing, Deutschland, 2016
- II. **Automotive Stamping Operations Scheduling Using Mathematical Programming and Constraint Programming**  
**ÇAĞLAR GENÇOSMAN B., ÖZMUTLU H. C., Özkan H., Beğen M.**  
in: Industrial Engineering Non-Traditional Applications in International Settings, Bopaya Bidanda, İhsan Sabuncuoğlu, Bahar Y. Kara, Editor, CRC Press, Taylor and Francis Group, New York, pp.37-69, 2014

## Refereed Congress / Symposium Publications in Proceedings

- I. **Improved Hybrid Genetic-Local Search Algorithm for Simultaneous Feature Selection and Weighting**  
**ÇAĞLAR GENÇOSMAN B., YILMAZ EROĞLU D., Beğen M.**  
Yazılım 2013, Bursa, Turkey, 27 - 28 September 2013, pp.4
- II. **Raf Alanı Tahsisi ve Sergileme Problemi çözümünde Genetik Algoritma**  
Bayazit B., ÇAĞLAR GENÇOSMAN B., Beğen M., uçarkuş g.  
YAEM 2019- 39.Yöneyelem Araştırması ve Endüstri Mühendisliği Ulusal Kongresi, Turkey, 12 - 14 June 2019
- III. **Analysis of Immigrants' Work Permit Applications with Association Rules**  
**ÇAĞLAR GENÇOSMAN B., İNKAYA T.**  
ICONDATA 2018, 4 - 07 October 2018, vol.1
- IV. **Ergonomic Assessment of Manual Handling Tasks in Textile Industry using Digital Human Modeling**  
BOSTANCI A., KARAGÖZ A., KARATAŞ M., ÇAĞLAR GENÇOSMAN B., ÖZALP B. T.  
GJCIE 2018-Global Joint Conference on Industrial Engineering and Its Application Areas, Nevşehir, Turkey, 21 June 2018
- V. **Application of Data Mining Techniques to Immigration Data**  
**ÇAĞLAR GENÇOSMAN B., İNKAYA T.**  
GJCIE-Global Joint Conference on Industrial Engineeringand Its Application Areas, Nevşehir, Turkey, 21 - 22 June 2018, vol.1, pp.11
- VI. **A new genetic algorithm improved with heuristic methods and reinforcement learning to solve the symmetric traveling salesman problem**  
uçarkuş g., ÇAĞLAR GENÇOSMAN B.

- VII. **Adaptive traffic signal control with artificial neural networks**  
ÇAĞLAR GENÇOSMAN B.  
International Conference on Multidisciplinary Sciences, 25 - 26 November 2017
- VIII. **Bir Otomotiv Yan Sanayi Tedarikc isinde Standart Zaman Hesaplama ve Montaj Hattı Dengeleme**  
Koç Ü. N., Kapuağası M., Atahan A., İNKAYA T., ÇAĞLAR GENÇOSMAN B., bakadur g.  
YAEM 2016-Yöneylem Araştırması Endüstri Mühendisliği 36. Ulusal Kongresi, İzmir, Turkey, 13 - 15 July 2016
- IX. **Comparison of Neural Network and Wrapper Methods for Decision Making Acceptance of Fabrics in Quality Control Process**  
YILMAZ EROĞLU D., ÇAĞLAR GENÇOSMAN B.  
GJCIE 2016 - Proceedings of the Global Joint Conference on Industrial Engineering and Its Application Areas, 14 - 15 July 2016
- X. **Comparison of dynamic scheduling approaches Predictive reactive scheduling vs Robust proactive scheduling in a generalized flowshop environment**  
ÇAĞLAR GENÇOSMAN B., YILMAZ EROĞLU D.  
GJCIE 2016 - Proceedings of the Global Joint Conference on Industrial Engineering and Its Application Areas, İstanbul, Turkey, 14 - 15 July 2016
- XI. **Genetic Algorithm Based Hybrid Solution for Feature Selection**  
YILMAZ EROĞLU D., ÇAĞLAR GENÇOSMAN B.  
GJCIE 2016 - Proceedings of the Global Joint Conference on Industrial Engineering and Its Application Areas, İstanbul, Turkey, 14 July 2016
- XII. **Dynamic scheduling of generalized flowshop problems using mathematical programming**  
ÇAĞLAR GENÇOSMAN B., YILMAZ EROĞLU D.  
GJCIE 2016 - Proceedings of the Global Joint Conference on Industrial Engineering and Its Application Areas, İstanbul, Turkey, 14 - 15 July 2016
- XIII. **An iterative mathematical programming algorithm for solving automotive stamping scheduling problem**  
ÇAĞLAR GENÇOSMAN B., ÖZMUTLU H. C., beğen m.  
ICAAMM-International Conference on Applied Analysis and Mathematical Modeling, 8 - 12 June 2015
- XIV. **Decomposition of stamping scheduling problem with multiple operations in consecutive machines**  
ÇAĞLAR GENÇOSMAN B., mehmet b., ÖZMUTLU H. C.  
ICAAMM-International Conference on Applied Analysis and Mathematical Modeling, 8 - 12 June 2015
- XV. **Combined use of Constraint Programming and Mixed Integer Programming: A case study in Stamping Scheduling.**  
ÇAĞLAR GENÇOSMAN B., YILMAZ EROĞLU D., Beğen M.  
INTERNATIONAL CONFERENCE on BUSINESS, MANAGEMENT, ECONOMICS and FINANCE, 4 - 05 October 2013
- XVI. **Performance comparison between Character N-gram and Levenshtein edit-distance for automatic topic identification in search engines**  
ÇAĞLAR GENÇOSMAN B., YILMAZ EROĞLU D., ÖZMUTLU H. C.  
International Software Conference and Exhibition, 27 - 28 September 2013
- XVII. **Production Scheduling Using Constraint Programming**  
ÇAĞLAR GENÇOSMAN B., ÖZMUTLU H. C., Hnich B.  
The 18th International Conference on Principles and Practice of Constraint Programming (CP'12), 8 - 12 October 2012, pp.1-6
- XVIII. **Factor Analysis and Response Surface Optimization for Copper Removal from Aqueous Solutions**  
ÇAĞLAR GENÇOSMAN B., ORBAK A. Y.  
International Conference on Industrial Engineering and Operations Management, IEOM2012, İstanbul, Turkey, 3 - 06 July 2012
- XIX. **Automatic New Topic Identification in Search Engine Transaction Log Using Goal Programming**  
ÇAVDUR F., ÖZMUTLU S., ÖZMUTLU H. C., YILMAZ EROĞLU D., ÇAĞLAR GENÇOSMAN B.  
Proceedings of the 2012 International Conference on Industrial Engineering and Operations Management, 3 - 06

July 2012

- XX. **Endüstride Kullanılan Sulu Çözeltilerden Kadmiyum Ayrışımı için Faktör Analizi ve Cevap Yüzeyi Yöntemi Kullanımı**  
ÇAĞLAR GENÇOSMAN B., ORBAK A. Y., ORBAK İ.  
Yöneylem Araştırması ve Endüstri Mühendisliği 32. Ulusal Kongresi (YAEM2012), İstanbul, Turkey, 20 - 22 June 2012, pp.112-113
- XXI. **Açık Uçlu Araç Rotalama Probleminde Genetik Algoritma Yaklaşımı**  
ÇAĞLAR GENÇOSMAN B., YILMAZ EROĞLU D., ÇAVDUR F., ÖZMUTLU S., ÖZMUTLU H. C.  
Yöneylem Araştırması ve Endüstri Mühendisliği 32. Ulusal Kongresi (YA/EM 2012), Turkey, 20 June 2012
- XXII. **Statistical Procedures for Robotic Assembly Line Balancing Problems**  
ÇAĞLAR GENÇOSMAN B., ÖZMUTLU H. C., ORBAK A. Y., ÖZMUTLU S.  
24th European Conference on Operational Research, EUROXXIV Lisbon 2010, Lisbon, Portugal, 11 - 14 July 2010, pp.166

## Supported Projects

Çağlar Gençosman B., TUBITAK Project, Büyük Ölçekli İşletmeler için Web Tabanlı Önleyici Uyarı ve IOT Veri Analizi Özelliklene Sahip MES Yazılımı Geliştirilmesi (1707 Siparişe Dayalı TÜBİTAK Ar-Ge Projesi), 2022 - 2023  
Çağlar Gençosman B., TUBITAK Project, Raf Alanı Tahsisini ve Sergileme Probleminde Kısıt Programlama Ve Mantık-tabanlı Benders Ayırıştırma Yöntemlerinin Araştırılması (217M920), 2018 - 2020  
İNKAYA T., ÇAĞLAR GENÇOSMAN B., TUBITAK Project, Montaj Hatlarında MTM Analizi ve Hat Dengeleme, 2015 - 2017  
Çağlar Gençosman B., Gençosman F., TUBITAK Project, Adaptif Trafik Yönetimi Yazılımı Geliştirilmesi, 2015 - 2017

## Metrics

Publication: 39  
Citation (WoS): 26  
Citation (Scopus): 34  
H-Index (WoS): 4  
H-Index (Scopus): 4

## Non Academic Experience

Richard Ivey School of Business / The University of Western Ontario