

## Assoc. Prof. MUALLA GONCA AVCI

### Personal Information

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### International Researcher IDs

ScholarID: g99kdGMAAAAJ

ORCID: 0000-0001-7591-1616

Publons / Web Of Science ResearcherID: F-2519-2012

ScopusID: 55257680900

Yoksis Researcher ID: 114120

### Education Information

Doctorate, Dokuz Eylul University, Fen Bilimleri Enstitüsü, Endüstri Mühendisliği (Dr), Turkey 2012 - 2016

Postgraduate, Dokuz Eylul University, Fen Bilimleri Enstitüsü, Endüstri Mühendisliği (YI) (Tezli), Turkey 2009 - 2012

Undergraduate, Dokuz Eylul University, Mühendislik Fakültesi, Endüstri Mühendisliği Bölümü, Turkey 2005 - 2009

### Foreign Languages

English, C1 Advanced

### Dissertations

Doctorate, A decision support system for global supply chain risk management by considering premium freights, Dokuz Eylul University, Fen Bilimleri Enstitüsü, Endüstri Mühendisliği (Dr), 2016

Postgraduate, A fuzzy rule based expert system for stock evaluation and portfolio construction: An application to Istanbul Stock Exchange, Dokuz Eylul University, Fen Bilimleri Enstitüsü, Endüstri Mühendisliği (YI) (Tezli), 2012

### Research Areas

Production and Service Systems, algorithms, Evolutionary Computing, Optimization Theory and Methods, Paving Theory and Applications, Linear Programming, Heuristic Methods, Integer and Mixed Integer Programming, Simulation Optimization, Modelling and Analysis of Production Systems, Service Systems Modeling and Analysis, Placement Analysis, Financial Models and Applications, Risk analysis, Supply Chain and Logistics Management

### Academic Titles / Tasks

Associate Professor, Dokuz Eylul University, Mühendislik Fakültesi, Endüstri Mühendisliği Bölümü, 2023 - Continues

Assistant Professor, Dokuz Eylul University, Mühendislik Fakültesi, Endüstri Mühendisliği Bölümü, 2017 - 2023

Research Assistant, Dokuz Eylul University, Mühendislik Fakültesi, Endüstri Mühendisliği Bölümü, 2010 - 2017

## Academic and Administrative Experience

Deputy Head of Department, Dokuz Eylul University, Mühendislik Fakültesi, Endüstri Mühendisliği Bölümü, 2023 - 2024

## Courses

END 2408 Finansman ve Muhasebe, Undergraduate, 2023 - 2024, 2022 - 2023, 2021 - 2022, 2019 - 2020  
IND 5098 M.Sc. Research, Postgraduate, 2023 - 2024, 2020 - 2021, 2019 - 2020, 2018 - 2019  
IND 3603 Business Economics, Undergraduate, 2023 - 2024, 2022 - 2023, 2021 - 2022, 2020 - 2021, 2019 - 2020, 2018 - 2019  
IND 5099 M.Sc. Thesis, Postgraduate, 2023 - 2024, 2020 - 2021, 2019 - 2020, 2018 - 2019  
IND 3604 Engineering Economics, Undergraduate, 2023 - 2024, 2022 - 2023, 2021 - 2022, 2020 - 2021  
IND 5046 Location Theory, Postgraduate, 2022 - 2023, 2021 - 2022, 2020 - 2021  
END 4717 Seminar, Undergraduate, 2023 - 2024, 2022 - 2023, 2021 - 2022, 2020 - 2021, 2019 - 2020, 2018 - 2019, 2017 - 2018  
END 4894 Bitirme Projesi, Undergraduate, 2023 - 2024, 2022 - 2023, 2021 - 2022, 2020 - 2021, 2019 - 2020, 2018 - 2019, 2017 - 2018  
END 3604 Mühendislik Ekonomisi, Undergraduate, 2023 - 2024, 2022 - 2023, 2021 - 2022, 2020 - 2021, 2019 - 2020, 2018 - 2019  
END 3503 İşletme Ekonomisi, Undergraduate, 2020 - 2021, 2019 - 2020, 2018 - 2019, 2017 - 2018  
END 3906 Lojistik Operasyonların Yönetimi, Undergraduate, 2020 - 2021, 2018 - 2019  
IND 5098 M.Sc. Seminar, Postgraduate, 2020 - 2021, 2019 - 2020  
IND 5096 M.Sc. Seminar, Postgraduate, 2019 - 2020  
END 4703 Yönetim ve Organizasyon, Undergraduate, 2019 - 2020, 2018 - 2019  
END 2404 İstatistik II, Undergraduate, 2018 - 2019, 2017 - 2018  
IND 3906 Logistics Operations Management, Undergraduate, 2017 - 2018

## Advising Theses

Avcı M. G., Location Planning of Wildfire Lookout Towers , Postgraduate, M.TOSUN(Student), Continues  
Avcı M. G., A Metaheuristic Approach for Traveling Repairman Problem with Profits, Postgraduate, C.DURMUŞ(Student), Continues  
Avcı M. G., Zaman pencereli dağıtık beklemesiz akış tipi çizelgeleme problemi için bir çözüm yaklaşımı, Postgraduate, K.MOUSIGHICHI(Student), 2023

## Advising Graduates (Non-Thesis)

Avcı M. G., YAZILIM GELİŞTİRME PROJE YÖNETİMİNDE KRİTERLERE GÖRE SCRUM VE KANBAN ÇERÇEVELERİNİN SEÇİMİ, Masters (Non-Thesis, Evening Education), İ.Bağcı(Student), 2022  
Avcı M. G., AN APPLICATION OF V-MODEL TO AUTOMOTIVE EMBEDDED SOFTWARE DEVELOPMENT PROCESS MANAGEMENT, Masters (Non-Thesis, Evening Education), A.Güçlü(Student), 2021

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

- I. **The wildfire suppression problem with multiple types of resources**  
Avcı M. G., Avcı M., Battarra M., Erdoğan G.  
EUROPEAN JOURNAL OF OPERATIONAL RESEARCH, vol.316, no.2, pp.488-502, 2024 (SCI-Expanded)
- II. **The distributed no-idle permutation flowshop scheduling problem with due windows**  
Mousighichi K., Avcı M. G.  
COMPUTATIONAL & APPLIED MATHEMATICS, vol.43, pp.1-32, 2024 (SCI-Expanded)

- III. **Location and replenishment problems of disaster stations for humanitarian relief logistics along with an application**  
Yörük E., Baykasoğlu A., Avcı M. G.  
Natural Hazards, vol.119, no.3, pp.1713-1734, 2023 (SCI-Expanded)
- IV. **A branch-and-cut approach for the distributed no-wait flowshop scheduling problem**  
Avcı M., AVCI M. G., Hamzadayı A.  
COMPUTERS & OPERATIONS RESEARCH, vol.148, 2022 (SCI-Expanded)
- V. **An empirical analysis of the cardinality constrained expectile-based VaR portfolio optimization problem**  
AVCI M. G., Avcı M.  
Expert Systems with Applications, vol.186, 2021 (SCI-Expanded)
- VI. **An adaptive large neighborhood search approach for multiple traveling repairman problem with profits**  
AVCI M. G., Avcı M.  
COMPUTERS & OPERATIONS RESEARCH, vol.111, pp.367-385, 2019 (SCI-Expanded)
- VII. **Lateral transshipment and expedited shipping in disruption recovery: A mean-CVaR approach**  
AVCI M. G.  
COMPUTERS & INDUSTRIAL ENGINEERING, vol.130, pp.35-49, 2019 (SCI-Expanded)
- VIII. **A multi-objective simulation-based optimization approach for inventory replenishment problem with premium freights in convergent supply chains**  
AVCI M. G., SELİM H.  
OMEGA-INTERNATIONAL JOURNAL OF MANAGEMENT SCIENCE, vol.80, pp.153-165, 2018 (SCI-Expanded)
- IX. **A GRASP with iterated local search for the traveling repairman problem with profits**  
Avcı M., AVCI M. G.  
COMPUTERS & INDUSTRIAL ENGINEERING, vol.113, pp.323-332, 2017 (SCI-Expanded)
- X. **A Multi-objective, simulation-based optimization framework for supply chains with premium freights**  
AVCI M. G., SELİM H.  
EXPERT SYSTEMS WITH APPLICATIONS, vol.67, pp.95-106, 2017 (SCI-Expanded)
- XI. **A multi-agent system model for supply chains with lateral preventive transshipments: Application in a multi-national automotive supply chain**  
AVCI M. G., SELİM H.  
COMPUTERS IN INDUSTRY, vol.82, pp.28-39, 2016 (SCI-Expanded)
- XII. **A Dynamic Maintenance Planning Framework Based on Fuzzy TOPSIS and FMEA: Application in an International Food Company**  
SELİM H., Yunusoglu M. G., Balaman S. Y.  
QUALITY AND RELIABILITY ENGINEERING INTERNATIONAL, vol.32, no.3, pp.795-804, 2016 (SCI-Expanded)
- XIII. **A GRASP based solution approach to solve cardinality constrained portfolio optimization problems**  
BAYKASOĞLU A., Yunusoglu M. G., ÖZSOYDAN F. B.  
COMPUTERS & INDUSTRIAL ENGINEERING, vol.90, pp.339-351, 2015 (SCI-Expanded)
- XIV. **A fuzzy rule based expert system for stock evaluation and portfolio construction: An application to Istanbul Stock Exchange**  
Yunusoglu M. G., SELİM H.  
EXPERT SYSTEMS WITH APPLICATIONS, vol.40, no.3, pp.908-920, 2013 (SCI-Expanded)

### Articles Published in Other Journals

- I. **Orman yangınlarına ilk müdahale ekiplerinin yerleşim planlaması: Aliağa-İzmir örneği**  
Ercan B., Özdim S., Avcı M. G.  
Anadolu Orman Araştırmaları Dergisi, vol.9, no.9, pp.96-103, 2023 (Peer-Reviewed Journal)
- II. **A MATHEMATICAL MODEL FOR THE PARCEL LOCKER LOCATION PROBLEM**

KARABULUT O. A., Seyret M. K., AVCI M. G.

Endüstri Mühendisliği, vol.34, no.1, pp.26-41, 2023 (Peer-Reviewed Journal)

III. **An Integrated Risk Management Framework for Global Supply Chains**

AVCI M. G.

Journal of advanced research in natural and applied sciences (Online), vol.8, no.4, pp.624-640, 2022 (Peer-Reviewed Journal)

IV. **Effectiveness of dynamic pricing strategy in presence of supply chain disruptions**

AVCI M. G.

PAMUKKALE UNIVERSITY JOURNAL OF ENGINEERING SCIENCES-PAMUKKALE UNIVERSITESI MUHENDISLIK BILIMLERI DERGISI, vol.26, no.4, pp.789-798, 2020 (ESCI)

V. **Türkiye deki İmalat İşletmelerinde Risk Farkındalığı ve Risk Yönetimi Uygulamalarına Bakış Tedarik Zinciri Odaklı Bir Analiz**

AVCI M. G., Korkmaz H., SELİM H.

Lojistik, 2010 (Peer-Reviewed Journal)

## Refereed Congress / Symposium Publications in Proceedings

I. **The Wildfire Suppression Problem: coordination of the fire fighting resources**

Battarra M., Avci M. G., Avci M., Erdoğan G.

33rd European Conference on Operational Research (EURO 2024), Kobenhavn, Denmark, 30 June - 03 July 2024, pp.355

II. **Rescheduling Strategies for a Dynamic Visit Scheduling Problem of a Salesperson**

Avci M. G., Akkuş M., Onar A.

37th Conference of the European Chapter on Combinatorial Optimization (ECCO XXXVII), Ghent, Belgium, 6 - 08 June 2024, pp.30

III. **A mathematical programming-based heuristic for the perishable inventory routing problem with product substitution**

Avci M., Avci M. G.

37th Conference of the European Chapter on Combinatorial Optimization (ECCO XXXVII), Ghent, Belgium, 6 - 08 June 2024, pp.52

IV. **Building Wildfire Resilience into the Forest Road Network Design**

Avci M. G.

9th International Symposium and 31st National Conference on Operational Research (HELORS 2023), Athens, Greece, 29 June - 01 July 2023, pp.34

V. **The Wildfire Suppression Problem: Coordination of the firefighting resources**

Avci M. G., Avci M., Battarra M., Erdoğan G.

Optimization Workshop in Logistics, Lecce, Italy, 12 - 14 June 2023, pp.1

VI. **Optimizing Parcel Locker Locations with Pricing Decisions in Last-Mile Delivery**

YUNUSOĞLU P., AVCI M. G.

The International Symposium for Production Research 2022 (ISPR2022), Turkey, 6 - 08 October 2022, pp.641-648

VII. **Kargo Otomati Ağ Tasarımı İçin Bir Matematiksel Model**

Avci M. G., Karabulut O. A., Seyret M. K.

41. YÖNEYLEM ARAŞTIRMASI VE ENDÜSTRİ MÜHENDİSLİĞİ ULUSAL KONGRESİ (YA/EM 2022), Denizli, Turkey, 26 October 2022, pp.111

VIII. **The Distributed No-Idle Flowshop Scheduling Problem with Due Windows**

Mousighichi K., AVCI M. G.

ECCO XXXV - CO 2022 Joint Conference, Russia, 09 June 2022

IX. **Branch-and-cut for the distributed no-wait flowshop scheduling problem**

AVCI M., AVCI M. G., HAMZADAYI A.

ECCO XXXV - CO 2022 Joint Conference, Russia, 09 June 2022

- X. **Portfolio optimization with expectile measure: An application to Borsa Istanbul**  
 AVCI M. G., AVCI M.  
 5th AIROYoung Workshop, Italy, 10 February 2021
- XI. **Effectiveness of Transshipment and Expediting in Disruption Risk Mitigation**  
 AVCI M. G.  
 Operations Research 2019, 3 - 06 September 2019
- XII. **An Adaptive Large Neighborhood Search Approach for Traveling Repairman Problem with Profits**  
 AVCI M. G., AVCI M.  
 Joint EURO/ALIO International Conference 2018 on Applied Combinatorial Optimization, 25 - 27 June 2018
- XIII. **An Iterated Local Search Algorithm for Multiple Traveling Repairman Problem with Profits**  
 AVCI M. G., AVCI M.  
 Annual Workshop of the EURO Working Group on Vehicle Routing and Logistics optimization (VeRoLog 2017), 10 - 12 July 2017
- XIV. **A Multi Objective Simulation Based Optimization Algorithm to Determine Ordering Parameters in Divergent Supply Chains**  
 AVCI M. G., SELİM H.  
 28th European Conference on Operational Research, 3 - 06 July 2016
- XV. **An Iterated Local Search Algorithm for Traveling Repairman Problem with Profits**  
 AVCI M. G., AVCI M.  
 Annual workshop of the EURO working group on Vehicle Routing and Logistics optimization (VeRoLog) 2016, 6 - 08 June 2016
- XVI. **Bir Tedarik Zincirinde Acil Sevkiyatları Dikkate Alarak Uygun Sipariş ve Stok Yönetimi Parametrelerinin Belirlenmesi**  
 YUNUSOĞLU M. G., SELİM H.  
 Yöneyem Araştırması ve Endüstri Mühendisliği Ulusal Kongresi (YAEM 2015), Ankara, Turkey, 9 - 11 September 2015
- XVII. **A Multi Objective Differential Evolution Algorithm to Determine Inventory Replenishment Parameters in a Supply Chain**  
 YUNUSOĞLU M. G., SELİM H.  
 International Conference on Operations Research (OR 2015), Viyana, Austria, 1 - 04 September 2015
- XVIII. **A group decision making based supplier risk assessment framework for multi national supply chains**  
 YUNUSOĞLU M. G., SELİM H.  
 23rd International Conference on Multiple Criteria Decision Making, Hamburg, Germany, 2 - 07 August 2015
- XIX. **An ordering policy to reduce transportation disruption impact on multi echelon supply chain systems**  
 YUNUSOĞLU M. G.  
 Joint International Symposium on CIE44 and IMSS'xx14, İstanbul, Turkey, 14 - 16 October 2014
- XX. **A Dynamic Pricing Strategy under Supplier Disruptions**  
 YUNUSOĞLU M. G., EREN AKYOL D., YILDIZ G.  
 20th Conference of the International Federation of Operational Research Societies, 13 - 18 July 2014
- XXI. **An Intelligent Water Drops Algorithm Combined with Differential Evolution Algorithm for Solving Cardinality Constrained Portfolio Optimization Problems**  
 AVCI M. G., BAYKASOĞLU A., ÖZSOYDAN F. B.  
 26th European Conference on Operational Research, 1 - 04 July 2013
- XXII. **A Dynamic maintenance planning framework based on fuzzy TOPSIS and FMEA A Case study in an International Food Company**  
 SELİM H., AVCI M. G., Karahan B., Güzelcik B.  
 International IIE Conference, 26 - 28 June 2013
- XXIII. **Measuring the Effects of Supply Risks on Supply Chain Partners Inventory Policy A Simulation Study**  
 AVCI M. G., SELİM H.  
 The Operations Research Society OR54 Annual Conference, 4 - 06 September 2012

- XXIV. **CAMELS Performans Değerlendirme Sistemi Kullanılarak Türk Bankacılık Sisteminin Performansının Analizi**  
SELİM H., AVCI M. G.  
Yöneylem Araştırması ve Endüstri Mühendisliği 32. Ulusal Kongresi (YA/EM 2012), Turkey, 20 - 22 June 2012
- XXV. **Assessment of Service Quality in a Private Hospital by Using Servqual Model**  
SELİM H., AVCI M. G.  
13th International Conference on Econometrics, Operations Research and Statistics (ICEOS 2012), 24 - 26 May 2012
- XXVI. **A Fuzzy Rule Based Decision Support System for Stock Evaluation and Portfolio Construction An Application to Istanbul Stock Exchange**  
AVCI M. G., SELİM H.  
The Second International Fuzzy Systems Symposium (FUZZYSS'xx11), 17 - 18 November 2011
- XXVII. **İşletmelerde Risk Farkındalığı ve Risk Yönetimi Uygulamalarına Bakış Türkiye deki İmalat Sektörü Üzerine Bir Değerlendirme**  
YUNUSOĞLU M. G., Korkmaz H., SELİM H.  
29. Yöneylem Araştırması ve Endüstri Mühendisliği Ulusal Kongresi, Turkey, 22 - 24 June 2009

## Supported Projects

- Avcı M. G., Avcı M., Project Supported by Higher Education Institutions, Zengin bozulabilir envanter rotalama problemi için bir çözüm yaklaşımı, 2023 - 2024
- AVCI M. G., SELİM H., Project Supported by Higher Education Institutions, KÜRESEL TEDARİK ZİNCİRİ RİSK YÖNETİMİ İÇİN ACİL SEVKİYATLARI DİKKATE ALAN BİR KARAR DESTEK BİRİMİ, 2015 - 2016
- AVCI M. G., SELİM H., Project Supported by Higher Education Institutions, Çok Kriterli Karar Verme Yaklaşımları Kullanılarak Finansal Risklerin Yönetimi, 2011 - 2012

## Memberships / Tasks in Scientific Organizations

Yöneylem Araştırması Derneği, Member, 2022 - Continues, Turkey

## Metrics

Publication: 46  
Citation (WoS): 268  
Citation (Scopus): 315  
H-Index (WoS): 9  
H-Index (Scopus): 9