

# ibrahimküçükkoç

yardımcı doçent doktor, endüstri mühendisliği

## iletişim

Balıkesir Üniversitesi  
Endüstri Mühendisliği Bölümü  
Çağış Kampüsü, Balıkesir  
Türkiye

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## diller

Türkçe ve İngilizce

## programlar

Java, CPLEX, GAMS,  
Witness, Solidworks

## profil sayfaları

[scopus](#)  
[orcid](#)  
[researchID](#)  
[researchgate](#)  
[google scholar](#)

## google atıf ölçüleri

h-index: 8  
i10-index: 8  
citations: 236

## üyelikler

EUROPT  
SSAISB  
DAAM  
APICS  
OR Society UK  
IBM Academic Initiative

## eğitim

- 2012 – 2015 **Doktora** Endüstri Mühendisliği  
University of Exeter, Exeter, İngiltere  
*Tez: Modelling and Solving Mixed-model Parallel Two-sided Assembly Line Problems*
- 2010 – 2011 **Master** Endüstri Mühendisliği  
Balıkesir Üniversitesi, Balıkesir, Türkiye
- 2009 – 2010 **Master** Endüstri Mühendisliği (*Balıkesir Üni. Yatay Geçiş*)  
Selçuk Üniversitesi, Konya, Türkiye
- 2005 – 2009 **Lisans** Endüstri Mühendisliği  
Selçuk Üniversitesi, Konya, Türkiye

## akademik görevler

- Eyl 2017 – Halen **Yardımcı Doçent**  
Balıkesir Üniversitesi, Endüstri Mühendisliği
- Ara 2015 – Eyl 2017 **Araştırma Görevlisi**  
Balıkesir Üniversitesi, Endüstri Mühendisliği
- Oca 2012 – Ara 2015 **Lisansüstü Araştırmacı**  
University of Exeter, College of Engineering,  
Mathematics and Physical Sciences
- Ara 2009 – Oca 2012 **Araştırma Görevlisi**  
Balıkesir Üniversitesi, Endüstri Mühendisliği

## editöryal görevler

- 2016 – Halen **Alan Editörü**  
An International Journal of Optimization and Control: Theories & Applications
- 2016 – Halen **Editör Kurulu Üyesi**  
Peertechz Journal of Computer Science and Engineering
- 2014 – Halen **Editör Kurulu Üyesi**  
News in Engineering
- 2013 – Halen **Editör Kurulu Üyesi**  
Journal of Computer Sciences and Applications (JCSA)
- 2012 – 2014 **Alan Editörü**  
IAES International Journal of Artificial Intelligence (IJ-AI)
- 2010 – 2016 **Teknik Editör**  
An International Journal of Optimization and Control: Theories & Applications
- 2013 **Co-keynote Editör**  
The OR Society, OR55 Annual Conference, 3-5 Eylül 2013,  
Exeter, UK
- 2013 **Keynote Editör**  
The OR Society, YOR18 Conference, 9-11 Nisan 2013, Exeter, UK

son güncelleme:1 Eyl 2017

## arařtırma alanları

Montaj hattı dengeleme ve üç boyutlu yazıcılarda üretim planlama problemleri dahil üretim sistemlerinin modellenmesi ve optimizasyonu; bu problemlerin sezgisel/meta-sezgisel algoritmalar ve etmen temelli yaklaşımlar kullanılarak çözülmesi.

## burs ve ödüller

TÜBİTAK Uluslararası Bilimsel Yayınları Teşvik Programı  
2013, 2014, 2015, 2016, 2017

Artificial Intelligence, An International Journal (Elsevier)  
AISB 2013 Convention Kayıt Ücreti Ödülü, Nisan 3-5, 2013

YÖK Yurtdışı Doktora Bursu (İngiltere)  
Yüksek Öğretim Kurulu, 01/2012 – 01/2016

Master Bursu  
TÜBİTAK BİDEB – 2210, 09/2010 – 07/2011

## projeler

Mixed Model Assembly Line Balancing Problems and an Application with Genetic Algorithms  
Balıkesir Üniversitesi, Bilimsel Araştırma Projesi, 12/2010 – 07/2011

## yayınlar

Alanımdaki önde gelen dergi ve bilimsel toplantılarda yaptığım yayınlar.

### uluslararası hakemli dergiler (SCI/SCI-E)

Optimising the process parameters of selective laser melting for the fabrication of Ti6Al4V alloy

Li, Z., Kucukkoc, I., Zhang, D. Z., Liu, F.  
Rapid Prototyping Journal, 24(3).  
<http://doi.org/10.1108/RPJ-03-2016-0045>

A mathematical model and artificial bee colony algorithm for the lexicographic bottleneck mixed-model assembly line balancing problem

Kucukkoc, I., Buyukozkan, K., Satoglu, S.I., Zhang, D. Z.  
Journal of Intelligent Manufacturing (to appear).  
<http://doi.org/10.1007/s10845-015-1150-5>

New MILP model and station-oriented ant colony optimization algorithm for balancing U-type assembly lines

Li, Z., Kucukkoc, I., Tang, Q.  
Computers & Industrial Engineering, 2017.  
<http://doi.org/10.1016/j.cie.2017.07.005>

Balancing of mixed-model parallel U-shaped assembly lines considering model sequences

Kucukkoc, I., Zhang, D. Z.  
International Journal of Production Research, 2017.  
<http://doi.org/10.1080/00207543.2017.1312586>

Comprehensive review and evaluation of heuristics and meta-heuristics for two-sided assembly line balancing problem

Li, Z., Kucukkoc, I., Nilakantan, J. M.  
Computers & Operations Research, 84C, pp. 146-161, 2017.  
<http://doi.org/10.1016/j.cor.2017.03.002>

- Production Planning in Additive Manufacturing and 3D Printing  
Li, Q., Kucukkoc, I., Zhang, D. Z.  
Computers & Operations Research, 83C, pp. 157-172, 2017.  
<http://doi.org/10.1016/j.cor.2017.01.013>
- A Lightweight and Support-free Design Method for Selective Laser Melting  
Li, Z., Zhang, D. Z., Dong, P., Kucukkoc, I.  
The International Journal of Advanced Manufacturing Technology (to appear).  
<http://doi.org/10.1007/s00170-016-9509-0>
- Mixed-model Parallel Two-sided Assembly Line Balancing Problem: A Flexible Agent-based Ant Colony Optimization Approach  
Kucukkoc, I., Zhang, D. Z.  
Computers & Industrial Engineering, 97, pp. 58-72, 2016.  
<http://doi.org/10.1016/j.cie.2016.04.001>
- Lexicographic Bottleneck Mixed-model Assembly Line Balancing Problem: Artificial Bee Colony and Tabu Search Approaches with Optimised Parameters  
Buyukozkan, K., Kucukkoc, I., Satoglu, S.I., Zhang, D. Z.  
Expert Systems with Applications, 50, pp. 151-166, 2016.  
<http://doi.org/10.1016/j.eswa.2015.12.018>
- Integrating ant colony and genetic algorithms in the balancing and scheduling of complex assembly lines  
Kucukkoc, I., Zhang, D. Z.  
The International Journal of Advanced Manufacturing Technology, 82(1), pp. 265-285, 2016.  
<http://doi.org/10.1007/s00170-015-7320-y>
- Balancing of parallel U-shaped assembly lines  
Kucukkoc, I., Zhang, D. Z.  
Computers & Operations Research, 64, pp. 233-244, 2016.  
<http://doi.org/10.1016/j.cor.2015.05.014>
- Type-E Parallel Two-Sided Assembly Line Balancing Problem: Mathematical Model and Ant Colony Optimisation based Approach with Optimised Parameters  
Kucukkoc, I., Zhang, D. Z.  
Computers & Industrial Engineering, 84, pp. 56-69, 2015.  
<http://doi.org/10.1016/j.cie.2014.12.037>
- A Mathematical Model and Genetic Algorithm based Approach for Parallel Two-Sided Assembly Line Balancing Problem  
Kucukkoc, I., Zhang, D. Z.  
Production Planning & Control, 26(11), pp. 874-894, 2015.  
<http://doi.org/10.1080/09537287.2014.994685>
- Mathematical Model and Agent Based Solution Approach for the Simultaneous Balancing and Sequencing of Mixed-Model Parallel Two-Sided Assembly Lines  
Kucukkoc, I., Zhang, D. Z.  
International Journal of Production Economics, 158, pp. 314-333, 2014.  
<http://doi.org/10.1016/j.ijpe.2014.08.010>
- Simultaneous balancing and sequencing of mixed-model parallel two-sided assembly lines  
Kucukkoc, I., Zhang, D. Z.  
International Journal of Production Research, 52(12), pp. 3665-3687, 2014.  
<http://doi.org/10.1080/00207543.2013.879618>

Using response surface design to determine the optimal parameters of genetic algorithm and a case study

Kucukkoc, I., Karaoglan, A. D., Yaman, R.

International Journal of Production Research, 51(17), pp. 5039-5054, 2013.

<http://doi.org/10.1080/00207543.2013.784411>

## **uluslararası hakemli dergiler (diğer indeksler)**

A nondominated sorting ant colony optimization algorithm for complex assembly line balancing problem incorporating incompatible task sets

Kucukkoc, I.

Pamukkale University Journal of Engineering Sciences, (in press).

A New Hybrid Genetic Algorithm to Solve More Realistic Mixed-Model Assembly Line Balancing Problem

Kucukkoc, I. and Yaman, R.

International Journal of Logistics Systems and Management, 14(4), (2013), pp. 405-425.

## **uluslararası hakemli bilimsel toplantılar-tam metin**

A non-dominated sorting approach to bi-objective optimisation of mixed-model two-sided assembly lines

Kucukkoc, I.

11th International Conference on Large-Scale Scientific Computations, Sozopol, Bulgaria, June 5-9, 2017, 8 pages (to be published as full text in Springer Lecture Notes in Computer Science).

Scheduling Customized Orders: A Case Study at Best Transformers Company

Ocaktan, M.A. B., Kucukkoc, I., Karaoglan, A. D., Cicibas, A., Buyukozkan, K.

The 6th International Conference on Mechanics and Industrial Engineering (ICMIE'17), Rome, Italy, June 8-10, 2017, ID:118, 8 Pages, DOI:

10.11159/icmie17.118.

Rebalancing of mixed-model two-sided assembly lines with incompatible task groups: An industrial case study

Zhang, D. Z., Kucukkoc, I., Karaoglan, A. D.

46th International Conference on Computers and Industrial Engineering (CIE46), Tianjin, China, October 29-31, 2016, ID:170, 8 pages.

Increasing the utilisation of additive manufacturing and 3D printing machines considering order delivery times

Kucukkoc, I., Li, Q., Zhang, D. Z.

In Grubbström, R.W, Hinterhuber, H.H., (Eds), PrePrints, Vol. 3, 19th International Working Seminar on Production Economics, Innsbruck, Austria, February 22-26, 2016, 195-201.

Multi-objective Optimization of Mixed-model Two-sided Assembly Lines - A Case Study

Kucukkoc, I.

International Conference on Computer Science and Engineering, Tekirdağ, Turkey, 20-23 October 2016, 249-255.

Coping with Model Variations on Parallel U-shaped Assembly Line Configurations

Kucukkoc, I., Zhang, D. Z.

Proceedings of the 15th IFAC/IEEE/IFIP/IFORS Symposium on Information Control in Manufacturing (INCOM 2015), Ottawa, Canada, May 11-13, 2015.

Lexicographic Bottleneck Mixed-model Assembly Line Balancing Problem: an Artificial Bee Colony Approach

Buyukozkan, K., Kucukkoc, I., Zhang, D. Z.

Proceedings of the 44th International Conference on Computers and Industrial

Engineering and IMSS 2014 - 9th International Symposium on Intelligent Manufacturing and Service Systems, Joint International Symposium on "The Social Impacts of Developments in Information, Manufacturing and Service Systems" (CIE 2014), Istanbul, Turkey, October 14-16, 2014, pp. 1213-1227.

**An Agent Based Ant Colony Optimisation Approach for Mixed-Model Parallel Two-Sided Assembly Line Balancing Problem**

Kucukkoc, I., Zhang, D. Z.

Pre-Prints of the Eighteenth International Working Seminar on Production Economics, Innsbruck, Austria, February 24-28, 2014, Volume 3, pp. 313-328.

**Balancing Parallel Two-Sided Assembly Lines via a Genetic Algorithm Based Approach**

Kucukkoc, I., Zhang, D. Z.

Proceedings of the 43rd International Conference on Computers and Industrial Engineering (CIE43), The University of Hong Kong, Hong Kong, October 16-18, 2013, Volume 1, pp. 106-121.

**Balancing Mixed-Model Parallel Two-Sided Assembly Lines**

Zhang, D. Z., Kucukkoc, I.

Proceedings of the International Conference on Industrial Engineering and Systems Management (IEEE-IESM'2013), École Mohammadia d'Ingénieurs de Rabat (EMI), International Institute for Innovation, Industrial Engineering and Entrepreneurship (I4E2) - Rabat, Morocco, October 28-30, 2013, pp. 391-401 (ISBN: 978-2-9600532-4-1).

**Balancing Parallel Two-Sided Assembly Lines with Ant Colony Optimisation Algorithm**

Kucukkoc, I., Zhang, D. Z., Keedwell, E. C.

Proceedings of the 2nd Symposium on Nature-Inspired Computing and Applications (NICA) at Artificial Intelligence and the Simulation of Behaviour (AISB) 2013 Convention, University of Exeter, April 3-5, 2013, pp. 21-28.

## **uluslararası hakemli bilimsel toplantılar (özet)**

**On Applications of Ant Colony Optimisation Techniques in Solving Assembly Line Balancing Problems**

Kucukkoc, I., Zhang, D. Z.,

Keynote Papers and Extended Abstracts Book, OR55 Annual Conference, The OR Society UK, University of Exeter, September 3-5, 2013, pp. 114-120 (Extended Abstract).

**An Improved Ant Colony Optimisation Algorithm for Type-I Parallel Two-Sided Assembly Line Balancing Problem**

Kucukkoc, I., Zhang, D. Z., Keedwell, E. C., Pakgohar, A.

YOR18 Biennial Conference, The OR Society UK, University of Exeter, April 9-11, 2013.

**Generalised Discrete Time-Cost Trade-Off Scheduling Problem in Highway Construction Projects**

Pakgohar, A., Childe, S., Kucukkoc, I., Zhang, D. Z.

YOR18 Biennial Conference, The OR Society UK, University of Exeter, April 9-11, 2013.

## **ulusal hakemli bilimsel toplantılar (tam metin)**

**A New Comsoal Based Heuristic Approach to Mixed-Model Assembly Line Balancing with Parallel Workstations and Zoning Constraints**

Yaman, R., Kucukkoc, I.

Proceedings of the 31th Turkish National Congress on Operations Research and Industrial Engineering, Sakarya Üniversitesi, July 5-7, 2011, pp. 219-230.

## kitaplar

OR55 Keynote Papers and Extended Abstracts (Edited Book)

Kucukkoc, I., Mustafee, N.

OR55 Annual Conference, 2013, The OR Society UK, University of Exeter,  
ISBN: 0903440555.

YOR18 Keynote Papers and Extended Abstracts (Edited Book)

Kucukkoc, I.

YOR18 Biennial Conference, 2013, The OR Society UK, University of Exeter,  
ISBN: 0903440520.

## komite görevleri

Organize Komitesi Üyeliği

48. International Conference on Computers & Industrial Engineering (CIE48),  
2-5 Aralık 2018, Wellington, Yeni Zelanda

19. Ulusal Ergonomi Kongresi, Balıkesir Üniversitesi, 27-29 Eylül 2013,  
Balıkesir, Türkiye

OR55 Annual Conference, The OR Society, 3-5 Eylül 2013, University of  
Exeter, İngiltere

YOR18 Biennial Conference, The OR Society, 9-11 Nisan 2013, University of  
Exeter, İngiltere

Program/Bilim Kurulu Komite Üyeliği

International Conference on Artificial Intelligence and Control Automation  
(AICA2015), 16-17 January 2015, Phuket Island, Thailand

International Conference on Advances in Computing, Communication and  
Control: ICAC3, Ocak 2015, Mumbai

3rd International Conference on Advances in Computing, Communication and  
Control: ICAC3, 18-19 Ocak 2013, Mumbai

## hakemlikler

Information Sciences, Elsevier, 2016 – Halen

International Journal of Production Economics, Elsevier, 2016 – Halen

Computers & Operations Research, Elsevier, 2015 – Halen

Expert Systems with Applications, Elsevier, 2016 – Halen

Applied Soft Computing, Elsevier, 2013 – Halen

Applied Mathematical Modelling, Elsevier, 2015 – Halen

International Journal of Production Research, Taylor & Francis, 2014 – Halen

Assembly Automation (AA), Emerald, 2012 – Halen

Journal of Intelligent Manufacturing, Springer, 2017 – Halen

Engineering Optimization, Taylor & Francis, 2016 – Halen

Journal of Facilities Management (JFM), Emerald, 2013 – Halen

Neural Computing and Applications (NCA), Springer, 2013 – Halen

International Journal of Industrial Engineering: Theory, Applications and Practice,  
2014 – Halen

Production & Manufacturing Research: An Open Access Journal, Taylor & Francis,  
2013 – Halen

The South African Journal of Industrial Engineering (SAJIE), 2013 – Halen

Iberoamerican Journal of Industrial Engineering (IJIE), 2013 – Halen

Journal of Industrial and Management Optimization, 2016 - Present

American Journal of Applied Mathematics and Statistics (AJAMS), 2013 – Halen

American Journal of Science and Technology, AASCIT, 2014 – Halen

Gazi University Journal of Science (GUJS), Part A: Engineering and Innovation,  
2014 – Halen  
International Journal of Renewable Energy Research (IJRER), 2011 – Halen

## **öğretim etkinliği**

### **Balıkesir Üniversitesi**

Verilen Dersler:

EMM4129 – Çizelgeleme, Lisans  
2017/18 Güz

EMM4131 – Popülasyon Temelli Algoritmalar, Lisans  
2017/18 Güz

EMM3115 – İleri Programlama, Lisans  
2017/18 Güz

BMM3101 – Programlama Dilleri, Lisans  
2017/18 Güz

### **University of Exeter**

Asiste edilen dersler:

ECM1101 – Professional Studies and Skills Development  
2014/5 (T2)

ECM3171 – Computer Aided Engineering Drawing  
2014/5 (T1)

ECM2106 – Manufacturing Systems  
2013/4 (T2)

ECM1101 – Professional Studies and Skills Development  
2012/3 (T2)