

## Prof. İHSAN SABUNCUOĞLU

### Personal Information

**Office Phone:** [+90 352 224 8800](tel:+903522248800)

**Fax Phone:** [+90 352 338 8828](tel:+903523388828)

**Web:** <https://avesis.agu.edu.tr/sabun>

**Address:** Abdullah Gül Üniversitesi Sümer Kampüsü, Barbaros Mah. Erkilet Bul. Kocasinan / Kayseri

### Biography

Prof. Dr. İhsan Sabuncuoğlu Abdullah Gül Üniversitesi'nin kurucu rektörü olarak görev yapmaktadır.

Lisans ve Yüksek Lisans derecelerini sırasıyla 1982 ve 1984'te Ortadoğu Teknik Üniversitesi'nde Endüstri Mühendisliği alanında yapmıştır. Doktora derecesini 1990 yılında ABD'de Wichita State Üniversitesi'nde Endüstri Mühendisliği alanında yapmıştır.

Prof. Dr. Sabuncuoğlu doktora çalışmaları esnasında ABD'de Boeing, Pizza Hut ve The National Institute of Health'te çalışmıştır. 2013 yılına kadar Türkiye'nin ilk özel ve kâr amacı gütmeyen üniversitesi olan Bilkent Üniversitesi'nde tam zamanlı öğretim üyesi olarak görev yapmıştır. Aynı zamanda ABD'de Carnegie Mellon Üniversitesi'nde ve Fransa'da Institut Français de Mécanique Avancée (IFMA)'de misafir öğretim üyesi pozisyonlarında bulunmuştur.

Araştırma alanları arasında gerçek zamanlı çizelgeleme, simülasyon tabanlı optimizasyon, akıllı üretim sistemleri, kanser görüntüleme ve güdümlü farmasötik sistemler bulunmaktadır. Araştırmaları TÜBİTAK ve EUREKA (İleri Teknolojiler Alanındaki Şirketler ve Araştırma Kurumları Arasındaki İş birlikleri) vasıtasiyla Avrupa Rekabetçiliğini Teşvik Etme Avrupa-Çapında Girişimi tarafından fonlanmıştır. Prof. Dr. Sabuncuoğlu ayrıca havacılık, otomotiv ve askeri savunma sistemleri konularında önemli sanayi tecrübesine sahiptir. Araştırma projelerine birçok ulusal ve uluslararası şirket tarafından sponsorluk desteği verilmiştir. 28 yıllık kariyeri boyunca Türkiye'deki çok sayıda organizasyon ve kuruluşda danışmanlık hizmeti vermiştir.

Bilimsel çalışmalarıyla uluslararası dergilerde yüzden fazla bilimsel makale, konferans bildirisi ve beş tane editörlü kitap üreten Prof. Dr. Sabuncuoğlu, endüstri mühendisliği ve yöneylem araştırması alanlarında yayın yapan pek çok bilimsel derginin de editörler kurulunda yer almaktadır. Endüstri Mühendisliği Enstitüsü, Yöneylem Araştırması Enstitüsü, Yönetim Bilimleri ve Simülasyon Topluluğu üyesidir. Ayrıca Endüstri Mühendisliği Konseyinde (CIEADH) ve çeşitli diğer mesleki ve sosyal komitelerde üyelikleri bulunmaktadır.

Prof. Dr. Sabuncuoğlu çeşitli idari ve yönetimsel pozisyonlarda 20 yıldan fazla deneyime sahiptir. Bilkent Üniversitesi'nin kurucu ekibinin bir üyesi olarak birçok kuruluşun idari komitesinde çalışmış ve aynı zamanda Endüstri Mühendisliği (IE) Bölümü'nün bölüm başkanlığı görevini yapmıştır. Bölüm başkanlığı sırasında, Endüstri Mühendisliği lisans programı ABET akreditasyonu almış ve Bilkent Üniversitesi tarihte ABET akreditasyonuna sahip Amerikan kökenli olmayan ilk

kuruluş olmuştur. Daha sonra Bilkent Üniversitesinde üniversite-sanayi iş birliği merkezini kurmuş ve 2013'te Abdullah Gül Üniversitesine geçinceye kadar merkezin kurucu direktörü olarak görev yapmıştır.

Abdullah Gül Üniversitesi (AGÜ) 2013 yılında Prof. Dr. İhsan Sabuncuoğlu'nun liderliğinde kurulmuştur. Türk Yükseköğretim Sistemindeki devlet ve vakıf üniversitelerinin ilk karma modelidir. Kurumun genç yaşına rağmen AGÜ halen, Türkiye Yenilikçi ve Girişimci Üniversiteler Endeksinde (200'den fazla üniversite arasında) 12. sırada yer almaktadır. URAP (Akademik Performansa Göre Üniversite Sıralaması)'a göre AGÜ halihazırda Türkiye'de son 20 yılda kurulan 70 üniversite arasında 2. sıradadır.

AGÜ'nün katkısı, Birleşmiş Milletlerin sürdürülebilir kalkınma hedefleri göz önüne alınarak yapılan sıralamada dünya çapında en etkili 101-200 üniversite içerisinde derecelendirilmesi ve ilk 200'deki en genç üniversite olması sebebiyle uluslararası alanda da tanınmaktadır. Toplumsal Etki hedefini yenilikçi üniversite tasarımmının en önemli unsuru olarak tanımlayan AGÜ, "Sürdürülebilir Şehir ve Yaşam Alanları" alt kategorisinde yapılan sıralamada ise büyük bir başarıya imza atarak bütün dünya üniversiteleri arasında 4. olmuştur. AGÜ'nün başarı gösterdiği diğer kategoriler ise İklim (32. sıra) ve Eşitsizliklerin Azaltılması (58. sıra) olarak listelenmiş; toplam 11 alt kategoride yapılan değerlendirmede AGÜ, Nitelikli Eğitim de dahil olmak üzere 4 farklı kategoride Türkiye üniversiteleri arasında en yüksek puanı elde etmiştir.

Prof. Dr. Sabuncuoğlu araştırmalarını global dünyada kurumsal değişimler ve yükseköğretim sistemlerinin yeniden organizasyonu konularında gerçekleştirmektedir. Özellikle, "3. Nesil Üniversite" olarak adlandırılan yeni bir üniversite konseptinin geliştirilmesiyle ilgili çalışmalar yapmaktadır. Bu yeni üniversite modelinin geliştirilmesi için tüm dünyadaki üniversiteler, endüstriler, STK'lar ve kamu kuruluşlarından 700'ün üzerinde kişinin aktif katılımlıyla 30'dan fazla arama konferansı organize etmiştir.

Prof. Dr. Sabuncuoğlu kıymetli deneyimlerini ve fikirlerini paylaşmak amacıyla düzenli olarak dünyada tanınmış pek çok ulusal ve uluslararası zirveye konuşmacı olarak davet edilmektedir. Bunların arasında *Times Higher Education Genç Üniversiteler Zirvesi* (Orlando, ABD, 2018), *Times Higher Education Yükselen Ekonomiler Zirvesi* (Rabat, Fas, 2018), *EDUCON ASIA Yükseköğretim Zirvesi* (Singapur, 2017), *IAU Uluslararası Konferansı* (Akra, Gana, 2017), *UIIN Üniversite – Endüstri Etkileşim Konferansı* (Londra, 2018) ve *Hansa Birliği Üniversiteleri Konferansı* (Seul, Güney Kore, 2019) yer almaktadır.

## **Education**

Doctorate, Wichita State University, Department of Industrial Engineering, United States Of America 1985 - 1989

Postgraduate, Middle East Technical University, Faculty Of Engineering, Department Of Industrial Engineering, Turkey 1982 - 1984

Undergraduate, Middle East Technical University, Faculty Of Engineering, Department Of Industrial Engineering, Turkey 1977 - 1982

## **Foreign Languages**

English, C2 Mastery

## **Dissertations**

Doctorate, Expert simulation systems. Recent developments and applications in flexible manufacturing systems, Wichita State University, 1990

Postgraduate, Design And Analysis Of Lot Sizing Techniques For An MRP System, Middle East Technical University, Faculty Of Engineering, Department Of Industrial Engineering, 1984

## Research Areas

Industrial Engineering , Stochastic Modeling, Optimization Theory and Methods, Simulation, Production Planning and Control, Quality and Reliability, Strategic planning, Supply Chain and Logistics Management, Engineering and Technology

## Academic Positions

Professor, Abdullah Gul University, Mühendislik Fakültesi, Endüstri Mühendisliği, 2013 - Continues

Professor, Ihsan Dogramaci Bilkent University, Faculty Of Engineering, Department Of Industrial Engineering, 2002 - 2012

Associate Professor, Ihsan Dogramaci Bilkent University, Faculty Of Engineering, 1993 - 2002

Assistant Professor, Ihsan Dogramaci Bilkent University, Faculty Of Engineering, Department Of Industrial Engineering, 1990 - 1993

Assistant Professor, Wichita State University, 1989 - 1990

Research Assistant, Wichita State University, 1985 - 1989

Research Assistant, Middle East Technical University, Faculty Of Engineering, Department Of Industrial Engineering, 1983 - 1985

## Academic and Administrative Experience

Rector, Abdullah Gul University, Mühendislik Fakültesi, Endüstri Mühendisliği, 2013 - Continues

Head of Department, Ihsan Dogramaci Bilkent University, Faculty Of Engineering, Department Of Industrial Engineering, 2002 - 2013

## Supervised Theses

Sabuncuoğlu İ., A simulation model for breast cancer epidemiology in Turkey, Postgraduate, K.ADA(Student), 2014

Sabuncuoğlu İ., Analysis of the in-vitro nanoparticle-cell interactions via support vector regression model, Postgraduate, N.MUHAMMED(Student), 2013

Sabuncuoğlu İ., Analysis of the in-vitro nanoparticle-cell interactions via smoothing splines mixed effects model, Postgraduate, E.DOĞRUÖZ(Student), 2013

Sabuncuoğlu İ., Integration of production, transportation, and inventory decisions in supply chains, Doctorate, U.KOÇ(Student), 2012

Sabuncuoğlu İ., Hiyerarşik yapılı büyük organizasyonlarda düşük maliyetli kurs planlaması için matematiksel model önerisi, Doctorate, L.KARAMALAK(Student), 2012

Sabuncuoğlu İ., Analysis of a hospital call center, Postgraduate, E.EZGİ(Student), 2012

Sabuncuoğlu İ., Artificial neural networks modeling and simulation of the in-vitro nanoparticle-cell interactions, Postgraduate, N.CENK(Student), 2012

Sabuncuoğlu İ., Generating robust and stable machine schedules from a proactive standpoint, Doctorate, S.GÖREN(Student), 2009

Sabuncuoğlu İ., A multi-modal discrete-event simulation model for military deployment, Doctorate, U.ZİYA(Student), 2009

Sabuncuoğlu İ., Prescription fraud detection via data mining: A methodology proposal, Postgraduate, K.DURU(Student),

2009

Sabuncuoğlu İ., Coordination of pricing and production-scheduling decisions in supply chains, Postgraduate, M.MISIRCI(Student), 2008

Sabuncuoğlu İ., New solution methods for single machine bicriteria scheduling problem: Minimization of average flowtime and number of tardy jobs, Postgraduate, F.SAFA(Student), 2006

Sabuncuoğlu İ., A learning-based scheduling system with continuous control and update structure, Postgraduate, G.METAN(Student), 2005

Sabuncuoğlu İ., Auction based scheduling for distributed systems, Postgraduate, E.ZARİFOĞLU(Student), 2005

Sabuncuoğlu İ., Inquiring the main assumption of the assembly line balancing problem: Solution procedures using AND/OR graph, Postgraduate, A.KOÇ(Student), 2005

Sabuncuoğlu İ., Beam search algorithms for the mixed-model assembly line sequencing, Postgraduate, Y.GÖÇGÜN(Student), 2005

Sabuncuoğlu İ., Ant colony optimization for the model U-type assembly line balancing problem, Postgraduate, A.ALP(Student), 2004

Sabuncuoğlu İ., Simulation modeling and analysis of messaging systems of a mechanized infantry brigade, Postgraduate, İ.CAN(Student), 2003

Sabuncuoğlu İ., Tabu search with fully sequential procedure for simulation optimization, Postgraduate, S.ÇEVİK(Student), 2003

Sabuncuoğlu İ., Analysis of variance reduction techniques in various systems, Postgraduate, S.ÇELİK(Student), 2003

Sabuncuoğlu İ., Balancing straight and U type assembly lines with stochastic process times, Postgraduate, H.ŞEKERCİ(Student), 2003

Sabuncuoğlu İ., Evaluation of army corps food supply system using simulation, Postgraduate, O.PEMBE(Student), 2002

Sabuncuoğlu İ., Modeling and analysis of movement of a Turkish Armored Battalion to mobilization task area using simulation, Postgraduate, B.ÜREK(Student), 2002

Sabuncuoğlu İ., Evaluation of ammunition and fuel supply systems of a Turkish Armored Battalion during mobilization and deployment using simulation, Postgraduate, A.ÖZÇEVİK(Student), 2002

Sabuncuoğlu İ., Robustness and stability measures for scheduling policies in a single machine environment, Postgraduate, S.GÖREN(Student), 2002

Sabuncuoğlu İ., Simulation modeling and analysis of border security system, Postgraduate, G.ÇELİK(Student), 2002

Sabuncuoğlu İ., Modeling and analysis of personnel mobilization and completion system via simulation, Postgraduate, L.KARAMALAK(Student), 2001

Sabuncuoğlu İ., The Behavior of transient period of nonterminating simulations: An experimental analysis, Postgraduate, B.SANDIKÇI(Student), 2001

Sabuncuoğlu İ., Modelling and optimization of Turkish Army fuel supply system via simulation, Postgraduate, A.HATİP(Student), 2001

Sabuncuoğlu İ., Modeling and analysing air assault operations via simulation, Postgraduate, G.VİRLAN(Student), 2001

Sabuncuoğlu İ., Parameter selection for genetic algorithm-based simulation optimization, Postgraduate, O.BOYABATLI(Student), 2001

Sabuncuoğlu İ., Evaluation of mobilization and deployment plan of a Turkish armoured battalion via simulation, Postgraduate, S.MÜSLÜM(Student), 2001

Sabuncuoğlu İ., Analysis of scheduling problems in dynamic and stochastic FMS environment comparison of rescheduling policies, Postgraduate, Ö.BATUHAN(Student), 2001

Sabuncuoğlu İ., Simulation of casualty evacuation of brigade in defence operation, Postgraduate, Ö.NUHUT(Student), 2000

Sabuncuoğlu İ., Modelling and optimisation of Turkish army STH level renovation maintenance system via simulation, Postgraduate, R.ALİ(Student), 2000

Sabuncuoğlu İ., Distributed scheduling, Postgraduate, A.TOPTAL(Student), 1999

Sabuncuoğlu İ., Analyses of serial production lines and assembly systems for throughput and interdeparture time variability, Postgraduate, A.GÜRHAN(Student), 1998

Sabuncuoğlu İ., A Re-examination of the effectiveness of priority rules in a dynamic job shop environment, Postgraduate, T.LEJMİ(Student), 1997

Sabuncuoğlu İ., Simulation metamodeling with neural networks, Postgraduate, S.TAVHAMİ(Student), 1997  
Sabuncuoğlu İ., Assembly line balancing using genetic algorithms, Postgraduate, M.TANYER(Student), 1997  
Sabuncuoğlu İ., Analysis of reactive scheduling problems in manufacturing systems, Postgraduate, M.BAYIZ(Student), 1997  
Sabuncuoğlu İ., A Comparison of the aggregation and disaggregation task allocation approaches in a random flexible manufacturing system, Postgraduate, M.LAHMAR(Student), 1997  
Sabuncuoğlu İ., Job shop scheduling under dynamic and stochastic manufacturing environment, Postgraduate, E.KUTANOĞLU(Student), 1995  
Sabuncuoğlu İ., An Analysis of order review/release problems in a job shop, Postgraduate, H.YAVUZ(Student), 1995  
Sabuncuoğlu İ., An Analysis of fms scheduling problem : A beam search based algorithm and comparison of scheduling schemes, Postgraduate, S.KARABÜK(Student), 1994  
Sabuncuoğlu İ., Scheduling with artificial neural networks, Postgraduate, B.GÜRGÜN(Student), 1993

### **Journal articles indexed in SCI, SSCI, and AHCI**

- I. **Modified self-adaptive local search algorithm for a biobjective permutation flow shop scheduling problem**  
ALABAŞ USLU Ç., Dengiz B., Aglan C., SABUNCUOĞLU İ.  
TURKISH JOURNAL OF ELECTRICAL ENGINEERING AND COMPUTER SCIENCES, vol.27, no.4, pp.2730-2745, 2019 (SCI-Expanded)
- II. **EXPECTED AND ACTUAL REIMBURSEMENT BASED ON CLINICAL PRACTICE GUIDELINE RECOMMENDATIONS IN TURKEY**  
Em K. O. C., Kahveci R., Tibet B., Sozmen M. K., Sabuncuoglu İ., Karadayi B.  
VALUE IN HEALTH, vol.21, 2018 (SCI-Expanded)
- III. **Coordination of inbound and outbound transportation schedules with the production schedule**  
Koc U., Toptal A., SABUNCUOĞLU İ.  
COMPUTERS & INDUSTRIAL ENGINEERING, vol.103, pp.178-192, 2017 (SCI-Expanded)
- IV. **Analysis of the in vitro nanoparticle-cell interactions via a smoothing-splines mixed-effects model**  
Dogruoz E., DAYANIK S., Budak G., SABUNCUOĞLU İ.  
ARTIFICIAL CELLS NANOMEDICINE AND BIOTECHNOLOGY, vol.44, no.3, pp.800-810, 2016 (SCI-Expanded)
- V. **A mathematical model proposal for cost-effective course planning in large hierarchical organizations**  
Karamalak L., SABUNCUOĞLU İ., Ozkil A.  
EUROPEAN JOURNAL OF OPERATIONAL RESEARCH, vol.238, no.2, pp.579-595, 2014 (SCI-Expanded)
- VI. **A joint production and transportation planning problem with heterogeneous vehicles**  
Toptal A., Koc U., Sabuncuoglu İ.  
JOURNAL OF THE OPERATIONAL RESEARCH SOCIETY, vol.65, no.2, pp.180-196, 2014 (SCI-Expanded)
- VII. **Artificial Neural Network Modeling and Simulation of In-Vitro Nanoparticle-Cell Interactions**  
Cenk N., Budak G., Dayanik S., SABUNCUOĞLU İ.  
JOURNAL OF COMPUTATIONAL AND THEORETICAL NANOSCIENCE, vol.11, no.1, pp.272-282, 2014 (SCI-Expanded)
- VIII. **A class of joint production and transportation planning problems under different delivery policies**  
Koc U., Toptal A., Sabuncuoglu İ.  
OPERATIONS RESEARCH LETTERS, vol.41, no.1, pp.54-60, 2013 (SCI-Expanded)
- IX. **A prescription fraud detection model**  
Aral K. D., Guvenir H. A., Sabuncuoglu I., Akar A. R.  
COMPUTER METHODS AND PROGRAMS IN BIOMEDICINE, vol.106, no.1, pp.37-46, 2012 (SCI-Expanded)
- X. **Optimization of Schedule Stability and Efficiency Under Processing Time Variability and Random Machine Breakdowns in a Job Shop Environment**  
Goren S., Sabuncuoglu I., Koc U.  
NAVAL RESEARCH LOGISTICS, vol.59, no.1, pp.26-38, 2012 (SCI-Expanded)
- XI. **Modeling and analyzing army air assault operations via simulation**

- Sabuncuoglu I., Virlan G.  
 SIMULATION-TRANSACTIONS OF THE SOCIETY FOR MODELING AND SIMULATION INTERNATIONAL, vol.87, no.11, pp.1002-1014, 2011 (SCI-Expanded)
- XII. **Hybrid Petri-nets for modelling and performance evaluation of supply chains**  
 Khilwani N., Tiwari M. K., Sabuncuoglu I.  
 INTERNATIONAL JOURNAL OF PRODUCTION RESEARCH, vol.49, no.15, pp.4627-4656, 2011 (SCI-Expanded)
- XIII. **Optimization of schedule robustness and stability under random machine breakdowns and processing time variability**  
 Goren S., Sabuncuoglu I.  
 IIE Transactions (Institute of Industrial Engineers), vol.42, no.3, pp.203-220, 2010 (SCI-Expanded)
- XIV. **New solution methods for single machine bicriteria scheduling problem: Minimization of average flowtime and number of tardy jobs**  
 Erenay F. S., Sabuncuoglu I., Toptal A., Tiwari M. K.  
 EUROPEAN JOURNAL OF OPERATIONAL RESEARCH, vol.201, no.1, pp.89-98, 2010 (SCI-Expanded)
- XV. **Distributed scheduling: a review of concepts and applications**  
 Toptal A., Sabuncuoglu I.  
 INTERNATIONAL JOURNAL OF PRODUCTION RESEARCH, vol.48, no.18, pp.5235-5262, 2010 (SCI-Expanded)
- XVI. **Real time selection of scheduling rules and knowledge extraction via dynamically controlled data mining**  
 Metan G., Sabuncuoglu I., Pierrevall H.  
 INTERNATIONAL JOURNAL OF PRODUCTION RESEARCH, vol.48, no.23, pp.6909-6938, 2010 (SCI-Expanded)
- XVII. **Ant colony optimization for the single model U-type assembly line balancing problem**  
 Sabuncuoglu I., Erel E., Alp A.  
 INTERNATIONAL JOURNAL OF PRODUCTION ECONOMICS, vol.120, no.2, pp.287-300, 2009 (SCI-Expanded)
- XVIII. **A multi-modal discrete-event simulation model for military deployment**  
 Yidirim U. Z., Tansel B. C., Sabuncuoglu I.  
 SIMULATION MODELLING PRACTICE AND THEORY, vol.17, no.4, pp.597-611, 2009 (SCI-Expanded)
- XIX. **Hedging production schedules against uncertainty in manufacturing environment with a review of robustness and stability research**  
 Sabuncuoglu I., Goren S.  
 International Journal of Computer Integrated Manufacturing, vol.22, no.2, pp.138-157, 2009 (SCI-Expanded)
- XX. **Process planning and scheduling for distributed manufacturing**  
 Sabuncuoglu I., Karpat Y.  
 INTERNATIONAL JOURNAL OF PRODUCTION RESEARCH, vol.47, no.4, pp.1151-1152, 2009 (SCI-Expanded)
- XXI. **Two exact formulations for disassembly line balancing problems with task precedence diagram construction using an AND/OR graph**  
 Koc A., Sabuncuoglu I., Erel E.  
 IIE TRANSACTIONS, vol.41, no.10, pp.866-881, 2009 (SCI-Expanded)
- XXII. **Variance reduction techniques: Experimental comparison and analysis for single systems**  
 Sabuncuoglu I., Fadiloglu M. M., Celik S.  
 IIE TRANSACTIONS, vol.40, no.5, pp.538-551, 2008 (SCI-Expanded)
- XXIII. **Backtracking and exchange of information: Methods to enhance a beam search algorithm for assembly line scheduling**  
 Sabuncuoglu I., Gocgun Y., Erel E.  
 EUROPEAN JOURNAL OF OPERATIONAL RESEARCH, vol.186, no.3, pp.915-930, 2008 (SCI-Expanded)
- XXIV. **Robustness and stability measures for scheduling: Single-machine environment**  
 Goren S., Sabuncuoglu I.  
 IIE Transactions (Institute of Industrial Engineers), vol.40, no.1, pp.66-83, 2008 (SCI-Expanded)
- XXV. **Simulation modelling and analysis of a border security system**  
 Celik G., Sabuncuoglu I.  
 EUROPEAN JOURNAL OF OPERATIONAL RESEARCH, vol.180, no.3, pp.1394-1410, 2007 (SCI-Expanded)

- XXVI. **Mixed-model assembly line sequencing using beam search**  
 Erel E., Gocgunz Y., Sabuncuoglu I.  
 INTERNATIONAL JOURNAL OF PRODUCTION RESEARCH, vol.45, no.22, pp.5265-5284, 2007 (SCI-Expanded)
- XXVII. **Analysis of the behavior of the transient period in non-terminating simulations**  
 Sandikci B., Sabuncuoglu I.  
 EUROPEAN JOURNAL OF OPERATIONAL RESEARCH, vol.173, no.1, pp.252-267, 2006 (SCI-Expanded)
- XXVIII. **Analysis of serial production lines: characterisation study and a new heuristic procedure for optimal buffer allocation**  
 Sabuncuoglu I., Erel E., Gocgun Y.  
 INTERNATIONAL JOURNAL OF PRODUCTION RESEARCH, vol.44, no.13, pp.2499-2523, 2006 (SCI-Expanded)
- XXIX. **The Turkish Army uses simulation to model and optimize its fuel-supply system**  
 Sabuncuoglu I., Hatip A.  
 INTERFACES, vol.35, no.6, pp.474-482, 2005 (SCI-Expanded)
- XXX. **Stochastic assembly line balancing using beam search**  
 Erel E., Sabuncuoglu I., Sekerci H.  
 INTERNATIONAL JOURNAL OF PRODUCTION RESEARCH, vol.43, no.7, pp.1411-1426, 2005 (SCI-Expanded)
- XXXI. **Evaluation of mobilization and deployment plan of an armored battalion**  
 Muslum S., Sabuncuoglu I.  
 MILITARY OPERATIONS RESEARCH, vol.10, no.1, pp.43-62, 2005 (SCI-Expanded)
- XXXII. **Simulation optimization: A comprehensive review on theory and applications**  
 Tekin E., Sabuncuoglu I.  
 IIE TRANSACTIONS, vol.36, no.11, pp.1067-1081, 2004 (SCI-Expanded)
- XXXIII. **Reactive scheduling in a dynamic and stochastic FMS environment**  
 Sabuncuoglu I., Kizilisik O.  
 INTERNATIONAL JOURNAL OF PRODUCTION RESEARCH, vol.41, no.17, pp.4211-4231, 2003 (SCI-Expanded)
- XXXIV. **An evaluative study of operation grouping policies in an FMS**  
 Sabuncuoglu I., Lahmar M.  
 INTERNATIONAL JOURNAL OF FLEXIBLE MANUFACTURING SYSTEMS, vol.15, no.3, pp.217-239, 2003 (SCI-Expanded)
- XXXV. **Operation-based flowtime estimation in a dynamic job shop**  
 Sabuncuoglu I., Comlekci A.  
 OMEGA-INTERNATIONAL JOURNAL OF MANAGEMENT SCIENCE, vol.30, no.6, pp.423-442, 2002 (SCI-Expanded)
- XXXVI. **Simulation analysis of army casualty evacuations**  
 Nuhut O., Sabuncuoglu I.  
 SIMULATION-TRANSACTIONS OF THE SOCIETY FOR MODELING AND SIMULATION INTERNATIONAL, vol.78, no.10, pp.612-625, 2002 (SCI-Expanded)
- XXXVII. **Simulation metamodelling with neural networks: an experimental investigation**  
 Sabuncuoglu I., Touhami S.  
 INTERNATIONAL JOURNAL OF PRODUCTION RESEARCH, vol.40, no.11, pp.2483-2505, 2002 (SCI-Expanded)
- XXXVIII. **Effect of load, processing time and due date variation on the effectiveness of scheduling rules**  
 Lejmi T., Sabuncuoglu I.  
 INTERNATIONAL JOURNAL OF PRODUCTION RESEARCH, vol.40, no.4, pp.945-974, 2002 (SCI-Expanded)
- XXXIX. **Analysis of assembly systems for interdeparture time variability and throughput**  
 Sabuncuoglu I., Erel E., Kok A.  
 IIE TRANSACTIONS, vol.34, no.1, pp.23-40, 2002 (SCI-Expanded)
- XL. **Routing-based reactive scheduling policies for machine failures in dynamic job shops**  
 Kutanoglu E., Sabuncuoglu I.  
 INTERNATIONAL JOURNAL OF PRODUCTION RESEARCH, vol.39, no.14, pp.3141-3158, 2001 (SCI-Expanded)
- XLI. **Balancing of U-type assembly systems using simulated annealing**  
 Erel E., Sabuncuoglu I., Aksu B.  
 INTERNATIONAL JOURNAL OF PRODUCTION RESEARCH, vol.39, no.13, pp.3003-3015, 2001 (SCI-Expanded)

- XLII. **An efficient algorithm for the single machine total tardiness problem**  
 Tansel B., Kara B., Sabuncuoglu İ.  
 IIE TRANSACTIONS, vol.33, no.8, pp.661-674, 2001 (SCI-Expanded)
- XLIII. **Experimental investigation of iterative simulation-based scheduling in a dynamic and stochastic job shop**  
 Kutanoğlu E., Sabuncuoglu İ.  
 JOURNAL OF MANUFACTURING SYSTEMS, vol.20, no.4, pp.264-279, 2001 (SCI-Expanded)
- XLIV. **Analysis of reactive scheduling problems in a job shop environment**  
 Sabuncuoglu İ., Bayiz M.  
 EUROPEAN JOURNAL OF OPERATIONAL RESEARCH, vol.126, no.3, pp.567-586, 2000 (SCI-Expanded)
- XLV. **Assembly line balancing using genetic algorithms**  
 Sabuncuoglu İ., Erel E., Tanyer M.  
 JOURNAL OF INTELLIGENT MANUFACTURING, vol.11, no.3, pp.295-310, 2000 (SCI-Expanded)
- XLVI. **A load-based and due-date-oriented approach to order review/release in job shops**  
 Sabuncuoglu İ., Karapınar H.  
 DECISION SCIENCES, vol.31, no.2, pp.413-447, 2000 (SSCI)
- XLVII. **Job shop scheduling with beam search**  
 Sabuncuoglu İ., Bayiz M.  
 EUROPEAN JOURNAL OF OPERATIONAL RESEARCH, vol.118, no.2, pp.390-412, 1999 (SCI-Expanded)
- XLVIII. **Analysis of order review/release problems in production systems**  
 Sabuncuoglu İ., Karapınar H.  
 INTERNATIONAL JOURNAL OF PRODUCTION ECONOMICS, vol.62, no.3, pp.259-279, 1999 (SCI-Expanded)
- XLIX. **An analysis of heuristics in a dynamic job shop with weighted tardiness objectives**  
 Kutanoğlu E., Sabuncuoglu İ.  
 INTERNATIONAL JOURNAL OF PRODUCTION RESEARCH, vol.37, no.1, pp.165-187, 1999 (SCI-Expanded)
- L. **Rescheduling frequency in an FMS with uncertain processing times and unreliable machines**  
 Sabuncuoglu İ., Karabuk S.  
 JOURNAL OF MANUFACTURING SYSTEMS, vol.18, no.4, pp.268-283, 1999 (SCI-Expanded)
- LI. **A study of scheduling rules of flexible manufacturing systems: a simulation approach**  
 Sabuncuoglu İ.  
 INTERNATIONAL JOURNAL OF PRODUCTION RESEARCH, vol.36, no.2, pp.527-546, 1998 (SCI-Expanded)
- LII. **A beam search-based algorithm and evaluation of scheduling approaches for flexible manufacturing systems**  
 Sabuncuoglu İ., Karabuk S.  
 IIE TRANSACTIONS, vol.30, no.2, pp.179-191, 1998 (SCI-Expanded)
- LIII. **Scheduling with neural networks: a review of the literature and new research directions**  
 Sabuncuoglu İ.  
 PRODUCTION PLANNING & CONTROL, vol.9, no.1, pp.2-12, 1998 (SCI-Expanded)
- LIV. **New insights on the single machine total tardiness problem**  
 Tansel B., Sabuncuoglu İ.  
 JOURNAL OF THE OPERATIONAL RESEARCH SOCIETY, vol.48, no.1, pp.82-89, 1997 (SCI-Expanded)
- LV. **A neural network model for scheduling problems**  
 Sabuncuoglu İ., Gurgun B.  
 EUROPEAN JOURNAL OF OPERATIONAL RESEARCH, vol.93, no.2, pp.288-299, 1996 (SCI-Expanded)
- LVI. **EXPERIMENTAL INVESTIGATION OF AN FMS DUE-DATE SCHEDULING PROBLEM - AN EVALUATION OF DUE-DATE ASSIGNMENT RULES**  
 SABUNCUOGLU İ., HOMMERTZHEIM D.  
 INTERNATIONAL JOURNAL OF COMPUTER INTEGRATED MANUFACTURING, vol.8, no.2, pp.133-144, 1995 (SCI-Expanded)
- LVII. **EXPERIMENTAL INVESTIGATION OF FMS MACHINE AND AGV SCHEDULING RULES AGAINST THE MEAN FLOW-TIME CRITERION**

- SABUNCUOGLU İ., HOMMERTZHEIM D.  
 INTERNATIONAL JOURNAL OF PRODUCTION RESEARCH, vol.30, no.7, pp.1617-1635, 1992 (SCI-Expanded)
- LVIII. **DYNAMIC DISPATCHING ALGORITHM FOR SCHEDULING MACHINES AND AUTOMATED GUIDED VEHICLES IN A FLEXIBLE MANUFACTURING SYSTEM**  
 SABUNCUOGLU İ., HOMMERTZHEIM D.  
 INTERNATIONAL JOURNAL OF PRODUCTION RESEARCH, vol.30, no.5, pp.1059-1079, 1992 (SCI-Expanded)
- LIX. **TRAINING AN ARTIFICIAL NEURAL NETWORK THE PURE PURSUIT MANEUVER**  
 HOMMERTZHEIM D., HUFFMAN J., SABUNCUOGLU İ.  
 COMPUTERS & OPERATIONS RESEARCH, vol.18, no.4, pp.343-353, 1991 (SCI-Expanded)
- LX. **AN EXPERT SYSTEM FOR SELECTING ATTRIBUTE SAMPLING PLANS**  
 FARD N., SABUNCUOGLU İ.  
 INTERNATIONAL JOURNAL OF COMPUTER INTEGRATED MANUFACTURING, vol.3, no.6, pp.364-372, 1990 (SCI-Expanded)
- LXI. **EXPERT SIMULATION SYSTEMS - RECENT DEVELOPMENTS AND APPLICATIONS IN FLEXIBLE MANUFACTURING SYSTEMS**  
 SABUNCUOGLU İ., HOMMERTZHEIM D.  
 COMPUTERS & INDUSTRIAL ENGINEERING, vol.16, no.4, pp.575-585, 1989 (SCI-Expanded)
- LXII. **A HEURISTIC-PROCEDURE FOR A SINGLE-ITEM DYNAMIC LOT SIZING PROBLEM**  
 BENLİ O., SABUNCUOGLU İ., TUFEKCI S.  
 COMPUTERS & INDUSTRIAL ENGINEERING, vol.14, no.2, pp.181-192, 1988 (SCI-Expanded)
- LXIII. **EXPERT SYSTEMS AND SIMULATION IN FLEXIBLE MANUFACTURING SYSTEMS**  
 SABUNCUOGLU İ., HOMMERTZHEIM D.  
 COMPUTERS & INDUSTRIAL ENGINEERING, vol.15, pp.1-7, 1988 (SCI-Expanded)

## Books

- I. **A bi-criteria approach to scheduling in the face of uncertainty: Considering robustness and stability simultaneously**  
 GÖREN S., SABUNCUOĞLU İ.  
 in: Sequencing and Scheduling with Inaccurate Data, Sotskov Y.N., Werner F., Editor, Nova Science Publishers, Inc., New York, pp.253-280, 2014
- II. **Değişen Üretim Sistemleri, Uluslararası Firmalar ve Doğrudan Yabancı Sermaye Yatırımları**  
 SABUNCUOĞLU İ.  
 in: Dünyada Küreselleşme ve Bölgesel Entegrasyonlar ve Türkiye İlişkileri Özel İhtisas Komisyonu Değerlendirme Raporu beşinci kalkınma planı 1994, , Editor, TC. Kalkınma Bakanlığı, pp.64-70, 1994
- III. **A prototype expert system for selecting MRP lot-sizing heuristics based on fuzzy demand patterns**  
 Dağlı C., SABUNCUOĞLU İ.  
 in: Applications of fuzzy set methodologies in industrial engineering, Gerald Evans, Waldemar Karwowski, Mickey R. Wilhelm, Editor, ELSEVIER SCIENCE BV, 1989, Amsterdam, pp.299-309, 1989

## Papers Presented at Peer-Reviewed Scientific Conferences

- I. **REVISITATION OF THE SIMULATION METHODOLOGIES AND APPLICATIONS IN MANUFACTURING**  
 Ramanan R., Sabuncuoglu I.  
 23rd European Modeling and Simulation Symposium / International Mediterranean and Latin American Modeling Multiconference, Rome, Italy, 12 - 14 September 2011, pp.283-288
- II. **A Local Search Heuristic with Self-tuning Parameter for Permutation Flow-Shop Scheduling Problem**  
 Dengiz B., Alabas-Uslu C., Sabuncuoglu I.  
 IEEE Symposium on Computational Intelligence in Scheduling, Tennessee, United States Of America, 30 March - 02

- April 2009, pp.62-63
- III. **A DESIGN OF EXPERIMENTS APPROACH TO MILITARY DEPLOYMENT PLANNING PROBLEM**  
Yildirim U. Z., Sabuncuoglu I., Tansel B., Balcioglu A.  
2008 Winter Simulation Conference, Florida, United States Of America, 7 - 10 December 2008, pp.1234-1236
- IV. **modeling and analysis of manufacturing systems via simulation**  
Ramanan R., SABUNCUOĞLU İ.  
Proceedings of the 13th International Conference on Machine Design and Production, İstanbul, Turkey, 3 - 06 September 2008
- V. **A simulation model for military deployment**  
Ydirim U. Z., Sabuncuoglu I., Tansel B.  
2007 Winter Simulation Conference, Washington, Kiribati, 9 - 12 December 2007, pp.1340-1348
- VI. **Askeri Birliklerin İntikal Planlaması İçin Bir Simülasyon Modeli**  
Yildirim U. Z., SABUNCUOĞLU İ., Tansel B.  
USMOS 2007, Turkey, 18 - 19 April 2007
- VII. **Auction based scheduling for distributed systems**  
Zarifoglu E., Sabuncuoglu I.  
10th World Multi-Conference on Systemics, Cybernetics and Informatics/12th International Conference on Information Systems Analysis and Synthesis, Florida, United States Of America, 16 - 19 July 2006, pp.244-245
- VIII. **A Simulation Based Learning Meachanism for Scheduling Systems**  
METAN G., SABUNCUOĞLU İ.  
Proceedings of the Winter Simulation Conference, 2005., Orlando, FL. USA, 4 - 07 December 2005, pp.2148-2156
- IX. **Warm up period behavior in steady state simulations**  
Sandıkçı B., SABUNCUOĞLU İ.  
Proceedings of the 35th International conference on Computers and Industrial Engineering, 19 - 22 June 2005
- X. **Ant Colony Optimization for the Single Model U Type Assembly Balancing Model**  
SABUNCUOĞLU İ., EREL E., Arda A.  
World Multiconference on Systemic, Cybernetics and Informatics ISCI 2004, 14 - 17 June 2004
- XI. **ÜNİVERSİTE SANAYİ İŞBİRLİĞİ NE ENDÜSTRİ MÜHENDİSLİĞİ SİSTEM TASARIM DERSLERİ  
ÇERÇEVESİİNDE BİR BAKIŞ**  
SABUNCUOĞLU İ., Kara B. Y.  
I. Ulusal Mühendislik Kongresi, Turkey, 20 - 21 May 2004
- XII. **GENERATING ROBUST AND STABLE SCHEDULES IN A SINGLE MACHINE ENVIRONMENT**  
GÖREN S., SABUNCUOĞLU İ.  
Industrial Engineering Research Conference IERC 2004, Houston Texas, 15 - 19 May 2004
- XIII. **Evaluation of army corps food supply system using simulation**  
Pembe O., SABUNCUOĞLU İ.  
36th Winter Simulation Conference, 7 - 10 December 2003, pp.1110-1115
- XIV. **Modeling and Simulation of a Messaging System of a Brigade System**  
Can I., SABUNCUOĞLU İ.  
NATO RTO Modelling and Simulation Conference, Antalya, Turkey, 9 - 10 October 2003
- XV. **Simulation optimization with genetic algorithms Analysis of numerical parameters**  
Boyabatlı O., SABUNCUOĞLU İ.  
7th World Multiconference on Systemics, Cybernetics and Informatics, 27 - 30 July 2003, pp.100-105
- XVI. **Evaluation of army corps artillery ammunition supply systems via simulation**  
SABUNCUOĞLU İ., Utku D. H.  
Proceedings of the Winter Simulation Conference, San Diego, CA, USA, 8 - 11 December 2002, pp.917-920
- XVII. **Simulation optimization with genetic algorithms Analysis of numerical parameters**  
Boyabatlı O., SABUNCUOĞLU İ.  
6th World Multi-Conference on Systemics, Cybernetics and Informatics (SCI 2002)/8th International Conference on Information Systems Analysis and Synthesis (ISAS 2002), 14 - 18 July 2002, pp.193-198
- XVIII. **Analysis of Reactive Scheduling Problems in a Dynamic FMS Environment Comparison of Scheduling**

## **Policies**

SABUNCUOĞLU İ., Kızılışık O. B.

2nd International Conference on Responsive Manufacturing, 26 - 28 June 2002, pp.84-90

**XIX. Distributed algorithms for scheduling and internet based supply webs**

TOPTAL BİLHAN A., SABUNCUOĞLU İ.

World Multiconference on Systemic, Cybernetics and Informatics ISCI 2001, 22 - 25 July 2001, pp.396-401

**XX. Bidding based Distributed Scheduling**

TOPTAL BİLHAN A., SABUNCUOĞLU İ.

World Multiconference on System Cybernetics and Informatics ISCI 2000, Orlando, United States Of America, 23 - 26 July 2000

**XXI. Scheduling for non regular performance measure under the due window approach**

Lejimi T., SABUNCUOĞLU İ.

6th International Workshop on Project Management and Scheduling, 7 - 09 July 1998, pp.281-284

**XXII. Probability Distribution selection Using Neural Networks**

Yılmaz A., SABUNCUOĞLU İ.

11th European Simulation Conference, 1 - 04 June 1997

**XXIII. An Investigation of Reactive Scheduling Policies under Machine Breakdowns**

KUTANOĞLU E., SABUNCUOĞLU İ.

Proceedings of 4th Industrial Engineering Research Conference, IIE, Nashville, Tennessee, 24 - 25 May 1995

**XXIV. Experimental Investigation of Scheduling Rules in a Dynamic Job Shop with Weighted Tardiness Costs**

KUTANOĞLU E., SABUNCUOĞLU İ.

Proceedings of 3rd Industrial Engineering Research Conference, IIE, Atlanta, Georgia, 18 - 19 May 1994, pp.656-661

**XXV. Issues in Integrating Simulation and Analytical Methods in a Real time Scheduling Environment for an FMS**

Karabuk S., SABUNCUOĞLU İ.

European Simulation Symposium 1994, 9 - 12 January 1994

**XXVI. A Neural Network Approach for the Single Machine Total Tardiness Scheduling Problem**

Gurgun B., SABUNCUOĞLU İ.

Second Turkish Artificial Intelligence and Artificial Neural Networks Symposium, 24 - 25 June 1993, pp.227-231

**XXVII. A BEAM SEARCH BASED ALGORITHM FOR SCHEDULING MACHINES AND AGVS IN AN FMS**

Karabuk S., SABUNCUOĞLU İ.

2ND INDUSTRIAL ENGINEERING RESEARCH CONF, 26 - 27 May 1993, pp.308-312

**XXVIII. Input Data Analysis for Simulation Using Neural Networks**

SABUNCUOĞLU İ., Yılmaz A., Oskaylar E.

Advances in Simulation Conference 1992, 6 - 07 July 1992, pp.137-150

**XXIX. Sinir Ağlarının Çizelgeleme Problemine Bir Bakış**

Gurgun B., SABUNCUOĞLU İ.

1st Turkish Artificial Neural Networks Symposium 1992, 25 - 26 June 1992, pp.55-61

**XXX. An Investigation of Machine and AGV Scheduling Rules in an FMS**

SABUNCUOĞLU İ., Hommertzheim D.

Third ORSA/TIMS Conference on Flexible Manufacturing Systems--Operations Research Models and Applications, Amsterdam, Netherlands, 14 - 16 August 1989, pp.261-266

**XXXI. The Effect of Input Device on Task Performance**

Fernandez J. E., Cihangirli M., Hommertzheim D., SABUNCUOĞLU İ.

Trends in Ergonomics: 5th: Human Factors - Conference Proceedings, Netherlands, 30 April - 01 May 1988

**XXXII. Expert Systems and Simulation in Flexible Manufacturing Systems**

SABUNCUOĞLU İ., Hommertzheim D.

10th Annual Conference for Computers and Industrial Engineering, Dallas, Texas, United States Of America, 23 - 25 March 1988, vol.15, pp.1-7

## **Peer Reviews in Scientific Publications**

EUROPEAN JOURNAL OF OPERATIONAL RESEARCH, Journal Indexed in SCI-E, January 1996  
JOURNAL OF SIMULATION, SCI Journal, January 1995  
IEEE Transactions on Robotics and Automation, Other journals, January 1995  
INTERNATIONAL JOURNAL OF FLEXIBLE MANUFACTURING SYSTEMS, Journal Indexed in SCI-E, January 1994  
OPERATIONS RESEARCH LETTERS, SCI Journal, January 1994  
JOURNAL OF OPERATIONS MANAGEMENT, SCI Journal, January 1994  
INTERNATIONAL JOURNAL OF QUANTITATIVE AND OPERATIONS MANAGEMENT, Other journals, January 1994  
ENDÜSTRİ MÜHENDİSLİĞİ, National Scientific Refreed Journal, January 1993  
INTERNATIONAL JOURNAL OF PRODUCTION RESEARCH, SCI Journal, January 1991

## **Metrics**

Publication: 98  
Citation (WoS): 1946  
Citation (Scopus): 2363  
H-Index (WoS): 26  
H-Index (Scopus): 28

## **Congress and Symposium Activities**

The 2nd Conference of Hanseatic League of Universities, Invited Speaker, Incheon, South Korea, 2019  
TIMES Higher Education Young Universities Summit 2018, Invited Speaker, Florida, United States Of America, 2018  
IAU 2017 International Association of Universities Conference, Invited Speaker, Accra, Ghana, 2017  
2nd International Higher Education Studies Conference, Invited Speaker, Antalya, Turkey, 2017  
2017 EDUCON ASIA Higher Education Summit, Invited Speaker, Singapore, Singapore, 2017  
Leadership in Higher Education Programme, Invited Speaker, Oxford, United Kingdom, 2015  
UMTIK 2008- International Machine Design and Production Conference, Invited Speaker, İstanbul, Turkey, 2008