

## ÖZGEÇMİŞ

1. **Adı Soyadı:** AYŞE KAVUŞTURUCU
2. **Doğum Tarihi:** 01/06/1962
3. **Unvanı:** Dr.
4. **Öğrenim Durumu:**

Derece	Alan	Üniversite	Yıl
Lisans	ENDÜSTRİ MÜHENDİSLİĞİ	PURDUE ÜNİVERSİTESİ	1987
Y. Lisans	ENDÜSTRİ MÜHENDİSLİĞİ	NORTHEASTERN ÜNİVERSİTESİ	1990
Doktora	OPERATIONS RESEARCH	NORTHEASTERN ÜNİVERSİTESİ	1995

5. **Akademik Unvanlar:**

**Yardımcı Doçentlik Tarihi :** 1995  
**Doçentlik Tarihi :** ---  
**Profesörlük Tarihi :** ---

6. **Yönetilen Yüksek Lisans ve Doktora Tezleri**

6.1. **Yüksek Lisans Tezleri**

**Just-in-Time (JIT) System Using a Rapid Modeling Technique:** The usefulness of rapid modeling approach in the case of JIT manufacturing systems is investigated. MANUPLAN is used to model a JIT manufacturing system. SIMAN is used to verify the results. It is shown that this methodology permits reasonable rough estimates for the system behavior.

6.2. **Doktora Tezleri**

**Design and Analysis of Flexible Manufacturing Systems (FMS) with Finite Buffers and Machine Unavailability:** Algorithms for the analysis of an FMS with finite buffer capacities and block after service mechanism are developed. The FMS considered consists of tandem and split and merge configurations. Furthermore, the machines are subject to unavailability (due to breakdowns, server vacations and  $N$ -policy model). The system is modeled using Open Queueing Networks. Results of the several experiments show that the algorithms are robust and remarkably accurate over a wide range of parameters.

7. **Yayımlar**

7.1. **Uluslararası hakemli dergilerde yayınlanan makaleler (SCI & SSCI & Arts and Humanities)**

- "Production Systems with Interruptions, Arbitrary Topology and Finite Buffers" *Annals of Operations Research*, Vol. 93, 145-176, 2000.
- "Expansion Method for the Throughput Analysis of Open finite Manufacturing/ Queueing Networks with N-Policy" *Computers and Operations Research*, Vol. 26, No. 13, 1267-1292, 1999.
- "Analysis of Manufacturing Flow Lines with Unreliable Machines", *International Journal of Computer Integrated Manufacturing*, Vol. 12, No. 6, 510-524, 1999.
- "Manufacturing Systems with Machine Vacations, Arbitrary Topology and Finite Buffers" *International Journal of Production Economics*, Vol. 58, No. 1, 1-15, 1999.
- "Tandem Manufacturing Systems with Machine Vacations", *Production Planning and Control* Vol. 9, No. 5, 494-503, 1998.

- "Modeling of Finite Buffer Cellular Manufacturing Systems with Unreliable Machines", *International Journal of Industrial Engineering*, Vol. 5, No. 4, 265-277, 1998.
- "A Methodology for Analyzing Finite Buffer Tandem Manufacturing Systems with N-Policy" *Computers and Industrial Engineering*, Vol. 34, No. 4, 837-848, 1998.
- "Modeling of Just-in-Time Systems Using a Rapid Modeling Technique", *Just-in-Time Manufacturing Systems (Manufacturing Research and Technology, Operational Issues)*, A. Satir (editor), pp. 141-148, Elsevier Science Publishers, 1991.

#### 7.2. Uluslararası diğer hakemli dergilerde yayımlanan makaleler : ---

#### 7.3. Uluslararası bilimsel toplantılarda sunulan ve bildiri kitabında (*Proceedings*) basılan bildiriler:

- "Expansion Algorithm for Unreliable Tandem Queueing Network with Finite Buffers", *Proceedings of First International Congress of Industrial Engineering*, Brazil, September 1995.
- "Analysis of Flexible Manufacturing Systems with Finite Buffers and Unreliable Machines", *Proceedings of Design and Production Conference*, 229-236, 1994.

#### 7.4. Yazılan uluslararası kitaplar veya kitaplarda bölümler: ---

#### 7.5. Ulusal hakemli dergilerde yayımlanan makaleler: ---

#### 7.6. Ulusal bilimsel toplantılarda sunulan ve bildiri kitabında basılan bildiriler : ---

#### 7.7. Diğer yayımlar: ---

### 8. Projeler

**Analysis of TollBooth Scheduling on State Highways via Simulation:** Developed a SIMAN model of tandem tollbooths. The model captures the average number of cars served at peak hours given different service policies, space and resource allocations between the booths. Analysis of Variance test is used to determine whether there are significant differences between different service policies.

**Concurrent Engineering Model for a Production System:** A common database and an information interface are designed to be shared between the design and manufacturing phases of circuit board production. Activities of the two phases are determined. An activity relationship chart is built to determine the quality and quantity of data flow between the phases. This provided the information for the database and interface.

Developed software for an algorithm that calculates the lot sizes and backorder times in a multi-level product environment.

### 9. İdari Görevler:

**CONSULTANT, Project Leader, IBM, Burlington, Vermont, U.S.A**

**Supported LP and AMRP tools developed for "PROFIT", a Supply Chain Management system developed for the Microelectronics Division of IBM, carrying the following responsibilities:**

- Maintained, enhanced and tested Linear Programming production planning model that is used across the IBM microelectronics divisions in U.S.A, Canada, Europe and Asia as a Supply Chain management tool.
- Maintained, enhanced and tested "Advanced MRP" production planning software. The software is an algorithm that combines heuristics with MRP, and it utilizes LP only when the problem on hand requires more complicated analysis. This way intelligence together with speed is provided in decision making at IBM semiconductor production planning environment.
- Developed and tested "Available-To-Promise" heuristic algorithm. The algorithm checks the availability of products in real time as a response to incoming demand. It is used as a Supply Chain management tool across the IBM microelectronics divisions in U.S.A, Canada, Europe and Asia.
- Interacted with customers and answered their questions on the technical details of Linear Programming, Advanced MRP and MRP tools.
- Developed C++ codes to support the Available-To-Promise heuristic algorithm.

### 10. Bilimsel ve Mesleki Kuruluşlara Üyelikler : INFORMS, The OR Society

11. **Ödüller** : Received the Best Senior Project Award at Purdue University.

12. Son iki yılda verdiğiniz lisans ve lisansüstü düzeydeki dersler için aşağıdaki tabloyu doldurunuz.

Aşağıdaki dersler 2009-2013 Bahçeşehir Üniversitesi'nde Öğretim Görevlisi olduğum dönemlerde verilmiştir.

Akademik Yıl	Dönem	Dersin Adı	Haftalık Saati		Öğrenci Sayısı
			Teorik	Uygulama	
2009	İlkbahar	SYSTEMS ANALYSIS	3		90
2010	Güz	QUALITY CONTROL AND MANAGEMENT	3		95
	İlkbahar	SYSTEMS ANALYSIS	3		97
2011	Güz	SERVICE OPERATIONS MANAGEMENT	3		20
	İlkbahar	SYSTEMS ANALYSIS	3		97
2012	Güz	SERVICE OPERATIONS MANAGEMENT	3		22
		QUALITY CONTROL AND MANAGEMENT	3		90
	İlkbahar	ADVANCED OPTIMIZATION	3		9
2013	Güz	MATHEMATICAL PROGRAMMING AND MODELING	3		9
		QUALITY CONTROL AND MANAGEMENT	3		90
	İlkbahar	ADVANCED OPTIMIZATION	3		9
2014	Güz	QUALITY CONTROL AND MANAGEMENT	3		105
	İlkbahar	ADVANCED OPTIMIZATION	3		7

