

# BARIŞ TAN

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## Academic Positions

PROFESSOR OF INDUSTRIAL ENGINEERING Faculty of Engineering, Özyeğin University	Mar. 2024 - present
PROFESSOR OF OPERATIONS MANAGEMENT Faculty of Business (joint appointment), Özyeğin University	Mar. 2024 - present
PROFESSOR OF OPERATIONS MANAGEMENT College of Administrative Sciences and Economics, Koç University	Dec. 2002 - Feb. 2024
PROFESSOR OF INDUSTRIAL ENGINEERING College of Engineering (Joint Appointment), Koç University	Aug. 2014- Feb. 2024
VICE PRESIDENT FOR ACADEMIC AFFAIRS KOÇ UNIVERSITY	Sept. 2013 - Aug. 2021
DEAN College of Administrative Sciences and Economics, Koç University	Sep. 2007 - Sept. 2013
DIRECTOR Graduate School of Business, Koç University	Sep. 2008 - Feb. 2010 Jan. 2003 - Dec.2005 Jan. 2002 - May 2002
ASSOCIATE PROFESSOR College of Administrative Sciences and Economics, Koç University	Oct. 1998 -Dec. 2002
ASSISTANT PROFESSOR College of Administrative Sciences and Economics, Koç University	July 1994 - Oct. 1998
LECTURER Industrial and Systems Engineering, University of Florida	Jan. 1994 - May 1994
RESEARCH ASSISTANT Industrial Research Laboratory, University of Florida	May 1991- May 1994
RESEARCH ASSISTANT Nanoptics Inc.	Oct. 1990- Sept. 1992

<b>Degrees</b>	UNIVERSITY OF FLORIDA Ph.D. in Industrial and Systems Engineering	April 1994
	UNIVERSITY OF FLORIDA M.S.E. Graduate Certificate in Manufacturing Systems	May 1993
	UNIVERSITY OF FLORIDA M.E. in Industrial and Systems Engineering	Dec. 1991
	BOĞAZİÇİ UNIVERSITY B.S. in Electrical and Electronics Engineering	June 1990
<b>Visiting Positions</b>	VISITING PROFESSOR POLITECNICO DI MILANO Manufacturing and Production Systems	Jan. 2022 - Jan. 2024
	SENIOR RESEARCH FELLOW ERA PROJECT IN4ACT KAUNAS UNIVERSITY OF TECHNOLOGY Industry 4.0 Impact on Management Practices and Economics	May 2022 - Apr. 2023
	VISITING PROFESSOR UNIVERSITY COLLEGE LONDON UCL School of Management	Sep. 2017 - Sep. 2019
	FELLOW UNIVERSITY OF CAMBRIDGE Judge Business School	Sep. 2013 - Sep. 2014
	VISITING SCHOLAR MASSACHUSETTS INSTITUTE OF TECHNOLOGY Laboratory for Manufacturing and Productivity	Aug. 2006 - July 2007
	VISITING SCHOLAR MASSACHUSETTS INSTITUTE OF TECHNOLOGY Operations Research Center	Jan. 2001 - June 2001
	VISITING SCHOLAR IN OPERATIONS RESEARCH HARVARD UNIVERSITY Division of Engineering and Applied Sciences Harvard Center for Textile and Apparel Research	Aug. 2000 - Aug. 2001
	VISITING RESEARCH SCIENTIST MASSACHUSETTS INSTITUTE OF TECHNOLOGY Laboratory for Manufacturing and Productivity	July. 1999 - Sept. 1999
<b>Other Positions</b>	LUMS, Pakistan Member of the University Advisory Board	2024-present
	KYOTO UNIVERSITY GRADUATE SCHOOL OF MANAGEMENT, Japan Member of the External Advisory Board	2021-present
	NOTTINGHAM BUSINESS SCHOOL, United Kingdom Member of the International Advisory Board	2011-2023
	ISM UNIVERSITY OF MANAGEMENT AND ECONOMICS, Lithuania Chairman of the Senate	2016-2022
	Member of the Senate	2013-2016
	EM LYON, France Member of the International Advisory Board	2014-2022

	EFMD: EUROPEAN FOUNDATION FOR MANAGEMENT DEVELOPMENT Member of the EQUIS Awarding Body	2013-2019
	ORACLE, USA Member of the Education and Research Industry Strategy Council	2013-2016
	MINDSPECS, India Member of the Advisory Board	2013-2016
	THOMSON REUTERS, USA Member of the Research Analytics Advisory Board	2013-2015
	EFMD GLOBAL NETWORK Member of the Board	2013-2014
	CEMS: THE GLOBAL ALLIANCE IN MANAGEMENT EDUCATION Member of the Strategic Board	2009-2013
	EFMD: EUROPEAN FOUNDATION FOR MANAGEMENT DEVELOPMENT Member of the Board	2009-2013
	TURKISH CUSTOMER SATISFACTION INDEX Member of the Board of Overseers	2005-2010
	TURKISH OPERATIONS RESEARCH SOCIETY Member of the Board	2001-2009
	TURKISH SOCIETY FOR QUALITY Member of the Board	2003-2008
	TURKISH COMPUTER SIMULATION RESEARCH FOUNDATION Member of the Board of Trustees	1997-2003
	SLOAN FOUNDATION INDUSTRY STUDIES PROGRAM Member	2007-present
	INFORMS Member	1993-present
<b>Honors</b>	KOÇ UNIVERSITY OUTSTANDING FACULTY AWARD	2021
<b>Awards</b>	President's Award	
<b>Fellowships</b>	KOÇ UNIVERSITY OUTSTANDING SERVICE AWARD Special Service Award	2021
	IIE TRANSACTIONS BEST PAPER AWARD Best Paper of the Year, Focused Issue on Design and Manufacturing	2015
	TÜBİTAK RESEARCH FELLOWSHIP	2006-2007
	TURKISH ACADEMY OF SCIENCES Distinguished Young Scholar Award (TÜBA GEBİP)	2005
	NATO SCIENCE FELLOWSHIP	1999, 2000-2001
	EUROPEAN SIMULATION MULTICONFERENCE BEST PAPER AWARD	1997
	NATIONAL COLLEGIATE ENGINEERING AWARD	1994
	TÜBİTAK FELLOWSHIP	1985-1990

## SCHOLARLY WORK

<b>Research Areas</b>	Design and Control of Manufacturing Systems Supply Chain Management Design of Business Models Stochastic Modeling and Control
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**Books**

HANDBOOK OF STOCHASTIC MODELS AND ANALYSIS OF MANUFACTURING SYSTEM OPERATIONS, J.M. Smith and B. Tan (editors), International Series in Operations Research & Management Science, Vol. 192, Springer, New York. 2013.

STOCHASTIC MODELING OF MANUFACTURING SYSTEMS: ADVANCES IN DESIGN, PERFORMANCE EVALUATION, AND CONTROL ISSUES, G. Liberopoulos, C.T. Papadopoulos, B. Tan, J.M. Smith, S.B. Gershwin (editors), Springer, Berlin Heidelberg. 2006.

**Working Papers**

1. Özkan, E. and **Tan, B.**, “[Asymptotically Optimal Power Management in a Make-to-Stock Manufacturing System](#)”
2. **Tan, B.** and Karabağ, “A Deterministic Fluid Model for Production and Energy Mode Control”
3. **Tan, B.**, Karabağ, O., and Khayyati, S., “Energy-Efficient Resource Scheduling of a Single Resource with Production Requirements: A Joint Simulation and Scenario-Based Mathematical Programming Approach”
4. Çelik, B.\*, Schwarz, J. A., and **Tan, B.**, “[Product and Price Competition with Selection of Unique and Common Features and Different Quality Levels](#)”
5. Owens, N., Schwarz, J. A., Karabağ, O., and **Tan, B.**, “Modeling and Analyzing the Effect of Stochastic Production on Product Rollovers”
6. Karabağ, O., Karaesmen, F., **Tan, B.**, “Modelling and Analysis of A Remanufacturing System with Different Quality Returned Material and Finished Goods”
7. Ghalkar, A.G., Bibak, B., Karaesmen, F., and **Tan, B.**, “Machine Learning Based Approximations for Some Production Control Problems with Product Returns and Remanufacturing”
8. Song, Y., Frigerio, N., Karabağ, O., and **Tan, B.**, “Optimal Production Control of a Recycling System with Different Quality Returns”
9. Gou, Y.X, A. Matta, and **Tan, B.**, “A sample Path-based Method for the Digital Twin Prediction Update Synchronization Problem of Unreliable Production Lines”
10. Stolletz, R. and **Tan, B.**, “When and How to (Mis-)match Supply and Demand: Managing Variable Environments”
11. Manafzadeh Dizbin, N.\* and **Tan, B.**, “Empirical Analysis of Product Flows in Semiconductor Manufacturing”
12. Manafzadeh Dizbin, N.\* and **Tan, B.**, “Cycle Time Prediction in Semiconductor Manufacturing”

**Journal Articles**

1. Çelik, B.\*, Schwarz, J. A., and **Tan, B.**, “[New Product Introductions with Selection of Unique and Common Features in Monopoly Markets](#)” *Omega*, Vol. 125, No. 103018, 2024.
2. Frigerio, N., **Tan, B.** and Matta, A., “[Simultaneous Control of Multiple Machines for Energy Efficiency: a Simulation-based Approach](#),” *International Journal of Production Research*, Vol. 62, No. 3, pp. 933-948, 2024.
3. **Tan, B.** and Matta, A., “[The Digital Twin Synchronization Problem: Framework, Formulations, and Analysis](#),” *IIE Transactions*, Vol. 56, No. 6, pp. 652-665, 2024.
4. Scrivano, S., **Tan, B.**, Tolio, T., “[Continuous-flow Simulation of Manufacturing Systems with Assembly/Disassembly Machines, Multiple Loops and General Layout](#),” *Journal of Manufacturing Systems*, Vol. 69, pp. 103-118, 2023.
5. **Tan, B.**, Karabağ, O., and Khayyati, S., “[Energy-efficient Production Control of a Make-to-Stock System with Buffer- and Time-Based Policies](#),” *International Journal of Production Research*, DOI:10.1080/00207543.2023.2298488, 2023.

6. **Tan, B.**, Karabağ, O., and Khayyati, S., “[Production and Energy Mode Control of a Production-Inventory System](#),” *European Journal of Operational Research*, Vol.308, No. 3, pp. 1176-1187, 2023.
7. **Tan, B.** and Khayyati, S.\* , “[Supervised Learning Based Approximation Method for Single-Server Open Queuing Networks with Correlated Interarrival and Service Times](#),” *International Journal of Production Research, Special Issue on Big Data Analytics in Production and Distribution Management*, Vol. 60, No. 22, pp. 6822-6847, 2022.
8. Khayyati, S.\* and **Tan, B.**, “[Supervised Learning-Based Approximation Method for Multi-server Queuing Networks under Different Service Disciplines with Correlated Inter-arrival and Service Times](#),” *International Journal of Production Research*, Vol. 60, No. 17, pp. 5176-5200, 2022.
9. Khayyati, S.\* and **Tan, B.**, “[A Machine Learning Approach for Implementing Data-driven Production Control Policies](#),” *International Journal of Production Research*, Vol. 60, No. 10, 3107-3128, 2022.
10. Hosseini, B.\* and **Tan, B.**, “[Modelling and Analysis of a Cooperative Service Network](#),” *Computer and Industrial Engineering*, Vol.161, 107620, 2021.
11. Khayyati, S.\* and **Tan, B.**, “[A Lab-scale Manufacturing System Environment to Investigate Data-Driven Production Control Approaches](#),” *Journal of Manufacturing Systems*, Vol.60, July, pp. 283-297, 2021.
12. Schwarz, J.A. and **Tan, B.**, “[Optimal Sales and Production Rollover Strategies Under Capacity Constraints](#),” *European Journal of Operational Research*, Vol. 294, No. 2, pp. 507-524, 2021.
13. Manafzadeh Dizbin, N.\* and **Tan, B.**, “[Optimal Control of Production/Inventory Systems with Correlated Demand Inter-Arrival and Processing Times](#),” *International Journal of Production Economics*, Vol. 228, 107692, 2020.
14. Khayyati, S.\* and **Tan, B.**, “[Data-Driven Control of a Production/Inventory System by Using Marking-Dependent Threshold Policy](#),” *International Journal of Production Economics*, Vol. 226, 107607, 2020.
15. **Tan, B.**, “[Design of Balanced Energy Savings Performance Contracts](#),” *International Journal of Production Research*, Vol. 58, No. 5, pp. 1401 - 1424, 2020.
16. **Tan, B.**, “[Production Control with Price, Cost, and Demand Uncertainty](#),” *OR Spectrum*, Vol. 41, No. 4, pp. 1057 - 1085, 2019.
17. Manafzadeh Dizbin, N.\* and **Tan, B.**, “[Modelling and Analysis of the Impact of Correlated Inter-event Data on Production Control Using Markovian Arrival Processes](#),” *Flexible Services and Manufacturing Journal*, Vol. 31, No. 4, pp. 1042 - 1076, 2019.
18. Hosseini, B.\* and **Tan, B.**, “[Modelling and Analysis of a Cooperative Production Network](#),” *International Journal of Production Research*, Vol. 57, No. 21, pp. 6665-6686, 2019.
19. Karabağ, O.\* and **Tan, B.**, “[An Empirical Analysis of the Main Drivers Affecting the Buyer Surplus in E-Auctions](#),” *International Journal of Production Research*, Volume: 57, No. 11, pp. 3435 - 3465, 2019.
20. Karabağ, O.\* and **Tan, B.**, “[Purchasing, Production, and Sales Strategies for a Production System with Limited Capacity and Fluctuating Sales and Purchasing Prices](#),” *IIE Transactions*, Vol. 51, No. 9, pp. 921-942, 2019.
21. Karabağ, O.\* and **Tan, B.**, “[Analysis of a Group Purchasing Organization Under Demand and Price Uncertainty](#),” *Flexible Services and Manufacturing Journal*, Vol. 30, No. 4, pp. 844-883, 2018.
22. **Tan, B.** and Lagershausen, S., “[On the Output Dynamics of Production Systems Subject to Blocking](#),” *IIE Transactions*, Vol. 49:3, pp. 268-284, 2017.

\*Graduate students

23. Hosseini, B.\* and **Tan, B.**, “Simulation and Optimization of Continuous Flow Production Systems with a Finite Buffer by Using Mathematical Programming,” *IIE Transactions*, Vol. 49:3, pp. 255-267, 2017.
24. **Tan, B.**, Yavuz, Y.\* , Otay, E. N., and Çamlıbel, E., “Optimal Selection of Energy Efficiency Measures for Energy Sustainability of Existing Building,” *Computers and Operations Research: Special Issue on Operations Research in Energy Modelling and Management*, Vol. 66, pp. 258-271, 2016.
25. **Tan, B.** and Yavuz, Y.\* , “Modelling and Analysis of a Business Model to Offer Energy Saving Technologies as a Service,” *International Journal of Production Research: Special Issue on Energy-Aware Manufacturing Operations*, Vol. 53:23, pp.7118-7135, 2015.
26. Lagershausen, S. and **Tan, B.**, “On the Exact Inter-departure and Inter-start Distribution of Closed Queueing Networks Subject to Blocking,” *IIE Transactions*, Vol. 47:7, pp.673-692, 2015.
27. **Tan, B.**, “Mathematical Programming Representations of Dynamics of Continuous Flow Production Systems,” *IIE Transactions*, Vol. 47:2, pp. 173-189, 2015. (*Honorable Mention for Best Paper Award in IIE Transactions Focused Issue on Design and Manufacturing*)
28. **Tan, B.** and Akçay, Y., “Assortment-based Cooperation of Two Firms with Limited Capacity,” *IIE Transactions*, Vol. 46:3, pp. 1-17, 2014. (*Best Paper of the Year Award in IIE Transactions Focused Issue on Design and Manufacturing*)
29. **Tan, B.** and Karabatı, S., “Retail Inventory Management with Stock-Out Based Dynamic Demand Substitution,” *International Journal of Production Economics*, Vol. 145, pp. 78-87, 2013.
30. Altuğ, S., **Tan, B.**, and G. Gencer\*, “Cyclical Dynamics of Industrial Production and Employment: Markov Chain-based Estimates and Tests,” *Journal of Economic Dynamics and Control*, Vol. 36, No. 10, pp. 1534-1550, 2012.
31. **Tan, B.** and Çömnden, E.N.\*, “Agricultural Planning for Annual Plants under Harvest, Yield, and Demand Risk,” *European Journal of Operational Research*, Vol. 220, pp. 539-549, 2012.
32. **Tan, B.** and Gershwin, S.B., “Modeling and Analysis of Markovian Continuous Flow Production Systems with a Finite Buffer,” *Annals of Operations Research, Special Issue on Advances in the Analysis of Manufacturing Systems*, Vol. 182, pp. 5-30, 2011.
33. **Tan, B.** and Gershwin, S.B., “Analysis of General Markovian Continuous Flow Production Systems with a Finite Buffer,” *International Journal of Production Economics*, Vol. 120, No. 2, pp.327-339, 2009.
34. Gershwin, S.B., **Tan, B.** and Veatch, M., “Production Control with Backlog-Dependent Demand,” *IIE Transactions*, Vol. 41, No. 6, pp. 511-523, 2009.
35. Özler, A.\* , **Tan, B.**, and Karaesmen, F., “Multi-product Newsvendor Problem with Value-at-Risk Constraints,” *International Journal of Production Economics*, Vol. 117, No. 2, pp. 244-255, 2009.
36. Karabatı, S., **Tan, B.** and Öztürk, Ö.C.\*, “A Method for Estimating Stock-Out Based Substitution Rates by Using Point-of-Sale Data,” *IIE Transactions*, Vol. 41, No. 2, pp. 408-420, 2009.
37. Akçay, Y. and **Tan, B.**, “On the Benefits of Assortment-Based Cooperation among Independent Producers,” *Production and Operations Management*, Vol. 17, No. 6, pp. 626-640, 2008.
38. Ağralı, S.\* , **Tan, B.** and Karaesmen, F., “Modeling and Analysis of an Auction-Based Logistics Market”, *European Journal of Operational Research*, Vol 191, No.1, pp. 270-292, 2008.

39. **Tan, B.**, “[Modeling and Analysis of a Network Organization for Cooperation of Producers on Production Capacity](#),” *Mathematical Problems in Engineering*, Volume 2006, Article ID 85103, pp. 1-24, 2006.
40. Yıldırım, I.\*, **Tan, B.** and Karaesmen, F., “[A Multiperiod Stochastic Production Planning and Sourcing Problem with Service Level Constraints](#),” *OR Spectrum*, Vol. 2, No. 2-3, pp. 471-489, 2005.
41. **Tan, B.** “[Subcontracting with Availability Guarantees: Production Control and Capacity Decisions](#),” *IIE Transactions*, Vol. 36, No. 8, pp. 711-724, 2004.
42. **Tan, B.** and S. Karabatı, “[Can the Desired Service Level be Achieved When the Demand and Lost Sales are Unobserved?](#),” *IIE Transactions*, Vol. 36, No. 4, pp. 345-358, 2004.
43. **Tan, B.** and S.B. Gershwin, “[Production and Subcontracting Strategies for Manufacturers with Limited Capacity and Volatile Demand](#),” *Annals of Operations Research: Special Volume on Stochastic Models of Production/Inventory Systems*, Vol. 125, pp. 205-232, 2004.
44. **Tan, B.**, “[Production Control of a Pull System with Production and Demand Uncertainty](#),” *IEEE Transactions on Automatic Control*, Vol. 47, No. 5, pp. 779-783, 2002.
45. **Tan, B.**, “[Managing Manufacturing Risks by Using Capacity Options](#),” *Journal of the Operational Research Society*, Vol. 53, No. 2, pp. 232-242, 2002.
46. **Tan, B.** and Yilmaz, K., “[Markov Chain Test for Time Dependence and Homogeneity: An Analytical and Empirical Evaluation](#),” *European Journal of Operational Research*, Vol. 137, No. 3, pp. 524-543, 2002.
47. **Tan, B.**, “[A Three Station Continuous Materials Flow Merge System with Unreliable Stations and a Shared Buffer](#),” *Mathematical and Computer Modelling*, Vol. 33, Issue: 8-9, pp.1011-1026, 2001.
48. **Tan, B.** and Karabatı, S. “[Modelling and Scheduling of an Asynchronous Cyclic Production Line with Multiple Parts](#),” *Journal of the Operational Research Society*, Vol. 51, No. 11, pp. 1296-1308, 2000.
49. **Tan, B.** “[Asymptotic Variance Rate of the Output in Production Lines with Finite Buffers](#),” *Annals of Operational Research, Special Issue on Performance Evaluation and Optimization of Production Lines*, Vol. 93, pp. 385-403, 2000.
50. **Tan, B.** and Otay, E., “[Modeling and Analysis of Vessel Casualties Resulting from Tanker Traffic through Narrow Waterways](#),” *Naval Research Logistics*, Vol. 46, No. 8, pp. 871-892, 1999.
51. **Tan, B.**, “[Variance of the Output as a Function of Time: Production Line Dynamics](#),” *European Journal of Operational Research*, Vol. 117, No. 3, pp. 470-484, 1999.
52. **Tan, B.**, “[Asymptotic Variance Rate of the Output of a Transfer Line with No Buffer Storage and Cycle-Dependent Failures](#),” *Mathematical and Computer Modelling*, Vol. 29, No. 7, pp. 97-112, 1999.
53. **Tan, B.** “[Agile Manufacturing and Management of Variability](#),” *International Transactions in Operational Research*, Vol. 5, No. 5, pp. 375-388, 1998.
54. Karabatı, S. and **Tan, B.**, “[Stochastic Cyclic Scheduling Problem in Synchronous Assembly and Production Lines](#),” *Journal of the Operational Research Society*, Vol. 49, No. 11, pp. 1173-1187, 1998.
55. **Tan, B.**, “[An Analytic Formula for Variance of Output from a Series-Parallel Production System with No Interstation Buffers and Time-Dependent Failures](#),” *Mathematical and Computer Modelling*, Vol. 27, No. 6, pp. 95-112, 1998.
56. **Tan, B.**, “[Effects of Variability on the Due-Time Performance of a Continuous Materials Flow Production System in Series](#),” *International Journal of Production Economics*, vol. 54, pp. 87-100, 1998.



57. **Tan, B.**, “Variance of the Throughput of an N-station Production Line with No Intermediate Buffers and Time Dependent Failures,” *European Journal of Operational Research*, Vol. 101, No. 3, pp. 560-576, 1997.
58. Yeralan, S. and **Tan, B.** “A Station Model for Continuous Materials Flow Production,” *International Journal of Production Research*, Vol. 35, No. 9, pp. 2525-2541, 1997.
59. **Tan, B.** and Yeralan, S., “A Decomposition Model for Continuous Materials Flow Production,” *International Journal of Production Research*, Vol. 35, No. 10, pp. 2759-2772, 1997.
60. Yeralan, S. and **Tan, B.**, “Analysis of Multistation Production Systems with Limited Buffer Capacity, Part I,” *Mathematical and Computer Modelling*, Vol. 25, No. 7, pp. 109-122, 1997.
61. **Tan, B.** and Yeralan, S., “Analysis of Multistation Production Systems with Limited Buffer Capacity, Part II,” *Mathematical and Computer Modelling*, Vol. 25, No. 11, pp. 109-123, 1997.
62. **Tan, B.** “Markov Chains and the RISK Board Game,” *Mathematics Magazine*, Vol. 70, No. 5, pp. 349-357, 1997.
63. **Tan, B.** and Yeralan, S., “A Fuzzy Decomposition Method for Multistation Production Systems Subject to Blocking,” *International Journal of Production Economics*, Vol. 42, No. 3, pp. 245-262, 1995.
64. **Tan, B.**, Yeralan, S., Babu. S, and Osborn, B., “Product Quality/Tool Reliability Modeling of Complex Manufacturing Tools,” *Endüstri Mühendisliği/Industrial Engineering Journal of Turkish Chamber of Engineers*, Vol. 5, No. 3, pp. 3-11, 1995.
65. **Tan, B.** and Yeralan, B., “A Unified-Boundary Interior Model for Continuous Materials Flow Production Lines with Station Breakdown,” *Yöneylem Araştırması Dergisi/Transactions on Operational Research*, Vol. 6, No. 2, pp. 95-120, 1994.
66. **Tan, B.**, Yeralan, S., Babu. S, and Osborn, B., “Computer-Aided Reliability Modeling and Applications in Semiconductor Manufacturing,” *Computers and Industrial Engineering*, Vol. 23, No. 1-4, pp. 169-172, 1992.

## Book Chapters

1. **Tan, B.**, Yavuz, Y.\*, Otay, E.N., Çamlıbel, E., “Developing a Business Model to Improve Energy Sustainability of Existing Buildings,” In: *Advances in Business, Operations, and Product Analytics*, M. Drake, Pearson/FT Press, 2015 (Reprint of The Case Centre Collection No. 614-074-1).
2. **Tan, B.**, “Modeling and Analysis of Output Variability in Discrete Material Flow Production Systems,” In: *Handbook of Stochastic Models and Analysis of Manufacturing System Operations*, International Series in Operations Research & Management Science Volume 192, 2013, J.M. Smith and B. Tan (editors), pp 287-311, Springer, New York, 2013.
3. **Tan, B.**, “Incorporating Harvest, Maturity, Yield, and Demand Risk in Planning for Agricultural Supply Chains for Premium Products,” In: *Managing Supply Chains on the Silk Road: Strategy, Performance, and Risk*, C. Haksöz, S. Seshadari, A.V. Iyer (editors), pp. 239-252, CRC Press, 2011.
4. **Tan, B.**, “State-Space Modeling and Analysis of Pull Controlled Production Systems,” In: *Analysis and Modeling of Manufacturing Systems*, S.B. Gershwin, Y. Dallery, C. Papadopoulos, J.M. Smith (editors), Chapter 15, pp. 363-398, Kluwer International Series in Operations Research and Management Science, 2003.
5. **Tan, B.**, “Fuzzy Logic Control for Design and Control of Manufacturing Systems,” In: *Computational Intelligence: Soft Computing and Fuzzy-Neuro Integration with Applications*, O. Kaynak, L.A. Zadeh, B. Türksen, I. Rudas (editors), (NATO ASI Series-Series F. Computer and Systems Sciences; vol. 162), pp. 496-513, Springer-Verlag, 1998.



6. Yeralan, S. and **Tan, B.**, “Fuzzy Logic Control as an Industrial Control Language for Embedded Controllers,” In: Design and Implementation of Intelligent Manufacturing Systems: From Expert Systems, Neural Networks, to Fuzzy Logic, Hamid R. Parsaei and M. Jamshidi (editors), pp. 107-140, Prentice Hall Inc., 1995.

**Other  
Journal  
Publications  
and Book  
Chapters**

1. **Tan, B.**, Gershwin, S. B., Liberopoulos, G., Meerkov, S.M., and Papadopoulos, C.T., “Advances in Stochastic Models of Manufacturing and Service Operations,” *Annals of Operations Research*, Vol. 231, pp. 1-3, 2015.
2. **Tan, B.**, [Legitimacy and Future of Business Schools in Turkey](#), In: Business Schools and their Contribution to Society, M. Morsing and A. Sauquet Rovira (Editors), pp. 49-56, SAGE, 2011.
3. Van Woensel, T., Buzacott, J., Gershwin, S.B., Liberopoulos, G., Smith, J.M., Meerkov, S., **Tan, B.**, “Introduction to Special Issue on Advances in Manufacturing Systems,” *Annals of Operations Research*, Vol. 182 , No. 1 , pp. 1-3, 2011.
4. **Tan, B.**, “Modelleme ve Model Türleri” (Modeling and Model Types), Türkiye Bilişim Vakfı Bilişim Ansiklopedisi, (Turkish) Informatics Foundation- Encyclopedia of Informatics), T. Ören, T. Üney, R. Çölkesen (editors), Türkiye Bilişim Vakfı, pp. 590-595, 2006.
5. **Tan, B.**, Management Education in Turkey, In: A Global Guide to Management Education 2006, Global Foundation for Management Education, pp. 251-256, 2006.
6. Liberopoulos, G., Papadopoulos, C.T., **Tan, B.**, Gershwin, S.B., Smith, J.M., Editorial-Stochastic Modeling of Manufacturing Systems: Advances in Design, Performance Evaluation, and Control Issues., pp. V-VIII, Springer, 2006.
7. Liberopoulos, G., Papadopoulos, C.T., **Tan, B.**; Gershwin, S.B., Smith, J.M., “Stochastic Models for the Design, Coordination, and Control of Manufacturing Systems-Preface”, *OR Spectrum*, Vol. 27, No. 2-3, pp. 167-169, 2005.
8. Liberopoulos, G., **Tan, B.**, Gershwin, S.B.; Papadopoulos, C.T.; Smith, J.M., “Special issue: Stochastic Models of Production-Inventory Systems, Part I - Preface”, *Annals of Operations Research*, Vol. 125, Issue. 38078 , pp. 17-19, 2004.
9. Liberopoulos, G., **Tan, B.**, Gershwin, S.B., Papadopoulos, C.T., Smith, J.M., “Special issue: Stochastic Models of Production-Inventory Systems, Part II - Preface”, *Annals of Operations Research*, Vol. 126, Issue. 38078 , pp. 17-19, 2004.

**Refereed  
Conference  
Proceedings**

1. Gou, Y.X, A. Matta, and **Tan, B.**, “A sample path-based method for the digital twin prediction update synchronization problem of unreliable production lines,” Proceedings of 2024 IEEE 20th International Conference on Automation Science and Engineering (CASE) (CASE 2024), 2024.
2. Friglio, N. and **Tan, B.** and A. Matta, “Green Gateways: a Concept and a Framework for Decisions in Circular-Oriented Economies,” *Procedia CIRP*, Proceedings of 31st CIRP Conference on Life Cycle Engineering (LCE 2024), Vol. 122, pp. 617-622, 2024.
3. **Tan, B.** and A. Matta, “[Optimizing Digital Twin Synchronization in Finite Horizon](#),” In: Proceedings of the 2022 Winter Simulation Conference, B. Feng, G. Pedrielli, Y. Peng, S. Shashaani, E. Song, C. Corlu, L. Lee, E. Chew, T. Roeder, and P. Lendermann (editors), Institute of Electrical and Electronics Engineers, Piscataway, New Jersey, pp.2924-2935, 2022. (*Winter Simulation Conference 2022 Best Theoretical Paper Award Finalist*)
4. **Tan, B.**, “[Global Sourcing and the Competitiveness of the Turkish Textile and Apparel Industries](#),” In: Proceedings of International Conference on Business, Economics and Management ICBME 2005 Volume 2: Organizational Culture, Corporate Governance and Competitiveness C. C. Aktan (editor), pp. 179-199, 2005.
5. **Tan, B.**, “Performance Evaluation of Auction-Based Allocation Mechanisms for Cooperation of Manufacturers on Production Capacity,” In: Proceedings of the European Simulation and Modelling Conference, P. Geril (editor), pp.415-419, 2003.

6. **Tan, B.** and Otay, E., “A Stochastic Model for Vessel Casualties Resulting from Oil Tanker Traffic through Narrow Waterways,” In: Proceedings of the 1998 European Simulation Multiconference, R. Zobel and D. Moeller (editors), pp. 881-885, 1988.
7. **Tan, B.** and Karabatı, S., “Effects of Variability on the Performance of a Production Line Under Cyclic Scheduling,” In: Proceedings of the 1997 European Simulation Multiconference, A.R.Kaylan and A.Lehmann (editors), pp. 795-802, 1997 (*European Simulation Multiconference Best Paper Award*).
8. Yeralan, S., **Tan, B.**, and Tüfekçi, S. “Emulated Flexible Manufacturing Laboratory,” In: Proceedings of the European Simulation Symposium ESS 94, A. R. Kaylan, A.l Lehmann, T. I. Ören (editors), Vol. 1, pp. 196-198, 1994.
9. Yeralan, S. and **Tan, B.**, “An Architecture and Language for Fuzzy PLCs,” In: Proceedings of 1994 Annual International Conference on Industry, Engineering and Management Systems, p. 167-171, 1994.

### Conference Proceedings

1. **Tan, B.**, “Markov Süreçlerinin Yarı Simgesel Çözümü ve Üretim Sistemlerinin Kullanılabilirlik ve Güvenirlilik Çözümlemesinde Uygulamaları,” (Semi-Symbolic Solution of Markov Processes and Applications in Availability/Reliability Analysis of Production Systems), III. Ulusal Ekonometri ve İstatistik Sempozyumu, Bursa, 1997.
2. Yeralan, S. and **Tan, B.**, “Need-Driven Research Opportunities for the Industrial Engineering Profession,” In: Proceedings of the UNESCO International Conference on Technology Management: University/Industry/Government Collaboration UNIG '96, pp. 314-319, 1996.
3. **Tan, B.** , “Doğma Ölme Benzeri Süreçlerin Matris Polinomları ile Çözümlemesi (Analysis of Quasi Birth and Death Processes with Matrix Polynomials),” II. Ulusal Ekonometri ve İstatistik Sempozyumu , İzmir, 1995.
4. Yeralan, S., **Tan, B.**, Norton, G., and Fadiloğlu, M. “The Impact of Intelligent Machine Tools on Production Operations Management and Control,” In: Proceedings of 1995 NSF Design and Manufacturing Grantees Conference, La Jolla California, pp. 301-303, 1995.
5. Yeralan, S., Norton, G., and **Tan, B.**, “Analytical Methods for Agent-Based Materials Handling Systems,” In: Proceedings of the 1994 Florida Conference on Recent Advances in Robotics, pp. 240-245, 1994.

### Technical Reports

1. Stolletz, R. and **Tan, B.**, “[When and How to \(Mis-\)match Supply and Demand: Managing Variable Environments](https://ssrn.com/abstract=4735439)” (February 19, 2024). Available at SSRN: <https://ssrn.com/abstract=4735439> or <http://dx.doi.org/10.2139/ssrn.4735439>
2. Özkan, E. and **Tan, B.**, “[Asymptotically Optimal Power Management in a Make-to-Stock Manufacturing System](https://ssrn.com/abstract=4348962)” (February 5, 2023). Available at SSRN: <https://ssrn.com/abstract=4348962> or <http://dx.doi.org/10.2139/ssrn.4348962>
3. Çelik, B.\*, Schwarz, J. A., and **Tan, B.**, “[New Product Introductions with Selection of Unique and Common Features in Monopoly Markets](https://ssrn.com/abstract=4323474)” (June 15, 2022). Available at SSRN: <https://ssrn.com/abstract=4323474> or <http://dx.doi.org/10.2139/ssrn.4323474>
4. Çelik, B.\*, Schwarz, J. A., and **Tan, B.**, “[Product and Price Competition with Selection of Unique and Common Features and Different Quality Levels](https://ssrn.com/abstract=4323571)” (November 9, 2022). Available at SSRN: <https://ssrn.com/abstract=4323571> or <http://dx.doi.org/10.2139/ssrn.4323571>
5. G. Gencer\*, Altug, S. and **Tan, B.**, “[Cyclical Dynamics of Industrial Production and Employment: Markov Chain-based Estimates and Tests](#),” TÜSİAD-Koç University Economic Research Forum Working Paper Series- No. 1101, January 2011.
6. **Tan, B.** and Gershwin, S.B. “[Modelling and Analysis of Markovian Continuous Flow Production Systems with a Finite Buffer: A General Methodology and Applications](#)” Massachusetts Institute of Technology, Operations Research Center, Working Paper Series, ORC-381-07, March 2007.

7. **Tan, B.** and Gershwin, S.B. “On Production and Subcontracting Strategies for Manufacturers with Limited Capacity and Volatile Demand,” Massachusetts Institute of Technology, Operations Research Center, Working Paper Series, ORC-354-01, May 2001.
8. **Tan, B.**, “On Capacity Options in Lean Retailing,” Harvard University, Center for Textile and Apparel Research, Research Paper Series, February 2001.
9. **Tan, B.** “Overview of the Turkish Textile and Apparel Industry,” Harvard University, Center for Textile and Apparel Research, Research Paper Series, February 2001.

### Dissertation and Reports

1. **Tan, B.**, A Decomposition Method for Multistation Production Systems, Ph.D. Dissertation, Industrial and Systems Engineering, University of Florida, May 1994.
2. **Tan, B.**, A Computerized Alignment System for the Scanning Proton Microprobe, Master’s Project, Industrial and Systems Engineering, University of Florida, December 1991.

### Academic Advising

#### Advisor, Ph.D. Theses

- Burak Çelik (2018-2023),  
 “New Product Introductions with Selection of Unique and Common Features”  
 Koç University, PhD in Industrial Engineering and Operations Management  
 Current position: Postdoctoral Research Fellow, Univ. of Chinese Academy of Sciences  
 First position: Postdoctoral Research Fellow, Koç University
- Nima Manafzadeh Dizbin (2016-2020),  
 “Analysis and Control of Production Systems with Correlated Arrival and Service Times”  
 Koç University, PhD in Business Administration, Operations Management  
 Current position: Data Scientist, Rabobank  
 First position: Postdoctoral Research Fellow, Eindhoven University of Technology
- Siamak Khayyati (2016-2020),  
 “Data-driven Control of a Production System by Using Marking-dependent Threshold Policy”  
 Koç University, PhD in Industrial Engineering and Operations  
 Current position: Asst. Professor, HEC-Liège Management School of the Univ. of Liège  
 Previous position: Postdoctoral Research Fellow, Mannheim University
- Behnaz Hosseini (2014-2019),  
 “Modelling and Analysis of the Cooperative Production and Service Networks”  
 Koç University, PhD in Industrial Engineering and Operations Management  
 Current position: Supply Chain Designer, Aurizon  
 First position: Postdoctoral Research Fellow, National University of Singapore
- Oktay Karabağ (2014-2018),  
 “Essays on Modelling and Analysis of the Purchasing Process for a Producer”  
 Koç University, PhD in Industrial Engineering and Operations Management  
 Current position: Asst. Professor, Izmir University of Economics & Erasmus University Rotterdam  
 First position: Postdoctoral Research Fellow, Eindhoven University of Technology

#### Advisor, M.S Theses

#### MS in Business Theory, Koç University:

- Nima Manafzadeh Dizbin (2016),  
 “Modelling and Control of Production Systems based on Observed Inter-event Times: An Analytical and Empirical Investigation”

**MS in Industrial Engineering, Koç University:**

- Yahya Yavuz (2013),  
 “Analysis of a Business Model to Offer Energy Saving Technologies as a Service”  
 Gözde Gencer (2010),  
 “Cyclical Dynamics of Industrial Production and Employment:A Markov Chain Approach”  
 Elif Nihan Çömnden (2009),  
 “Agricultural Planning Problems with Harvest, Yield and Demand Uncertainty”  
 Figen Helvacıoğlu (2009), Co-supervisor (with S. Karabatı),  
 “Multi-product Inventory Control Under Stock-out Based Substitution”  
 Ömer Cem Öztürk (2006), Co-supervisor (with S. Karabatı),  
 “Estimating Stock-out Based Substitution Rates by Using Point-of-Sale Data”  
 Semra Ağralı(2005), Co-supervisor (with F. Karaesmen),  
 “Modeling and Analysis of an Auction-based Logistics Market”  
 Aysun Aker (2005), Co-supervisor (with F. Karaesmen),  
 “Single Period Stochastic Inventory Problem with Downside Risk Considerations”  
 İşıl Yıldırım (2004), Co-supervisor (with F. Karaesmen),  
 “Stochastic Production Planning and Sourcing Problems with Service Level Constraints”

**Member,  
Ph.D.  
Committee**

- Arash Gandomkar Ghalhar (2023 - ),  
 Koç University, PhD in Industrial Engineering and Operations Management  
 Bijan Bibak(2023 - ),  
 Koç University, PhD in Industrial Engineering and Operations Management  
 Christoph Jacobi (2023),  
 Karlsruhe Institute of Technology, PhD in Mechanical Engineering  
 Seval Ata (2022 - ),  
 Boğaziçi University, PhD in Industrial Engineering  
 Maria Chiara Magnanini (2019),  
 Politecnico di Milano, PhD in Industrial Engineering, Manufacturing Systems  
 Martin Epp (2023),  
 Karlsruhe Institute of Technology, PhD in Mechanical Engineering  
 Yiğit Altan (2016),  
 Boğaziçi University, PhD in Civil Engineering  
 Ramiz Assaf (2012),  
 Politecnico di Milano, PhD in Industrial Engineering, Manufacturing Systems  
 Emre Çamlıbel (2011),  
 Boğaziçi University, PhD in Civil Engineering

**Visiting  
Researchers**

- Raik Stolletz (2019, 2022), University of Mannheim  
 Justus A. Schwarz (2016, 2018), University of Mannheim  
 Martin Epp (2016), Karlsruhe Institute of Technology  
 Svenja Lagershausen (2013), Leibniz University Hannover

**Sponsored  
Research  
Projects**

- |  |           |
|--|-----------|
| HORIZON EUROPE - Research and Innovation Actions   | 2022-2025 |
| AUTO-TWIN: Data-driven Method Based on a Process Mining Approach for Automated Digital Twin Generation, Operations, and Maintenance in Circular Value Chains             |           |
| TÜBİTAK  | 2022-2025 |
| Design and Implementation of Data-Driven Production, Material Flow, and Energy Mode Control Systems with Energy and Cost Efficiency Considerations in Production Systems |           |
| H2020-ECSEL Research and Innovation Actions and TÜBİTAK  | 2017-2020 |
| Productive 4.0: Electronics and ICT as Enabler for Digital Industry and Optimized Supply Chain Management Covering the Entire Product Lifecycle                          |           |

ZER A.S.	2013
Analysis and Development of Cooperation-based Business Models	
TÜBİTAK	2010-2012
The Determinants of Business Cycles in Turkey and in Emerging Market Economies	
TÜBİTAK	2006-2009
A Point-of-Sales Based Method for Estimation of Product Substitution Rates and Inventory Control Under Stock-out Based Substitution	
KÜMPEM: Koç University-Migros Retailing Center	2004-2006
Modeling and Analysis of RFID Technology within the Supply Chain	
IBM CORPORATION	1992-1994
Computer-Aided Reliability Modeling of Semiconductor Manufacturing Tools	
MICROCHIP TECHNOLOGIES	1993-1994
Fuzzy Logic Code Generator for Embedded Controllers	

**Invited  
Research  
Talks**

UNIVERSITY OF MANNHEIM: Chair of Production Management	2023
SABANCI UNIVERSITY: Industrial Engineering	2023
KYOTO UNIVERSITY: Graduate School of Management	2023
KAUNAS UNIVERSITY OF TECHNOLOGY: In4Act ERA Chair	2022
POLITECNICO DI MILANO: Mechanical Engineering - MeccPhD Lecture	2021
KYOTO UNIVERSITY: Graduate School of Management	2019
BUDAPEST UNIV. OF TECHNOLOGY AND ECONOMICS: Networked Systems&Services	2019
PEKING UNIVERSITY: Department of Industrial Engineering and Management	2018
UNIVERSITY COLLEGE LONDON: School of Management	2018
KOBE UNIVERSITY: Graduate School of System Informatics	2016
KYOTO UNIVERSITY: Graduate School of Management	2016
UNIVERSITY COLLEGE LONDON: School of Management	2016
UNIVERSITY OF MANNHEIM: Chair of Production Management	2015
UNIVERSITY OF CAMBRIDGE: Institute for Manufacturing	2014
KOBE UNIVERSITY: Graduate School of Business Administration-SESAMI Seminar	2014
KYOTO UNIVERSITY: Graduate School of Management	2014
HITACHI YOKOHOMA RESEARCH LAB.: Manufacturing Technology Research Center	2014
YAŞAR UNIVERSITY: Department of Industrial Engineering	2013
POLITECNICO DI MILANO: Manufacturing and Production Systems Division	2012
BİLKENT UNIVERSITY: Department of Industrial Engineering	2010
MIDDLE EAST TECHNICAL UNIVERSITY: Department of Industrial Engineering	2008
BİLKENT UNIVERSITY: Department of Industrial Engineering	2008
MIT: Laboratory for Manufacturing and Productivity	2007
CASE WESTERN RESERVE UNIVERSITY: Weatherhead School of Management	2007
RUTGERSUNIVERSITY: Department of Industrial Engineering	2007
MARMARA UNIVERSITY: Department of Industrial Engineering	2006
MIDDLE EAST TECHNICAL UNIVERSITY: Department of Industrial Engineering	2006
HEC PARIS: Operations Management	2005
POLITECNICO DI MILANO: Manufacturing and Production Systems Division	2003
TECHNISCHE UNIVERSITEIT EINDHOVEN: Beta Institute	2002
TILBURG UNIVERSITY: Center for Economic Research	2002
BOĞAZİÇİ UNIVERSITY: Department of Industrial Engineering	2002
ÉCOLE CENTRALE PARIS: Laboratoire Productique et Logistique	2002
INSEAD: Technology and Operations Management	2002
SABANCI UNIVERSITY: Manufacturing Systems Engineering	2001
BİLKENT UNIVERSITY: Department of Industrial Engineering	2001
BOSTON UNIVERSITY: United Technologies Distinguished Lecturer Series	2001
BOSTON UNIVERSITY: Manufacturing Engineering	2001
UNIVERSITY OF FLORIDA: Department of Industrial and Systems Engineering	2001

HARVARD UNIVERSITY: Harvard Center for Textile and Apparel Research	2001
HARVARD UNIVERSITY: Division of Applied Sciences and Engineering	2001
MCGILL UNIVERSITY: Graduate School of Business	2001
MIT: Laboratory for Manufacturing and Productivity	2000
MIDDLE EAST TECHNICAL UNIVERSITY: Department of Industrial Engineering	1997
BOĞAZİÇİ UNIVERSITY: Department of Industrial Engineering	1993
BILKENT UNIVERSITY: Department of Industrial Engineering	1993
UNIVERSITY OF FLORIDA: Department of Industrial and Systems Engineering	1993

## Conference

<b>Presentations</b>	SMMSO Stochastic Models of Manufacturing and Service Operations, Italy	2024
	EURO Conference, Copenhagen	2024
	CIRP Winter Meeting, Paris ( <i>Keynote</i> )	2024
	SMMSO Stochastic Models of Manufacturing and Service Operations, France	2022
	YAEM National Conference of Operational Research and Industrial Engineering	2021
	EURO Conference, Dublin, Ireland	2019
	SMMSO Stochastic Models of Manufacturing and Service Operations, Germany	2019
	INFORMS Annual Meeting, Phoenix, USA	2018
	INFORMS Manufacturing and Service Operations Conference, Dallas, USA	2018
	EURO Stochastic Modelling Conference, Lancaster, UK	2018
	SMMSO Stochastic Models of Manufacturing and Service Operations, Italy ( <i>Keynote</i> )	2017
	IIE Annual Conference, USA	2016
	INFORMS Applied Probability Conference, Türkiye	2015
	SMMSO Stochastic Models of Manufacturing and Service Operations, Greece	2015
	IIE Annual Conference, USA	2015
	YAEM National Conference of Operational Research and Industrial Engineering	2015
	EURO Stochastic Modelling Conference, Mannheim, Germany	2014
	INFORMS, San Fransisco, USA	2014
	SMMSO Stochastic Models of Manufacturing and Service Operations, Germany	2013
	INFORMS, Phoenix, USA	2012
	SMMSO Stochastic Models of Manufacturing and Service Operations, Türkiye	2011
	POMS International Meeting, Orlando, USA	2009
	INFORMS San Diego, USA	2009
	BILKENT University Second Annual Workshop on Supply Chain and Logistics, Ankara	2009
	YAEM National Conference of Operational Research and Industrial Engineering	2008
	KYOTO International Conference on Business Groups in Emerging Economies	2007
	INFORMS, Seattle, USA	2007
	SMMSO Stochastic Models of Manufacturing and Service Operations, Netherlands	2007
	UNDP Clustering Conference, Istanbul, Türkiye	2007
	AAOM PDW Academy of Management Conference, Philadelphia, USA	2007
	INFORMS International, Puerto Rico	2007
	INFORMS, Pittsburgh, USA	2006
	INFORMS International Conference, Hong Kong	2006
	POMS International Meeting, Boston, USA	2006
	INFORMS Annual Meeting, San Francisco, USA	2005
	SMMSO Stochastic Models of Manufacturing and Service Operations, Greece	2005
	YAEM National Conference of Operational Research and Industrial Engineering	2004
	EUROSIS European Simulation Multiconference, Naples, Italy	2003
	SMMSO Stochastic Models of Manufacturing and Service Operations, Greece	2003
	EURO-INFORMS, Istanbul	2003
	INFORMS, San Jose, USA	2002
	SMMSO Stochastic Models of Manufacturing and Service Operations, Greece	2001
	INFORMS, San Antonio, USA	2000

EURO, Budapest, Hungary	2000
YAEM National Conference of Operational Research and Industrial Engineering	2000
SMMSO Stochastic Models of Manufacturing and Service Operations, Greece	1999
INFORMS International, Tel-Aviv, Israel	1998
INFORMS-EURO, Barcelona Spain	1997
SMMSO Stochastic Models of Manufacturing and Service Operations, Greece	1997
YAEM National Conference of Operational Research and Industrial Engineering	1996
IFORS 14th Triennial Conference, Vancouver, B.C., Canada	1996
INFORMS, Atlanta, USA	1996
ORSA/TIMS Joint National Meeting, Detroit, USA	1994

## TEACHING ACTIVITIES

### Courses Taught

PH.D. COURSES:  
 Stochastic Modelling and Analysis of Production Systems

EXECUTIVE MBA, MBA, AND UNDERGRADUATE COURSES:  
 Operations Management  
 Design, Planning, and Control of Operations  
 Supply Chain Management  
 Service Operations Management  
 Total Quality Management  
 Management Science  
 Computer Simulation in Business  
 Transform Methods in Systems Engineering

EXECUTIVE EDUCATION PROGRAMS:  
 Strategy: Doing the Right Thing Right  
 Business Model Innovation  
 Supply Chain Management

### Case Studies

[Developing a Business Model to Improve Energy Sustainability of Existing Buildings](#), Koç University Graduate School of Business Case Series, (The Case Centre Collection 614-074-1) (with Otay, E. N., and Çamlıbel, E., and Y. Yavuz, Y.), 2014. (*INFORMS Case Award Finalist*)

[Zer: The Power of Cooperation](#), Koç University Graduate School of Business Case Series, (The Case Centre Collection 614-016-1), 2014.

[Turkish Airlines: Globally Yours, Balancing Growth, Profitability and Quality](#), Koç University Graduate School of Business Case Series-OPSM2011-1. (ECCH Collection 612-011-1), (with Z. Akşin-Karaesmen), 2011.

[Vestel- Electronics-Transition into the Leading European TV Manufacturer](#), Koç University Graduate School of Business Case Series- OPSM2005-1. (ECCH Collection 605-015-1),(with S. Karabatı), 2005.

[Vestel Durable Goods- Distribution Planning and 3PL Relations](#), Koç University Graduate School of Business Case Series- OPSM2004-1. (ECCH Collection 604-016-1), (with Z. Akşin-Karaesmen), 2004.



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**SERVICE ACTIVITIES**

<b>Editing Professional Journals</b>	FLEXIBLE SERVICES AND MANUFACTURING, Area Editor Manufacturing Systems	2017-2023	
	IIE TRANSACTIONS, Associate Editor Focus Issue on Design and Manufacturing	2017-2023	
	ANNALS OF OPERATIONS RESEARCH, Guest Editor Special Volume on Stochastic Models of Manufacturing and Service Operations	2015	
	ANNALS OF OPERATIONS RESEARCH, Guest Editor Special Volume on Stochastic Models of Manufacturing Systems	2008	
	IIE TRANSACTIONS, Guest Editor Special Volume on Stochastic Models of Manufacturing Systems	2007	
	OPERATIONS RESEARCH SPECTRUM, Guest Editor Special Volume on Stochastic Models of Production/Inventory Systems	2005	
	ANNALS OF OPERATIONS RESEARCH, Guest Editor Special Volume on Stochastic Models of Manufacturing Systems I and II	2004	
	<b>Reviewing Professional Journals</b>		
	Annals of Operations Research, Asia-Pacific Journal of Operational Research, Automatica, European Journal of Operational Research, 4OR, Fuzzy Sets and Systems, Computers and Industrial Engineering, Computers in Industry, IEEE Transactions on Automatic Control, IEEE Transactions on Automation Science and Engineering, IEEE Transactions on Robotics and Automation, IIE Transactions, Industrial Engineering Journal of Turkish Chamber of Engineers, INFORMS Journal on Computing, International Journal of Production Economics, International Journal of Production Research, International Journal of Systems Science, International Transactions in Operational Research, Mathematical and Computational Applications, Mathematical and Computer Modelling, Mathematical Problems in Engineering, Naval Research Logistics, Operations Research, Operations Research Spectrum, Production and Operations Management, Transactions on Operational Research		
	<b>External Review of Institutions</b>	EQUIS ACCREDITATION Chairman of the Peer Review Team 9 schools in Australia, Brazil, Canada, Germany, Japan, Mexico, Singapore, South Africa, South Korea	2011-2022
Member of the Peer Review Team 11 schools in Australia, China, Denmark, France, Russia, Sweden, United Kingdom		2010-2022	
Member of the EQUIS Awarding Body		2013-2019	
<b>Conference Organization</b>	WINTER SIMULATION CONFERENCE 2023 Member of the Program Committee - Simulation as Digital Twin	2023	
	INFORMS APPLIED PROBABILITY CONFERENCE Member of the Program Committee	2019	
	IFAC CONFERENCE ON MANUFACTURING MODELING, MANAGEMENT, AND CONTROL MIM 2019 Track Chair	2019	
	INFORMS ANNUAL CONFERENCE Emerging Topics Chair: Design and Control of Manufacturing Systems	2018	
	SMMSO STOCHASTIC MODELS OF MANUFACTURING AND SERVICE OPERATIONS Member of the Scientific Committee	2003-present	
	EFMD DEANS AND DIRECTORS GENERAL CONFERENCE Member of the Advisory Committee	2011-2013	
	<b>Conference Organization</b>		
	WINTER SIMULATION CONFERENCE 2023 Member of the Program Committee - Simulation as Digital Twin		2023

	CEMS STRATEGIC BOARD MEETING Member of the Advisory Committee	2012-2013
	IIE INTERNATIONAL Member of the Scientific Committee	2013
	SMMSO STOCHASTIC MODELS OF MANUFACTURING AND SERVICE OPERATIONS Conference Chair	2011
	INTERNATIONAL CONFERENCE ON ANALYTICAL AND STOCHASTIC MODELING TECHNIQUES AND APPLICATIONS Member of the International Program Committee	1998-2010
	EFMD ANNUAL CONFERENCE, Conference Chair	2009
	EUROMA CONFERENCE Member of the Organizing Committee	2007
	NATIONAL OPERATIONS RESEARCH AND INDUSTRIAL ENGINEERING CONFERENCE YA/EM 2006, Conference Co-chair	2006
	LOGISTICS SUMMIT, Conference Chair	2005
	YAEM National Operations Research and Industrial Engineering Conference Member of the Organizing committee	2004
	IE/OR DOCTORATE STUDENTS COLLOQUIUM, Co-chair	2003
	INTERNATIONAL CONFERENCE ON RESPONSIVE MANUFACTURING Member of the International Program Committee	2002
	YAEM National Operations Research and Industrial Engineering Conference Member of the Organizing committee	2000
	EUROPEAN SIMULATION MULTICONFERENCE Modeling Organizations and Information Systems Conference, Program Co-chair	2000
	INTERNATIONAL SYSTEMS DYNAMICS CONFERENCE Member of the Organizing Committee	1997
<b>Other Invited Talks</b>	IN4ACT Webinar Series	2022
	FORD OTOSAN - KOÇDIGITAL Manufacturing AI Day TJU, Turkish-Japanese University	2022 2021
	OMAN, The Education Council	2019
	PROCTER & GAMBLE Türkiye&Caucasus 2015 Annual Meeting ( <i>Keynote</i> )	2015
	XVII. LOGISTICS SUMMIT ( <i>Keynote</i> )	2015
	HITACHI LTD, YOKOHOMA RESEARCH LABORATORY	2014
	THE COCA COLA COMPANY Türkiye, Caucasus & Central Asia ( <i>Keynote</i> )	2013
	KOÇ HOLDING: Logistics Executives Meeting ( <i>Keynote</i> )	2013
	CEVA LOGISTICS Global Business Directors Meeting ( <i>Keynote</i> )	2011
	BAHRAIN, Ministry of Industry and Commerce ( <i>Keynote</i> )	2006
	VI. LOGISTICS SUMMIT	2004
	UTIKAD International Freight Forwarders Association Meeting	2004
	V. LOGISTICS SUMMIT ( <i>Keynote</i> )	2003
	I. OUTSOURCING SUMMIT	2002
	MESS Turkish Employers' Association of Metal Industries, Change '97	1997
<b>Other Services</b>	SMART 4.0: Smart Manufacturing Advanced Research Training for Industry Member of the Expert Panel	2019-
<b>Contribution to media</b>	Monthly page in <a href="#">Capital</a> magazine: 46 articles	2003-2010