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Academic Positions

PROFESSOR OF OPERATIONS MANAGEMENT College of Administrative Sciences and Economics, Koç University	Dec. 2002 -present
PROFESSOR OF INDUSTRIAL ENGINEERING College of Engineering (Joint Appointment), Koç University	Aug. 2014-present
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
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
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	December 1991
BOĞAZIÇI UNIVERSITY B.S. in Electrical and Electronics Engineering	June 1990

Degrees

Visiting Positions	VISITING PROFESSOR POLITECNICO DI MILANO Manufacturing and Production Systems	Jan. 2022 - present	
	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	
	Other Positions	MIGROS, Turkey Independent Member of the Board of Directors	2022-present
ANADOLU ISUZU, Turkey Independent Member of the Board of Directors		2022-present	
KYOTO UNIVERSITY GRADUATE SCHOOL OF MANAGEMENT, Japan Member of the External Advisory Board		2021-present	
ANADOLU EFES, Turkey Independent Member of the Board of Directors		2018-present	
NOTTINGHAM BUSINESS SCHOOL, United Kingdom Member of the International Advisory Board		2011-present	
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	

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 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
INFORMS	
Member	1993-present

Honors	WINTER SIMULATION CONFERENCE BEST THEORETICAL PAPER	2022
	Finalist	
Awards	KOÇ UNIVERSITY OUTSTANDING FACULTY AWARD	2021
	President's Award	
Fellowships	KOÇ UNIVERSITY OUTSTANDING SERVICE AWARD	2021
	Special Service Award	
	ROCKEFELLER FOUNDATION	2017
	Bellagio Center Residency Award	
	IIE TRANSACTIONS BEST PAPER AWARD	2016
	Honorable Mention, Focused Issue on Design and Manufacturing	
	IIE TRANSACTIONS BEST PAPER AWARD	2015
	Best Paper of the Year, Focused Issue on Design and Manufacturing	
	INFORMS CASE AWARD	2014
	Finalist	
	TÜBİTAK RESEARCH FELLOWSHIP	2006-2007
	TURKISH ACADEMY OF SCIENCES	2005
	Distinguished Young Scholar Award (TÜBA GEBİP)	
	NATO SCIENCE FELLOWSHIP	1999, 2000-2001
	EUROPEAN SIMULATION MULTICONFERENCE BEST PAPER AWARD	1997
	NATIONAL COLLEGIATE ENGINEERING AWARD	1994
	TÜBİTAK FELLOWSHIP	1985-1990

SCHOLARLY WORK

Research Areas	Design and Control of Manufacturing Systems
	Supply Chain Management
	Stochastic Modeling
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 Matta, A., “Optimal Digital Twin Synchronization Problem in Production Systems”
3. Çelik, B.* , Schwarz, J. A., and **Tan, B.**, “[New Product Introductions with Selection of Unique and Common Features in Monopoly Markets](#)”
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. Scrivano, S., Tolio, T., **Tan, B.**, “Continuous-flow Simulation of Manufacturing Systems”
6. **Tan, B.**, Karabağ, O., and Khayyati, S., “A Data-driven Marking-dependent Policy for Energy and Production Control”
7. Manafzadeh Dizbin, N.* and **Tan, B.**, “Empirical Analysis of Product Flows in Semiconductor Manufacturing”
8. Manafzadeh Dizbin, N.* and **Tan, B.**, “Cycle Time Prediction in Semiconductor Manufacturing”
9. Schwarz, J. A., Karabağ, O., and **Tan, B.**, “Sales and Production Rollover Strategies under Stochastic Demand and Random Yield”

**Journal
Articles**

1. Frigerio, N., **Tan, B.** and Matta, A., “[Simultaneous control of multiple machines for energy efficiency: a simulation-based approach](#),” *International Journal of Production Research*, DOI: 10.1080/00207543.2023.2175175, 2023.
2. **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. 1176-2287, 2023.
3. **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.
4. Khayyati, S.* and **Tan, B.**, “[Supervised Learning-Based Approximation Method for Multi-server Queueing 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.
5. 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.
6. Hosseini, B.* and **Tan, B.**, “[Modelling and Analysis of a Cooperative Service Network](#),” *Computer and Industrial Engineering*, Vol.161, 107620, 2021.
7. 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.
8. 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.
9. 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.

*Graduate students

10. 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.
11. **Tan, B.**, “Design of Balanced Energy Savings Performance Contracts,” *International Journal of Production Research*, Vol. 58, No. 5, pp. 1401 - 1424, 2020.
12. **Tan, B.**, “Production Control with Price, Cost, and Demand Uncertainty,” *OR Spectrum*, Vol. 41, No. 4, pp. 1057 - 1085, 2019.
13. 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.
14. 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.
15. 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.
16. 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.
17. 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.
18. **Tan, B.** and Lagershausen, S., “On the Output Dynamics of Production Systems Subject to Blocking,” *IIE Transactions*, Vol. 49:3, pp. 268-284, 2017.
19. 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.
20. **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.
21. **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.
22. 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.
23. **Tan, B.**, “Mathematical Programming Representations of Dynamics of Continuous Flow Production Systems,” *IIE Transactions*, Vol. 47:2, pp. 173-189, 2015. (Received Honorable Mention designation in the *IIE Transactions* Focused Issue on Design and Manufacturing Best Paper Award Competition for 2016)
24. **Tan, B.** and Akçay, Y., “Assortment-based Cooperation of Two Firms with Limited Capacity,” *IIE Transactions*, Vol. 46:3, pp. 1-17, 2014. (Selected as the Best Paper of the Year in *IIE Transactions* Focused Issue on Design and Manufacturing Best Paper Award Competition for 2015)
25. **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.
26. 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.

27. **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.
28. **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.
29. **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.
30. Gershwin, S.B., **Tan, B.** and Veatch, M., “[Production Control with Backlog-Dependent Demand](#),” *IIE Transactions*, Vol. 41, No. 6, pp. 511-523, 2009.
31. 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.
32. 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.
33. 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.
34. 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.
35. **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.
36. 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.
37. **Tan, B.** “[Subcontracting with Availability Guarantees: Production Control and Capacity Decisions](#),” *IIE Transactions*, Vol. 36, No. 8, pp. 711-724, 2004.
38. **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.
39. **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.
40. **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.
41. **Tan, B.**, “[Managing Manufacturing Risks by Using Capacity Options](#),” *Journal of the Operational Research Society*, Vol. 53, No. 2, pp. 232-242, 2002.
42. **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.
43. **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.
44. **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.

45. **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.
46. **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.
47. **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.
48. **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.
49. **Tan, B.** “Agile Manufacturing and Management of Variability,” *International Transactions in Operational Research*, Vol. 5, No. 5, pp. 375-388, 1998.
50. 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.
51. **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.
52. **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.
53. **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.
54. 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.
55. **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.
56. 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.
57. **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.
58. **Tan, B.** “Markov Chains and the RISK Board Game,” *Mathematics Magazine*, Vol. 70, No. 5, pp. 349-357, 1997.
59. **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.
60. **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.
61. **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.
62. **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. Türkşen, 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. **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.
2. **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.
3. **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.
4. **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.
5. **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 (Best paper award).
6. 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.
7. 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 Polinomlanı 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.
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Technical Reports

1. “Cyclical Dynamics of Industrial Production and Employment: Markov Chain-based Estimates and Tests,” TÜSİAD-Koç University Economic Research Forum Working Paper Series- No. 1101, (with S. Altug and G. Gencer*), January 2011.
2. “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, (with S.B. Gershwin), March 2007.
3. “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, (with S.B. Gershwin), May 2001.
4. “On Capacity Options in Lean Retailing,” Harvard University, Center for Textile and Apparel Research, Research Paper Series, February 2001.
5. “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 Management
 Current position: Postdoctoral Research Fellow, Mannheim University
 First position: Postdoctoral Research Fellow, Koç 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: Assistant Professor, Yaşar University & Erasmus University Rotterdam
 First position: Postdoctoral Research Fellow, Eindhoven University of Technology

Advisor, M.S Theses	<p>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”</p> <p>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”</p>	
Sponsored Research Projects	<p>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</p> <p>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</p> <p>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</p> <p>ZER A.S. 2013 Analysis and Development of Cooperation-based Business Models</p> <p>TÜBİTAK 2010-2012 The Determinants of Business Cycles in Turkey and in Emerging Market Economies</p> <p>TÜBİTAK 2006-2009 A Point-of-Sales Based Method for Estimation of Product Substitution Rates and Inventory Control Under Stock-out Based Substitution</p> <p>KÜMPEM: Koç University-Migros Retailing Center 2004-2006 Modeling and Analysis of RFID Technology within the Supply Chain</p> <p>IBM CORPORATION 1992-1994 Computer-Aided Reliability Modeling of Semiconductor Manufacturing Tools</p> <p>MICROCHIP TECHNOLOGIES 1993-1994 Fuzzy Logic Code Generator for Embedded Controllers</p>	
Invited Research Talks	<p>KAUNAS UNIVERSITY OF TECHNOLOGY: In4Act ERA Chair 2022</p> <p>POLITECNICO DI MILANO: MeccPhD Lecture 2021</p> <p>KYOTO UNIVERSITY: Graduate School of Management 2019</p> <p>BUDAPEST UNIV. OF TECHNOLOGY AND ECONOMICS: Networked Systems&Services 2019</p> <p>PEKING UNIVERSITY: Department of Industrial Engineering and Management 2018</p>	

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
BILKENT UNIVERSITY: Department of Industrial Engineering	2010
MIDDLE EAST TECHNICAL UNIVERSITY: Department of Industrial Engineering	2008
BILKENT 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
BILKENT 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

**Editing
Professional
Journals**

IIE TRANSACTIONS	
Focus Issue on Design and Manufacturing, Area Editor	2017-present
FLEXIBLE SERVICES AND MANUFACTURING	
Manufacturing Systems, Area Editor	2017-2023
ANNALS OF OPERATIONS RESEARCH	
Special Volume on Stochastic Models of Manufacturing and Service Operations, Guest Editor	2015
ANNALS OF OPERATIONS RESEARCH	
Special Volume on Stochastic Models of Manufacturing Systems, Guest Editor	2008
IIE TRANSACTIONS	
Special Volume on Stochastic Models of Manufacturing Systems, Guest Editor	

OPERATIONS RESEARCH SPECTRUM Special Volume on Stochastic Models of Production/Inventory Systems Vol. 25, Issue: 2-3, Guest Editor	2005
ANNALS OF OPERATIONS RESEARCH Special Volume on Stochastic Models of Manufacturing Systems I and II Vol. 125-126, Guest Editor	2004

TEACHING ACTIVITIES

Courses Taught	<p>EXECUTIVE MBA, MBA, AND UNDERGRADUATE COURSES:</p> <p>Operations Management Design, Planning, and Control of Operations Supply Chain Management Service Operations Management Total Quality Management Management Science Computer Simulation in Business</p> <p>EXECUTIVE EDUCATION PROGRAMS: Strategy: Doing the Right Thing Right Business Model Innovation Supply Chain Management</p>	
Case Studies	<p>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.</p> <p>Zer: The Power of Cooperation, Koç University Graduate School of Business Case Series, (The Case Centre Collection 614-016-1), 2014.</p> <p>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.</p> <p>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.</p> <p>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.</p>	
Contribution to media	<p>Harvard Business Review Turkey 2012</p> <p>Monthly page in Capital magazine: 46 articles 2003-2010</p>	