

CURRICULUM VITAE

Prof. Dr. Bülent Çatay

CONTACT INFORMATION

Sabanci University, Faculty of Engineering and Natural Sciences
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EDUCATION

Ph.D., University of Florida, 1999
Dept. of Information Systems and Operations Management, Warrington College of Business
(formerly Department of Decision and Information Sciences)
Concentration: Production and Operations Management

B.Sc., Istanbul Technical University, 1992
Department of Industrial Engineering, Faculty of Management
Major: Industrial Engineering

Baccalauréat, Saint Joseph French High School, 1988

ACADEMIC EXPERIENCE

Mar. 2015 – Present *Full Professor*, Sabanci University, Istanbul, Turkey
Faculty of Engineering and Natural Sciences

Feb. 2008 – Mar. 2015 *Associate Professor*, Sabanci University, Istanbul, Turkey
Faculty of Engineering and Natural Sciences

July 2000 – Feb. 2008 *Assistant Professor*, Sabanci University, Istanbul, Turkey
Faculty of Engineering and Natural Sciences

Aug. 1999 – June 2000 *Visiting Lecturer*, University of Florida, Gainesville, FL
Department of Information Systems and Operations Management

Aug. 1994 – Aug. 1999 *Graduate Assistant*, University of Florida, Gainesville, FL
Department of Information Systems and Operations Management

Aug. 1993 – June 1994 *Teaching Assistant Coordinator*, SUNY at Buffalo, Amherst, NY
Department of Economics

ACADEMIC LEAVES OF ABSENCE

Feb. 2010 – June 2010 *Visiting Researcher*, Lancaster University, Lancaster, UK
Department of Management Science

June 1997 – Sept. 1997 *Consultant*, IBM, Burlington, VT
Microelectronics Division

RESEARCH INTERESTS

Transportation and logistics systems, sustainable transport planning, applied optimization, metaheuristic approaches to large-scale problems, operations research methods in protein structure determination.

PUBLICATIONS

Refereed Articles in SCI-SSCI Journals

1. Keskin M, Çatay B (2016) Partial Recharge Strategies for the Electric Routing Problem with Time Windows. *Transportation Research Part C: Emerging Technologies* 65: 111-127.
2. Emeç U, Çatay B, Bozkaya B (2016) An Adaptive Large Neighborhood Search for an E-grocery Delivery Routing Problem. *Computers and Operations Research* 69: 109-125.
3. Akhmedov M, Çatay B, Apaydın MS (2015) Automating unambiguous NOE data usage in NVR for NMR Protein Structure-Based Assignments. *Journal of Bioinformatics and Computational Biology* 13(6), 1550020: 1-14.
4. Wen L, Çatay B, Eglese R (2014) Finding a Minimum Cost Path between a Pair of Nodes in a Time-Varying Road Network with a Congestion Charge. *European Journal of Operational Research* 236(3): 915–923.
5. Çavuşlar G, Çatay B, Apaydın MS (2012) A Tabu Search Approach for the NMR Protein Structure-Based Assignment Problem. *IEEE/ACM Transactions on Computational Biology and Bioinformatics* 9(6): 1621-1628.
6. Yıldırım UM, Çatay B (2012) A Time-based Pheromone Approach for the Ant System. *Optimization Letters* 6(6): 1081-1099.
7. Başar A, Çatay B, Ünlüyurt T (2012) A Taxonomy for Emergency Service Station Location Problem. *Optimization Letters* 6(6): 1147-1160.
8. Uzar MF, Çatay B (2012) Distribution Planning of Bulk Lubricants at BP Turkey. *Omega-International Journal of Management Science* 40(6): 870-881.
9. Çatay B, Özlük Ö, Ünlüyurt (2011) TestAnt: An Ant Colony System Approach to Sequential Testing under Precedence Constraints. *Expert Systems with Applications* 38(12): 14945-14951.
10. Apaydın MS, Çatay B, Patrick N, Donald BR (2011) NVR-BIP: Nuclear Vector Replacement using Binary Integer Programming for NMR Structure-Based Assignments. *The Computer Journal* 54(5): 708-716.
11. Başar A, Çatay B, Ünlüyurt T (2011) A Multi-Period Double Coverage Approach for Locating the Emergency Medical Service Stations in Istanbul. *Journal of the Operational Research Society* 62(4): 627-637.
12. Doyuran T, Çatay B (2011) A Robust Enhancement to the Clarke-Wright Savings Algorithm. *Journal of the Operational Research Society* 62(1): 223-231.
13. Çatay B (2010) A New Saving-based Ant Algorithm for the Vehicle Routing Problem with Simultaneous Pickup and Delivery. *Expert Systems with Applications* 37(10): 6809-6817.
14. Göl H, Çatay B (2007) Third Party Logistics Provider Selection: Insights from a Turkish Automotive Company. *Supply Chain Management: An International Journal* 12(6): 379-384.
15. Çimren E, Çatay B, Budak E (2007) Development of a Machine Tool Selection System Using Analytic Hierarchy Process. *International Journal of Advanced Manufacturing Technology* 35(3-4): 363-376.
16. Yılmaz P, Çatay B (2006) Strategic Level Three-Stage Production Distribution Planning with Capacity Expansion. *Computers & Industrial Engineering* 51(4): 609-620.
17. Çatay B, Vakharia AJ, Erengüç SS (2006) Printed Circuit Board Scheduling in an Openshop Manufacturing Environment. *International Journal of Advanced Manufacturing Technology* 29(9): 980-989.

18. Cetindamar D, Çatay B, Basmacı OS (2005) Competition through Collaboration: Insights from an Initiative in the Turkish Textile Supply Chain. *Supply Chain Management: An International Journal* 10(4): 238-240.
19. Çatay B, Erengüç SS, Vakharia AJ (2005) Capacity Allocation with Machine Duplication in Semiconductor Manufacturing. *Naval Research Logistics* 52(7): 659-667.
20. Çatay B, Vakharia AJ, Erengüç SS (2003) Tool Capacity Planning in Semiconductor Manufacturing. *Computers & Operations Research* 30(9): 1349-1366.
21. Vakharia AJ, Çatay B (1997) Two Machine Openshop Scheduling with Machine Dependent Processing Times. *Discrete Applied Mathematics* 73(3): 283-288.

Refereed Articles in Other Journals

1. Çatay B (2011) Siting New Fire Stations in Istanbul: A Risk-based Optimisation Approach. *OR Insight*, 24(2): 77-89.
2. Çetindamar D, Çatay B, Basmacı OS (2006) Improving the Performance of Technology Partnerships: A Case Study in the Turkish Textile Industry. *Handbook of Business Strategy* 7(1): 319-324.
3. Arslan MÇ, Çatay B, Budak E (2004) A Decision Support System for Machine Selection. *Journal of Manufacturing Technology Management* 15(1): 101-109.

Working Papers

1. Yıldırım UM, Çatay B. A Parallel Matheuristic Approach for Solving a Class of Vehicle Routing Problems (in preparation).
2. Yıldırım UM, Çatay B. A Fast Algorithm for Finding the Greenest Paths on Time-Dependent Road Networks (in preparation).

Refereed Book Chapters

1. Yıldırım UM, Çatay B (2014) A Parallel Matheuristic for Solving the Vehicle Routing Problems. In: J. Freire de Sousa and R. Rossi (eds.), *Computer-based Modelling and Optimization in Transportation, Advances in Intelligent Systems and Computing* 262, Springer International Publishing, Switzerland: 477-489.
2. Cetindamar D, Çatay B, Basmacı OS (2010) Performance Measurement in Supply Chain Collaboration: A Case Study in the Turkish Textile Industry. In: Tschirky H et al. (eds.) *Managing Innovation Driven Companies: Approaches in Practice*, Palgrave, New York: 137-157.
3. Çatay B (2009) Ant Colony Optimization and Its Application to the Vehicle Routing Problem with Pickup and Delivery. In: Chiong R, Dhakal S (eds), *Natural Intelligence for Scheduling, Planning and Packing Problems, Series on Studies in Computational Intelligence* 250, Springer-Verlag, Berlin: 219-244.
4. Doyuran T, Çatay B (2008) Two Enhanced Savings Functions for the Clark-Wright Algorithm. In: Blecker T, Kersten W, Gertz C (eds), *Management in Logistics Networks and Nodes: Concepts, Technology and Applications, Series on Operations and Technology Management* 8, Erich Schmidt Verlag, Berlin: 245-258.

Special Issues Edited

1. Çatay B, Chiong R, Cordón O, Siarry P (2014) Guest Editorial: Computational Intelligence In Production and Logistics Systems: Solving Vehicle Routing, Supply Chain Network, and Air-Traffic Trajectory Planning Problems. *IEEE Computational Intelligence Magazine* 9(4): 16-17.
2. Çatay B, Chiong R, Siarry P (2013) Editorial: Computational Intelligence in Production and Logistics Systems. *International Journal of Production Economics* 145(1): 1-3.

Refereed Conference Proceedings Papers

1. Shi W, Weise T, Chiong R, Çatay B (2015) Hybrid PACO with Enhanced Pheromone Initialization for Solving the Vehicle Routing Problem with Time Windows. In: *Proc. of the 2015 IEEE Symposium Series on Computational Intelligence (SSCI 2015)*, Cape Town, South Africa: 1735-1742
2. Tozlu B, Daldal R, Ünlüyurt T, Çatay B (2015) Crew Constrained Home Care Routing Problem with Time Windows. In: *Proc. of the 2015 IEEE Symposium Series on Computational Intelligence (SSCI 2015)*, Cape Town, South Africa: 1751-1757
3. Özdemir ED, Kleiner F, Beermann M, Çatay B, Beers E, Moran B, Lim OT, Schmid SA (2015) Status and Trends for Electrified Transport Logistic Vehicles. In: *Proc. of the 2015 European Battery, Hybrid and Fuel Cell Electric Vehicle Congress (EEVC 2015)*, Brussels, Belgium.
4. Keskin M, Çatay B (2015) The Electric Vehicle Routing Problem: Outlook and Recharging Strategies. In: U Aydın et al. (eds.), *Proc. of the 13th International Logistics and Supply Chain Congress*, Izmir, Turkey: 828-838.
5. Yıldırım UM., Çatay B (2015) An Ant Colony-Based Matheuristic Approach for Solving a Class of Vehicle Routing Problems. In: F Corman et al. (eds.), *Computational Logistics: 6th International Conference (ICCL 2015)*, Lecture Notes in Computer Science 9335: 105-119.
6. Kleiner F, Özdemir ED, Schmid SA, Beermann M, Çatay B, Moran B, Lim OT, Friedrich HE (2015) Electrification of Transport Logistic Vehicles: A Techno-Economic Assessment of Battery and Fuel Cell Electric Transporter. *Proc. of the 28th International Electric Vehicle Symposium and Exhibition (EVS28)*, Goyang, South Korea.
7. Yıldırım UM, Çatay B. (2014) Minimizing the Carbon Emissions on Road Networks. *Proc. of the 7th International Symposium on Transportation Technologies (TRANSIST 2014)*, Istanbul, Turkey: 242-251.
8. Keskin M, Çatay B (2014) An Adaptive Large Neighborhood Search Approach for the Electric Vehicle Routing Problem. In: YC Toklu, G Bekdaş (eds.), *Proc. of the 15th Workshop of the EURO Working Group on Metaheuristics (EU/ME)*, Istanbul, Turkey: 31-36.
9. Aslanov J, Çatay B, Apaydın MS (2013) An Ant Colony Optimization Based Approach for Solving the Nuclear Magnetic Resonance Structure Based Assignment Problem. In: C Blum (ed.) *Proc. of the 15th Genetic and Evolutionary Computation Conference (GECCO 2013) Companion*, ACM, New York, NY: 1609-1616.
10. Kılıç MA, Çatay B (2013) Scheduling Operations for Multi-Spindle and Multi-Machining Unit Machines. *Proc. of the International IIE Conference*, Istanbul, Turkey.
11. Akhmedov M, Çatay B, Apaydın MS (2013) Distinguishing the Type of NOE for NMR Protein Structure-based Assignments. *Proc. of the 21st Signal Processing and Communications Applications Conference (SIU 2013)*, Northern Cyprus: 1-4.

12. Çalpur MÇ, Erdoğan H, Çatay B, Donald BR, Apaydın MS (2010) Developing a Scoring Function for NMR Structure-based Assignments using Machine Learning. In: E Gelenbe et al. (eds.), *Computer and Information Sciences: Proc. of 25th International Symposium on Computer and Information Sciences, Lecture Notes in Electrical Engineering* 62: 87-90.
13. Çatay B (2009) A Risk-based Multiple Coverage Model for Locating Fire Stations in Istanbul. *Proc. of the 13th Euro Working Group on Transportation (EWGT) Meeting*, Padua, Italy.
14. Apaydın MS, Çatay B, Patrick N, Donald BR (2009) NVR-BIP: Nuclear Vector Replacement using Binary Integer Programming for NMR Structure-Based Assignments. In: FY Vural et al. (eds.), *Proc. of the IEEE 24th International Symposium on Computer and Information Sciences*, Güzelyurt, Northern Cyprus: 177-182.
15. Başar A, Çatay B, Ünlüyurt T (2009) A New Model and Tabu Search Approach for Planning the Emergency Service Stations. In: B Fleischmann et al. (eds.), *Operations Research Proceedings 2008: Selected Papers of the Annual International Conference of the German Operations Research Society (GOR)*, University of Augsburg, Springer-Verlag, Berlin: 41-46.
16. Yıldırım UM, Çatay B (2009) An Ant Colony Algorithm for Time-Dependent Vehicle Routing Problem with Time Windows. In: B Fleischmann et al. (eds.), *Operations Research Proceedings 2008: Selected Papers of the Annual International Conference of the German Operations Research Society (GOR)*, University of Augsburg, Springer-Verlag, Berlin: 337-342.
17. Çatay B, Özlük Ö, Ünlüyurt T (2008) An Ant Colony Algorithm for the Sequential Testing Problem under Precedence Constraints. *Proc. of the IEEE International Conference on Service Operations and Logistics, and Informatics*, Beijing, China: 1800-1805.
18. Çatay B (2008) An Ant Colony Optimization Approach for the Mixed Vehicle Routing Problem with Backhauls. In: K Amasata et al. (eds.), *Manufacturing Fundamentals: Necessity and Sufficiency – Proc. of the 3rd World Conference on Production and Operations Management*, Tokyo, Japan: 2653-2661.
19. Demirok E, Çatay B (2007) Vehicle Routing Problem with Simultaneous Delivery and Pick-up and Intermediary Delivery. In: M Tanyaş, A Eser (eds.), *Proc. of the 5th International Logistics & Supply Chain Congress*, Istanbul, Turkey: 407-414.
20. Sarıgöl İ, Çatay B (2007) A Clustering-based Heuristic for the Location-Routing Problem. In: M Tanyaş, A Eser (eds.), *Proc. of the 5th International Logistics & Supply Chain Congress*, Istanbul, Turkey: 415-422.
21. Budak E, Çatay B, Tekin İ, Yenigün Y, Abbak M, Drannikov S, Şimşek O (2007) Design of an RFID-based Manufacturing Monitoring and Analysis System. In: AF Özok, A Üstündağ (eds.), *Proc. of the 1st International RFID Eurasia Conference*, Istanbul, Turkey: 259-264.
22. Budak E, Çatay B, Tekin İ, Yenigün Y, Abbak M, Drannikov S (2007) Microstrip Patch Antenna for RFID Applications. In: AF Özok, A Üstündağ (eds.), *Proc. of the 1st International RFID Eurasia Conference*, Istanbul, Turkey: 265-267.
23. Göl H, Çatay B (2007) Logistics Outsourcing and 3PL Selection: A Case Study in an Automotive Supply Chain. *Proc. 86th Annual Meeting of the Transportation Research Board*, Washington, DC, USA.
24. Çatay B (2006) An Ant Colony Optimization Approach for the Capacitated Vehicle Routing Problem with Simultaneous Delivery and Pick-up. In: M Binetti et al. (eds.), *Proc. of the 10th Euro Working Group on Transportation (EWGT) Meeting*, Bari, Italy: 275-282.

25. Gökçe Eİ, Çatay B (2005) A Revised Ant Colony System for the Vehicle Routing Problem with Time Windows. In: B Durmuşoğlu, C Kahraman (eds.), *Proc. of the 35th International Conference on Computers & Industrial Engineering*, Istanbul, Turkey: 813-818.
26. Vural, AV, Çatay B, Ekşioğlu B (2005) A Dual GA Approach to Capacitated Vehicle Routing Problem with Simultaneous Pick-up and Deliveries. *Proc. of the IIE Annual Conference*, Atlanta, GA, USA.
27. Çimren E, Budak E, Çatay B (2004) Development of a Machine Tool Selection System Using Analytic Hierarchy Process. In: R Teti (ed.), *Proc. of the 4th CIRP International Seminar on Intelligent Computation in Manufacturing Engineering*, Sorrento, Italy: 193-198.
28. Göl H, Yumusak K, Çatay B (2003) Development and Application of a Third-Party Logistics Provider Selection Methodology. In: CR Kaykayoğlu et al. (eds.), *Proc. of the International Logistics Congress*, Istanbul, Turkey: 59-66.
29. Denizel M, Arıkan Y, Ulusoy G, Çatay B (2002) Conceptual Design of an e-Marketplace for Small and Medium Enterprises in the Turkish Machinery Industry. *Proc. of the Sixth International Conference on Electronic Commerce Research (ICECR-6)*, Montreal, Canada.
30. Arslan MÇ, Çatay B, Budak E (2002) A Decision Support System for Machine Selection. In: A Baykasoglu, T Dereli (eds.), *Proc. of the 2nd International Responsive Manufacturing Conference, ICRM-2002*, Gaziantep, Turkey: 752-757.
31. Çatay B, Vakharia AJ (1997) Integrating Family Formation and Scheduling in PCB Manufacturing. *Proc. of the 31st Annual Meeting of the Decision Sciences Institute*, San Diego, CA, USA, Vol. 3: 1222.

Refereed Articles in Turkish

1. Çatay B (2011) A Multiple Coverage Approach using Risk Factors for Locating Fire Stations in Istanbul. *Industrial Engineering Journal* 22(2): 33-44.
2. Çatay B, Başar A, Ünlüyurt T (2008) Location Planning of Emergency Medical Service Stations in Istanbul. *Industrial Engineering Journal* 19(4): 20-35.
3. Başar A, Çatay B, Ünlüyurt T (2008) A Tabu Search Approach for Location Planning of Emergency Medical Service Stations. *Proc. of National Congress of Operations Research/Industrial Engineering*, Istanbul, Turkey.

Non-Refereed Articles in Turkish

1. Çimren E, Çatay B, Budak E (2005) A Decision Support System for Machine Tool Selection: Part II. *Automation Journal* 151: 162-167.
2. Çimren E, Çatay B, Budak E (2004) A Decision Support System for Machine Tool Selection: Part I. *Automation Journal* 150: 132-135.

Books Edited in Turkish

1. Çatay B, Öztürk G (2012) *International Logistics*. Anadolu University Press, Eskişehir.

Reports in Turkish

1. Ulusoy G, Çatay B, Denizel M, Arıkan Y (2002) Business Excellence and e-Business Strategies in Machine Manufacturing Industry. *TÜSİAD Competition Strategies Series 8*, Istanbul, Turkey.

Presentations in Conferences and Seminars

1. Çatay B, Keskin M (2016) Electric Vehicle Routing Problem with Time Windows and Multiple Charger Types. *INFORMS 2016*, Nashville, TN, USA.
2. Keskin M, Çatay B (2016) A matheuristic approach for solving the electric vehicle routing problem with time windows and fast recharges. *EURO 2016*, Poznan, Poland.
3. Çatay B, Keskin M (2016) A Matheuristic Approach for Solving the Electric Vehicle Routing Problem with Time Windows and Fast Recharges. *VeRoLog 2016*, Nantes, France.
4. Yıldırım UM, Çatay B (2015) Time-Dependent Emission Vehicle Routing Problem. *VeRoLog 2015*, Vienna, Austria.
5. Çatay B, Keskin M (2015) Partial Recharge Strategies for the Electric Vehicle Routing Problem with Time Windows. *ODYSSEUS 2015*, Ajaccio, France.
6. Çatay B, Yıldırım UM (2014) A Parallel Matheuristic for Solving a Class of Vehicle Routing Problems. *VeRoLog 2014*, Oslo, Norway.
7. Çatay B, Keskin M (2014) An Adaptive Large Neighborhood Search Approach for Solving the Electric Vehicle Routing Problem with Time Windows. *VeRoLog 2014*, Oslo, Norway.
8. Çatay B (2014) Sustainable Transport Planning: New Trends and Approaches. *3rd Logistics and Supply Chain Congress*, Trabzon, Turkey.
9. Çatay B, Emeç U, Bozkaya B (2014) An Adaptive Large Neighborhood Search for the E-Delivery Routing Problem for Online Retail Distribution Planning. *Invited Seminar*, Yaşar University, İzmir, Turkey.
10. Emeç U, Çatay B, Bozkaya B (2013) Vehicle Routing Problem with Vendor Selection, Intermediate Pickups and Deliveries. *VeRoLog 2013*, Southampton, UK.
11. Yıldırım UM, Çatay B (2013) Finding the Greenest Path on Time-Dependent Road Networks. *25th EURO-INFORMS Joint International Meeting*, Rome, Italy.
12. Çatay B (2012) New Research Trends in Sustainable Transport Planning. *10th International Logistics and Supply Chain Congress*, Istanbul, Turkey.
13. Yıldırım UM, Çatay B (2012) Greenest Paths in Time-Dependent Transportation Networks.
 - *25th Conference of European Chapter on Combinatorial Optimization (ECCO 2012)*, Antalya, Turkey.
 - *25th European Conference on Operational Research (EURO 2012)*, Vilnius, Lithuania.
14. Çatay B (2011) Green and Sustainable Logistics. *1st National Symposium on Logistics & Supply Chain*, Istanbul, Turkey.
15. Çatay B, Uzar MF (2010) Distribution Planning of Bulk Lubricants at BP Turkey. *1st International Conference on Computational Logistics (ICCL)*, Shanghai, China.
16. Çatay B, Uzar MF (2010) Distribution Planning of Bulk Lubricants at BP Turkey:
 - *Invited Seminar*, Southampton University, Nottingham University, Lancaster University, UK (2010); Galatasaray University, Anadolu University, TURKEY (2012).
17. Çatay B (2009) Sustainability in Logistics Services: Trends and Issues. *INFORMS Meeting*, San Diego, CA, USA.
18. Uzar MF, Çatay B (2009) Distribution Planning of Bulk Lubricants at an Energy Company. *23rd European Conference on Operational Research*, Bonn, Germany.

19. Ünlüyurt T, Çatay B (2008) Sequential Testing Under Precedence Constraints. *18th Triennial Conference of the International Federation of Operational Research Societies*, Sandton, South Africa.
20. Çatay B, Altınalev T (2007) Pilot Training Planning Problem in Turkish Naval Air Forces. *INFORMS International Meeting*, Puerto Rico, USA.
21. Çatay B (2006) An Ant Based Algorithm for the Vehicle Routing Problem with Simultaneous Delivery and Pick-up. *INFORMS Meeting*, Pittsburgh, PA, USA.
22. Çatay B, Yılmaz P (2005) Strategic Level Three-Stage Production Distribution Planning. *17th Triennial Conference of the International Federation of Operational Research Societies*, Honolulu, HI, USA.
23. Çatay B, Gökçe Eİ (2004) A Revised Ant Colony Algorithm for the Vehicle Routing Problem with Time Windows. *INFORMS Meeting*, Denver, CO, USA.
24. Cetindamar D, Basmacı OS, Çatay B (2004) Performance Measurement in Supply Chain Collaboration: A Case Study in the Turkish Textile Industry. *10th International Schumpeter Society Conference*, Milan, Italy.
25. Çatay B (2004) Ant Colony Systems and Its Application to the Vehicle Routing Problem. *Invited Seminar*, Koç University, Istanbul, Turkey.
26. Vural AV, Çatay B (2003) A GA Based Meta-Heuristic for Capacitated Vehicle Routing Problem with Simultaneous Pick-up and Delivery. *Euro/INFORMS Joint International Meeting*, Istanbul, Turkey.
27. Çatay B, Çapar İ (2003) A Performance Measurement System in an Automotive Supply Chain. *Euro/INFORMS Joint International Meeting*, Istanbul, Turkey.
28. Çatay B (2003) Multi-Period Capacity Planning in Semiconductor Manufacturing. *Invited Seminar*, Boğaziçi University, Istanbul, Turkey.
29. Oflezer Ö, Çatay B, Ünlüyurt T (2002) Improving Manufacturing Efficiency by Operations Reversal. *16th Triennial Conference of the International Federation of Operational Research Societies*, Edinburgh, Scotland.
30. Çatay B, Erengüç SS, Vakharia AJ (1998) Operation/Machine Type Assignment in Semiconductor Manufacturing”, *INFORMS Meeting*, Seattle, WA, USA.

FUNDED PROJECTS

1. *Director* (2013-2015), “New Approaches and Methodologies to Reduce Energy Consumption and Greenhouse Gas Emissions on Transportation Networks,” The Scientific and Technological Research Council of Turkey (TÜBİTAK 2515 Program Grant #113M522 - related with the COST Action TU 1204 “People Friendly Cities in a Data Rich World”), 117090 TL.
2. *Researcher* (2013-2015), “Testing NVR Suite of Programs with Real NMR Data,” The Scientific and Technological Research Council of Turkey (TÜBİTAK 2505 Program Grant #113E085), 14130 TL.
3. *Researcher* (2011-2014), “Analysis, Modeling and Optimization of Simultaneous Machining Processes Performed on Multi-Tasking Machine Tools,” The Scientific and Technological Research Council of Turkey (TÜBİTAK 1001 Program Grant #110M522), 337520 TL.
4. *Researcher* (2009-2011), “Novel Algorithms for Nuclear Magnetic Resonance (NMR) Structure-Based Assignments,” The Scientific and Technological Research Council of Turkey (TÜBİTAK 1001 Program Grant #109E027), 91340 TL.

5. *Director* (2008-2009), “Planning of New Fire Brigade Locations in Istanbul,” Istanbul Metropolitan Municipality, 14000 TL.
6. *Researcher* (2006-2008), “Radio Frequency Identification (RFID) Based Manufacturing Monitoring and Analysis System,” The Scientific and Technological Research Council of Turkey (TÜBİTAK 1001 Program Grant # 104E123), 97300 TL.
7. *Director* (2006-2007), “Location Planning of Emergency Medical Service Stations and Ambulances,” Istanbul Metropolitan Municipality, 12820 TL.
8. *Researcher* (2002-2003), “Project Analysis and Development Methodology,” Logo Business Solutions (LBS), 95000 USD.
9. *Researcher* (2001-2002), “Competitiveness Strategies and Business Excellence in the Machine Manufacturing Sector in Turkey,” Association of Machine Manufacturers (MIB)-Turkish Technology Development Foundation (TTGV) - Turkish Industrialists’ and Businessmen’s Association (TÜSİAD), 18900 USD.

CONSULTANCY PROJECTS

1. Eskişehir-Bilecik-Kütahya Ceramics Cluster (2012-2013) “Assessment of Eskişehir-Bilecik-Kütahya Ceramics Cluster Logistics Processes”
2. Assan Aluminium (2012-2013) “Cost Optimization of Raw Materials in Melting Processes”
3. Kümsan Crane Systems (2009) “Standardization of Medium and High Capacity Cranes”
4. BOT Group (2008) “Analysis and Improvement of Production Efficiency”
5. Teksan Jeneratör (2004) “Factory Layout Planning and Process Reengineering”

AWARDS & HONORS

IBM Faculty Award 2010

Alpha Iota Delta Decision Sciences Honorary Society Member

Outstanding Academic Achievement by an International Student, Univ. of Florida, 1999

Outstanding Graduate Student in Decision and Information Sciences, Univ. of Florida, 1999

Outstanding Academic Achievement by an International Student, Univ. of Florida, 1997

Academic Excellence Award, College of Business Administration, Univ. of Florida, 1996

Meritorious Service Award, Istanbul Technical University Alumni Association, 1996 & 1997

Graduate Scholarship, University of Florida, 1994-1999

THESIS ADVISING

Ph.D. Thesis Advising

1. Umman Mahir Yıldırım (2014) New Approaches for Determining Greenest Paths and Efficient Vehicle Routes on Transportation Networks.

M.Sc. Thesis Advising

1. Gizem Ermiş (2015) Accelerating Local Search Algorithms for Travelling Salesman Problem Using GPU Effectively.
2. İman Roozbeh (2014) Heuristic Solutions for Electric Vehicle Routing Problem with Time Windows and Recharging Stations (with G. İzbırak, Eastern Mediterranean University)

3. Merve Keskin (2014) An Adaptive Large Neighborhood Search Approach for Solving the Electric Vehicle Routing Problem with Time Windows.
4. Murodzhon Akhmedov (2013) Distinguishing the NOE types and Utilizing the NOE Distance Upper Bounds for NMR protein Structure-Based Assignments (with M. S. Apaydın).
5. Uğur Emeç (2013) Vehicle Routing Problem with Vendor Selection, Intermediate Pickups and Deliveries (with B. Bozkaya).
6. Gizem Çavuşlar (2011) A Tabu Search Approach for the NMR Protein Structure-Based Assignment Problem (with M. S. Apaydın).
7. Muhammed Furkan Uzar (2009) Distribution Planning of Bulk Lubricants at an Energy Company.
8. Lale Tunçyürek (2009) A New Genetic Algorithm for the Cell Formation Problem in Group Technology (with U. Sezerman).
9. Umman Mahir Yıldırım (2008) An Ant Colony Algorithm for the Time-Independent and Time-Dependent Vehicle Routing Problem with Time Windows.
10. Ayfer Başar (2008) Planning of Emergency Medical Service Stations and Ambulances (with T. Ünlüyurt).
11. Tamer Doyuran (2008) Enhancements of Clarke-Wright Savings Heuristics for the Capacitated Vehicle Routing Problem.
12. Sergei Drannikov (2008) RFID-Based Manufacturing Monitoring and Analysis System (with H. Yenigün).
13. Ersin Demirok (2007) Vehicle Routing Problem with Simultaneous Delivery and Pickup and Intermediary Delivery.
14. İlkan Sarıgöl (2007) A Clustering-based Heuristic for Location Routing Problems.
15. Duygu Taşkiran (2006) A Revised Multiple Ant Colony System for Vehicle Routing Problems with Time Windows.
16. Emrah Çimren (2004) An Intelligent Decision Support System for Machine Tool Selection (with E. Budak).
17. Elif İlke Gökçe (2004) A Revised Ant Colony System Approach to Vehicle Routing Problems.
18. Pınar Yılmaz (2004) Strategic Level Three-Stage Production Distribution Planning with Capacity Expansions.
19. Arif Volkan Vural (2003) A GA Based Meta-Heuristic for Capacitated Vehicle Routing Problem with Simultaneous Pick-up and Deliveries.
20. Osman Serdar Basmacı (2003) Supply Chain Collaboration: A Case Study in Textile Industry (with D. Çetindamar).
21. Mahmut Çağdaş Arslan (2002) A Decision Support System for Machine Tool Selection (with E. Budak).
22. İsmail Çapar (2002) A Supply Chain Performance Measurement System: A Case Study in Automotive Industry.
23. Öykü Oflezer (2002) Operations Reversal: An Investigation of Capacitated and Uncapacitated Models (with T. Ünlüyurt).

Leaders for Industry (LFI) Program Advising

1. Dicle Evliyaoğlu (2011) Distribution Planning at İpek Kağıt.
2. Selçuk Yetimoğlu (2010) A Model for Workforce Planning in İpek Kağıt Converting Department.
3. Sırma Yücel (2005) Modeling Process Costs in Tire Cord Fabric Manufacturing.
4. Onur Çotur (2004). Determination of Spare Parts Inventory Policy and Integration of Systematic Forecasting to the Order Management System.
5. Hakan Göl (2003) Third-Party Logistics Provider Selection Process: 3PL Literature Review, Development of a Selection Methodology and Its Application.

Ph.D. Thesis Jury Member

1. Gülçin Ermiş (2014) Single Machine Scheduling with Timelag Constraints (Koç University).
2. Ayfer Başar (2014) Location Planning of Bank Branches (Istanbul Technical University).
3. Erinç Albey (2012) Capacity Modeling in Aggregate Production Planning: Multi-Dimensional Clearing Functions and Iterative Linear Programming-Simulation Approaches (Boğaziçi University).
4. Gülay Arzu Gündüz (2011) Hierarchical and Distributed Planning in Project and Operations Management (Istanbul Technical University).
5. Emre Özlü (2008) Analytical Modeling of Cutting Process Mechanics and Dynamics for Simulation of Industrial Machining Operations.

Ph.D. Thesis Supervisory Committee Member

1. Ayfer Başar (2012-2014) Location Planning of Bank Branches (Istanbul Technical University).
2. Erinç Albey (2008-2012) Capacity Anticipation Modeling in Hierarchical Production Planning under Manufacturing Flexibility (Boğaziçi University).
3. Elvan Bayraktaroğlu (2010-present) Technology Management in Manufacturing Systems: A Case of a Turkish Appliances Manufacturing Company (Istanbul Technical University).

M.Sc. Thesis Jury Member

1. Özgün Elçi (2016) Chance-Constrained Stochastic Programming Models for Humanitarian Relief Network Design
2. Şeyma Çetinkaya (2016) An Improved Formalism for Assigning Proteins Using Nuclear Vector Replacement Framework (Istanbul Sehir University).
3. Başak Tozlu (2015) Modeling and Analysis of a Home Care Routing Problem.
4. Hanefi Mercan (2015) GPU-based Parallel Computing Methods for Constructing Covering Arrays.
5. Ezgi Aylı (2015) A Network Design Problem for a Post Sale Services Distribution System.
6. Fikri Küçüksayacıgil (2014) Use of Genetic Algorithms in Multi-Objective Multi-Project Resource Constrained Project Scheduling.
7. Uğur Koç (2014) Using Simulated Annealing for Computing Test Case-Aware Covering Arrays.

8. Gürkan Işık (2014) Sequential Testing of Series Parallel Systems.
9. Oğuzhan Orhan (2013) An Indoor Positioning System based on Global Positioning System.
10. Alptunç Çomak (2013) Dynamics and Chatter Stability of Multi Delay Machining Systems.
11. Ali Çetin Suyabatmaz (2012) Railway Crew Capacity Planning Problem with Connectivity Considerations in Pairings.
12. Soner Beyhan (2012) A Column Generation Algorithm for Robust Gate Assignment Problems.
13. Arda Ceylan (2011) A Simulation Model for a Generic Unit-Load Warehouse (Turkish Naval Academy).
14. Elif Özdemir (2011) Testing Strategies for k -out-of- n Systems Under General Type Precedence Constraints.
15. Mustafa Şahin (2011) Multi-Vehicle One-to-One Pickup and Delivery Problem with Split Loads.
16. Nükte Şahin (2011) Experiments on Supply Chain Contracting: Effects of Contract Type and Relationship Length.
17. Yasir Tuncer (2011) Estimating the Performance of EMS Location Models via Simulation.
18. Serdar Bozoğlan (2010) Developing Simulation-Optimization Code Library (Turkish Naval Academy).
19. Mehmet Çavdar (2010) Analysis of the Multi Echelon Inventory System with Lead Time Dependent Backorder by Simulation (Turkish Naval Academy).
20. İsmail Kırıcı (2010) A Two Echelon Inventory System with Lead Time Dependent Backorder (Turkish Naval Academy).
21. Onur Bozkurt (2010) Personalized Advertisement Assignment System.
22. Gamze Belen (2009) Dual Sales Channel Management with Price Competition.
23. Sevilay Gökdoğan (2009) Dual Sales Channel Management with Buyback Contracts.
24. Alp Eren Akçay (2008) Software Frameworks for Production Scheduling and Analytical Benchmarking.
25. Burak Aksu (2008) Experimental and Analytical Investigation on Mechanics of Metal Cutting Including Edge Forces.
26. Hakan Kaynar (2008) Heuristics for Unique Input Output Sequence Computation.
27. Aydın Tanrıverdi (2008) Sequential Testing of k -out-of- n Systems Under Precedence Constraints.
28. Cenk Aydın (2006) Improved Rehandling Strategies for Container Retrieval Process.
29. Lütfi Taner Tunç (2006) Geometrical Analysis and Optimization of 5-Axis Milling Processes.
30. Murat Kılıç (2003) Multiobjective Genetic Algorithm Approaches to Project Scheduling.
31. Evren Burcu Kıvanç (2003) Modeling Statics and Dynamics of Milling Machine Components.
32. Ekim Özyayın (2003) Capacitated Vehicle Routing Problem with Time Windows.
33. Hacı Murat Özdemir (2003) Hierarchical Modeling and Analysis of Container Terminal Operations.

34. Sema Nur Altuğ (2002) Risk Management and Post Project Evaluation Processes for Research.
35. Ercüment Kenger (2002) Airline Crew Rescheduling Problem: A Heuristic Approach (Boğaziçi University).

TEACHING

Courses Developed/Taught at the Faculty of Engineering and Natural Sciences, Sabanci University (2000- Present)

Undergraduate Level

1. ENS 208 Introduction to Manufacturing Systems (3 Credits)
Major course update and delivery in *Fall 2007, Fall 2008, Fall 2009, Fall 2010, Spring 2011, Fall 2011, Spring 2012, Fall 2012, Spring 2013, Fall 2013, Spring 2014, Spring 2015, Spring 2016*
2. MS 301 Deterministic Models in Operations Research (4 Credits)
New course development and delivery in *Fall 2001, Fall 2002, Fall 2003*
3. MS 304 Production and Service Systems Planning and Design (3 Credits)
New course development and delivery in *Spring 2002, Spring 2003, Spring 2004, Spring 2005, Fall 2005, Fall 2006*
4. MS 417 Facilities and Material Handling Design (3 Credits)
New course development and delivery in *Fall 2002, Fall 2003, Fall 2004, Spring 2006, Fall 2007, Fall 2009, Fall 2011*
5. IE (Formerly MS) 430 Logistics Systems Planning and Design (3 Credits)
Offered in *Fall 2014, Fall 2015, Fall 2016*

Graduate Level

1. IE 553 Facility Design and Analysis (3 Credits)
New course development and delivery in *Fall 2000, Fall 2001, Fall 2002, Fall 2003, Spring 2008, Fall 2008, Fall 2010, Fall 2012*
2. IE 554 Supply Chain Management (3 Credits)
New course development and delivery in *Spring 2001, Spring 2002, Spring 2006*
3. IE 567 Manufacturing Systems Modelling (3 Credits)
Offered in *Spring 2007*
4. IE 580 Special Topics in IE I: Multi-Level Production Planning (3 Credits)
New course development and delivery in *Spring 2001*
5. IE 581 Special Topics in IE II: Logistics and Transportation Planning (3 Credits)
New course development and delivery in *Spring 2009*
6. IE 582 Special Topics in IE III: Logistics and Transportation Planning (3 Credits)
New course development and delivery in *Spring 2015*
7. IE 681 Selected Topics in IE II: Advanced Concepts in Production Planning (3 Credits)
New course development and delivery in *Spring 2004, Fall 2004*
8. IE 58000 Special Topics in IE: Logistics and Transportation Planning (3 Credits)
Fall 2016
9. IE 592 LFI Project Course (3 Credits)
Offered in *Fall 2002, Fall 2003, Fall 2004, Fall 2009, Fall 2010*

10. ENS 596 Industrial Research (3 Credits)
Offered in *Spring 2003, Spring 2010, Spring 2011*

Courses Taught at the Warrington College of Business, University of Florida (1998-2000)

Undergraduate Level

1. QMB 4701 Managerial Operations Analysis (3 Credits)
Offered in *Fall 1998, Spring 1999, Spring 2000*

Graduate Level

1. QMB 6358 Statistical Analysis for Managerial Decisions I (1.5 Credits)
Offered in *Fall 1999*
2. QMB 6359 Statistical Analysis for Managerial Decisions II (1.5 Credits)
Offered in *Fall 1999*
3. QMB 6755 Managerial Quantitative Analysis I (1.5 Credits)
Offered in *Fall 1999*
4. QMB 6756 Managerial Quantitative Analysis II (1.5 Credits)
Offered in *Fall 1999*

INTERNAL SERVICE

Committee Memberships, Sabanci University (2000-Present)

- *Member, University Research Council, Oct. 2015- Present*
- *Undergraduate Diploma Area Advisor, Oct. 2014-Present*
- *Member, Faculty of Engineering and Natural Sciences Board, Oct. 2011-Oct. 2014*
- *Member, Faculty of Engineering and Natural Sciences Executive Board, Oct. 2011- Oct. 2014*
- *Member, Graduate School of Engineering and Natural Sciences Executive Committee (formerly Faculty Graduate Committee), 2000-Oct. 2011*
- *Graduate Coordinator, Industrial Engineering Program, 2000-2003 and Sept. 2008-Feb. 2010*
- *Coordinator, Manufacturing Systems Engineering Program, Sept. 2004-Sept. 2006*
- *Member, Project Courses Committee, Faculty of Engineering and Natural Sciences, 2005-2006*
- *Member, PROJ 102 Course Committee, 2002-2004*
- *Member, Ph.D. Committee, Graduate School of Engineering and Natural Sciences, 2002-2004*
- *Graduate Orientation Coordinator, Faculty of Engineering and Natural Sciences, Sept. 2002*

EXTERNAL SERVICE

Editorial Board Membership

Editorial Board, International Journal of Advanced Manufacturing Technology

International Editorial Review Board, International Journal of Service Science, Management, Engineering, and Technology

Organizing Seminars, Conferences, Workshops and Symposiums

Chairing

- *Co-Chair*, Symposium on Computational Intelligence in Production and Logistics Systems (CIPLS), IEEE Symposium Series on Computational Intelligence (SSCI)
 - CIPLS 2016, 6-9 December 2016, Athens, Greece
 - CIPLS 2015, 7-10 December 2015, Cape Town, South Africa
 - CIPLS 2014, 9-12 December 2014, Orlando, Florida, USA
 - CIPLS 2013, 16-19 April 2013, Singapore
 - CIPLS 2011, 11-15 April 2011, Paris, France
- *Local Chair*, 14th International Symposium on Logistics (ISL 2009), 5-8 July 2009, Istanbul, Turkey.
- *Invited Cluster Chair*, Manufacturing Systems and Supply Chain Integration, INFORMS Annual Meeting, 4-7 November 2001, Miami Beach, FL, USA.

Committee Membership

- *Invited Stream Co-Organizer*, Sustainable Transport Planning, 26th EURO-INFORMS Joint International Meeting, 1-4 July 2013, Rome, Italy.
- *Invited Stream Co-Organizer*, Sustainable Transport Planning, 25th European Conference on Operational Research (EURO 2012), 8-11 July 2012, Vilnius, Lithuania.
- *Scientific Committee Member*, Logistics and Supply Chain Congress (LSCC)
 - 4th LSCC, 21-23 May 2015, Gümüşhane, Turkey
 - 3rd LSCC, 15-17 May 2014, Trabzon, Turkey
 - 2nd LSCC, 16-18 May 2013, Aksaray, Turkey
 - 1st LSCC, 10-12 May 2012, Konya, Turkey
- *International Program Committee Member*, International Workshop on Collaboration in Logistics, Planning & Services (CLPS 2012), 21-25 May 2012, Denver, Colorado, USA.
- *International Advisory Committee Member*, International Symposium on Logistics (ISL)
 - 21st ISL, 3-6 July 2016, Taiwan
 - 20th ISL, 5-8 July 2015, Bologna, Italy
 - 18th ISL, 7-10 July 2013, Vienna, Austria
 - 17th ISL, 8-11 July 2012, Cape Town, South Africa
 - 16th ISL, 10-13 July 2011, Berlin, Germany
 - 15th ISL, 4-7 July 2010, Kuala Lumpur, Malaysia
- *International Program Committee Member*, Special Session on Evolutionary Computing of the 9th IEEE International Conference on Cognitive Informatics (ICCI 2010), 7-9 July 2010, Beijing, China.
- *Program Committee Member*, 30th National Conference on Operations Research and Industrial Engineering (YAEM 2010), Istanbul, Turkey.
- *International Program Member*, RFID Eurasia, 5-6 September 2007, Istanbul, Turkey.
- *Organizing Committee Member*, 14th European Operations Management Association (EurOMA) Annual Conference, 17-20 June 2007, Ankara, Turkey.
- *Scientific Committee Member*, International Logistics and Supply Chain Congress

- 13th LMSCM, 22-23 October 2015, Izmir, Turkey
 - 12th LMSCM, 30-31 October 2014, Istanbul, Turkey
 - 5th ILSCS, 8-9 November 2007, Istanbul, Turkey
 - 4th ILSCS, 29 November-1 December 2006, Izmir, Turkey
 - 3rd ILSCS, 23-24 November 2005, Istanbul, Turkey
- *Organizing Committee Member*, Workshop on “Collaboration in Automotive Industry II: Industrial Design and Product Development,” Sabanci University, 22 October 2004, Istanbul, Turkey.
 - *Organizing Committee Member*, Workshop on “Opportunities for Strategic Alliances between Manufacturers and Suppliers in the Automotive Industry,” Sabanci University, 25-26 September 2003, Istanbul, Turkey.
 - *Organizing Committee Member*, Workshop on “e-Business: Applications and Infrastructure,” Sabanci University, 26-27 April 2001, Istanbul, Turkey.

Manuscript Reviewing

International Journals

Annals of Operations Research, Applied Mathematical Modelling, Central European Journal of Operational Research, Computers and Operations Research, Engineering Applications of Artificial Intelligence, European Journal of Industrial Engineering, European Journal of Operational Research, IEEE Transaction in Engineering Management, International Journal of Advanced Manufacturing Technology, International Journal of Manufacturing and Management, International Journal of Production Economics, International Journal of Production Research, International Journal of Project Organisation and Management, IT Professional, Journal of Industrial and Management Optimization, Journal of the Operational Research Society, Journal of the Operational Research Society of India, Journal of Zhejiang University Science C, Networks, Omega-The International Journal of Management Science, Operations Management Research, Optimization Letters, Production Planning and Control, Robotics and Computer Integrated Manufacturing, Socio-Economic Planning Sciences, Transportation Research Part B, Transportation Research Part C, Transportation Research Part E.

National Journals (in Turkish)

Industrial Engineering Journal, Gazi University Journal, Uludağ University FEAS Journal

Books

- *Editorial Review Board*, Natural Intelligence for Scheduling, Planning and Packing Problems. Series: Studies in Computational Intelligence, Vol. 250, Chiong R, Dhakal S (eds), Springer-Verlag Berlin Heidelberg (2009).
- *Reviewer*, Nature-Inspired Informatics for Intelligent Applications and Knowledge Discovery: Implications in Business, Science and Engineering. In: Chiong R (ed), IGI Global (2009).

International Conferences

- International Logistics and Supply Chain Congress
 - 13th LMSCM, 22-23 October 2015, Izmir, Turkey
 - 12th LMSCM, 30-31 October 2014, Istanbul, Turkey
 - 7th ILSCS, 5-6 November 2009, Istanbul, Turkey

- 5th ILSCS, 8-9 November 2007, Istanbul, Turkey
- 4th ILSCS, 29 November-1 December 2006, Izmir, Turkey
- 3rd ILSCS, 23-24 November 2005, Istanbul, Turkey
- 2nd ILSCS, 2-3 December 2004, Izmir, Turkey
- 14th IEEE Wireless Communications and Networking Conference (WCNC), 6-9 April 2014, Istanbul, Turkey.
- 43rd Hawaii International Conference on System Sciences (HICSS), 5-8 January 2010, Manoa, HI, USA.
- 21st International Symposium on Computer and Information Sciences ISCIS'06, 1-3 November 2006, Istanbul, Turkey.

Service in Professional Organizations

- *Reviewer and Referee*, Research Grant/Industrial Project Proposals and Award Applications, The Scientific and Technological Research Council of Turkey (TÜBİTAK)
- *Evaluator*, Logistics Project Competition, Logistics Association (Turkey), 2011-2015
- *Reviewer and Referee*, Logistics Case Study Competition, Logistics Association (Turkey), 2004-2010
- *Evaluator*, National Quality Award, Turkish Society for Quality (KalDer), 2002, 2003

MEMBERSHIPS IN PROFESSIONAL SOCIETIES

Institute for Operations Research and Management Science (INFORMS)
 Institute of Electrical and Electronics Engineers (IEEE), Senior Member
 Logistics Association-Turkey (LODER)
 Operational Research Society-Turkey (YAD)
 INFORMS Computing Society
 INFORMS Transportation Science and Logistics Society