

# CURRICULUM VITAE

## Prof. Dr. Bülent Çatay

(Founding Director, Smart Mobility and Logistics Lab)

### CONTACT INFORMATION

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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. Istanbul Saint Joseph French High School, 1988

### EXPERIENCE

Mar. 2015 – Present	<i>Full Professor</i> , Sabancı University, Istanbul, Türkiye Faculty of Engineering and Natural Sciences
Mar. 2018 – Mar. 2019	<i>Vice Dean</i> , Sabancı University, Istanbul, Türkiye Faculty of Engineering and Natural Sciences
Feb. 2008 – Mar. 2015	<i>Associate Professor</i> , Sabancı University, Istanbul, Türkiye Faculty of Engineering and Natural Sciences
July 2000 – Feb. 2008	<i>Assistant Professor</i> , Sabancı University, Istanbul, Türkiye Faculty of Engineering and Natural Sciences
Aug. 1999 – June 2000	<i>Visiting Lecturer</i> , University of Florida, Gainesville, FL Department of Information Systems and Operations Management
Aug. 1994 – Aug. 1999	<i>Graduate Assistant</i> , University of Florida, Gainesville, FL Department of Information Systems and Operations Management
Aug. 1993 – June 1994	<i>Teaching Assistant Coordinator</i> , SUNY at Buffalo, Amherst, NY Department of Economics

### ACADEMIC LEAVES

Feb. 2010 – June 2010	<i>Visiting Researcher</i> , Lancaster University, Lancaster, UK Department of Management Science
June 1997 – Sept. 1997	<i>Consultant</i> , IBM, Burlington, VT Microelectronics Division

### RESEARCH INTERESTS

Transportation and logistics systems, sustainable transport planning, applied optimization, electromobility, heuristic approaches to large-scale problems.

## PUBLICATIONS

### *Refereed Articles Indexed in Web of Science (SCI and SSCI)*

1. Çatay B, Sadati İ (2026) A note on battery swapping policies in the electric vehicle routing problem with time windows and battery swapping vehicles. *Computers & Operations Research* 185, 107277.
2. Bruglieri M, Çatay B, Keskin M, Mancini S, Pisacane O (2025) The mixed fleet vehicle routing problem with low emission zones. *Transportation Research Part E: Logistics and Transportation Review* 201, 104230.
3. Duman EN, Taş D, Çatay B (2024) A bidirectional branch-and-price algorithm with Pulse procedure for the electric vehicle routing problem with flexible deliveries. *Transportation Research Part C: Emerging Technologies* 165, 104699.
4. Akbari V, Çatay B, Sadati İ (2024) Route optimization of battery electric trucks using dynamic charging on electrified roads. *Sustainable Cities and Society* 109, 105532.
5. İslim RB, Çatay B (2024) An effective matheuristic approach for solving the electric traveling salesperson problem with time windows and battery degradation. *Engineering Applications of Artificial Intelligence* 132, 107943.
6. Çatay B, Sadati İ (2023) An improved matheuristic for solving the electric vehicle routing problem with time windows and synchronized mobile charging/battery swapping. *Computers & Operations Research* 159, 106310.
7. Moradi N, Sadati İ, Çatay B (2023) Last mile delivery routing problem using autonomous electric vehicles. *Computers & Industrial Engineering* 184, 109552.
8. Rastani S, Çatay B (2023) A large neighborhood search-based matheuristic for the load-dependent electric vehicle routing problem with time windows. *Annals of Operations Research* 324(1–2), 761–793.
9. Duman EN, Taş D, Çatay B (2022) Branch-and-price-and-cut methods for the electric vehicle routing problem with time windows. *International Journal of Production Research* 60(17), 5332–5353.
10. Sadati MEH, Akbari V, Çatay B (2022) Electric vehicle routing problem with flexible deliveries. *International Journal of Production Research* 60(13), 4268–4294.
11. Seyfi M, Alinaghian M, Ghorbani E, Çatay B, Sabbagh MS (2022) Multi-mode hybrid electric vehicle routing problem. *Transportation Research Part E: Logistics and Transportation Review* 166, 102882.
12. Yıldırım UM, Çatay B (2022) An enhanced network-consistent travel speed generation scheme on time-dependent shortest path and routing problems. *IEEE Transactions on Intelligent Transportation Systems* 23(2), 873–884.
13. Sadati MEH, Çatay B, Aksen D (2021) An efficient variable neighborhood search with tabu shaking for a class of multi-depot vehicle routing problems. *Computers and Operations Research* 133, 105269.
14. Keskin M, Çatay B, Laporte G (2021) A simulation-based heuristic for the electric vehicle routing problem with time windows and stochastic waiting times at recharging stations. *Computers and Operations Research* 125, 105060.
15. Sadati MEH, Çatay B (2021) A hybrid variable neighborhood search approach for the multi-depot green vehicle routing problem. *Transportation Research Part E: Logistics and Transportation Review* 149, 102293.

16. Rastani S, Yüksel T, Çatay B (2019) Effects of ambient temperature on the route planning of electric freight vehicles. *Transportation Research Part D: Transport and Environment* 74, 124–141.
17. Keskin M, Laporte G, Çatay B (2019) Electric vehicle routing problem with time-dependent waiting times at recharging stations. *Computers and Operations Research* 107, 77–94.
18. Keskin M, Çatay B (2018) A matheuristic method for the electric vehicle routing problem with time windows and fast chargers. *Computers and Operations Research* 100, 172–188.
19. 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.
20. 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.
21. 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.
22. 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.
23. Başar A, Çatay B, Ünlüyurt T (2012) A taxonomy for emergency service station location problem. *Optimization Letters* 6(6), 1147–1160.
24. 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.
25. Uzar MF, Çatay B (2012) Distribution planning of bulk lubricants at BP Turkey. *Omega-International Journal of Management Science* 40(6), 870–881.
26. Yıldırım UM, Çatay B (2012) A time-based pheromone approach for the ant system. *Optimization Letters* 6(6), 1081–1099.
27. 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.
28. 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.
29. 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.
30. Doyuran T, Çatay B (2011) A robust enhancement to the Clarke-Wright savings algorithm. *Journal of the Operational Research Society* 62(1), 223–231.
31. 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.
32. 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.
33. 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.
34. 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.

35. Yılmaz P, Çatay B (2006) Strategic level three-stage production distribution planning with capacity expansion. *Computers & Industrial Engineering* 51(4), 609–620.
36. Çatay B, Erengüç SS, Vakharia AJ (2005) Capacity allocation with machine duplication in semiconductor manufacturing. *Naval Research Logistics* 52(7), 659–667.
37. 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.
38. Çatay B, Vakharia AJ, Erengüç SS (2003) Tool capacity planning in semiconductor manufacturing. *Computers & Operations Research* 30(9), 1349–1366.
39. Vakharia AJ, Çatay B (1997) Two machine openshop scheduling with machine dependent processing times. *Discrete Applied Mathematics* 73(3), 283–288.

### ***Refereed Articles Indexed in Other Databases***

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. İslim RB, Çatay B. Influence of self-pickup incentives on last-mile deliveries: a route-optimization-based simulation approach considering consumer behavior (submitted).
2. Sadati İ, Çatay B. Electric vehicle routing problem with synchronized mobile charging stations: Bi-level vs. joint optimization approaches (submitted).
3. Sadati İ, Çatay B. Routing of electric freight vehicles (submitted).
4. Akbari V, Çatay B, Masoud N. Exact and heuristic methods for deploying electrified road systems on transportation networks (in progress).
5. Rastani S, Çatay B. Uphill struggles, downhill gains: How road gradients and load dynamics influence electric vehicle routing decisions? (revised and resubmitted).
6. Shokirov N, Çatay B, Ünlüyurt T. A parallel neighborhood search method for the crew constrained home health care routing problem (in progress).

### ***Refereed Book Chapters***

1. Rastani S, Yüksel T, Çatay B (2020) Electric vehicle routing problem with time windows and cargo weight. In: Golinska-Dawson P., Tsai KM., Kosacka-Olejnik M. (eds) *Smart and Sustainable Supply Chain and Logistics – Trends, Challenges, Methods and Best Practices. EcoProduction (Environmental Issues in Logistics and Manufacturing)*, Springer, Switzerland, 175–190.
2. 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.

3. 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.
4. 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.
5. 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, Cordon 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 Indexed in Web of Science***

1. İslim RB, Çatay B (2025) A route optimization approach for incentivizing self-pickups in last-mile deliveries. *Procedia Computer Science* 263, 68–75.
2. Sadati İ, Çatay B (2025) Improving last-mile delivery operations of electric vehicles using on-demand portable chargers. *Transportation Research Procedia* 86, 564–571.
3. Çatay B, Eshtehadi R (2023) Improving the route planning of battery electric freight vehicles through speed optimization. *7th International Symposium on Innovative Approaches in Smart Technologies (ISAS 2023)*, Istanbul, Türkiye, 1–6.
4. İslim RB, Çatay B (2022) The effect of battery degradation on the route optimization of electric vehicles. *Procedia Computer Science* 204, 1–8.
5. Keskin M, Akhavan-Tabatabaei R, Çatay B (2019) Electric vehicle routing problem with time windows and stochastic waiting times at recharging stations. *2019 Winter Simulation Conference (WSC)*, National Harbor, MD, USA, 1649–1659.
6. Çatay B, Keskin M (2017) The impact of quick charging stations on the route planning of electric vehicles. *22nd IEEE Symposium on Computers and Communications (ISCC 2017)*, Heraklion, Greece, 152–157.
7. Ermiş G, Çatay B (2017) Accelerating local search algorithms for the travelling salesman problem through the effective use of GPU. *Transportation Research Procedia* 22, 409–418.
8. Shi W, Weise T, Chiong R, Çatay B (2015) Hybrid PACO with enhanced pheromone initialization for solving the vehicle routing problem with time windows. *2015 IEEE Symposium Series on Computational Intelligence (SSCI 2015)*, Cape Town, South Africa, 1735–1742.
9. Tozlu B, Daldal R, Ünlüyurt T, Çatay B (2015) Crew constrained home care routing problem with time windows. *2015 IEEE Symposium Series on Computational Intelligence (SSCI 2015)*, Cape Town, South Africa, 1751–1757
10. Yıldırım UM, Çatay B (2015) An ant colony-based matheuristic approach for solving a class of vehicle routing problems. *Lecture Notes in Computer Science* 9335, 105–119.

11. Akhmedov M, Çatay B, Apaydin MS (2013) Distinguishing the type of NOE for NMR protein structure-based assignments. *21st Signal Processing and Communications Applications Conference (SIU 2013)*, Northern Cyprus, 1–4. (in Turkish)
12. Apaydin 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.), *IEEE 24th International Symposium on Computer and Information Sciences*, Güzelyurt, Northern Cyprus, 177–182.
13. Çatay B, Özlük Ö, Ünlüyurt T (2008) An ant colony algorithm for the sequential testing problem under precedence constraints. *IEEE International Conference on Service Operations and Logistics, and Informatics*, Beijing, China, 1800–1805.
14. 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.), *1st International RFID Eurasia Conference*, Istanbul, Türkiye, 259–264.
15. 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.), *1st International RFID Eurasia Conference*, Istanbul, Türkiye, 265–267.

### ***Refereed Conference Proceedings Papers Indexed in Other Databases***

1. Nozir S, Çatay B, Ünlüyurt T (2020) Crew constrained home health care routing problem with time windows and synchronized visits. *Lecture Notes in Management and Industrial Engineering*, Springer, 87–96.
2. Çakmak UC, Apaydin MS, Çatay B (2018) Traffic speed prediction with neural networks. In: N Kliewer et al. (eds.), *Operations Research Proceedings 2017: Selected Papers of the Annual International Conference of the German Operations Research Society (GOR)*, Freie Universität Berlin, Springer, 737–743.
3. Kayikci Y, Çatay B (2017) A revenue-based slot allocation and pricing framework for multimodal transport networks. In: KS Pawar et al. (eds.) *22nd International Symposium on Logistics (ISL 2017)*, Ljubljana, Slovenia, 672–679.
4. Kleiner F, Beermann M, Çatay B, Beers E, Davies H, Lim OT (2017) Current status of the electrification of transport logistic vehicles-early niche markets and commercialization opportunities. *2017 European Battery, Hybrid and Fuel Cell Electric Vehicle Congress (EEVC 2017)*, Geneva, Switzerland.
5. Mutlu A, Kayikci Y, Çatay B (2017) Planning multimodal freight transport operations: A literature review. In: KS Pawar et al. (eds.) *22nd International Symposium on Logistics (ISL 2017)*, Ljubljana, Slovenia, 553–560.
6. Keskin M, Çatay B (2015) The electric vehicle routing problem: outlook and recharging strategies. In: U Aydın et al. (eds.), *13th International Logistics and Supply Chain Congress*, Izmir, Türkiye, 828–838.
7. 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. *28th International Electric Vehicle Symposium and Exhibition (EVS28)*, Goyang, South Korea.
8. 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. *2015 European Battery, Hybrid and Fuel Cell Electric Vehicle Congress (EEVC 2015)*, Brussels, Belgium.
9. Keskin M, Çatay B (2014) An adaptive large neighborhood search approach for the electric vehicle routing problem. In: YC Toklu, G Bekdaş (eds.), *15th Workshop of the EURO Working Group on Metaheuristics (EU/ME)*, Istanbul, Türkiye, 31–36.

10. Yıldırım UM, Çatay, B. (2014) Minimizing the carbon emissions on road networks. *7th International Symposium on Transportation Technologies (TRANSIST 2014)*, Istanbul, Türkiye, 242–251.
11. 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.) *15th Genetic and Evolutionary Computation Conference (GECCO 2013) Companion*, ACM, New York, NY, 1609–1616.
12. Kılıç MA, Çatay B (2013) Scheduling operations for multi-spindle and multi-machining unit machines. *International IIE Conference*, Istanbul, Türkiye.
13. Çalpur MÇ, Erdoğan H, Çatay B, Donald BR, Apaydın MS (2010) Developing a scoring function for NMR structure-based assignments using machine learning. *Lecture Notes in Electrical Engineering* 62, 87–90.
14. 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.
15. Çatay B (2009) A risk-based multiple coverage model for locating fire stations in Istanbul. *13th Euro Working Group on Transportation (EWGT) Meeting*, Padua, Italy.
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 (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 –3rd World Conference on Production and Operations Management*, Tokyo, Japan, 2653–2661.
18. Demirok E, Çatay B (2007) Vehicle routing problem with simultaneous delivery and pick-up and intermediary delivery. In: M Tanyaş, A Eser (eds.), *5th International Logistics & Supply Chain Congress*, Istanbul, Türkiye, 407–414.
19. Göl H, Çatay B (2007) Logistics outsourcing and 3PL selection: A case study in an automotive supply chain. *86th Annual Meeting of the Transportation Research Board*, Washington, DC, USA.
20. Sarıgöl İ, Çatay B (2007) A clustering-based heuristic for the location-routing problem. In: M Tanyaş, A Eser (eds.), *5th International Logistics & Supply Chain Congress*, Istanbul, Türkiye, 415–422.
21. 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.), *10th Euro Working Group on Transportation (EWGT) Meeting*, Bari, Italy, 275–282.
22. Gökçe Eİ, Çatay B (2005) A revised ant colony system for the vehicle routing problem with time windows. In: B Durmuşoğlu, C Kahraman (eds.), *35th International Conference on Computers & Industrial Engineering*, Istanbul, Türkiye, 813–818.
23. Vural, AV, Çatay B, Ekşioğlu B (2005) A dual GA approach to capacitated vehicle routing problem with simultaneous pick-up and deliveries. *IIE Annual Conference*, Atlanta, GA, USA.
24. Çimren E, Budak E, Çatay B (2004) Development of a machine tool selection system using analytic hierarchy process. In: R Teti (ed.), *4th CIRP International Seminar on Intelligent Computation in Manufacturing Engineering*, Sorrento, Italy, 193–198.

25. Göl H, Yumusak K, Çatay B (2003) Development and application of a third-party logistics provider selection methodology. In: CR Kaykayoğlu et al. (eds.), *International Logistics Congress*, Istanbul, Türkiye, 59–66.
26. Arslan MÇ, Çatay B, Budak E (2002) A decision support system for machine selection. In: A Baykasoglu, T Dereli (eds.), *2nd International Responsive Manufacturing Conference, ICRM-2002*, Gaziantep, Türkiye, 752–757.
27. Denizel M, Arikan 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.
28. Çatay B, Vakharia AJ (1998) 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. Karadeniz-Alver Ö, Ayvaz B, Çatay B (2018) A multi-objective reverse logistics network design for waste electrical and electronic equipment: The Case of Istanbul. *Uludağ University Journal of the Faculty of Engineering* 23(4), 41–54.
2. Kayikci Y, Mutlu, A Çatay B (2018) A decision support system and its application for international sea-rail multimodal freight transportation operations. *Uludağ University Journal of the Faculty of Engineering* 23(4), 99–116.
3. Çatay B (2011) A multiple coverage approach using risk factors for locating fire stations in Istanbul. *Industrial Engineering Journal* 22(2), 33–44.
4. Çatay B, Başar A, Ünlüyurt T (2008) Location planning of emergency medical service stations in Istanbul. *Industrial Engineering Journal* 19(4), 20–35.

#### **Refereed Conference Proceedings Papers in Turkish**

1. Çakmak UC, Çatay B, Apaydin MS (2018) A neural network approach for predicting speeds on road networks. *26th Signal Processing and Communications Applications Conference (SIU 2018)*, İzmir, Türkiye, 1–4.
2. Alver ÖK, Ayvaz B, Çatay B (2018) Reverse logistics network desing for waste of electrical and electronic equipments: The case of Istanbul. *7th National Logistics and Supply Chain Congress*, Bursa, Türkiye.
3. Mutlu A, Kayikci Y, Çatay B (2018) Decision support system for sea-rail multimodal freight transportation operations. *7th National Logistics and Supply Chain Congress*, Bursa, Türkiye.
4. Çatay B, Keskin M (2017) The electric vehicle routing problem: analysis of different models. *6th National Logistics and Supply Chain Congress*, Antalya, Türkiye.
5. Akhmedov M, Çatay B, Apaydin MS (2013) Distinguishing the type of NOE for NMR protein structure-based assignments. *21st Signal Processing and Communications Applications Conference (SIU 2013)*, Northern Cyprus, 1–4.
6. Başar A, Çatay B, Ünlüyurt T (2008) A tabu search approach for location planning of emergency medical service stations. *National Congress of Operations Research/Industrial Engineering*, Istanbul, Türkiye.

#### **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***

1. Davies H, Deniz Ö, Schmid S, Çatay B, Muller W, Leutenegger R, Akbarian M, Lim OT (2023) International Energy Agency Technology Collaboration Programme – Hybrid and Electric Vehicles Final Report of Taskforce 41 “Electric Freight Vehicles”.
2. Kleiner F, Beermann M, Beers E, Çatay B, Moran B, Davies H, Lim OT (2017) HEV-TCP Task 27 Final Report: “Electrification of Transport Logistic Vehicles (eLogV)”. International Energy Agency Implementing Agreement for Co-operation on Hybrid and Electric Vehicle Technologies and Programmes.

### ***Reports in Turkish***

1. Ulusoy G, Kılıç K, Özlü E, Altekin FT, Çatay B, Budak E, Pasin M, Karaata ES, Varandi S (2017) Strategies for Digitalization in Industry: Draft Report. Sabancı University, Istanbul, Türkiye.
2. 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, Türkiye.

### ***Presentations in Conferences and Seminars***

1. Çatay B (2023) Challenges of Electric Vehicles in Logistics (Lojistiğin Elektrikli Araçlarla İmtihanı). *Keynote Speaker, YAEM 2023*, Gaziantep, Türkiye.
2. Sadati MEH, Çatay B (2022) Electric Vehicle Routing Problem with Time Windows and On-Demand Mobile Charging System. *EURO 2022*, Aalto, Finland.
3. Çatay B (2022) Electric Vehicle Routing Problem with Time Windows and Waiting Times at Recharging Stations. *Invited Seminar*, Università Politecnica delle Marche, Ancona, Italy (Virtual).
4. Çatay B (2020) Route Planning of Electric Freight Vehicles: Overview, Research Trends and Future Outlook. *Invited Seminar*, La Universidad Pública de Navarra, Pamplona, Spain.
5. Çatay B, Rastani S, Yuksel T (2019) The Impact of Load on the Energy Consumption and Route Planning of Electric Freight Vehicles. *INFORMS 2019*, Seattle, WA, USA.
6. Keskin M, Çatay B, Laporte G (2019) Electric Vehicle Routing Problem with Time Windows and Stochastic Waiting Times at Recharging Stations. *VeRoLog 2019*, Sevilla, Spain.
7. Çatay B (2019) Electric Vehicle Routing Problem. *Transportation & Logistics Workshop 2019*, Ankara, Türkiye.
8. Çatay B, Rastani S, Yuksel T (2018) The Impact of Load on the Route Planning of Electric Freight Vehicles. *OR 2018*, Brussels, Belgium.
9. Rastani S, Yuksel T, Çatay B (2018) Electric Vehicle Routing Problem with Time Windows and Ambient Temperature Effect. *INFORMS 2018*, Phoenix, AZ, USA.
10. Rastani S, Yuksel T, Çatay B (2018) Electric Vehicle Routing Problem with Time Windows and Ambient Temperature Effect. *EURO 2018*, Valencia, Spain.

11. Keskin M, Laporte G, Çatay B (2018) Electric Vehicle Routing Problem with Time Dependent Waiting Times at Recharging Stations. *ODYSSEUS 2018*, Cagliari, Italy.
12. Rastani S, Yuksel T, Çatay B (2017) Route Planning of Electric Freight Vehicles by Considering Internal and Environmental Conditions. *VeRoLog 2017*, Amsterdam, Netherlands.
13. Çatay B, Keskin M (2016) Electric Vehicle Routing Problem with Time Windows and Multiple Charger Types. *INFORMS 2016*, Nashville, TN, USA.
14. 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.
15. 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.
16. Çatay B, Keskin M (2015) Partial Recharge Strategies for the Electric Vehicle Routing Problem with Time Windows. *ODYSSEUS 2015*, Ajaccio, France.
17. Yıldırım UM, Çatay B (2015) Time-Dependent Emission Vehicle Routing Problem. *VeRoLog 2015*, Vienna, Austria.
18. Çatay B (2014) Sustainable Transport Planning: New Trends and Approaches. *3<sup>rd</sup> Logistics and Supply Chain Congress*, Trabzon, Türkiye.
19. 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, Türkiye.
20. 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.
21. Çatay B, Yıldırım UM (2014) A Parallel Matheuristic for Solving a Class of Vehicle Routing Problems. *VeRoLog 2014*, Oslo, Norway.
22. Çatay B (2013) An Adaptive Large Neighborhood Search for the E-Delivery Routing Problem for Online Retail Distribution Planning. *Invited Seminar*, Yaşar University, İzmir, Türkiye.
23. Emeç U, Çatay B, Bozkaya B (2013) Vehicle Routing Problem with Vendor Selection, Intermediate Pickups and Deliveries. *VeRoLog 2013*, Southampton, UK.
24. Yıldırım UM, Çatay B (2013) Finding the Greenest Path on Time-Dependent Road Networks. *25<sup>th</sup> EURO-INFORMS Joint International Meeting*, Rome, Italy.
25. Çatay B (2012) Distribution Planning of Bulk Lubricants at BP Turkey. *Invited Seminar*, Galatasaray University, Istanbul, Türkiye.
26. Çatay B (2012) Distribution Planning of Bulk Lubricants at BP Turkey. *Invited Seminar*, Anadolu University, Eskişehir, Türkiye.
27. Çatay B (2012) New Research Trends in Sustainable Transport Planning. *10<sup>th</sup> International Logistics and Supply Chain Congress*, Istanbul, Türkiye.
28. Yıldırım UM, Çatay B (2012) Greenest Paths in Time-Dependent Transportation Networks. *25<sup>th</sup> Conference of European Chapter on Combinatorial Optimization (ECCO 2012)*, Antalya, Türkiye.
29. Yıldırım UM, Çatay B (2012) Greenest Paths in Time-Dependent Transportation Networks. *25<sup>th</sup> European Conference on Operational Research (EURO 2012)*, Vilnius, Lithuania.
30. Çatay B (2011) Green and Sustainable Logistics. *1<sup>st</sup> National Symposium on Logistics & Supply Chain*, Istanbul, Türkiye.
31. Çatay B (2010) Distribution Planning of Bulk Lubricants at BP Turkey. *Invited Seminar*, Lancaster University, Lancaster, UK.

32. Çatay B (2010) Distribution Planning of Bulk Lubricants at BP Turkey. *Invited Seminar*, Southampton University, Southampton, UK.
33. Çatay B (2010) Distribution Planning of Bulk Lubricants at BP Turkey. *Invited Seminar*, Nottingham University, Nottingham, UK.
34. Çatay B, Uzar MF (2010) Distribution Planning of Bulk Lubricants at BP Turkey. *1st International Conference on Computational Logistics (ICCL)*, Shanghai, China.
35. Çatay B (2009) Sustainability in Logistics Services: Trends and Issues. *INFORMS Meeting*, San Diego, CA, USA.
36. Uzar MF, Çatay B (2009) Distribution Planning of Bulk Lubricants at an Energy Company. *23<sup>rd</sup> European Conference on Operational Research*, Bonn, Germany.
37. Ünlüyurt T, Çatay B (2008) Sequential Testing Under Precedence Constraints. *18<sup>th</sup> Triennial Conference of the International Federation of Operational Research Societies*, Sandton, South Africa.
38. Çatay B, Altınalev T (2007) Pilot Training Planning Problem in Turkish Naval Air Forces. *INFORMS International Meeting*, Puerto Rico, USA.
39. Çatay B (2006) An Ant Based Algorithm for the Vehicle Routing Problem with Simultaneous Delivery and Pick-up. *INFORMS Meeting*, Pittsburgh, PA, USA.
40. Çatay B, Yılmaz P (2005) Strategic Level Three-Stage Production Distribution Planning. *17<sup>th</sup> Triennial Conference of the International Federation of Operational Research Societies*, Honolulu, HI, USA.
41. Çatay B (2004) Ant Colony Systems and Its Application to the Vehicle Routing Problem. *Invited Seminar*, Koç University, Istanbul, Türkiye.
42. Çatay B, Gökçe Eİ (2004) A Revised Ant Colony Algorithm for the Vehicle Routing Problem with Time Windows. *INFORMS Meeting*, Denver, CO, USA.
43. Cetindamar D, Basmacı OS, Çatay B (2004) Performance Measurement in Supply Chain Collaboration: A Case Study in the Turkish Textile Industry. *10<sup>th</sup> International Schumpeter Society Conference*, Milan, Italy.
44. Çatay B (2003) Multi-Period Capacity Planning in Semiconductor Manufacturing. *Invited Seminar*, Boğaziçi University, Istanbul, Türkiye.
45. Çatay B, Çapar İ (2003) A Performance Measurement System in an Automotive Supply Chain. *Euro/INFORMS Joint International Meeting*, Istanbul, Türkiye.
46. 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, Türkiye.
47. Oflezer Ö, Çatay B, Ünlüyurt T (2002) Improving Manufacturing Efficiency by Operations Reversal. *16<sup>th</sup> Triennial Conference of the International Federation of Operational Research Societies*, Edinburgh, Scotland.
48. Çatay B, Erengüç SS, Vakharia AJ (1998) Operation/Machine Type Assignment in Semiconductor Manufacturing”, *INFORMS Meeting*, Seattle, WA, USA.

## FUNDED PROJECTS

1. *Researcher* (2023-2028) “HYSouthMarmara: South Marmara Hydrogen Shore” HORIZON JU Innovation Actions. Total Funding: 7,519,941 EUR. (Sabanci University Funding: 300,800 EUR)

2. *Director* (2021) “MeHUB: Integrating a Connected Micromobility Infrastructure to the Existing Public Transport,” EIT Urban Mobility, Total Funding: 186,973 EUR (Partners: DUCKT, Ankara Metropolitan Municipality).
3. *Director* (2020-2021) “Smart City Monitoring and Management System: Smart Transport and Energy Applications,” ASELSAN, 120,000 TL.
4. *Director* (2018-2020), “New Models and Efficient Solution Methods for the Electric Vehicle Routing Problem,” The Scientific and Technological Research Council of Türkiye (TÜBİTAK 1001 Program Grant # 118M412), 270,210 TL.
5. *Researcher* (2017-2018), “Costs and Benefits of Vehicle Electrification in Türkiye,” Sabancı University Internal Research Grant, 107,800 TL.
6. *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 Türkiye (TÜBİTAK 2515 Program Grant #113M522 - related with the COST Action TU 1204 “People Friendly Cities in a Data Rich World”), 117,090 TL.
7. *Researcher* (2013-2015), “Testing NVR Suite of Programs with Real NMR Data,” The Scientific and Technological Research Council of Türkiye (TÜBİTAK 2505 Program Grant #113E085), 14,130 TL.
8. *Researcher* (2011-2014), “Analysis, Modeling and Optimization of Simultaneous Machining Processes Performed on Multi-Tasking Machine Tools,” The Scientific and Technological Research Council of Türkiye (TÜBİTAK 1001 Program Grant #110M522), 337,520 TL.
9. *Researcher* (2009-2011), “Novel Algorithms for Nuclear Magnetic Resonance (NMR) Structure-Based Assignments,” The Scientific and Technological Research Council of Türkiye (TÜBİTAK 1001 Program Grant #109E027), 91,340 TL.
10. *Director* (2008-2009), “Planning of New Fire Brigade Locations in Istanbul,” Istanbul Metropolitan Municipality, 14,000 TL.
11. *Researcher* (2006-2008), “Radio Frequency Identification (RFID) Based Manufacturing Monitoring and Analysis System,” The Scientific and Technological Research Council of Türkiye (TÜBİTAK 1001 Program Grant # 104E123), 97,300 TL.
12. *Director* (2006-2007), “Location Planning of Emergency Medical Service Stations and Ambulances,” Istanbul Metropolitan Municipality, 12,820 TL.
13. *Researcher* (2002-2003), “Project Analysis and Development Methodology,” Logo Business Solutions (LBS), 95,000 USD.
14. *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), 18,900 USD.

## **R&D CONSULTANCY PROJECTS**

1. Bestera Software (2024-25) “Development of a Route- and Price-based Task Planning Optimization Engine”
2. Konya Metropolitan Municipality (2021-22) “Smart City Strategy and Roadmap”
3. Başarsoft Information Technologies (2019) “Route Optimization of Waste Collection Vehicles”
4. Ekol Logistics (2014-2015) “Optimization of the Material Flows in the Warehouse Operation Processes”

5. Eskişehir-Bilecik-Kütahya Ceramics Cluster (2012-13) “Assessment of Eskişehir-Bilecik-Kütahya Ceramics Cluster Logistics Processes”
6. Assan Aluminium (2012-13) “Cost Optimization of Raw Materials in Melting Processes”
7. Kümsan Crane Systems (2009) “Standardization of Medium and High Capacity Cranes”
8. BOT Group (2008) “Analysis and Improvement of Production Efficiency”
9. 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, 1997 & 1999

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 SUPERVISION**

### ***Ph.D. Dissertation***

1. Raci Berk İslim (in progress) Last-mile logistics with shared delivery locations: Location and route optimization considering incentives and consumer behavior.
2. Nozir Shokirov (in progress) Route Planning in Home Health Care Services (with T. Ünlüyurt).
3. Ece Naz Duman (2022) Column Generation-based Methods for the Electric Vehicle Routing Problems with Time Windows (with D. Taş Küten, MEF University).
4. Sina Rastani (2020) Route Planning of Electric Freight Vehicles by Considering Internal and Environmental Conditions.
5. Merve Keskin (2018) Recharge Strategies for the Electric Vehicle Routing Problem with Time Windows in Deterministic and Stochastic Environments.
6. Umman Mahir Yıldırım (2014) New Approaches for Determining Greenest Paths and Efficient Vehicle Routes on Transportation Networks.

### ***M.Sc. Thesis***

1. İbrahim Enes Yavaş (2025) Optimal Selection and Placement of Military Defense Systems (with G. Tiniç)
2. Nima Moradi (2022) E-delivery Routing Problem using Autonomous Vehicles (with M.E.H. Sadati).
3. Raci Berk İslim (2022) Charge Scheduling and Route Planning of Electric Freight Vehicles Effects Considering Battery Degradation.
4. Özlem Karadeniz-Alver (2018) A Multi-Criteria Reverse Logistics Network Design for Waste Electrical and Electronic Equipment (with B. Ayvaz, Istanbul Commerce University).
5. Aysun Mutlu (2018) Revenue-driven Dynamic Pricing and Operational Planning in Multimodal Freight Transportation (with Y. Kayıkçı, Turkish German University).
6. Umut Can Çakmak (2017) Traffic Speed Prediction with Neural Networks.
7. Nozir Shokirov (2017) A Variable Neighborhood Search Approach for Solving the Crew Constrained Home Care Routing Problem (with T. Ünlüyurt).

8. Gizem Ermiş (2015) Accelerating Local Search Algorithms for Travelling Salesman Problem Using GPU Effectively.
9. Iman Roozbeh (2014) Heuristic Solutions for Electric Vehicle Routing Problem with Time Windows and Recharging Stations (with G. İzbırak, Eastern Mediterranean University)
10. Merve Keskin (2014) An Adaptive Large Neighborhood Search Approach for Solving the Electric Vehicle Routing Problem with Time Windows.
11. Murodzhon Akhmedov (2013) Distinguishing the NOE types and Utilizing the NOE Distance Upper Bounds for NMR protein Structure-Based Assignments (with M. S. Apaydın, Istanbul Şehir University).
12. Uğur Emeç (2013) Vehicle Routing Problem with Vendor Selection, Intermediate Pickups and Deliveries (with B. Bozkaya).
13. Gizem Çavuşlar (2011) A Tabu Search Approach for the NMR Protein Structure-Based Assignment Problem (with M. S. Apaydın).
14. Muhammed Furkan Uzar (2009) Distribution Planning of Bulk Lubricants at an Energy Company.
15. Lale Tunçyürek (2009) A New Genetic Algorithm for the Cell Formation Problem in Group Technology (with U. Sezerman).
16. Umman Mahir Yıldırım (2008) An Ant Colony Algorithm for the Time-Independent and Time-Dependent Vehicle Routing Problem with Time Windows.
17. Ayfer Başar (2008) Planning of Emergency Medical Service Stations and Ambulances (with T. Ünlüyurt).
18. Tamer Doyuran (2008) Enhancements of Clarke-Wright Savings Heuristics for the Capacitated Vehicle Routing Problem.
19. Sergei Drannikov (2008) RFID-Based Manufacturing Monitoring and Analysis System (with H. Yenigün).
20. Ersin Demirok (2007) Vehicle Routing Problem with Simultaneous Delivery and Pickup and Intermediary Delivery.
21. İlkan Sarıgöl (2007) A Clustering-based Heuristic for Location Routing Problems.
22. Duygu Taşkiran (2006) A Revised Multiple Ant Colony System for Vehicle Routing Problems with Time Windows.
23. Emrah Çimren (2004) An Intelligent Decision Support System for Machine Tool Selection (with E. Budak).
24. Elif İlke Gökçe (2004) A Revised Ant Colony System Approach to Vehicle Routing Problems.
25. Pınar Yılmaz (2004) Strategic Level Three-Stage Production Distribution Planning with Capacity Expansions.
26. Arif Volkan Vural (2003) A GA Based Meta-Heuristic for Capacitated Vehicle Routing Problem with Simultaneous Pick-up and Deliveries.
27. Osman Serdar Basmacı (2003) Supply Chain Collaboration: A Case Study in Textile Industry (with D. Çetindamar).
28. Mahmut Çağdaş Arslan (2002) A Decision Support System for Machine Tool Selection (with E. Budak).
29. İsmail Çapar (2002) A Supply Chain Performance Measurement System: A Case Study in Automotive Industry.

30. Öykü Oflezer (2002) Operations Reversal: An Investigation of Capacitated and Uncapacitated Models (with T. Ünlüyurt).

***Leaders for Industry (LFI) M.Sc. 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. Hanefi Mercan (2021) Unified Combinatorial Interaction Testing (Sabancı University).
2. Mert Şahinkoç (2020) Evolutionary Approaches to Many-Objective Combinatorial Optimization Problems (Boğaziçi University).
3. Zeynep İdil Erzurum Çiçek (2020) Data Analytics and Optimization in Traffic Applications (Eskişehir Technical University).
4. Gerhard Hiermann (2019) Solving Vehicle Routing Problems with a Hybrid Heterogeneous Electric Fleet (University of Vienna).
5. Mir Ehsan Hesam Sadati (2018) A Trilevel  $r$ -Interdiction Multi-Depot Vehicle Routing Problem with Depot Protection and Customer Selection (Koç University).
6. Mehmet Tuğrul Tekin (2018) Collection System Design Problem with Routing Under a Pick-up Policy (Boğaziçi University).
7. Elvan Bayraktaroğlu (2015) Intellectual Capital Efficiency and Firm Performance Relationship in Turkish Manufacturing Sector (Istanbul Technical University).
8. Gülçin Ermiş (2014) Single Machine Scheduling with Timelag Constraints (Koç University).
9. Ayfer Başar (2014) Location Planning of Bank Branches (Istanbul Technical University).
10. Erinç Albey (2012) Capacity Modeling in Aggregate Production Planning: Multi-Dimensional Clearing Functions and Iterative Linear Programming-Simulation Approaches (Boğaziçi University).
11. Gülay Arzu Gündüz (2011) Hierarchical and Distributed Planning in Project and Operations Management (Istanbul Technical University).
12. Emre Özlü (2008) Analytical Modeling of Cutting Process Mechanics and Dynamics for Simulation of Industrial Machining Operations (Sabancı University).

***Ph.D. Thesis Supervisory Committee Member***

1. Ezgi Tükel (2023-Present) New Models for the Use of Electric Bicycles in Urban Logistics Services (Eskişehir Technical University).
2. Hanefi Mercan (2017-2021) Unified Combinatorial Interaction Testing (Sabancı University).
3. Erdener Özçetin (2015-2019) Design and Application of a Parallel Algorithm for Solving Large Scela Vehicle Routing Problems (Eskişehir Technical University).

4. Ayfer Başar (2012-2014) Location Planning of Bank Branches (Istanbul Technical University).
5. Erinç Albey (2008-2012) Capacity Anticipation Modeling in Hierarchical Production Planning under Manufacturing Flexibility (Boğaziçi University).
6. Elvan Bayraktaroğlu (2010-2015) Intellectual Capital Efficiency and Firm Performance Relationship in Turkish Manufacturing Sector (Istanbul Technical University).

***M.Sc. Thesis Jury Member***

1. Atakan Yılmaz (2025) A Matheuristic for Sustainable Logistics for Food Banks (Koç University).
2. Mert Özçelik (2024) Estimation of Life Cycle Greenhouse Gas Emissions of Electric Delivery Trucks.
3. Pınar Şentürk (2023) Tramp Shipment Routing and Scheduling with Inventory and Stowage Constraints (Koç University).
4. Oğulcan Doğan (2022) A Comparative Analysis on Undirected Cut-Based Formulations of Periodic Vehicle Routing Problem.
5. Gülten Büşra Karkılı (2020) Optimization Models for Routing and Frequency Assignment in Wireless Mesh Networks.
6. Neda Tanoumand (2017) A Branch-and-Price Algorithm for Resource Constrained Vehicle Routing Problem with Time Windows.
7. Özgün Elçi (2016) Chance-Constrained Stochastic Programming Models for Humanitarian Relief Network Design.
8. Şeyma Çetinkaya (2016) An Improved Formalism for Assigning Proteins Using Nuclear Vector Replacement Framework (Istanbul Sehir University).
9. Başak Tozlu (2015) Modeling and Analysis of a Home Care Routing Problem.
10. Hanefi Mercan (2015) GPU-based Parallel Computing Methods for Constructing Covering Arrays.
11. Ezgi Aylı (2015) A Network Design Problem for a Post Sale Services Distribution System.
12. Fikri Küçüksayacıgil (2014) Use of Genetic Algorithms in Multi-Objective Multi-Project Resource Constrained Project Scheduling.
13. Uğur Koç (2014) Using Simulated Annealing for Computing Test Case-Aware Covering Arrays.
14. Gürkan Işık (2014) Sequential Testing of Series Parallel Systems.
15. Oğuzhan Orhan (2013) An Indoor Positioning System based on Global Positioning System.
16. Alptunç Çomak (2013) Dynamics and Chatter Stability of Multi Delay Machining Systems.
17. Ali Çetin Suyabatmaz (2012) Railway Crew Capacity Planning Problem with Connectivity Considerations in Pairings.
18. Soner Beyhan (2012) A Column Generation Algorithm for Robust Gate Assignment Problems.
19. Arda Ceylan (2011) A Simulation Model for a Generic Unit-Load Warehouse (Turkish Naval Academy).
20. Elif Özdemir (2011) Testing Strategies for k-out-of-n Systems Under General Type Precedence Constraints.



21. Mustafa Şahin (2011) Multi-Vehicle One-to-One Pickup and Delivery Problem with Split Loads.
22. Nükte Şahin (2011) Experiments on Supply Chain Contracting: Effects of Contract Type and Relationship Length.
23. Yasir Tuncer (2011) Estimating the Performance of EMS Location Models via Simulation.
24. Serdar Bozoğlan (2010) Developing Simulation-Optimization Code Library (Turkish Naval Academy).
25. Mehmet Çavdar (2010) Analysis of the Multi Echelon Inventory System with Lead Time Dependent Backorder by Simulation (Turkish Naval Academy).
26. İsmail Kırıcı (2010) A Two Echelon Inventory System with Lead Time Dependent Backorder (Turkish Naval Academy).
27. Onur Bozkurt (2010) Personalized Advertisement Assignment System.
28. Gamze Belen (2009) Dual Sales Channel Management with Price Competition.
29. Sevilay Gökdoğan (2009) Dual Sales Channel Management with Buyback Contracts.
30. Alp Eren Akçay (2008) Software Frameworks for Production Scheduling and Analytical Benchmarking.
31. Burak Aksu (2008) Experimental and Analytical Investigation on Mechanics of Metal Cutting Including Edge Forces.
32. Hakan Kaynar (2008) Heuristics for Unique Input Output Sequence Computation.
33. Aydın Tanrıverdi (2008) Sequential Testing of  $k$ -out-of- $n$  Systems Under Precedence Constraints.
34. Cenk Aydın (2006) Improved Rehandling Strategies for Container Retrieval Process.
35. Lütfi Taner Tunç (2006) Geometrical Analysis and Optimization of 5-Axis Milling Processes.
36. Murat Kılıç (2003) Multiobjective Genetic Algorithm Approaches to Project Scheduling.
37. Evren Burcu Kıvanç (2003) Modeling Statics and Dynamics of Milling Machine Components.
38. Ekim Özyayın (2003) Capacitated Vehicle Routing Problem with Time Windows.
39. Hacı Murat Özdemir (2003) Hierarchical Modeling and Analysis of Container Terminal Operations.
40. Sema Nur Altuğ (2002) Risk Management and Post Project Evaluation Processes for Research.
41. Ercüment Kenger (2002) Airline Crew Rescheduling Problem: A Heuristic Approach (Boğaziçi University).

## TEACHING

### *Courses Developed/Taught at Sabancı 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, Spring 2017*
2. MS 301 Deterministic Models in Operations Research (4 Credits)  
New course development and delivery in *Fall 2001, Fall 2002, Fall 2003*
3. IE 304 (Formerly 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, Fall 2019, Spring 2020, Fall 2020, Spring 2021, Fall 2022, Spring 2023, Fall 2023, Spring 2024, Fall 2024, Spring 2025*

4. IE 417 (Formerly 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 430 (Formerly MS 430) Logistics Systems Planning and Design (3 Credits)  
Offered in *Fall 2014, Fall 2015, Fall 2016, Fall 2017, Fall 2018, Fall 2020*

#### Graduate Level

1. IE 530 Logistics and Transportation Systems Planning (3 Credits)  
New course development and delivery in *Spring 2023, Fall 2024*
2. 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, Spring 2020, Spring 2024*
3. IE 554 Supply Chain Management (3 Credits)  
New course development and delivery in *Spring 2001, Spring 2002, Spring 2006*
4. IE 567 Manufacturing Systems Modelling (3 Credits)  
Offered in *Spring 2007*
5. IE 580 Special Topics in IE I: Multi-Level Production Planning (3 Credits)  
New course development and delivery in *Spring 2001*
6. IE 581 Special Topics in IE II: Logistics and Transportation Planning (3 Credits)  
New course development and delivery in *Spring 2009*
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 (IE 582) Special Topics in IE: Logistics and Transportation Planning (3 Credits)  
*Spring 2015, Fall 2016, Spring 2019*
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 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 (2000-Present)*

#### Sabancı University

- *Member*, University Disciplinary Committee, Oct. 2020-Present
- *Member*, University Education Council, Mar. 2018-Mar. 2019
- *Member*, University Research Council, Oct. 2015-July 2018

#### Faculty of Engineering and Natural Sciences

- *Vice Dean*, Faculty of Engineering and Natural Sciences, Mar. 2018-Mar. 2019
- *Vice Director*, Graduate School of Engineering and Natural Sciences Committee, Mar. 2018-Mar. 2019
- *Vice Director*, Graduate School of Engineering and Natural Sciences Executive Committee, Mar. 2018-Mar. 2019
- *Program Coordinator*, Industrial Engineering Program, Sept. 2004-Sept. 2006; Sept. 2020-Aug. 2021
- *Member*, Faculty of Engineering and Natural Sciences Executive Board, Oct. 2011-Oct. 2014; July 2020- Aug. 2021
- *Coordinator*, Faculty of Engineering and Natural Sciences Course Scheduling Committee, Sept. 2019-Aug. 2021; Sept. 2022-Present
- *Member*, Faculty of Engineering and Natural Sciences Academic Ethic Committee, Sept. 2022-Present
- *Member*, Faculty of Engineering and Natural Sciences Board, Oct. 2011-Oct. 2014; Oct. 2017-Mar. 2018
- *Undergraduate Diploma Area Advisor*, Oct. 2014-Oct. 2015; Sept. 2022-Present
- *Member*, Graduate School of Engineering and Natural Sciences Executive Committee (formerly Faculty Graduate Committee), Sept. 2000-Oct. 2011
- *Graduate Coordinator*, Industrial Engineering Program, 2000-2003; Sept. 2008-Feb. 2010
- *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

### *National*

- *Member of the Science and Technology Commission*, Climate Council, 21-25 February 2022, Konya, Türkiye.
- *Member of the Working Group on “Integrated, Efficient, Safe, Environmentally Friendly Intelligent Transportation Systems”*, Presidency of the Republic of Türkiye Science, Technology and Innovation Policies Board, February-August 2025.

### ***Editorial Board Membership***

*Editorial Board*, Engineering Applications of Artificial Intelligence, 2022-Present

*Editorial Board*, International Journal of Advanced Manufacturing Technology, 2008-Present

*Associate Editor*, Metaheuristics, 2017-2019

*International Editorial Review Board*, International Journal of Service Science, Management, Engineering, and Technology, 2010-2019

### ***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 2020, 1-4 December 2020, Canberra, Australia
  - CIPLS 2019, 6-9 December 2019, Xiamen, China
  - CIPLS 2017, 27 Nov-1 December 2017, Hawaii, USA
  - 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
- *“Smart Mobility” Track Chair*, 12th Annual International Conference on Industrial Engineering and Operations Management (IEOM), 7-10 March 2022, Istanbul, Türkiye.
- *Local Chair*, 14th International Symposium on Logistics (ISL 2009), 5-8 July 2009, Istanbul, Türkiye.
- *Invited Cluster Chair*, Manufacturing Systems and Supply Chain Integration, INFORMS Annual Meeting, 4-7 November 2001, Miami Beach, FL, USA.

#### **Committee Membership**

- *Program Committee Member*, High-Performance Computing Conference (BAŞARIM).
  - 7<sup>th</sup> BAŞARIM, 15-17 May 2024, Ankara, Türkiye
  - 8<sup>th</sup> BAŞARIM, 11-13 October 2024, Istanbul, Türkiye (hybrid)
- *Program Committee Member*, International Conference on Optimization and Decision Science (ODS 2023), 4-7 September 2023, Ischia, Italy.
- *Organizing Committee Member*, 14th European Operations Management Association (EurOMA) Annual Conference, 17-20 June 2007, Ankara, Türkiye.
- *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.
- *Program Committee Member*, 30th National Conference on Operations Research and Industrial Engineering (YAEM 2010), Istanbul, Türkiye.
- *Scientific Committee Member*, 9th International Conference on Computational Logistics (ICCL), 1-3 October 2018, Salerno, Italy
- *International Program Committee Member*, International Workshop on Collaboration in Logistics, Planning & Services (CLPS 2012), 21-25 May 2012, Denver, Colorado, USA.

- *International Scientific Committee Member*, Global Joint Conference on Industrial Engineering and Its Application Areas (GJCIE)
  - GJCIE 2025, 12-15 August 2025, Istanbul, Türkiye
  - GJCIE 2024, 7-9 August 2024, Antalya, Türkiye
  - GJCIE 2023, 14-16 August 2023, New York, NY, USA
  - GJCIE 2022, 29-30 October 2022, Online
  - GJCIE 2021, 30-31 October 2021, Online
  - GJCIE 2020, 14-15 August 2020, Online
  - GJCIE 2019, 2-3 September 2019, Gazimagusa, TRNC
  - GJCIE 2018, 21- 22 June 2018, Urgup-Nevsehir, Türkiye
  - GJCIE 2017, 20-21 July 2017, Vienna, Austria
  - GJCIE 2016, 14-15 July 2016, Istanbul, Türkiye
  - GCTEM 2015, 4-5 September 2015, Chicago, Illinois, USA
  - GCTEM 2014, 23-26 June 2014, Istanbul, Türkiye
- *Scientific Committee Member*, National Logistics and Supply Chain Congress (ULTZK)
  - 14<sup>th</sup> ULTZK, 22-24 May 2025, Kütahya, Türkiye
  - 13<sup>th</sup> ULTZK, 16-18 May 2024, Afyonkarahisar, Türkiye
  - 10<sup>th</sup> ULTZK, 24-26 June 2021, Kahramanmaraş, Türkiye
  - 9<sup>th</sup> ULTZK, 15-16 October 2021, Online
  - 8<sup>th</sup> ULTZK, 25-27 April 2019, Niğde, Türkiye
  - 7<sup>th</sup> ULTZK, 3-5 May 2018, Bursa, Türkiye
  - 6<sup>th</sup> ULTZK, 17-19 May 2017, Antalya, Türkiye
  - 5<sup>th</sup> ULTZK, 26-28 May 2016, Mersin, Türkiye
  - 4<sup>th</sup> ULTZK, 21-23 May 2015, Gümüşhane, Türkiye
  - 3<sup>rd</sup> ULTZK, 15-17 May 2014, Trabzon, Türkiye
  - 2<sup>nd</sup> ULTZK, 16-18 May 2013, Aksaray, Türkiye
  - 1<sup>st</sup> ULTZK, 10-12 May 2012, Konya, Türkiye
- *International Advisory Committee Member*, International Symposium on Logistics (ISL)
  - 23<sup>rd</sup> ISL, 8-11 July 2018, Bali, Indonesia
  - 21<sup>st</sup> ISL, 3-6 July 2016, Taiwan
  - 20<sup>th</sup> ISL, 5-8 July 2015, Bologna, Italy
  - 18<sup>th</sup> ISL, 7-10 July 2013, Vienna, Austria
  - 17<sup>th</sup> ISL, 8-11 July 2012, Cape Town, South Africa
  - 16<sup>th</sup> ISL, 10-13 July 2011, Berlin, Germany
  - 15<sup>th</sup> 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.
- *International Program Member*, RFID Eurasia, 5-6 September 2007, Istanbul, Türkiye.
- *Scientific Committee Member*, International Logistics and Supply Chain Congress
  - 23<sup>rd</sup> LMSCM, 16-17 October 2025, Istanbul, Türkiye
  - 22<sup>nd</sup> LMSCM, 17-18 October 2024, Istanbul, Türkiye
  - 21<sup>st</sup> LMSCM, 19-20 October 2023, Gaziantep, Türkiye
  - 20<sup>th</sup> LMSCM, 21-22 October 2022, Online
  - 19<sup>th</sup> LMSCM, 15-16 October 2021, Online
  - 17<sup>th</sup> LMSCM, 17-18 October 2019, Istanbul, Türkiye
  - 16<sup>th</sup> LMSCM, 18-20 October 2018, Denizli, Türkiye
  - 15<sup>th</sup> LMSCM, 19-20 October 2017, Istanbul, Türkiye
  - 14<sup>th</sup> LMSCM, 20-21 October 2016, Izmir, Türkiye
  - 13<sup>th</sup> LMSCM, 22-23 October 2015, Izmir, Türkiye
  - 12<sup>th</sup> LMSCM, 30-31 October 2014, Istanbul, Türkiye

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

## ***Manuscript Reviewing***

### International Journals

- Annals of Operations Research
- Applied Soft Computing
- Applied Mathematical Modelling
- Central European Journal of Operational Research
- Cleaner and Responsible Consumption
- Computers and Industrial Engineering
- Computers and Operations Research
- Energy
- Engineering Applications of Artificial Intelligence
- EURO Journal on Transportation and Logistics
- European Journal of Industrial Engineering
- European Journal of Operational Research
- Expert Systems with Applications
- Flexible Services and Manufacturing Journal
- IEEE Transactions in Engineering Management
- IEEE Transactions on Intelligent Transportation Systems
- IET Intelligent Transport Systems
- INFOR: Information Systems and Operational Research
- 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 Cleaner Production
- 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
- Sustainable Cities and Society

- Swarm and Evolutionary Computation
- Transportation Research Part B: Methodology
- Transportation Research Part C: Emerging Technologies
- Transportation Research Part D: Transport and Environment
- Transportation Research Part E: Logistics and Transportation Review
- Transportation Science

#### 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).

#### ***Service in Professional Organizations***

- *Reviewer and Referee*, Research Grant/Industrial Project Proposals and Award Applications, The Scientific and Technological Research Council of Türkiye (TÜBİTAK)
- *Evaluator*, Logistics Project Competition, Logistics Association (Türkiye), 2011-2017
- *Reviewer and Referee*, Logistics Case Study Competition, Logistics Association (Türkiye), 2004-2010
- *Evaluator*, National Quality Award, Turkish Society for Quality (KalDer), 2002, 2003

#### **MEMBERSHIPS IN PROFESSIONAL SOCIETIES**

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