

FATMA SIBEL SALMAN

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EDUCATION

Ph.D. in Operations Research, 2000, Carnegie Mellon University, Pittsburgh, PA, USA

M.Sc. in Industrial Administration, 1997, Carnegie Mellon University, Pittsburgh, PA, USA

M.Sc. in Industrial Engineering, 1994, Bilkent University, Ankara, Turkey

B.Sc. in Industrial Engineering, 1992, Bilkent University, Ankara, Turkey (with first rank)

PROFESSIONAL EXPERIENCE

Academic Positions

03/19-current Professor – College of Engineering, Koç University, Istanbul, Turkey

11/12-02/19 Associate Professor – College of Engineering, Koç University, Istanbul, Turkey

9/03-10/12 Assistant Professor – College of Engineering, Koç University, Istanbul, Turkey

8/00-8/03 Assistant Professor – Krannert School of Management, Purdue University, West Lafayette, IN, USA

9/92-7/95 Research Assistant – Department of Industrial Engineering, Bilkent University, Ankara, Turkey

Visiting Scholar

3/19-6/19 School of Business and Economics, Vrije University, Amsterdam, Holland

10/13-1/14 R. H. Smith School of Business, University of Maryland, College Park, MD, USA

Industry Experience

6/98, 7/97-9/97 Summer Intern – IBM, T.J. Watson Research Center, Yorktown Heights, NY, USA.

Developed and analyzed approximation algorithms for multiple knapsack problems; developed and implemented algorithms for a steel-mill scheduling problem

RESEARCH AREAS

Methodologies: Network models and optimization, integer and stochastic programming, metaheuristics, design and analysis of online and approximation algorithms

Application Areas: Disaster preparedness and response logistics, humanitarian logistics, network design, routing and restoration in networks, facility location, healthcare logistics, production scheduling

PUBLICATIONS

Publications in Refereed Journals

1. R. Kian, G. Erdoğan, S. de Leeuw, F. S. Salman, E. Sabet, B. Y. Kara, and M. H. Demir, “Logistics planning of cash transfer to Syrian refugees in Turkey”, *European Journal of Operational Research*, available online, 2021.
2. F. S. Salman, E. Yücel, İ. Kayı, S. Turper-Alışık and A. Coşkun, “Modeling Mobile Health Service Delivery to Syrian Migrant Farm Workers Using Call Record Data”, *Socio-Economic Planning Sciences*, available online, 2021.
3. A. Cinar, F. S. Salman and B. Bozkaya, “Prioritized Single Nurse Routing and Scheduling for Home Healthcare Services”, *European Journal of Operational Research*, 289:3,867-878, 2021.
4. O. M. Araz, T-M. Choi, D. L. Olson and F. S. Salman, “Role of Analytics for Operational Risk Management in the Era of Big Data”, *Decision Sciences*, 51:6, 1320-1346, 2020.

5. O. M. Araz, T-M. Choi, D. L. Olson and F. S. Salman, "Data Analytics for Operational Risk Management", *Decision Sciences*, 51:6, 1316-1319, 2020.
6. D. Shiri, V. Akbari and F. S. Salman, "Online Routing and Scheduling of Search and Rescue Teams", *Operations Research Spectrum*, 42, 755-784, 2020.
7. D. Shiri and F. S. Salman, "Online Optimization of First-responder Routes in Disaster Response Logistics", *IBM Journal of Research and Development*, 64:1, 13:1-13:9, 2020.
8. R. Hassin, R. Ravi, F. S. Salman and D. Segev, "The Approximability of Multiple Facility Location on Directed Networks with Random Arc Failures", *Algorithmica*, 82, 2474-2501, 2020.
9. E. Yucel, F. S. Salman, B. Bozkaya and C. Gokalp, "A Data-driven Optimization Framework for Routing Mobile Medical Facilities", *Annals of Operations Research*, 291:1-2, 1077-1102, 2020.
10. M. Ajam, V. Akbari and F. S. Salman, "Minimizing Latency in Post-disaster Road Clearance Operations", *European Journal of Operational Research*, 277:3, 1098-1112, 2019.
11. S. Raghavan, M. Sahin and F. S. Salman, "The Capacitated Mobile Facility Location Problem", *European Journal of Operational Research*, 277:2, 507-520, 2019.
12. D. Shiri and F. S. Salman, "On the Randomized Online Strategies for the k-Canadian Traveler Problem", *Journal of Combinatorial Optimization*, 38:1, 254-267, 2019.
13. D. Shiri and F. S. Salman, "Competitive Analysis of Randomized Online Strategies for the Multi-agent k-Canadian Traveler Problem", *Journal of Combinatorial Optimization*, 37:3, 848-865, 2019.
14. A. Coskun, W. Elmaghraby, M. Karaman and F. S. Salman, "Relief Aid Stocking Decisions under Bilateral Agency Cooperation", *Socio-Economic Planning Sciences*, 67, 147-165, 2019.
15. M. Mostajabdaveh, W. J. Gutjahr and F. S. Salman, "Inequity-Averse Shelter Location for Disaster Preparedness", *IIE Transactions*, 51:8, 809-829, 2019.
16. C. Urkup, B. Bozkaya and F. S. Salman, "Customer Mobility Signatures and Financial Indicators as Predictors in Product Recommendation", *PLoS One*, 13(7): e0201197, 2018.
17. E. Yucel, F. S. Salman and I. Arsik, "Improving Post-Disaster Road Network Accessibility by Strengthening Links against Failures", *European Journal of Operational Research*, 269:2, 406-422, 2018.
18. R. Hassin, R. Ravi and F. S. Salman, "Multiple Facility Location on a Network with Linear Reliability Order of Edges", *Journal of Combinatorial Optimization*, 34:3, 931-955, 2017.
19. B. Bozkaya, F. S. Salman and K. Telciler, "An Adaptive and Diversified Vehicle Routing Approach to Reducing the Security Risk of Cash-in-Transit Operations", *Networks*, 69:3, 256-269, 2017.
20. V. Akbari and F. S. Salman, "Multi-vehicle Prize Collecting Arc Routing for Connectivity Problem", *Computers and Operations Research*, 82, 52-68, 2017.
21. V. Akbari and F. S. Salman, "Multi-vehicle Synchronized Arc Routing Problem to Restore Post-disaster Network Connectivity", *European Journal of Operational Research*, 257:2, 625-640, 2017.
22. D. Shiri and F. S. Salman, "On the Online Multi-agent O-D k-Canadian Traveler Problem", *Journal of Combinatorial Optimization*, 34:2, 453-461, 2017.
23. M. Kasaei and F. S. Salman, "Arc Routing Problems to Restore Connectivity of a Road Network", *Transportation Research, Part E: Logistics and Transportation Review*, 95, 177-206, 2016.

24. F. S. Salman and E. Yucel, "Emergency Facility Location under Random Network Damage: Insights from the Istanbul Case", *Computers and Operations Research*, 62, 266-281, 2015.
25. F. S. Salman and S. Gul, "Deployment of Field Hospitals in Mass Casualty Incidents", *Computers and Industrial Engineering*, 74, 37-51, 2014.
26. D. Aksen, O. Kaya, F. S. Salman and O. Tuncel, "An Adaptive Large Neighborhood Search Algorithm for a Selective and Periodic Inventory Routing Problem", *European Journal of Operational Research*, 239:2, 413-426, 2014.
27. E. L. Ormeci, F. S. Salman and E. Yucel, "Staff Rostering in Call Centers Providing Employee Transportation", *Omega, The International Journal of Management Science*, 43,41-52, 2014.
28. E. Yucel, F. S. Salman, E. S. Gel, E. L. Ormeci, and A. Gel, "Optimizing Specimen Collection for Processing in Clinical Laboratories", *European Journal of Operational Research*, 227:3, 503-514, 2013.
29. E. Yucel, F. S. Salman, E. S. Gel, and E. L. Ormeci, "A Constant-factor Approximation Algorithm for Multi-vehicle Collection for Processing Problem", *Optimization Letters*, 7:7, 1627-1642, 2013.
30. D. Aksen, O. Kaya, F. S. Salman and Y. Akça, "Selective and Periodic Inventory Routing Problem for Waste Vegetable Oil Collection", *Optimization Letters*, 6:6, 1063-1080, 2012.
31. K. Katterbauer, C. Oguz and F. S. Salman, "Hybrid Adaptive Large Neighborhood Search for the Optimal Statistic Median Problem", *Computers and Operations Research*, 39:11, 2679-2687, 2012.
32. B. Cesaret, C. Oguz and F. S. Salman, "A Tabu Search Algorithm for Order Acceptance and Scheduling", *Computers and Operations Research*, 39:6, 1197-1205, 2012.
33. D. Gunec and F. S. Salman, "Assessing the Reliability and the Expected Performance of a Network Under Disaster Risk", *OR Spectrum*, 33:3, 499-523, 2011.
34. E. Sancak and F. S. Salman, "Multi-item Dynamic Lot-sizing with Delayed Transportation Policy", *International Journal of Production Economics*, 131:2, 595-603, 2011.
35. N. Gormez, M. Koksalan, and F. S. Salman, "Locating Disaster Response Facilities in Istanbul", *Journal of the Operational Research Society*, 62:7, 1239-1252, 2011.
36. N. Tuncbag, F. S. Salman, O. Keskin, A. Gursoy. "Analysis and Network Representation of Hot Spots in Protein Interfaces Using Minimum Cut Trees", *Proteins: Structure, Function, and Bioinformatics*, 78:10, 2283-2294, 2010.
37. C. Oguz, F. S. Salman, and Z. B. Yalcin, "Order Acceptance and Scheduling Decisions in Make-to-order Systems", *International Journal of Production Economics*, 125:1, 200-211, 2010.
38. S. Peeta, F. S. Salman, D. Gunec, and K. Viswanath, "Pre-disaster Investment Decisions for Strengthening a Highway Network", *Computers and Operations Research*, 37:10, 1708-1719, 2010.
39. E. Yucel, F. Karaesmen, F. S. Salman, and M. Turkay, "Optimizing Product Assortment Under Customer-driven Demand Substitution", *European Journal of Operational Research*, 199:3, 759-768, 2009.
40. F. S. Salman, R. Ravi and J. Hooker, "Solving the Capacitated Local Access Network Design Problem", *INFORMS J. on Computing*, 20:2, 243-254, 2008.
41. B. Saglam, F. S. Salman, S. Sayin, and M. Turkay, "A Mixed-Integer Programming Approach to the Clustering Problem with an Application in Customer Segmentation", *European Journal of Operational Research*, 173:3, 866-879, 2006.

42. R. Hassin, R. Ravi and F. S. Salman, "Approximation Algorithms for a Capacitated Network Design Problem", *Algorithmica*, 38:3, 417-431, 2004.
43. M. Koksalan and F. S. Salman, "Beer in the Classroom: A Case Study of Location and Distribution Decisions", *INFORMS Transactions on Education*, 4:1, 65-77, 2003.
44. F. S. Salman, J. Kalagnanam, S. Murthy and A. Davenport, "Cooperative Strategies for Solving the Bicriteria Sparse Multiple Knapsack Problem", *Journal of Heuristics*, 8:2, 215-239, 2002.
45. G. Konjevod, R. Ravi and F. S. Salman, "On Approximating Planar Metrics by Tree Metrics", *Information Processing Letters*, 80:4, 213-219, 2001.
46. F. S. Salman, J. Cheriyan, R. Ravi and S. Subramanian, "Approximating the Single-sink Link-Installation Problem in Network Design", *SIAM J. Optimization*, 11:3, 595-610, 2001.
47. M. Dawande, J. Kalagnanam, P. Keskinocak, R. Ravi and F. S. Salman, "Approximation Algorithms for the Multiple Knapsack Problem with Assignment Restrictions", *Journal of Combinatorial Optimization*, 4, 171-186, 2000.

Book Chapters

1. D. Shiri and F. S. Salman, "New Variations of the Online k-Canadian Traveler Problem: Uncertain Costs at Known Locations", *Probability, Combinatorics and Control*, A. Kostogryzov and V. Korolev (Eds.), Intech Open, 2019.
2. S. T. Alışık, D. B. Aksel, A. E. Yantaç, İ. Kayı, F. S. Salman, A. İçduygu, D. Çay, L. Baruh, and I. Bensason, "Seasonal Labor Migration Among Syrian Refugees and Urban Deep Map for Integration in Turkey", *Data for Refugees: The D4R Challenge on Mobility of Syrian Refugees in Turkey*, A. A. Salah, A. Pentland, B. Lepri, E. Letouze, Y. de Montjoye, X. Dong, P. Vinck (Eds.), 305-328, 2019.
3. F. S. Salman, E. Sivaslioglu, B. Memis "Analysis of Mobile Phone Call Data of Istanbul Residents", Chapter 1 in *Geo-Intelligence and Visualization Through Big Data Trends*, B. Bozkaya and V. K. Singh (Eds.), IGI Global, 1-32, 2015.
4. A. N. Asaly and F. S. Salman, "Arc Selection and Routing for Restoration of Network Connectivity after a Disaster", Chapter 8 in *Global Logistics Management*, B. Y. Kara, I. Sabuncuoglu and B. Bidanda (Eds.), CRC Press, 165-194, 2014.

Publications in Refereed Conference/Workshop Proceedings

1. A. Cinar, F. S. Salman and B. Bozkaya, "Prioritized Scheduling and Routing for Home Healthcare Services", *Proceedings of the Global Joint Conference on Industrial Engineering and Its Application Areas (GJCIE) 2016*, July 14-15, 2016, Istanbul, Turkey.
2. V. Akbari and F. S. Salman, "A Model-Based Heuristic to the Min Max K-Arc Routing for Connectivity Problem", *Proceedings of SCOR*, May 2-4, 2014, Nottingham, UK, 76-88, Open Access Series in Informatics, 2014.
3. I. Arsik and F. S. Salman, "Modeling Earthquake Vulnerability of Highway Networks", *Electronic Notes in Discrete Mathematics*, 41 (2013) 319-326. *Proceedings of the International Network Optimization Conference (INOC)*, May 20-22, 2013, Tenerife, Spain.
4. F. S. Salman, E. Yucel, E. L. Ormeci, and E. S. Gel, "Logistics of Clinical Testing: A Prioritized Bicriteria Heuristic for Collection for Processing Problem", *Proceedings of the International Workshop on Freight Transportation and Logistics (ODY SSEUS)*, May 21-25, 2012, Mykonos, Greece.

5. F. S. Salman, E. Yucel, E. L. Ormeci, and E. S. Gel, "Logistics of Clinical Testing: A Prioritized Bicriteria Heuristic for Collection for Processing Problem", *Proceedings of the Conference of EURO Working Group on Vehicle Routing and Logistics Optimization (VeRoLog)*, June 18-20, 2012, Bologna, Italy.
6. F. S. Salman, E. Yucel, E. L. Ormeci, and E. S. Gel, "Logistics of Clinical Testing: Heuristics for Routing and Scheduling of Specimen Collection", *Proceedings of EU/ME 2011: Workshop on Client-centered Logistics and International Aid*. February 21-22, 2011, Vienna, Austria.
7. E. Yucel, F. S. Salman, E. L. Ormeci, E. S. Gel, A. Gel, "Logistics of Clinical Testing: Heuristics for Routing and Scheduling of Specimen Collection", *Proceedings of the Manufacturing and Service Operations Management Society Annual Conference (MSOM)*, June 27-29, 2010, Haifa, Israel.
8. M. M. Karaman, W. Elmagrabhy, F. S. Salman, "Relief Aid Stocking Decisions under Cooperation of Emergency Response Agencies", *Proceedings of the Manufacturing and Service Operations Management Society Annual Conference (MSOM)*, June 27-29, 2010, Haifa, Israel.
9. B. Cesaret, C. Oguz and F. S. Salman. "A Tabu Search Algorithm for Order Acceptance and Scheduling", *Proceedings of the 12th International Conference on Project Management and Scheduling (PMS)*, pp. 141-144, April 26-28, 2010, Tours, France.
10. R. Hassin, R. Ravi and F. S. Salman. "Tractable Cases of Facility Location on a Network with a Linear Reliability Order of Links", *Proceedings of the European Symposium on Algorithms (ESA)*, LNCS 5757, pp. 275-276, September 7-9, 2009, Copenhagen, Denmark.
11. S. Gül and F. S. Salman "Post-disaster Casualty Logistics Planning: The İstanbul Case", *Proceedings of the International Workshop on Freight Transportation and Logistics (ODYSSEUS)*, May 26-29, 2009, Cesme, Turkey.
12. S. Peeta, F. S. Salman, L. Du "A Strategic Planning Framework to Enhance Infrastructure Network Survivability and Functionality under Disasters", *Proceedings of the International Workshop on Freight Transportation and Logistics (ODYSSEUS)*, May 26-29, 2009, Cesme, Turkey.
13. A. Gel, E. S. Gel, E. L. Örmeci, F. S. Salman, E. Yücel "Designing Routes to Match Collected Workload with the Processing Capacity", *Proceedings of the International Workshop on Freight Transportation and Logistics (ODYSSEUS)*, May 26-29, 2009, Cesme, Turkey.
14. R. Hassin, R. Ravi and F. S. Salman. "Facility Location on a Network with Unreliable Links", *Proceedings of the International Network Optimization Conference (INOC)*, April 26-29, 2009, Pisa, Italy.
15. V. Dedeoglu, C. Atici, F. S. Salman and M. O. Sunay, "System Optimization for Peer-to-Peer Multi Hop Video Broadcasting in Wireless Ad-Hoc Networks", *Proceedings of the IEEE Workshop on Mobile Video Delivery (MoVid)*, June 23, 2008, Newport Beach, USA.
16. T. Erkan, E. Sancak, E. Yildirim and F. S. Salman, "Manufacturing Parts Sourcing with Delayed Transportation Policy", *Proceedings of the IEEE International Conference on Industrial Engineering and Engineering Management (IEEM)*, pp. 950-954, Dec. 2-4, 2007, Singapore.
17. E. Emil, F. S. Salman, and E. L. Ormeci, "Shift Scheduling in Call Centers with Multiple Skill Sets and Transportation Costs", *Proceedings of the IEEE International Conference on Service Operations and Logistics, and Informatics (SOLI)*, August 27-29, 2007, Philadelphia, USA.
18. Z. Bilginturk, C. Oguz and F. S. Salman, "Order Acceptance and Scheduling Decisions in Make-to-Order Systems", *Proceedings of the 3rd Multidisciplinary International Conference on Scheduling: Theory and Application (MISTA)*, pp. 80-87, August 28-31, 2007, Paris, France.
19. E. Bas, A. M. Tekalp, and F. S. Salman, "Automatic vehicle counting from video for traffic flow analysis", *Proceedings of the IEEE Intelligent Vehicles Symposium (IV)*, pp. 392-397, June 13-15, 2007, Istanbul, Turkey.

20. D. Gunneç and F. S. Salman, "Assessing the Reliability and the Expected Performance of a Network Under Disaster Risk", *Proceedings of the International Network Optimization Conference (INOC)*, April 22-25, 2007, Spa, Belgium.
21. D. Gunneç and F. S. Salman, "A Two-Stage Multi-Criteria Stochastic Programming Model for Location of Emergency Response and Distribution Centers", *Proceedings of the International Network Optimization Conference (INOC)*, April 22-25, 2007, Spa, Belgium.
22. K. Viswanath, S. Peeta, F. S. Salman, and D. Gunneç, "Strengthening the Links of a Stochastic Network for Disaster Response with Applications to Istanbul", *Proceedings of the International Conference on Dynamics of Disasters (CCD)*, October 5-7, 2006, Athens, Greece.
23. K. Vishwanath, S. Peeta and F. S. Salman, "Strengthening the Links of a Network for Disaster Response", *Proceedings of Third International Workshop on Freight Transportation and Logistics (ODYSSEUS)*, May 23-26, 2006, Altea, Spain.
24. E. Yucel, F. Karaesmen, F. S. Salman, and M. Turkyay, "Product assortment under customer-driven demand substitution in retail operations", *Proceedings of the International Conference on Information Systems, Logistics and Supply Chain*, May 14-17, 2006, Lyon, France.
25. K. Altinkemer, F. S. Salman, and P. Bellur, "Solving the Minimum Energy Broadcasting Problem in Ad Hoc Wireless Networks by Integer Programming", *Proceedings of the International Network Optimization Conference (INOC)*, March 20-23, 2005, Lisbon, Portugal.
26. K. Altinkemer, F. S. Salman, and P. Bellur, "Exact Solution of the Minimum Energy Broadcasting Problem in Ad Hoc Wireless Networks by Integer Programming", *Proceedings of the Modeling and Optimization in Mobile, Ad Hoc and Wireless Networks Conference (WiOpt)*, March 24-26, 2004, Cambridge, UK.
27. N. Garg, R. Khandekar, G. Konjevod, R. Ravi, F. S. Salman, and A. Sinha, "On the integrality gap of a natural formulation of the single-sink buy-at-bulk network design problem", *Proceedings of the Eighth Conference on Integer Programming and Combinatorial Optimization (IPCO)*, pp. 170-184, June 2001, Utrecht, Netherlands.
28. R. Hassin, R. Ravi and F. S. Salman, "Approximation Algorithms for a Capacitated Network Design Problem", *Proceedings of the Workshop on Approximation Algorithms (APPROX)*, LNCS 1913, pp. 167-176, September 2000, Saarbrücken, Germany.
29. F. S. Salman, J. Kalagnanam and S. Murthy, "Cooperative strategies for solving the bicriteria sparse multiple knapsack problem", *Proceedings of the 1999 Congress on Evolutionary Computation (CEC 99)*, Volume: 1, pp. 53-60, July 6-9, 1999, Washington D.C., USA.
30. R. Ravi and F. S. Salman, "Approximation Algorithms for the Traveling Purchaser Problem and Its Variants in Network Design", *Proceedings of the Seventh European Symposium on Algorithms (ESA)*, LNCS 1693, pp. 29-40, July 1999, Prague, Czech Republic.
31. F. S. Salman, J. Cheriyan, R. Ravi and S. Subramanian, "Buy-at-bulk network design: approximating the single-sink edge installation problem", *Proceedings of the Eighth Annual ACM-SIAM Symposium on Discrete Algorithms (SODA)*, pp. 619-628, January 1997, New Orleans, USA.

SPONSORED RESEARCH

1. UNDP (United Nations Development Program), 2020: EVSAR: A Decision Support System for Home Healthcare Routing and Scheduling, Principle Investigator: F. S. Salman, Funding: 50,000 USD.
2. TUBITAK Research Project, (119M229), 2019-2022: Optimization of Mobile Aid Provision to En Route Refugees, Investigators: D. Günneç, F. S. Salman, E. Yücel, Funding: 347,410 TL.

3. RCUK-TUBITAK Research Project (216M380), 2016-2019: Innovating the Turkish Supply Chain for Services in Humanitarian Aid, Principle Investigators: F. S. Salman and S. de Leeuw, Funding: 771,824 TL.
4. Borusan Logistics Company Research Project, 2016–2017: Optimizing Domestic Freight Operations of a 3PL Carrier in Turkey, Principle Investigator: F. S. Salman, Funding: 54,000 TL.
5. TUBITAK Research Project, (114M373), 2014-2016: Optimization of Arc Routing Decisions in Real-Time for Emergency Route Clearing in Disaster Response, Principle Investigator: F. S. Salman, Funding: 139,695 TL.
6. TUBITAK Research Project, (111M357), 2012-2014: Logistics Planning for Restoring the Connectivity of Highways after a Disaster, Principle Investigator: F. S. Salman, Funding: 93,340 TL.
7. NATO Collaborative Linkage Grant, 2007-2009: Locating Disaster Response Facilities for Effective Distribution of Emergency Supplies, Principle Investigators: F. S. Salman, R. Hassin, R. Ravi. Funding: 10,000 Euro.
8. TUBITAK CAREER AWARD (105M316), 2006-2011: Stochastic Network Optimization Methods with Applications in Disaster Management, Principle Investigator: F. S. Salman, Funding: 228,660 TL.
9. TUBITAK Research Project, (106M175), 2006-2008: Call Center Workforce Planning; Investigators: L. Ormeci, D. Aksen, A. Erdem, F. S. Salman, S. Savas. Funding: 101,114 TL.
10. Istanbul Metropolitan Municipality, 2006-2007: Post-disaster Logistics Planning for the City of Istanbul; Co-investigators: D. Gunec, F. S. Salman. Funding: 15,000 TL.
11. Istanbul Metropolitan Municipality, 2006-2007: Automatic Video Processing for Traffic Data Generation, Co-investigators: A. M. Tekalp, F. S. Salman. Funding: 10,000 TL.
12. KUMPEM, 2004-2006: Vendor Selection under Product Assortment and Inventory Considerations; Co-Principal Investigators: F. Karaesmen, F. S. Salman, M. Türkay; Funding: \$19,000.

HONORS AND AWARDS

2012	IBM Faculty Award
2007	IBM Shared University Research Award
2006	TUBITAK Career Award
2002	First Prize, Third Annual INFORMS Case Competition
8/97-7/99	IBM Corporate Fellowship for doctoral study
8/96-7/97	Doctoral Fellowship, William Larimer Mellon Foundation, GSIA, CMU
8/95-8/96	Fulbright Scholarship for doctoral study
9/92-7/95	Fellowship for graduate study, Bilkent University
9/88-6/92	Fellowship for undergraduate study, Bilkent University
8/89-6/92	H. O. Sabanci Foundation scholarship for undergraduate study
6/92	Graduated with first rank from Bilkent University, Industrial Engineering, BSc program
8/88	Outstanding Achievement Award of Vehbi Koc Foundation for undergraduate study
6/88	Ranked 20th (200,000 participants) in the nationwide university entrance exam (second round)
2/87	Ranked 21st (900,000 participants) in the nationwide university entrance exam (first round)

TEACHING EXPERIENCE

College of Engineering, Koç University

Instructor, *Mathematical Programming*, Fall 14-19, Fall 06; junior-level required course

Instructor, *Introduction to Optimization Methods*, Spring 11, Spring 2018; sophomore-level required course

Instructor, *Production Planning and Control*, Spring 04-16; junior-level required course

Instructor, *Network Models and Optimization*, Fall 03-Fall 11, 14-16, 18-19; graduate-level elective course

Instructor, *Operations Research Applications*, Spring 12, 14-18, 20; elective undergraduate course

Instructor, *Large Scale Systems*, Spring 05-10; elective undergraduate course

Instructor, *Information Systems*, Fall 03-11; senior-level required course

Senior Design Project Supervisor, 2003-2020

Independent Study and Special Topics courses, *Big Data Analytics Applications and Methodology* (Spring 20), *Electric Vehicle Supply Chain Management* (Spring 2018, graduate-level), *Humanitarian Logistics* (Spring 17), *Routing and Scheduling in Logistics Planning* (Fall 15, Fall 09, graduate-level), *Geographic Information Systems Applications in Retailing* (Fall 06), *Mixed Model Assembly Line Balancing* (Fall 04)

Coordinator, Industrial Engineering Seminar Course, Fall 04, Spring 05, Fall 10, Spring 11, Fall 11; graduate-level seminar course

Krannert School of Management, Purdue University

Course Coordinator, *Management Science*, Spring 02, Fall 02

Coordinated 6 sections of the required Management Science course in the undergraduate management program.

Instructor, *Management Science*, Fall 00, Spring 01, Fall 01, Spring 02, Fall 02

Course topics include linear programming, integer programming, network models, decision analysis
Developed teaching material including a case that won the INFORMS Case Competition in 2002.

Received an overall instructor rating of 4.5 out of 5 from students (Spring 02)

Instructor, *Seminar in Quantitative Methods*, Fall 01, *Approximation Algorithms*, Spring 02, PhD courses

Tepper School of Business, Carnegie Mellon University

Instructor, *Scheduling and Sequencing*, Spring 00, Master of Industrial Administration Program, (MBA)

Developed and taught MBA level elective course; prepared course material that has been included into the educational materials distributed with the textbook by Pinedo and Chao.

Instructor, *Production and Operations Management*, Summer 99, required course in the undergraduate Business Administration program

Recitation Instructor, *Introduction to Operations Research*, Spring 97, Dept. of Math. Sciences, undergraduate course

Teaching Assistant, *Combinatorial Optimization* (undergraduate, Spring 99), *Introduction to Operations Research* (MBA, Fall 97, Fall 96), *Production and Operations Management* (undergraduate, Summer 96)

Training, Attended teaching seminars at the Eberly Center for Teaching Excellence

Industrial Engineering Department, Bilkent University, Turkey

Teaching Assistant, *Manufacturing Processes* (Spring 93), *Applied Linear Algebra* (graduate, Fall 94), *Production Systems Design* (Spring 94, senior-project), *Introduction to Modeling and Optimization* (Spring 95)

GRADUATE STUDENT ADVISING

Graduated

Ph.D.

1. Onur Can Saka, **Ph.D.** in IEOM, 2020, Koc University (advisor)
2. Meraj Ajam, **Ph.D.** in IEOM, 2019, Koc University (advisor)
3. Ahmet Çınar, **Ph.D.** in IEOM, 2019, Koc University (advisor)
4. Mahdi Mostajabdaveh, **Ph.D.** in IEOM, 2019, Koc University (advisor)
5. Davood Shiri, **Ph.D.** in IEOM, 2019, Koc University (advisor)
6. Vahid Akbari, **Ph.D.** in IEOM 2016, Koc University (advisor)
7. Eda Yücel, **Ph.D.** in IEOM 2011, Koc University (advisor)

M.Sc.

1. Baturhan Bayraktar, M.Sc. in IE, 2020, Koc University (advisor)
2. Umut Ermağan, M.Sc. in IE, 2020, Koc University (advisor)
3. Abdullah Coşkun, M.Sc. in IE, 2019, Koc University (advisor)
4. Kaan Telciler, M.Sc. in IE, 2017, Koc University (advisor)
5. Çağan Ürküp, M.Sc. in IE, 2017, Koc University (advisor)
6. Maziar Kasaei Roodsari, M.Sc. in IE, 2015, Koc University (advisor)
7. İdil Arşık, M.Sc. in IE, 2013, Koc University (advisor)
8. Ayşe Nur Kibar, M.Sc. in IE, 2013, Koc University (advisor)
9. Özge Tuncel, M.Sc. in IE, 2013, Koc University (advisor)
10. Yeliz Akca, M.Sc. in IE, 2011, Koc University (co-advisor)
11. Selin Özdiñ, M.Sc. in IE, 2011, Koc University (advisor)
12. Emin Tanrıöven, M.Sc. in IE, 2010, Koc University (advisor)
13. Bahriye Cesaret, M.Sc. in IE, 2010, Koc University (co-advisor)
14. Emre Sancak, M.Sc. in IE, 2009, Koc University (advisor)
15. Müge Karaman, M.Sc. in CMSE, 2009, Koc University (advisor)
16. Sezer Gül, M.Sc. in IE, 2008, Koc University (advisor)
17. Zehra Bilgintürk, M.Sc. in IE, 2007, Koc University (co-advisor)
18. Dilek Günneç, M.Sc. in IE, 2007, Koc University (advisor)
19. Eda Yücel, M.Sc. in IE, 2006, Koc University (co-advisor)
20. Burcu Sağlam, M.Sc. in IE, 2005, Koc University (co-advisor)

Ongoing

1. Nasim Mousavi, **Ph.D.** in IEOM, Koc University (advisor)

PROFESSIONAL ACTIVITIES AND SERVICE

Member of Editorial Board:

Computers and Operations Research (2014-2016), Production and Operations Management (2015-current).

Special Issue Editing:

Decision Sciences Journal, Title: Data Analytics for Operational Risk Management, (2019-2020), with editors Ozgur Araz, Tsan-Ming Choi and David Olson.

Journal Referee:

Operations Research, Management Science, Inform Journal on Computing, Transportation Science, SIAM J. on Discrete Mathematics, IIE Transactions, European Journal of Operational Research, Computers and Operations Research, Naval Research Logistics, Transportation Research, Optimization and Engineering, Telecommunication Systems, 4OR, International J. of Operations and Quantitative Management, Journal of Infrastructure Systems, Journal of Discrete Algorithms, Theoretical Computer Science, Annals of Operations Research, Optimization Letters, International Journal of Production Economics, Socio-Economic Planning Sciences, OMEGA - The International Journal of Management Science, Applied Mathematical Modeling, INFOR: Information Systems and Operational Research, IATSS Research, Surveys in Operations Research and Management Science, Journal of Operational Research Society, Journal of Industrial Management and Optimization, European Journal of Industrial Engineering, Computers and Industrial Engineering, IEEE Intelligent Transportation Systems, Natural Hazards, OR Spectrum (received outstanding reviewer award in 2019).

Conference Referee:

Winter Simulation Conference, 2010; SAVTEK, Turkish Defense Technologies Conference, 2010; Fourth International Workshop on Freight Transportation and Logistics, ODYSSEUS 2009; International Network Optimization Conference INOC 2009; IEEE International Conference on Service Operations and Logistics, and Informatics, SOLI 2007; Management and Service Operations Management, MSOM 2006; First International Conference on Computer, Communications and Signal Processing 2005; ACM-SIAM Symposium on Discrete Algorithms, SODA 2003.

Project Proposal Reviewer/Panelist:

Turkish Science and Technology Council (TUBITAK.), Israel Science Foundation, Istanbul Municipality.

Judge/Jury Member:

Judge for the YAEM 2018 Industry Project Competition, 2012 INFORMS Student Paper Competition, YAEM 2009 Student Paper Competition, Bilkent Student Project Competition 2009 and 2012, INFORMS Case Competition 2003; YA/EM 2005 Student Paper Competition Coordinator.

Positions in Professional Societies:

Coordinator and Co-founder of EURO Working Group on Humanitarian Operations (2015-2017).
Founding committee member of EURO WISDOM

Invited Talks/Seminars:

Technical University Delft, 2019; Koç University, 2018; Bilkent University, 2017; Vrei University, 2015; University of Vienna, 2015; University of Maryland, 2013; Arizona State University, 2013; Sabanci University, 2012; Bilkent University 2012; Metropolitan Planning Department, Istanbul Municipality, 2008; Department of Operations Research and Statistics, Tel Aviv University, 2007; Industrial Engineering Department, Galatasaray University, 2007 and 2010; Industrial Engineering Department, Eastern Mediterranean University, 2006; Industrial Engineering Department, Bilkent University, 2006; Industrial Engineering Department, Bogazici University, 2004 and 2009; Faculty of Engineering and Natural Sciences, Sabanci University, 2004; Industrial Engineering Department, Middle East Technical University, 2003; Industrial Engineering Department, Koc University, 2003; Mechanical and Industrial Engineering Department, University of Toronto, 2003; Department of Industrial Engineering and Operations Research, University of California, Berkeley, 2001; School of Industrial and Systems Engineering, Georgia Institute of Technology, 2000; Department of Systems Engineering, University of Pennsylvania, 2000.

Conference Presentations:

1. ORAHS 2020: 46th Annual Meeting of the EURO Working Group on Operational Research in Health Care (e-conference), July 27-31, 2020, Vienna, Austria. "Prioritized Routing and Scheduling for Home Healthcare Services: Static and Dynamic Optimization", with A. Cinar, O. Araz and B. Bozkaya.
2. EURO 2019: 30th European Conference on Operational Research, June 23-26, 2019, Dublin, Ireland. "Modeling Mobile Health Service Delivery to Syrian Migrant Farm Workers using Call Record Data", with S. Turper-Alisik, A. Coskun, I. Kayi and E. Yucel.
3. CPAIOR 2019: 16th International Conference on the Integration of Constraint Programming, Artificial Intelligence and Operations Research, June 4-7, 2019, Thessaloniki, Greece. Invited for the Master Class. "Modeling Equity in Disaster Management: Inequity-Averse Shelter Location for Disaster Preparedness", with W. Gutjahr and M. Mostajabdaveh.
4. POMS 2019: 30th Annual Conference of Production and Operations Management Society, May 2-6, 2019, Washington D.C., USA. "Logistics Planning of Cash Transfer: The Case of Syrian Refugees in Turkey", with S. De Leeuw et al.
5. INFORMS 2018: Annual Meeting, November 4-7, 2018, Phoenix, USA. "Inequity-averse Shelter Location for Disaster Preparedness", with M. Mostajabdaveh and W. Gutjahr.
6. EURO 2018: 29th European Conference on Operational Research, July 8-11, 2018, Valencia, Spain. "A Data-driven Model for Routing Mobile Medical Facilities", with E. Yucel, B. Bozkaya and C. Gokalp.
7. YAEM 2018: National Meeting, June 26-29, 2017, Anadolu University, Eskisehir, Turkey. "Optimizing the Routing of Mobile Medical Facilities", with E. Yucel, B. Bozkaya and C. Gokalp.
8. VeRoLog 2017: Conference of EURO Working Group on Vehicle Routing and Logistics Optimization, July 10-12, 2017, Amsterdam, Holland, "Prioritized Routing and Scheduling for Home Healthcare Services", with A. Çınar and B. Bozkaya.
9. HOpe 2017: Mini-conference of EURO Working Group on Humanitarian Operations, June 29-30, 2017, Vienna, Austria, "Planning and Distribution in Cash-based Intervention Programs".
10. YAEM 2017: National Meeting, July 5-7, 2017, YTU, Istanbul. "The Role of Operations Research/Industrial Engineering in Disaster and Emergency Management", panel moderator and speaker.

11. WARP2 2016: Workshop on Arc Routing Problems, May 22-24, 2016, Lisbon, Portugal, “Multi-Vehicle Synchronized Prize Collecting Arc Routing for Connectivity Problem”, with V. Akbari.
12. EURO 2016: European Conference on Operational Research, July 3-6, 2016, Poznan, Poland, “An Optimal Strategy for the Online Multi-agent k-Canadian Traveler Problem on Edge-disjoint Graphs”, with D. Shiri.
13. ISMP 2015: International Mathematical Programming Symposium, July 12-17, 2015, Pittsburgh, USA, “Multi-Vehicle Arc Routing for Connectivity Problem”, with V. Akbari.
14. YAEM 2015: National Meeting, September 9-11, 2015, METU, Ankara. “A Prize-Collecting Arc Routing for Connectivity Problem to Open Emergency Routes After a Disaster”, with Maziar Kasaei.
15. ISOLDE 2014: International Symposium on Locational Decisions, June, 2014, Napoli-Capri, Italy. “Arc Routing for Connectivity in Disaster Response”, with V. Akbari.
16. INFORMS 2013: Annual Meeting, October 6-9, 2013, Minneapolis, USA. “Restoration of Road Network Connectivity After a Disaster”, with A. N. Asaly.
17. YAEM 2012: National Meeting, June 20- July 22, 2012, Dogus University, Istanbul. “Locating Emergency Response Facilities in Istanbul ”, with S. Özdiñç and E. Yücel.
18. VeRoLog 2012: Conference of EURO Working Group on Vehicle Routing and Logistics Optimization, June 18-20, 2012, Bologna, Italy. “Logistics of Clinical Testing: A Prioritized Bicriteria Heuristic for Collection for Processing Problem”, with E.Yücel, E. L.Örmeci and E. S. Gel.
19. EU/ME Workshop 2011: Client-centered Logistics and International Aid, Feb. 21-22, 2011, Vienna, Austria. “Logistics of Clinical Testing: Heuristics for Routing and Scheduling of Specimen Collection”, with E.Yücel, E. L.Örmeci and E. S. Gel.
20. EURO 2010 Conference, July 11-14, 2010, Lisbon, Portugal. “Locating Emergency Response Facilities on a Network with a Linear Reliability Order of Links”, with R. Hassin and R. Ravi.
21. YAEM 2010: National Meeting, June 30- July 2, 2010, Sabancı University, Istanbul. “An Assessment of the Emergency Medical Response System of Istanbul after a Possible Earthquake ”, with E. A. Tanrıöven and E. S. Gel.
22. YAEM 2009: National Meeting, June 22-24, 2009, Bilkent University, Ankara. “Multi-item Dynamic Lot-sizing with Delayed Transportation Policy”, with E. Sancak.
23. ESA 2009, European Symposium on Algorithms, September 7–9 2009, Copenhagen, Denmark. “Tractable Cases of Facility Location on a Network with a Linear Reliability Order of Links”, with R. Hassin and R. Ravi.
24. ODYSSEUS 2009, Fourth International Workshop on Freight Transportation and Logistics, May 26-29 2009, Cesme, Turkey. “Post-disaster Casualty Logistics Planning: The İstanbul Case”, with S. Gül.
25. INOC 2009, International Network Optimization Conference, April 26-29, 2009, Pisa, Italy. “Facility Location on a Network with Unreliable Links”, with R. Hassin and R. Ravi.
26. INFORMS Telecommunications Conference, March 27-29, 2008. University of Maryland, College Park, MD. “System Optimization for Broadcasting in Ad Hoc Wireless Networks”, with C. Atici, V. Dedeoglu, and M. O. Sunay.
27. SOLI 2007, IEEE International Conference on Service Operations and Logistics, and Informatics, Philadelphia, August 27-29, 2007. “Shift Scheduling in Call Centers with Multiple Skill Sets and Transportation Costs”, with E. Emil, and E. L. Örmeci.
28. INOC 2007, International Network Optimization Conference, Spa, Belgium, April 22-25, 2007. “Assessing the Performance and Reliability of a Network under Disaster Risk”, with D. Gunneç.
29. INFORMS Annual Meeting 2006, Pittsburgh, USA. “Assortment Planning and Supplier Selection under Demand Substitution in Retail Operations” with E. Yücel, F. Karaesmen and M. Turkyay.
30. CDD 2006, International Conference on Dynamics of Disasters, Mati, Athens, October 5-7, 2006. “Disaster Management: Strengthening the Links of a Network for Disaster Response”, with D. Gunneç, K. Viswanath and S. Peeta.

31. ODYSSEUS 2006 Conference, Third International Workshop on Freight Transportation and Logistics, May 23-26, 2006, Altea, Spain. “Strengthening the Links of a Network for Disaster Response” with K. Viswanath and S. Peeta.
32. EURO 2004 Conference, Rhodes, Greece, “Energy Efficient Broadcasting in Ad Hoc Wireless Networks”, with K. Altinkemer and P. Bellur, July 4-7, 2004.
33. INFORMS Annual Meeting 2002, San Jose, “A Case Study of Location and Distribution Decisions at Anadolu Efes” with M. Koksalan.
34. INFORMS International Conference, Maui, Hawaii, June 17-20, 2001. “Search by Objective Relaxation for the LAN Design Problem”, with R. Ravi and J. Hooker.
35. INFORMS Annual Meeting 1999, Philadelphia, “Cooperative Strategies for Solving the Bicriteria Sparse Knapsack Problem”, with J. Kalagnanam and Sesh Murty.
36. INFORMS Annual Meeting 1999, Philadelphia, “Approximation Algorithms for the Multiple Knapsack Problem with Assignment Restrictions”, with P. Keskinocak, M. Dawande and J. Kalagnanam.
37. ESA European Symposium on Algorithms, “Approximation Algorithms for the Traveling Purchaser Problem and Its Variants in Network Design”, with R. Ravi, Prague, 1999.
38. INFORMS National Meeting, Montreal, Spring 1998. “Heuristics for the Bicriteria Sparse Multiple Knapsack Problem”, with J. Kalagnanam and, S. Murthy.
39. INFORMS National Meeting, “Analysis of a General Class of Discrete Optimization Problems with Parametric Righthand Sides”, with B. C. Tansel, Seattle, Fall 1998.
40. INFORMS National Meeting, “A Survey of Parametric and Sensitivity Analysis in Combinatorial Optimization”, with B. C. Tansel and M. H. Demir, San Diego, Spring 1997.
41. INFORMS National Meeting, “Parametric Multimedial Location on Networks”, with B. C. Tansel, New Orleans, Fall 1995. Also presented at the National Meeting of the Operational Research Society of Turkey, YAEM, Ankara, 1994 (in Turkish).

Conference/Workshop Program Committees:

EURO Conference 2018, Valencia, Spain.

YAEM 2018, National Operations Research/Industrial Engineering Congress, Anadolu University, Eskişehir, Turkey.

International IIE (Institute of Industrial Engineers) Conference, 2013, Istanbul, Turkey.

YAEM 2012, National Operations Research/Industrial Engineering Congress, Dogus University, Istanbul, Turkey.

Conference/Workshop Organization Committees:

ODYSSEUS 2009, The Fourth International Workshop on Freight Transportation and Logistics, May 2009, Cesme, Turkey.

MAPSP 2007, The 8th Workshop on Models and Algorithms for Planning and Scheduling Problems, Koc University, Istanbul, Turkey, July 2-6, 2007.

YA/EM 2005, The Twenty Fifth National Operations Research/Industrial Engineering Congress, Koc University, Istanbul, Turkey, July 4-6, 2005.

Memberships in Professional Organizations: Institute for Operations Research and the Management Sciences (INFORMS), Production and Operations Management Society (POMS), Association of European Operational Research Societies (EURO), Yöneylem Araştırması Derneği (YAD).