

Burcu Balcik

CONTACT INFORMATION Ozyegin University
Industrial Engineering
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EDUCATION

Ph.D., Industrial and Systems Engineering, University of Washington (UW), Seattle, WA, 2008.

M.S., Industrial Engineering, Middle East Technical University (METU), Ankara, Turkey, 2003.

B.S., Industrial Engineering, METU, Ankara, Turkey, 2001.

APPOINTMENTS

Full Professor 02/2022 - present
Industrial Engineering, Ozyegin University, Istanbul, Turkey

Academic Director 07/2022 - present
Sustainability Platform, Ozyegin University, Istanbul, Turkey

Associate Professor 04/2015 - 02/2022
Industrial Engineering, Ozyegin University, Istanbul, Turkey

Visiting Professor 08/2017 - 08/2018
Logistics and Operations Management Department, HEC Montreal, Canada

Assistant Professor
Industrial Engineering, Ozyegin University, Istanbul, Turkey 10/2011 - 05/2015
Industrial Engineering, Kadir Has University, Istanbul, Turkey 10/2010 - 10/2011

Visiting Scholar 02/2010 - 06/2010
HUMLOG Institute, Hanken School of Economics, Helsinki, Finland
- Funded by Hanken Commerce and Industry Scholarship

Postdoctoral Fellow 07/2008 - 09/2009
Industrial Engineering and Management Sciences
Northwestern University, USA

Graduate Research and Teaching Assistant
Industrial Engineering, UW, Seattle, WA, USA 09/2004 - 06/2008
Industrial Engineering, METU, Ankara, Turkey 12/2002 - 08/2004
Industrial Engineering, Cankaya University, Ankara, Turkey 09/2001 - 11/2002

HONORS & AWARDS

- **Luk Van Wassenhove Career Award**, EURO Working Group on Humanitarian Operations (EURO HOpe), 2023.
- **Best Paper Award**, SEIO-BBVA Foundation 2023 Prize for the best applied paper in operations research for “A Cost-Sharing Mechanism for Multi-Country Partnerships in Disaster Preparedness”, published in Production and Operations Management in 2021.
- **Faculty Research Excellence Award**, Ozyegin University, 2020.

- **Best Paper Award**, Production and Operations Management Society (POMS) College of Humanitarian Operations & Crisis Management (HOCM), 2019.
- **Highly influential (World's Top 2%) Scientists list (single year)**, 2019, 2020, 2021, 2022. (Ioannidis JPA, Boyack KW, Baas J. Updated science-wide author databases of standardized citation indicators.
- **Outstanding Reviewer Award**, Production and Operations Management, 2018.
- **Young Scientist Award**, The Science Academy, Turkey, 2014.
- **Outstanding Reviewer Award**, Interfaces, 2011.
- **Outstanding Reviewer Award**, Journal of Humanitarian Logistics and Supply Chain Management, 2011.
- **Teaching Assistant Innovator Award**, UW College of Engineering, 2007.
- **Outstanding Graduate Female Award**, UW Society of Women Engineers, 2008.
- **Outstanding Graduate Female Award**, UW Society of Women Engineers, 2006.
- **Clairmont L. Egtvedt Fellowship**, UW College of Engineering, 2006-2007.
- **Top Scholar Award**, UW Graduate School, 2005.
- **Scholarship**, Turkish Education Foundation, 1997-2001.

PUBLICATIONS

Peer-Reviewed Journal Publications

1. Zbib, H., Balcik, B., Rancourt, M.E., Laporte, G., 2024. "Catastrophic insurance models for multi-country regional disaster preparedness", *Operations Research*, accepted.
2. Adsanver, B., Coban, E., Balcik, B. "A multi-stage predictive approach for drone routing in post-disaster damage assessment", *International Transactions in Operational Research*, forthcoming. <http://doi.org/10.1111/itor.13429>
3. Karakaya, S. [†], Balcik, B., 2024. "Developing a national pandemic vaccination calendar under supply uncertainty", *Omega*, forthcoming. <https://doi.org/10.1016/j.omega.2023.103001>
4. Adsanver, B., Balcik, B., Belanger, V., Rancourt, M.E., 2023. "Operations research approaches for coordination, cooperation, and collaboration in humanitarian relief chains: A framework and literature review", *European Journal of Operational Research*, forthcoming. <https://doi.org/10.1016/j.ejor.2023.11.031>.
5. Grass, E., Balcik, B., Ortmann, J., Rei, W., 2023. "A machine learning approach to deal with data source ambiguity in humanitarian relief decision making", *Production and Operations Management*, forthcoming. <https://doi.org/10.1111/poms.14018>
6. Bozkir, C. D., Ozmemis, C., Kurbanzade, A. K., Balcik, B., Gunes, E. D., Tuglular, S., 2023. "Capacity planning for effective cohorting of hemodialysis patients during the coronavirus pandemic: A case study", *European Journal of Operational Research*, 304 (1), 276-291. <https://doi.org/10.1016/j.ejor.2021.10.039>
7. Balcik, B., Yucesoy, E., Akca, A., Karakaya, S., Gevsek, A.A., Baharmand, H., Sgarbossa, F., 2022. "A mathematical model for equitable in-country COVID-19 vaccine allocation", *International Journal of Production Research*, 60(24), 7502-7526. <https://doi.org/10.1080/00207543.2022.2110014>
8. Celik, O., Ozmemis, C., Balcik, B., Cifcili, S., 2022. "Evaluation of the Covid-19 vaccination process in family health centers: A descriptive study" (in Turkish), *The Journal of Turkish Family Physician*, 13(3), 84-95. [10.15511/tjtfp.22.00384](https://doi.org/10.15511/tjtfp.22.00384)
9. Hakimifar, M., Balcik, B., Fikar, C., Hemmelmayr, V., Wakolbinger, T., 2022. "Evaluation of field visit planning policies during rapid needs assessment in an uncertain post-disaster environment", *Annals of Operations Research*, 319, 517-558. <https://doi.org/10.1007/s10479-021-04274-y>

[†]Underlined co-authors are graduate students.

10. Atsiz, E., Balcik, B., Gunneç, D., Sevindik, B. U., 2022. “A coordinated repair routing problem for post-disaster recovery of interdependent infrastructure networks”, *Annals of Operations Research*, 319, 41-71. <https://doi.org/10.1007/s10479-020-03909-w>
11. Olmez, B., Gultekin, C., Balcik, B., Ekici, A., Ozener, O.O., 2022. “A variable neighborhood search based matheuristic for a waste cooking oil collection network design problem”, *European Journal of Operational Research*, 302(1), 187-202. <https://doi.org/10.1016/j.ejor.2021.12.018>
12. Rodriguez-Pereira, J., Balcik, B., Rancourt, M.E., Laporte, G., 2021. “A cost-sharing mechanism for multi-country partnerships in disaster preparedness”, *Production and Operations Management*, 30(12), 4541-4565. <https://doi.org/10.1111/poms.13403>
(Winner of the Best Paper Award in 2023, SEIO-BBVA Foundation)
13. Pamukcu, D., Balcik, B., 2020. “A multi-cover routing problem for rapid needs assessment operations”, *OR Spectrum*, 42, 1-42. <https://doi.org/10.1007/s00291-019-00563-y>
14. Balcik, B., Yanikoglu, I., 2019. “A robust optimization approach for humanitarian needs assessment planning under travel time uncertainty”, *European Journal of Operational Research*, 282(1), 40-57. <https://doi.org/10.1016/j.ejor.2019.09.008>
15. Balcik, B., Silvestri, S., Rancourt, M.E., Laporte, G., 2019. “Collaborative prepositioning network design for regional disaster response”, *Production and Operations Management*, 28(10), 2431-2455. <https://doi.org/10.1111/poms.13053>
(Winner of the Best Paper Award in 2019, Production and Operations Management Society (POMS), College of Humanitarian Operations & Crisis Management)
16. Battara, M., Balcik, B., Xu, H., 2018. “Disaster preparedness using risk-assessment methods from earthquake engineering”, *European Journal of Operational Research*, 269(2), 423-435. <https://doi.org/10.1016/j.ejor.2018.02.014>
17. Balcik, B., 2017. “Site selection and vehicle routing for post-disaster rapid needs assessment”, *Transportation Research Part E: Logistics and Transportation Review*, 101, 30-58. <https://doi.org/10.1016/j.tre.2017.01.002>
18. Balcik, B., Bozkir, C.D.C., Kundakcioglu, O.E., 2016. “A literature review on inventory management in humanitarian supply chains”, *Surveys in Operations Research and Management Science*, 21(2), 101-116. <https://doi.org/10.1016/j.sorms.2016.10.002>
19. Noyan N., Balcik, B., Atakan, S., 2016. “A stochastic optimization model for designing last mile relief networks”, *Transportation Science*, 50(3), 1092-1113. <https://doi.org/10.1287/trsc.2015.0621>
20. Balcik, B., Irvani, S., Smilowitz, K., 2014. “Multi-vehicle sequential resource allocation for a nonprofit distribution system”, *IIE Transactions*, 46(12), 1279-1292. <https://www.tandfonline.com/doi/abs/10.1080/0740817X.2013.876240>
(Featured in the Institute of Industrial and Systems Engineers (IIE) magazine; 10/2014.)
21. Balcik, B., Ak, D., 2014. “Supplier selection for framework agreements in humanitarian relief”, *Production and Operations Management*, 23(6), 1028-1041. <https://doi.org/10.1111/poms.12098>
22. Huang, M., Smilowitz, K., Balcik, B., 2013. “A continuous approximation approach for assessment routing in disaster relief”, *Transportation Research Part B: Methodological*, 50, 20-41. <https://doi.org/10.1016/j.trb.2013.01.005>
23. Huang, M., Smilowitz, K., Balcik, B., 2012. “Models for relief routing: Equity, efficiency and efficacy”, *Transportation Research Part E: Logistics and Transportation Review*, 48(1), 2-18. <https://doi.org/10.1016/j.tre.2011.05.004>
24. Balcik, B., Beamon, B., Krejci, C., Muramatsu, K., Ramirez, M., 2010. “Coordination in humanitarian relief chains: Practices, challenges and opportunities”, *International Journal of Production Economics*, 126(1), 22-34. <https://doi.org/10.1016/j.ijpe.2009.09.008>

25. Balcik, B., Beamon, B., Smilowitz, K. 2008. "Last mile distribution for humanitarian relief chains", *Journal of Intelligent Transportation Systems*, 12(2), 51–63. <https://doi.org/10.1080/15472450802023329>
26. Balcik, B., Beamon, B. 2008. "Facility location in humanitarian relief", *International Journal of Logistics: Research and Applications*, 11(2), 101–121. <https://doi.org/10.1080/13675560701561789>
27. Beamon, B., Balcik, B. 2008. "Performance measurement in humanitarian relief chains", *International Journal of Public Sector Management*, 21(1), 4–25. <https://www.emerald.com/insight/content/doi/10.1108/09513550810846087/full/html>

Refereed Book Chapters & Proceedings

1. Yucesoy, E., Coban, E., Balcik, B., 2023. "Post-disaster damage assessment by using drones in a remote communication setting", Handbook for Management of Threats - Security and Defense, resilience and optimal strategies (Edited by: Fytopoulos, A., Balomenos, K., Pardalos, P.), forthcoming. https://link.springer.com/chapter/10.1007/978-3-031-39542-0_15
2. Selcuk, Y. S., Coban, E., Balcik, B., 2022. "Simulated annealing heuristic for disposable medical face mask production scheduling problem", Proceedings of the 5th European International Conference on Industrial Engineering and Operations Management, Rome, Italy, July 26-28, 2022.
3. Yucesoy, E., Coban, E., Balcik, B., 2022. "Mobile vaccination clinic routing problem", Proceedings of the International Conference on Industrial Engineering and Operations Management, Istanbul, Turkey, March 7-10, 2022.
4. Baharmand, H., Balcik, B., Boey, L., Decouttere, C., Phillips, R., Saeed, N., Vandaele, N. . "Toward a decision support system for COVID-19 vaccine allocation inside countries", Proceedings of the The Norwegian Conference for IT Use in Organizations (NOKOBIT), Trondheim , Norway, Nov 29-Dec 1, 2021.
5. Adsanver, B., Coban, E., Balcik, B., 2021. "Drone routing for post-disaster damage assessment", in Dynamics of Disasters: Impact, Risk, Resilience, and Solutions (edited by I.S. Kotsireas, A. Nagurney, P. M. Pardalos, A. Tsokas), Springer, 1–29. https://doi.org/10.1007/978-3-030-64973-9_1
6. Gultekin, C., Olmez, B., Balcik, B. Ekici, A., Ozener, O.O., 2020. "A decomposition-based heuristic for a waste cooking oil collection problem", in Green transportation and new advances in Vehicle Routing Problems (edited by H. Derbel, B. Jarboui, P. Siarry), Springer, 159–176. https://doi.org/10.1007/978-3-030-45312-1_6
7. Balcik, B., Smilowitz, K., 2020. "Contributions to humanitarian and non-profit operations: equity impacts on modeling and solution approaches", in Women in Industrial and Systems Engineering: Key Advances and Perspectives on Emerging Topics (edited by A. E. Smith), Springer, 371–390. https://doi.org/10.1007/978-3-030-11866-2_16
8. Balcik, B., 2016. "Selective routing for post-disaster needs assessments", in Dynamics of Disasters – Key Concepts, Models, Algorithms, and Insights (edited by I.S. Kotsireas, A. Nagurney, P. M. Pardalos), Springer, 15–35. https://link.springer.com/chapter/10.1007/978-3-319-43709-5_2
9. Balcik, B., Iravani, S., Smilowitz, K., 2010. "A review of equity in nonprofit and public sector: A vehicle routing perspective", *Wiley Encyclopedia of Operations Research and Management Science*. <https://doi.org/10.1002/9780470400531.eorms0002>
10. Balcik, B., Meral, S., 2004. "A multi-item integrated location/inventory model", *Proceedings of the 24th National Congress on Operational Research and Industrial Engineering*, Adana, Turkey, 15-18 June 2004.
11. Tursel, D.E., Balcik, B., 2004. "A tabu search approach for a multi-item integrated location/inventory problem", *Proceedings of the International Logistics Congress*, Izmir, vol. 1, 454-463, 2-3 December 2004.

Other Publications

1. Fortier, E., Chane, F., Minetto, S., Kasap-Simsek, L.G., Balcik, B. “Prepositioning Made Better: Branding Postponement and Loan-Borrowing for Increased Efficiency.”, *ESUPS report*. <https://esups.org/our-work/resources/report-branding-postponement-loan-borrowing/>
2. Balcik, B. 2016. “Special issue in humanitarian operations”, Letter from the Special Issue Editor, *Surveys in Operations Research and Management Science*, 21 (2), 29–30. <http://dx.doi.org/10.1016/j.sorms.2017.02.001>
3. Balcik, B. 2015. “Special issue on humanitarian relief chains in honor of Professor Benita Beamon”, Letter from the Special Issue Editor, *Journal of Humanitarian Logistics and Supply Chain Management*, 5(3). <https://doi.org/10.1108/JHLSCM-10-2015-0040>
4. Balcik, B., Ozener, O.O., Menguc, M.P. 2012. “How to improve inner city freight movement in Istanbul”, City Logistics Project. DHL Customer Solutions & Innovations. Technical report.
5. Balcik, B., Durham, C., Ergun, O., Keskinocak, P., Salman, S. 2012. “International Federation of Red Cross and Red Crescent Societies (IFRC) Global Logistics Service Business Case: Case Study 2011 Van Earthquake”. Technical report.
6. Huang, M., Smilowitz, K., Balcik, B. 2011. “Models for relief routing: Equity, efficiency and efficacy”, *Procedia - Social and Behavioral Sciences; Papers selected for the 19th International Symposium on Transportation and Traffic Theory at University of California, Berkeley*, 17, 416–437. <https://doi.org/10.1016/j.sbspro.2011.04.525>
7. Balcik, B. 2003. “A multi-item integrated location/inventory model”, *Master’s Thesis. Industrial Engineering Department, METU*.

Manuscripts under Review/Revision

1. Balcik, B., Battarra, M., Celik, M., Khoury, B., Subramanian, A. “Beneficiary appointment and delivery planning in a conflict setting”, *Decision Sciences*, under review (2nd round).
2. Yucesoy, E., Balcik, B., Coban, E., “The role of drones in disaster response: A literature review of operations research applications”, *International Transactions in Operational Research*, under review (2nd round).
3. Kasap-Simsek, L.G., Balcik, B., “The impact of loan-borrowing and postponement strategies on prepositioning performance”, *Decision Sciences*, under review.
4. Boey, L., Decouttere, C., Phillips, R.O., Balcik, B., Kjondal, J.O., Birkeland, A., Fossli, H., Saeed, N., Vandaele, N., Baharmand, H. “Development of a decision support system for in-country vaccine allocation through conceptual system mapping”.

Selected Working Papers

1. Bozkir, C.D.C., Apak, K., Balcik, B., Gunes, E., Tuglular, S. “Serving chronic patients in times of capacity shortages: Hemodialysis planning after a disaster”.
2. Ozmemis, C., Balcik, B. “Reducing open vial wastage with lateral transshipment in Covid-19 vaccine administration”.
3. Karakaya, S., Balcik, B., Gunes, E. “Bridge to resilience: Designing an alliance network among dialysis centers for disaster preparedness”.
4. Adsanver, B., Balcik, B., Belanger, V., Rancourt, M.E., 2023. “Forecast-driven collaborative repositioning in anticipation of storms: A case study on Madagascar”.
5. Ozmemis, C., Balcik, B., Yanioglu, I. “Integrated treatment scheduling and logistics planning for a hemodialysis center after a disaster with robust travel times”.
6. Pamukcu, D., Celik, M., Balcik, B. “Integrating logistics planning and population sampling decisions for humanitarian needs assessment”.

7. Pashapour, A., Alem, D., Balcik, B., Salman, S. "The multi-period humanitarian pickup and distribution problem in food assistance campaigns".
8. Pamukcu, D. Paquette, J., Balcik, B., Rancourt, M. E. "Optimizing food bank operations for equity and efficiency: A case study of food bank Quebec".
9. Kasap-Simsek, L.G., Balcik, B. "Collaborative prepositioning with postponement and stock sharing".
10. Kaplan, A.A., Balcik, B., Paquette, J. "Sustainability metrics for food bank operations: A literature review and case study".

RESEARCH GRANTS

1. Collaborating Researcher, "*Artificial Intelligence to Improve the Logistics of Food Banks in Quebec*", Ministry of Economy and Innovation of Quebec (PI: Paquette, J.), 06/2022 - 5/2025.
2. Collaborating Researcher, "*Humanitarian Supply Chain Analytics*", Institute Data Valorisation (IVADO) Fundamental Research Funding Program (PI: Rancourt, M.E.), 08/2021 - 10/2024.
3. Collaborating Researcher, "*Information Gathering and Damage Prediction Problems and Solution Methods for Urgent Post-Disaster Damage Assessment via Drones*", TUBITAK 1001 Earthquake Research Special Call (PI: E. Coban), 2021 - 2024.
4. Primary Investigator (PI), "*Resource Planning Problems and Models for Effective Management of Chronic Dialysis Patients after a Disaster*", TUBITAK 1001, 07/2020 - 04/2023.
5. Co-PI, "*COVID-19 Network Technology based Responsive Action (CONTRA)*", Norwegian Research Council (PI: Hossein Baharmand; Co-PIs: C. Decouttere N. Vandaele, N. Saeed, R. Phillips), 07/2020 - 12/2021.
6. PI, "*Modeling and Analysis of Stock Sharing and Postponement Strategies in Regional Humanitarian Aid Networks*", TUBITAK 1002, 07/2020 - 07/2021.
7. PI, "*Designing Global Humanitarian Relief Networks through Local Partnerships*", TUBITAK 2219, 10/2017 - 07/2018.
8. PI, "*Selective Routing Problems for Post-Disaster Needs Assessment: Models and Solution Methods*", TUBITAK 3501, 03/2014 - 09/2016.
9. PI, "*Improving Inner City Freight Movements in Istanbul*", funded by Deutsche Post (DHL) (Co-PI: O.O. Ozener), 02/2012 - 09/2012.
10. Collaborating Researcher, "*Stochastic Programming Models for the Post-disaster Relief Network Design Problem*", TUBITAK 3501 (PI: N. Noyan), 03/2012 - 09/2015.
11. Post-graduate Researcher, "*Design and Control Principles for Non-Profit Supply Chains*", National Science Foundation (NSF) (PIs: S. Iravani, K. Smilowitz), 7/2009 - 09/2010.
12. Graduate Researcher, "*Inter-organizational Decision Making and Organizational Design for Improved ICT Coordination in Disaster Relief*", NSF (PIs: C. Maitland, J. Yen, A. Tapia, B. Beamon), 09/2007 - 06/2008.
13. Graduate Researcher, "*Inventory Policies for Pre-Positioned Response in Humanitarian Relief*", Royalty Research Fund at UW (PI: B. Beamon), 09/2007 - 06/2008.
14. Graduate Researcher, "*Staff Restructuring at BOTAS (Natural Gas Distribution Company)*", Systems Sciences Research Center, METU, 06/2003 - 10/2003.

Keynotes

1. Keynote speaker, “Challenges and Opportunities for Operations Research to Improve Humanitarian Decision Making and Collaboration”, EURO (Association of European Operational Research Societies) 2022, Espoo, Finland.
2. Keynote speaker, “Post-disaster Health Care Logistics Models and Applications”, ICCL (International Conference on Computational Logistics) 2022, Barcelona, Spain.
3. Keynote speaker, “Collaborative Approaches in Humanitarian Supply Chains: The impact of stock sharing and postponement strategies on prepositioned relief stocks”, 19th International Logistics and Supply Chain Congress, Gaziantep University, 10/2021.

Invited Seminars

1. HEC Montreal, Coordinating and planning post-disaster health care services for chronic hemodialysis patients, 07/2023.
2. Norwegian Business School, Models and strategies for better disaster preparedness: using real data o relevant problems in collaboration with practitioners, 03/2023.
3. Koc University, A catastrophe insurance framework for multi-country partnerships in disaster preparedness, 02/2022.
4. University of Vienna, Austrian OR Society, Operations Research in Health Care & Disaster Management Workshop, Service delivery planning for effective management of chronic dialysis patients after a disaster, 11/2021.
5. Vienna University of Economics and Business, Collaborative prepositioning network design for regional disaster response, 10/2019.
6. HEC Montreal, A robust optimization approach for humanitarian needs assessment planning under travel time uncertainty, 03/2018.
7. University of Alabama, A robust optimization approach for humanitarian needs assessment planning under travel time uncertainty, 04/2018.
8. University of Massachusetts at Amherst, A robust optimization approach for humanitarian needs assessment under travel time uncertainty, 04/2018.
9. **Between 2005-2017:** Ozyegin University (07/2011); Galatasaray University (05/2011); Koc University (11/2010); Bogazici University (04/2010); Kadir Has University (04/2010); Hanken School of Economics (03/2010); Bahcesehir University (11/2009); Yeditepe University (11/2009); Isik University (09/2009); Auburn University (01/2009); Rochester Institute of Technology (03/2008); University of Washington (03/2008); University at Buffalo (02/2008); Lehigh University (02/2008); University of Massachusetts at Amherst (12/2007); University of Washington (10/2005).

Selected Conference Presentations (Last 5 years) ‡

1. The impact of postponement and stock sharing strategies on prepositioned relief stocks, *INFORMS*, 2023, Phoenix, USA.
2. The 3Cs – coordination, cooperation collaboration in view of 2023 Turkey earthquakes, *EURO-Hope Summer School*, 2023, online.
3. Bridge to Resilience: Designing an Alliance Network among Dialysis Centers for Disaster Preparedness, 9th KU Health Care Operations Workshop, 2023, Istanbul. .
4. Operations research approaches for coordination, cooperation, and collaboration in humanitarian relief chains: A framework and literature review, *Optimization Days*, 2023, Montreal.
5. Applications of Humanitarian Aid and Disaster Management, Isik University, Supply Chain and Logistics Colloquium, 2023, online.

‡Presented by Dr. Balcik or her students.

6. Pre-Disaster Alliance Network Design and Backup Center Assignment for Dialysis Centers, *YAEM 2022*, Pamukkale.
7. The impact of postponement and stock sharing strategies on prepositioned relief stocks, *Annual POM Conference*, 2023, Orlando, USA.
8. A robust optimization approach for modelling uncertain post-disaster travel times in planning hemodialysis treatments, *EURO-HOpe Mini Conference*, 2022, Istanbul.
9. Post disaster assessment drone routing problem in an online setting, *EURO Conference*, 2022, Espoo.
10. Reducing open vial wastage with lateral transshipment in COVID-19 vaccine administration, *POM 2022*, online.
11. COVID-19 vaccination calendar preparation under supply uncertainty, *POM 2022*, online.
12. A Post-Disaster Assignment and Scheduling Problem For Chronic Dialysis Services, *YAEM 2021*, Istanbul.
13. A Post-Disaster Assignment and Scheduling Problem for Chronic Hemodialysis Services, *INFORMS 2021*, California, USA.
14. The effect of inventory sharing and postponement strategies on prepositioned stocks, *IFORS 2021*, Seoul, South Korea.
15. An equitable vaccine allocation problem, *IFORS 2021*, Seoul, South Korea.
16. Drone routing for post-disaster damage assessment, *IFORS 2021*, Seoul, South Korea.
17. Collaborative approaches for prepositioning & inventory management, *The 1st EURO HOpe Summer School on Humanitarian Logistics 2021*.
18. A post disaster assignment and scheduling problem for chronic dialysis services, *EURO/INFORMS 2021*, Athens, Greece.
19. A post disaster assignment and scheduling problem for chronic dialysis services, *YAEM 2021*, Istanbul, Turkey.
20. Capacity planning for effective cohorting of dialysis patients during the coronavirus pandemic: A case study, *EURO/INFORMS 2021*, Athens, Greece.
21. An Equitable Vaccine Allocation Problem, *EURO/INFORMS 2021*, Athens, Greece.
22. Beneficiary appointment scheduling for delivering humanitarian aid in conflict-affected regions, *INFORMS Annual Meeting 2019*, Seattle, USA.
23. Beneficiary appointment scheduling for delivering humanitarian aid in conflict-affected regions, *EURO HOpe Mini-conference 2019*, Kristiansand, Norway.
24. Collaborative prepositioning network design for regional disaster response, *POMS Annual Meeting 2019*, Washington DC, USA.
25. A robust optimization approach for humanitarian needs assessment planning under travel time uncertainty, *Optimization Days 2018*, Montreal, Canada.
26. A collaborative prepositioning model for strengthening regional disaster response capacity, *29th POMS Annual Meeting 2018*, Houston, TX, USA.

TEACHING §
EXPERIENCE

Ozyegin University, Industrial Engineering Department

IE 565*: Sustainable Supply Chain and Operations Management (Spring 2023)

IE 504*: Heuristic Methods (Fall 2013-2016, 2018-2023)

§New courses designed by Dr. Balcik are marked with *

IE 461/561*: Operations Research Models and Applications in Humanitarian Logistics (Fall 2016, Spring 2019/2021)

IE 325: Simulation Modelling and Analysis (Spring 2015-2017, 2019-2021; Fall 2019-2022, Spring 2023)

IE 352: Supply Chain Management (Fall 2011, Spring 2013/2014)

IE 102: Computational Methods for IE (Spring 2012-2014)

IE 401/402: Senior Design Projects (Advisor for 3-5 groups every academic year)

IE 101: Introduction to Industrial Engineering (Spring 2015-2017, 2019-2021); Co-instructor: Lectures in Simulation and Heuristics.

Kadir Has University, Industrial Engineering Department

IE 415: Supply Chain Management (Spring 2011)

IE 412: Quality Control (Spring 2011)

IE 341: Logistics Management (Fall 2010)

Hanken School of Economics, HUMLOG Institute

Co-instructor: Masters course in Humanitarian Logistics (Spring 2010)

İşık University, Industrial Engineering Department

IE 422: Inventory Planning Problems (Fall 2009)

STUDENT
ADVISING

PhD Dissertation Advising

1. Lamia G. Kasap, Ozyegin University. *Topic*: Collaborative strategies in humanitarian prepositioning networks through loan-borrowing and postponement. 2019-present. Current position: Visiting Scholar at The University of Texas at Dallas.
2. Cem C.D. Bozkır, Ozyegin University. *Topic*: Post-disaster scheduling of chronic dialysis patients with service choice. 2019-present. Current position: Senior analytics consultant at KocDigital.
3. Sirma Karakaya, Ozyegin University. *Topic*: Stochastic optimization models for health-care planning problems. 2020-present. Current position: Instructor at TED university.
4. Ozlem Karadeniz Alver, Ozyegin University. *Topic*: Designing collaborative food networks. 2019-present. Current position: Graduate assistant at Maltepe University.

M.S. Thesis Advising

1. Ecem Yucesoy, Ozyegin University (Co-advisor: E. Coban), Graduated: 07/2023. “Drone routing for post-disaster damage assessment in an online setting”, Current position: PhD student at INSEAD.
2. Cagri Ozmemis, Ozyegin University, Graduated: 08/2022. “Reducing open vial wastage with lateral transshipment in COVID-19 vaccine administration”, Current position: PhD student at Georgia Tech Scheller College of Business.
3. Berna Akca, Ozyegin University, Graduated: 08/2022. “Scheduling and routing of chronic dialysis patients in the aftermath of a disaster”, Current position: Business Analyst at ValuePlus.
4. Birce Adsanver, Ozyegin University (Co-advisor: E. Coban), Graduated: 06/2020. “An integrated post-disaster assessment routing problem for collecting damage information with drones”, Current position: PhD student at HEC Montreal.
5. Duygu Pamukcu, METU (Co-advisor: M. Celik), Graduated: 07/2018. “Routing for post-disaster needs assessment to improve information accuracy and precision”, Current position: Postdoctoral researcher at HEC Montreal.
6. Busra Uydasoglu Sevindik, Ozyegin University (Co-advisor: D. Gunec), Graduated: 06/2018. “A synchronized routing problem for restoring interdependent infrastructure networks”, Current position: Senior business consultant at KocDigital.

7. Fahriye Karabak, Ozyegin University, Graduated: 06/2016. “An integrated location routing problem for waste oil collection operations”, Current position: Head Of Operations - Turkbox, UK.

8. Meserret Karaca. Ozyegin University, (Co-advisor: O.O. Ozener), Graduated: 07/2016. “Coordinated inventory planning for humanitarian agencies”, Current position: Data Scientist, Bayer, USA.

9. Deniz Ak. Kadir Has University. Graduated: 09/2010. “A supplier selection model for framework agreements in disaster relief”.

M.S. Project Advising

1. Elif Nimetoglu, Ozyegin University, 2023-. “Inventory management system at Vestel with carbon emission considerations”.

2. Murat Koyuncuoglu, Ozyegin University, Graduated: 01/2014. “Inventory management of indirect materials at Vestel white goods indirect materials warehouses”.

3. Aydın Korkmaz, Ozyegin University, Graduated: 06/2016. “Selection of Vestel white goods (washing machine) plants”.

Ph.D. Committee Membership

1. Zeynep Çağlar, Sakarya University, 2023 - present.
2. Kian Farajkhah, Ozyegin University, 2022 - present.
3. Birce Adsanver, HEC Montreal, 2021 - present .
4. Duygu Pamukcu, Virginia Tech, Graduated in 2022.
5. Selcuk Korkmaz, Ozyegin University, 2016 - 2021.
6. Hafize Yilmaz, Istanbul Technical University, 2016 - 2019.
7. Feyza G. Sahinyazan, McGill University, Graduated in 2018.
8. Joseph Warfel, Northwestern University, Graduated in 2017.
9. Kezban Sokat, Northwestern University, Graduated in 2017.
10. Vahid Akbari, Koc University, Graduated in 2016.
11. Michael Huang, Northwestern University, Graduated in 2011.

SERVICE ACTIVITIES

Editorial Service

- *Associate Editor*, IISE Transactions, 01/2024- .
- *Associate Editor*, Transportation Science, 01/2021- .
- *Editorial Board Member (EBM)*: Journal of Business Logistics, 03/2022- .
- *EBM*: Transportation Research Part E, 05/2020- .
- *EBM*: Sustainability Analytics and Modeling, 03/2021- .
- *EBM*, Production and Operations Management, 2015- .
- *EBM*: Journal of Operations Management, 2015-2021.
- *EBM*: Journal of Humanitarian Logistics & Supply Chain Management, 2010- .
- *Guest Editor*: Special Issue in Humanitarian Operations, *Surveys in Operations Research and Management Science*, 2016.
- *Guest Associate Editor*: Special Issue on Empirically Grounded Research in Humanitarian Operations, *Journal of Operations Management*, 2014 - 2015.
- *Guest Editor*: Special Issue in Honor of Prof. Benita Beamon, *Journal of Humanitarian Logistics and Supply Chain Management*, 2015.
- *Referee*: Production and Operations Management, Transportation Science, Operations Research, Management Science, Journal of Operations Management, Manufacturing and Service Operations Management, IISE Transactions, European Journal of Operational Research, Interfaces, Journal of the Operational Research Society, Annals of Operations Re-

search, Transportation Research Part E, Omega, OR Spectrum, Socio-Economic Planning Sciences, International Journal of Production Economics, International Journal of Physical Distribution & Logistics Management, Optimization Letters, Journal of Humanitarian Logistics and Supply Chain Management.

Professional Service

- *Coordinator*, EURO Working Group on Humanitarian Operations (EURO HOpe), with S. Salman, 2021-2022.
- *Committee member*, Ad-hoc Diversity Equity and Inclusion Committee, INFORMS Transportation and Logistics (TSL) Society, 2021 - 2022.
- *Board Member*, EURO HOPE, 2015 - present.
- *President*, INFORMS Public Sector Operations Research (PSOR), 2016 - 2017.
- *President-Elect*, INFORMS PSOR, 2015 - 2016.
- *Senior Vice President*, INFORMS PSOR, 2014 - 2015.
- *Junior Vice President*, INFORMS PSOR, 2013 - 2014.
- *President*, UW Student Chapter of Alpha Pi Mu, 2005 - 2006.

Conference Organization

- *Co-Organizer* (with M. Jahre), The Second EURO HOpe Summer School on Humanitarian Logistics, June 26-28, 2023 (online).
- *Co-Organizer* (with S. Salman, B. Yetis), EURO HOpe Mini Conference, October 6-7, 2022, Istanbul.
- *Co-Organizer* (with S. Salman, B. Yetis), The First EURO HOpe Summer School on Humanitarian Logistics 2021 (online).
- *Scientific committee member*, POMS International, Brighton, UK, 2019.
- *Conference program committee member*, 2nd, 3rd and 4th International Conference on Dynamics of Disasters, Kalamata, Greece; 2015, 2017 and 2019.
- *Conference cluster chair*, HOCM, POMS Annual Meeting, 2016.
- *Conference cluster chair*, PSOR, EURO/INFORMS, 2015.
- *Conference cluster chair*, PSOR, INFORMS, 2014 and 2015.
- *Conference cluster chair*, Humanitarian Logistics, YAEM, 2015.
- *Conference cluster chair*, PSOR, EURO/INFORMS, 2013.
- *Conference session chair*, EURO/INFORMS 2003, INFORMS 2008, EURO/INFORMS 2013, EURO HOpe 2015, YAEM 2015, JOPT 2018, EURO/INFORMS 2019 and 2021.

Award/Grant Reviewer

- *Refere*, Best Paper Award Competition, POMS College of Humanitarian Operations and Crisis Management, 2021.
- *Award jury member*, BAGEP Young Scientist Award, The Science Academy of Turkey, 2020, 2021, 2022.
- *Grant reviewer*, TUBITAK, 2014, 2020, 2021.
- *Jury member*, YAEM Student Project Competition, 2012.
- *Grant reviewer*, Social Sciences and Humanities Research Council of Canada, 2011.
- *External reviewer*, KOSGEB (Small and Medium Enterprises Development Organization of Turkey) (2011-2012).

University Service

- Member, Promotion Committee, 10/2023 - .
- Academic Director, Sustainability Platform, Ozyegin University, 07/2022 - .
- Member, Commission for Assessment of International Faculty Members, Ozyegin University, 2022 - .
- Chair, PhD Qualifier Exam Committee, Industrial Engineering Department, Ozyegin

University, 2013 - .

- Member, Graduate Program Committee, Industrial Engineering Department, Ozyegin University, 2013 - .
- Member, Faculty Executive Committee, Faculty of Engineering, Ozyegin University, 2020 - .
- Member, Faculty Executive Committee, Faculty of Architecture, Ozyegin University, 2018 - 2019.
- Member, Faculty Executive Committee, Faculty of Engineering, Ozyegin University, 2013 - 2015.
- Member, Curriculum Committee, Industrial Engineering Department, Ozyegin University, 2011 - 2014.
- Member, Engineering Education Accreditation Coordinator, Faculty of Engineering, Kadir Has University, 2010 - 2011.

OUTREACH & IMPACT

Panels & Workshops

1. Workshop Speaker, “Coordination of private sector efforts for disaster preparedness”, Private sector disaster preparedness workshop organized by International Freight Forwarders Association, 12/2023.
2. Panel Speaker, “Data-driven optimization approaches for disaster management”, Izmir Universities Platform - Disaster Resilience on the 100th Anniversary of the Turkish Republic, 10/2023.
3. Workshop participant and moderator, Turkish Science Academy Earthquake Workshop, 09/2023.
4. Panel Speaker, EURO HOPE Mini Conference 2023, “How can academics contribute to disaster response and recovery? Experiences from the Kahramanmaraş earthquake in Turkey”, 09/2023.
5. Panel Speaker, Disaster Resilient City - Istanbul Planning Agency, 17 August 1999 Earthquake commemoration program, (In Turkish), 08/2023. <https://kampus.ipa.istanbul/event/afete-dayanikli-sehir-17-agustos-anma-programi/>
6. Participant, Istanbul Metropolitan Municipality Scientific Council, Earthquake Preparedness Workshops: 02/2023, 06/2023, 08/2023, 09/2023. Report from the first meeting: <https://ipa.istanbul/wp-content/uploads/2023/03/DEPREM-CALISTAYI-OZET-RAPOR-WEB-2.pdf>
7. Panel Speaker, Turkish Science Academy, Earthquake Panel Series, “Humanitarian Aid and Disaster Management” (In Turkish), 03/2023. https://www.youtube.com/watch?v=ZN_4X7t9fDg
8. Panel Discussant, Earthquake and Migration: Situation Overview Meeting, Association for Migration Research (In Turkish), 03/2023.
9. Panel Discussant, Experts’ reaction to earthquake in Turkey and Syria, Science Advice for Policy by European Academies (SAPEA) consortium, 02/2023. https://www.youtube.com/watch?v=yGW-Fr_KHKM
10. Panel speaker, Princeton School of Public and International Affairs (SPIA), SPIA Responds: Turkey/Syria Earthquake and Disaster Relief, “Earthquake in Turkey (6 February 2023); A Brief Overview of Humanitarian Relief Efforts”. <https://spia.princeton.edu/events/spia-responds-turkeysyria-earthquake-and-disaster-relief>
11. Speaker, Supply chain learning from Ukraine response Roundtable Discussion, “Continuing Care for Patients on Chronic Hemodialysis During Disasters and Armed Conflicts”, 2022 Health and Humanitarian Logistics Conference, Aidex, Brussels, 11/2022. https://www.humanitarianlogistics.org/wp/wp-content/uploads/2022/12/Dr-Balcik_-Dr-Tuglular-presentations-PM-Session.pdf

12. Panel organizer and moderator, Practitioner Panel titled “Local Response, Coordination and Collaboration”, EURO HOpe Mini-Conference 2022, Istanbul, 10/2022.
13. Panel moderator, Stakeholder Meeting organized by TUSIAD, Disaster Risk Management in Green and Smart Cities (In Turkish), 02/2022.
14. Invited speaker, Emergency Supply Prepositioning Strategy’s Practitioner Panel, Humanitarian Network and Partnership Week (HPNW) 2022, Geneva, The impact of loan-borrowing and postponement on prepositioned relief stocks, 05/2022.
15. Invited speaker, Emergency Supply Prepositioning Strategy’s Practitioner Panel, Humanitarian Network and Partnership Week (HPNW) 2020, Geneva, The impact of loan-borrowing and postponement on prepositioned relief stocks, 02/2020.
16. Opening talk and panel chair, World Humanitarian Summit, Practitioner panel organized by the Disaster and Emergency Management Presidency of Turkey (AFAD), Istanbul, 05/2016.

Selected Practitioner Collaborations

- Member of Earthquake Science Council, Istanbul Metropolitan Municipality, 02/2023-.
- Research project collaborator, Emergency Supply Pre-positioning Strategy (ESUPS), 2019-.
- Research project collaborator, Renal Disaster Relief Task Force, Turkey, 2018- .
- Research project collaborator, Disaster Coordination Center (AKOM), Istanbul Metropolitan Municipality, Turkey, 2021- .
- Research project collaborator, The Caribbean Disaster Emergency Management Agency (CDEMA), 2017-2020.

Media

- Acik Radyo, Altin Saatler, “Disaster and humanitarian relief logistics” (In Turkish), 01/2024. <https://acikradyo.com.tr/podcast/242436>
- Sensiz Olmaz Sessiz Olmaz, “We say the emergency phase is over, but we also see that basic needs are still not being met.” (In Turkish), 03/2023. <https://www.youtube.com/watch?v=68398aRxKcw>
- Haberturk TV, “How to help earthquake victims?” (In Turkish), 02/2023. <https://www.youtube.com/watch?v=1xsnUzx3yCU>
- KRT TV, “The cost of delaying humanitarian aid is human life.” (In Turkish), 02/2023, <https://www.youtube.com/watch?v=yh0lvIkCxUo>
- Medyascope TV, “How should assistance be provided to earthquake-affected areas? How should we coordinate?” (In Turkish), 02/2023, https://www.youtube.com/watch?v=mR8_c5QdezE
- Bloomberg TV, “Steps to be followed in post-disaster humanitarian aid activities.” (In Turkish), 02/2023, <https://www.youtube.com/watch?v=u0kEw9sa2QI>
- Gain, “Earthquake relief activities” (In Turkish), 02/2023, <https://www.youtube.com/watch?v=Qyw-7yH4GLc>
- Medyascope TV, Turkish Science Academy, Conversation on humanitarian supply chains and disaster management, 10/2019. <https://www.youtube.com/watch?v=dtBPhJveqrU&t=1097s>

News Articles

- Sarkac, 09/2023, “A system’s perspective on disaster preparedness”, <https://sarkac.org/2023/09/afetlere-hazirlikta-sistem-bakis-acisi/>
- Independent Turkey, 04/2023, “Disaster management plan should be established neighborhood by neighborhood in Istanbul, anticipating the earthquake.” (In Turkish), <https://www.indyturk.com/node/614516/r%C3%B6portaj/depremi-bekleyen-i%C3%87stanbulda-afet-y%C3%B6netimi-plan%C4%B1-mahalle-mahalle-kurulmal%C4%B1>
- Hurriyet, 04/2023, “Importance of effective humanitarian supply chains.” (In Turkish), <https://www.hurriyet.com.tr/kelebek/hurriyet-pazar/alisveris-platformu-bug-un-aldiginiz-gomlegi-yarin-size-ulastiriyor-afette-neden-olmasin-42259158>
- Fikir Turu, 03/2023, “How can assistance be continuous, organized, and effective?” (In Turkish), <https://fikirturu.com/toplum/yardimlar-nasil-surekli-duzenli-ve-etkin-olabilir/>
- Hurriyet, 04/2023, “It is not enough to send, coordination is essential.” (In Turkish), https://www.hurriyet.com.tr/yazarlar/fulya-soybas/gondermek-yetmez-koordin-e-edilmeli-42226499?utm_source=t.co&utm_medium=post
- Fikir Turu, 02/2023, “How should the aid be delivered? Why is humanitarian aid logistics important?” (In Turkish), <https://fikirturu.com/toplum/yardimlar-nasil-gitmeli-insani-yardim-lojistigi-neden-onemli/>
- BBC News Turkish (also appeared on BBC News Azerbaijan), 02/2023, “How should assistance be provided to earthquake-affected areas?” (In Turkish), <https://www.bbc.com/turkce/articles/c72dkwp2v1ro>

Other Interviews

- UMass INFORMS Interview, “Humanitarian operations”, 04/2018, <https://www.youtube.com/watch?v=0DZx8p6Lrc0>
- Ozyegin University, “Disaster engineering”: A conversation with Derya Deniz, (in Turkish), 07/2023, <https://www.youtube.com/watch?v=GzAjjZg5Y-w>

MEMBERSHIPS

- **Professional Societies:** The Institute for Operations Research and the Management Sciences (INFORMS), Production and Operations Management Society (POMS), Operations Research Society Turkey (YAD), EURO Working Group on Humanitarian Operations (EURO HOPE)
- **Research Center:** Interuniversity Research Center on Enterprise Networks, Logistics and Transportation (CIRRELT)