

Özlem Ergun

Associate Professor

School of Industrial & Systems Engineering

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I. EARNED DEGREES

- Ph. D., Operations Research, *Massachusetts Institute of Technology*, Boston, MA, June 2001
- B. S., Operations Research and Industrial Engineering, *Cornell University*, Ithaca, NY, January 1996

II. EMPLOYMENT

- Visiting Associate Professor, Applied Mathematics, School of Engineering and Applied Sciences, Harvard University, Cambridge, MA, August 2011 - May 2013
- Part-time Faculty on Loan, Preparedness Modeling Unit, *Centers for Disease Control and Prevention*, Atlanta, GA, September 2009 - September 2010
- Co-Director, Center for Health and Humanitarian Logistics, School of Industrial & Systems Engineering, *Georgia Institute of Technology*, Atlanta, GA, March 2007 - present
- Associate Professor, School of Industrial & Systems Engineering, *Georgia Institute of Technology*, Atlanta, GA, February 2008 - present
- Assistant Professor, School of Industrial & Systems Engineering, *Georgia Institute of Technology*, Atlanta, GA, September 2001 - 2008
- Visiting fellow, *The Logistics Institute - Asia Pacific*, National University of Singapore, Singapore, November 2003 and November 2004

III. TEACHING

(A) Individual Student Guidance

Ph.D. students

1. Maciek Novak (with Dr. Chelsea White). Thesis title: The split pick-up and delivery problem. Graduated May 2005. Current position: Associate Professor at Loyola University Chicago. Granted tenure Spring 2012.
2. Gultekin Kuyzu (with Dr. Martin Savelsbergh). Thesis title: Procurement in truck-load transportation. Graduated May 2007. Current position: Assistant Professor TOB University, Turkey.
3. Kathe Yao (with Dr. Ellis Johnson). Thesis title: Combined crew-pairing and fleet-assignment for time-shared jets. Graduated May 2007. Current position: Supply Chain Logistics Manager at AT&T - BellSouth Corporation.

4. Richa Agarwal. Thesis title: Network design and alliance formation for liner shipping. Graduated from the Algorithms, Combinatorics and Optimization program, August 2007. Current position: Research Scientist in the Supply Chain and Transportation group at Amazon.com.
5. Lori Houghtalen (with Dr. Joel Sokol). Thesis title: Designing management mechanisms for carrier alliances. Graduated August 2007. Initial position: Assistant Professor at Babson College.
6. Doug Altner. Thesis title: The network interdiction problem. Graduated August 2008. Initial position: Assistant professor at US Naval Academy.
7. Orsan Ozener (with Dr. Martin Savelsbergh). Thesis title: Cost allocation in collaborative logistics networks. Graduated December 2008. Current position: Assistant Professor at Ozyegin University, Turkey.
8. Fei Qian. Thesis title: Scheduling problems for fractional airlines. Graduated from the Algorithms, Combinatorics and Optimization program December 2010. Current position: Operations Research Analyst at CitationAir.
9. Jessica Heier Stamm (with Dr. Julie Swann). Thesis title: Design and analysis of humanitarian and public health logistics systems. Graduated December 2010. Current position: Assistant Professor at Kansas State University.
10. Luyi Gui (with Drs. Atalay Atasu and Beril Toktay). Thesis title: Managing and optimizing decentralized networks with resource sharing. Graduated May 2013. Current position: Assistant Professor UC Irvine The Paul Merage School of Business.
11. Yaxian Li (with Dr. Nemhauser). Thesis title: Lower bounds for integer programming problems. Graduated May 2013. Current position: Operations Research Analyst at United Airlines.
12. Kael Stilp (with Dr. Keskinocak). Thesis topic: Network design and optimization. Expected graduation from the ACO program, December 2013.
13. Mallory Soldner (with Dr. Swann). Thesis topic: Design, improvement, and measurement of supply chain operations at large non-governmental . Expected graduation Summer 2014.
14. Isil Alev (with Drs. Atalay Atasu and Beril Toktay). Thesis topic: Operational perspectives on extended producer responsibility for durable and consumable goods. Expected graduation Summer 2014.
15. Melih Celik (with Dr. Keskinocak). Thesis topic: Dynamic and stochastic optimization in the context of disaster operations. Passed comprehensive examination in March 2011.

Masters thesis supervised

1. Zhaofu Cao. Thesis title: Container Trucking Efficiency Analysis. Georgia Tech National University of Singapore Dual Masters Degree received December 2003.
2. Kai Siang Lee. Thesis topic: A Review Of Transport Operations and Structures for CISCO Recall. Georgia Tech National University of Singapore Dual Masters Degree

received December 2004.

3. Wang Rui. Thesis topic: New strategies in online grocery delivery. Georgia Tech National University of Singapore Dual Masters Degree received graduation December 2007.

Undergraduate thesis supervised

1. Chris Coey (Applied Mathematics, Harvard University). Perishable food aid supply chains. Fall 2012.
2. Carl Dahl (Applied Mathematics, Harvard University). Facility location problem in service networks with self-routing users. Spring 2013.
3. Lily Hsiang (Applied Mathematics, Harvard University). Optimization of a breast-milk donation network in KwaZulu-Natal, South Africa. Spring 2013.
4. Youn Sang Richard Hwang (Applied Mathematics, Harvard University). On forecasting infrastructure developments and capital allocations in America's shale gas revolution. Spring 2013.

Independent study with graduate students

1. Cheng-Huang Hung (with Drs. Ahmed and Sokol). Inverse shortest path length problem. Fall 2001.
2. Demet Batur. Dynamic routing. Summer 2002.
3. Burak Karacik. Very large scale neighborhood search for the constrained TSP. Fall 2002.
4. Ozgun Caliskan Demirag (with Dr. Savelsbergh). Algorithms for a constrained cycle covering problem. Fall 2002 & Spring 2003.
5. Ali C. Begen (with Dr. Altunbasak). Multi-path selection algorithms for multiple description video streaming. Fall 2002 & Spring 2003.
6. Gizem Keysan. Very large scale neighborhood search in dynamic routing. Fall 2003.
7. Mario Cesar Velez. Dynamic routing algorithms and augmentation networks. Spring 2004.
8. Nelson Uhan. Network interdiction problem. Visiting student from MIT Operations Research Center during Spring 2006.
9. Chien-Hung Chen. Local search in machine scheduling. Spring 2007.
10. Ali Ekici (with Dr. Pinar Keskinocak). Real world scheduling and routing problems. Fall 2006 - Fall 2007.
11. Paul Kerl (with Drs. Pinar Keskinocak and Julie Swann). Humanitarian logistics. Fall 2007 - Spring 2008.
12. Monica Villarreal (with Drs. Pinar Keskinocak and Julie Swann). Humanitarian logistics. Fall 2008 - Summer 2009.
13. Melih Celik (with Dr. Julie Swann). Blood allocation for Zambia. Fall 2009 - 2010.
14. Mallory Soldner (with Dr. Julie Swann). Blood allocation for Zambia. Fall 2009 - 2010.

15. Qianyi Wang. Decentralized network games. Spring 2010.
16. Stefania Stefansdottir (with Dr. Julie Swann). Optimizing and evaluating health kit design. Fall 2010 - present.
17. Jiajin Yu (Computer Science, Georgia Tech). Atomic Congestion games. Spring 2011 - Spring 2012.
18. Alvaro Lorca (with Dr. Pinar Keskinocak). Long term infrastructure decisions for debris disposal and re-use operations. Fall 2011 - present.

Independent study with undergraduate students

1. Candis Head. Scheduling for ocean carriers. Fall 2005.
2. Nitza Arroya. Dynamic vehicle routing. Fall 2002.
3. Mike Holman. Efficient insertion algorithms for vehicle routing problems with time windows. Spring 2003.
4. Owen Carroll. Stochastic optimization for time share jets. Summer 2008.
5. Lawrence Lee. Supply chain optimization for the World Food Programme. Spring 2009.
6. Joy Peak. Supply chain optimization for the World Food Programme. Fall 2009.
7. James Wade. Supply chain optimization for the World Food Programme. Spring 2009 - Spring 2011.
8. Steven Grimes. Humanitarian Logistics. Spring 2010.
9. Chris Coey (Applied Mathematics, Harvard University). Multi-commodity flow models for water distribution in emergencies. Spring 2012.
10. Lily Hsiang (Applied Mathematics, Harvard University). Incentives in network optimization. Fall 2012.
11. Youn Sang Hwang (Applied Mathematics, Harvard University). Applications of OR in healthcare. Fall 2012.

(B) Curriculum development

1. *Advanced Optimization* (AMPH 121, Applied Mathematics, Harvard University), a graduate level course offered in Fall 2011 and 2012. The course covers advanced techniques for modeling and solving large and difficult optimization problems as well as the core theory and geometry of linear inequalities, integer programming and combinatorial optimization. Topics include geometry and theory of linear programming, solving large scale optimization problems using column and constraint generation, network flows, computational complexity, basic integer programming models and algorithms. Emphasis is on developing an understanding of the core theory and solution methods.
2. *Health and Humanitarian Applications of Operations Research and Management Science* (ISyE 8813 and ISyE 6320) (with Dr. Keskinocak), a graduate level project course offered in Fall 2008 and Spring 2011. The course had a set of research-oriented projects with different humanitarian and health organizations and a student team was assigned to each project. The overall goals of each team was (1) to do an analysis

and develop methods/insights that will be useful to the partner organization and have an impact in practice, and (2) to conduct research and write the findings for an academic publication.

3. *Heuristics for Optimization* (ISyE 8801), a Ph.D. level special topics course initially developed and offered in Spring 2003 and re-designed and offered in Fall 2006. The aim of the course was to give in depth knowledge on design of heuristics (new and old) for hard optimization problems. The implementation details were also emphasized through a semester long computational project students completed.
4. *Graduate Seminar in Combinatorial Auctions* (ISyE 8900) (with Drs. Keskinocak and Sokol), a Ph.D. level seminar course developed and offered in Fall 2002. The course aimed to introduce students to the field of combinatorial auctions and to explore the new and advanced research in this area, as well as improve the presentation skills of the participants.

(C) Teaching materials

1. Ö. Ergun, L. Gui, J. L. Heier Stamm, P. Keskinocak and J. L. Swann. “Supply Chain Coordination and Collaboration in Haiti: A Case Study of The Salvation Army’s Use of the UPS Trackpad,” teaching case and game. 2012. Based on our interaction in Haiti with the Salvation Army and UPS, the case describes humanitarian supply chain operations involving many different parties, such as government, military, private, and non-governmental organizations and individuals. Well coordinated interactions between parties can capitalize on synergies and lead to improved humanitarian outcomes, yet there are many barriers to cooperation. We document the benefits of a public-private partnership that formed in the aftermath of the January 2010 earthquake in Haiti. The partnership contributed to improved operations in one of the many camps for internally displaced persons. Motivated by this case study and our discussions with organizations active in the response to the earthquake, we introduce cooperative game theory models and explore the insights they provide toward facilitating coordination in future humanitarian operations.
2. M. Celik, W. Cao, N. Viljoen, Ö. Ergun and J.L. Swann, “MILK: A Network Expansion Model for the South African Breastmilk Reserve,” teaching case and game. 2012. The MILK Case Study is a by-product of an applied research project conducted for the benefit of South African Breastmilk Reserve (SABR). Given an established description of SABRs operations, current regional network and future goals, we describe the development of a national supply chain network. More specifically, the problem of deciding where to open facilities and the assignment of product flows between the facilities is explored. It is envisioned that this case study would be presented to a number of different audiences. The two primary target audiences were humanitarian practitioners and Operations Research (OR) students (at various levels). Firstly, we believe that the case study would be a useful tool to illustrate to humanitarian practitioners the problem solving approach and potential of OR techniques in humanitarian logistics problems. Secondly, the case study is an example to students of an OR application in a field where the objectives and trade-offs are

slightly different from conventional business. Understandably, these two audiences are diverse in terms of their problem solving paradigm, knowledge of OR and other quantitative techniques, experience in the humanitarian field and so on. It is thus impossible to design a one-size-fits-all case study. Instead a modular approach was followed, so that different modules of the case study can be presented as stand-alone case studies or in conjunction depending on the intention of the instructor, the audience and the length of time available.

3. M. Drake, Ö. Ergun, G. Karakus, P. Kerl, P. Keskinocak, J. Swann, M. Villarreal, “Humanitarian Response Planning at the Home Depot,” teaching case. (Third place, 2010 INFORMS Best Teaching Case Award) Motivated by real world problems generalized from a series of interviews with Home Depot’s disaster response team, the goal of this case study is to exemplify the application of operations research concepts, methodology and intuition to challenges faced in relief logistics, which may be different than the ones typically faced in the idealized commercial supply chain settings. Issues include unpredictable disasters of unpredictable magnitude that lead to unpredictable demand, the speed in which a supply chain must be constructed once a disaster is realized, the limited visibility of needs, and the need for dynamic decisions. The case has been used in the Supply Chain Module of the Master of Advanced Studies in Humanitarian Logistics and Management Program in University of Lugano, Switzerland (July 2009) and in ISYE 4803-Societal/Humanitarian Applications of OR/MS (Fall 2009) at Georgia Tech.
4. Ö. Ergun, J. L. Heier, P. Keskinocak, and J. Swann, “Lessons in Disaster Supply Chain Management from Waffle House Restaurants,” teaching case. (First runner-up, 2009 INFORMS Best Teaching Case Award) Natural and man-made disasters present an increasing challenge to the management of supply chains both for businesses and humanitarian response agencies. Sharing best practices enables the continued improvement of processes that can further impact lives and livelihoods in the event of a disaster. This case study highlights the experiences of Waffle House Restaurants, which has been nationally recognized for its response to hurricanes in the United States. It also includes questions that instructors or managers can use to help students or supply chain professionals develop analytical approaches to the challenges presented by disaster response. The case has been used in the Supply Chain Module of the Master of Advanced Studies in Humanitarian Logistics and Management Program at the University of Lugano, Switzerland (July 2009) and ISYE 4803-Societal/Humanitarian Applications of OR/MS (Fall 2009) at Georgia Tech.
5. Ö. Ergun, G. Karakus, P. Keskinocak, J. Swann, M. Villarreal. “Big Depot Hurricane Planning,” classroom game. This game provides a synthesis between contracting and allocating inventory under demand uncertainty. It has a table-top structure, starting with general information about the supply chain setting, conditions and operations; then, every step begins with some data and information that should be used to make decisions about expected issues in the exercises. Players

assume roles, which may well affect their incentives and priorities, and therefore the decisions they make. The game has been played in ISYE 6203-Transportation and Supply Chain Systems (Spring 2009) , ISYE 4803-Societal/Humanitarian Applications of OR/MS (Fall 2009) at Georgia Tech and in the Supply Chain Module of the Master of Advanced Studies in Humanitarian Logistics and Management Program in University of Lugano, Switzerland (July 2009).

(D) **Professional teaching**

1. *Distribution Network Design and Transportation Decisions*, Health and Humanitarian Logistics Professional Education Program, Georgia Tech, 2012-present.
2. *Supply Chain Optimization*, Executive Masters for Humanitarian Logistics Management, University of Lugano, Switzerland, 2011 - present.

IV. **SCHOLARLY ACCOMPLISHMENTS**

(A) **Books and parts of books**

Published

1. Ö. Ergun, E. Johnson, and K. Yao. (2006) An integrated model for on-demand air transportation planning. In V. S. Zeimpekis, G. M. Giaglis, C. D. Tarantilis and I. Minis (eds.), *Dynamic Fleet Management: Concepts, Systems, Algorithms & Case Studies* , Management Science (Production/Logistics) discipline, Springer-Verlag. (Refereed)
2. R.K. Ahuja, Ö. Ergun, J.B. Orlin, and A.B. Punnen. (2007) Very large-scale neighborhood search: theory, algorithms and applications. In T.F. Gonzalez (ed.), *Approximation Algorithms and Metaheuristics*, Computer & Information Science Series, Chapman & Hall, Boca-Raton, FL. (Invited)
3. R. Agarwal, Ö. Ergun, L. Houghtalen, and O. O. Ozener. (2006) Collaboration in Cargo Transportation. A. Chaovalitwongse and F. Roberts (eds.), *Optimization and Logistics Challenges in the Enterprise*. In press. Springer-Verlag. (Refereed)
4. R. K. Ahuja, D. S. Altner, Ö. Ergun, J. B. Orlin and A. Punnen. (2009) Very Large-Scale Neighborhood Search. To appear in *Handbook of Discrete and Combinatorial Mathematics* K. Rosen (ed.), CRC Press. (Invited and refereed)
5. D. S. Altner, R. K. Ahuja, Ö. Ergun, and J. B. Orlin. (2009) Very Large-Scale Neighborhood Search. In J.J. Cochran (ed.) *Wiley Encyclopedia of Operations Research and Management Science*. John Wiley & Sons. (Invited and refereed)
6. Ö. Ergun, G. Karakus, P. Keskinocak, J. Swann, and M. Villarreal. (2009) OR to Improve Disaster Supply Chain Management. In J.J. Cochran (ed.) *Wiley Encyclopedia of Operations Research and Management Science*. John Wiley & Sons. (Invited and refereed)
7. Ö. Ergun, L. Gui, L. Houghtalen, and O. O. Ozener. (2010) Shipper and carrier collaboration. In J.J. Cochran (ed.) *Wiley Encyclopedia of Operations Research and Management Science*. John Wiley & Sons. (Invited and refereed)

8. A. Ak, J.L. Heier, C.L. Wardell III, Ö. Ergun, P. Keskinocak, and J. Fitzimmons. (2010) Quantitative Models for Vaccine Procurement. To appear in D. Goldsman, P. Goldsman, and S. Kumar (eds.), *Humanitarian Logistics and Supply Chains: Case Studies and Research Issues*. (Invited and refereed)
9. S. Duran, Ö. Ergun, P. Keskinocak, J. Swann. (2012) Humanitarian Logistics: Advanced Purchasing and Pre-positioning of Relief Items. In J. H. Bookbinder (ed.) *Handbook of Global Logistics: Transportation in International Supply Chains*. (International Series in Operations Research and Management Science) Springer, New York, 181: 447-462. (Invited and refereed)
10. Ö. Ergun, G. Karakus, P. Kerl, P. Keskinocak, J. Swann, M. Villarreal and M. Drake. (2012) Disaster Response Planning in the Private Sector and the Role of Operations Research. In J. W. Herrmann (ed.) *Handbook of Operations Research for Homeland Security*. (International Series in Operations Research and Management Science) Springer, New York, 183: 197-217. (Invited and refereed)
11. M. Celik, Ö. Ergun, B. Johnson, P. Keskinocak, A. Lorca, P. Pekgun and J. Swann. (2012) Humanitarian Logistics. In P.B. Mirchandani (ed.) *New Directions in Informatics, Optimization, Logistics, and Production*. Tutorials in Operations Research INFORMS, Hanover, 18-49. (Invited and refereed)

(B) Refereed publications

Published papers in refereed journals

1. R.K. Ahuja, Ö. Ergun, J.B. Orlin, and A.B. Punnen. A survey of very large-scale neighborhood search techniques, *Discrete Applied Mathematics* 123, 75-102, 2002.
2. A.C. Begen, Y. Altunbasak, Ö. Ergun, and M.H. Ammar. A multi-path selection for multiple description video streaming over overlay networks. *EURASIP Signal Processing : Image Communication*. 20(1), 39-60, 2005.
3. Ö. Ergun and J.B. Orlin. Fast neighborhood search for the single machine total weighted tardiness problem. *Operations Research Letters*. 34 (1), 41-45, 2006.
4. Ö. Ergun, J.B. Orlin, and A. Steele-Feldman. Creating very large-scale neighborhoods out of smaller ones by compounding moves. *Journal of Heuristics*. 12 (1-2), 115-140, 2006.
5. Ö. Ergun and J.B. Orlin. A dynamic programming methodology in very large scale neighborhood search applied to the traveling salesman problem. *Discrete Optimization*. 3 (1), 78-85, 2006.
6. Ö. Ergun, G. Kuyzu, and M. Savelsbergh. The shipper collaboration problem. *Computers and Operations Research, Odysseus 2003 Special Issue*. 34 (6), 1551-1560, 2007.
7. Ö. Ergun, G. Kuyzu, and M. Savelsbergh. Reducing truckload transportation costs through collaboration. *Transportation Science*. 41, 206-221, 2007.
8. R. Agarwal, Ö. Ergun, J.B. Orlin, and C.N. Potts. Solving parallel machine scheduling problems with very-large scale neighborhood search. To appear in *Journal of*

Scheduling, 2007.

9. Y. Yao, Ö. Ergun, E. Johnson, W. Schultz, and J.M. Singleton. Strategic planning problems in fractional aircraft ownership programs. *European Journal of Operational Research* 189, 526-539, 2007.
10. M. Novak, Ö Ergun, and C.C. White. Pick-up and delivery with split loads. *Transportation Science* 42, 32-43, 2007.
11. R. Agarwal and Ö. Ergun. Ship scheduling and network design for cargo routing in liner shipping. *Transportation Science* 42(2) 175-196, 2008.
12. Ö. Özener and Ö Ergun. Allocating Costs in a Collaborative Transportation Procurement Network. *Transportation Science* 42(2) 146-165, 2008.
13. R. Agarwal and Ö. Ergun. Mechanism design for a multicommodity flow game in service network alliances. *Operations Research Letters* 36(5) 520-524, 2008.
14. N. Maciek, Ö. Ergun and C.C. White. An Empirical Study on the Benefit of Split Loads with the Pickup and Delivery Problem. *European Journal of Operational Research*, 198(3) 734-740, 2009.
15. Ö.Ergun, J. L. Heier, P. Keskinocak, and J. Swann. Waffle House Restaurants Hurricane Response: A Case Study. *International Journal of Production Economics* special issue on Improving Disaster Supply Chain Management, 126, 111-120, 2010.
16. D. Altner, Ö. Ergun and N. A. Uhan. On the Maximum Flow Network Interdiction Problem. *Operations Research Letters*, 38, 33-38, 2010.
17. R. Agarwal and Ö. Ergun. Network design and allocation mechanisms for carrier alliances in liner shipping. *Operations Research*, 58(6) 2010.
18. A. Ekici, Ö. Ergun, P. Keskinocak and M. G. Lagoudakis. Optimal job splitting on a multi-slot machine with applications in the printing industry. *Naval Research Logistics*, 57(3) 2010.
19. Ö. Ö.zener, Ö. Ergun, and M. Savelsbergh. Collaboration for Truckload Carriers. *Transportation Science*, 45(1) 2011.
20. D. Altner and Ö. Ergun. Rapidly Computing a Robust Minimum Capacity s-t Cut: A Case Study in Solving a Sequence of Maximum Flow Problems. *Annals of Operations Research*, 184(1) 2011.
21. L. Houghtalen, Ö. Ergun, and J. Sokol. Designing Mechanisms for the Management of Carrier Alliances. To appear in *Transportation Science*, 45(4), 465-482, 2011.
22. L. Gui, A. Atasu, Ö. Ergun and B. Toktay. Implementing Extended Producer Responsibility Legislation: A Multi-Stakeholder Case Analysis. Accepted *Journal of Industrial Ecology*, 2012.
23. Ö. Ö.zener, Ö. Ergun, and M. Savelsbergh. Allocating Cost of Service to Customers in Inventory Routing. Accepted *Operations Research*, 2012.
24. Ö.Ergun, L. Gui, J. L. Heier Stamm, P. Keskinocak and J. L. Swann. Improving Humanitarian Operations through Collaboration. Accepted *Production and Operations Management* special issue on Humanitarian Operations and Crisis Manage-

ment, 2013.

Submitted papers to refereed journals

25. L. Gui, A. Atasu, Ö. Ergun, and B. Toktay. Fair and Efficient Implementation of Collective Extended Producer Responsibility Legislation. Under first revision for *Management Science*, 2012.
26. J. L. Heier, Ö. Ergun, and J. Swann. Providing Information to Improve the Performance of Decentralized Logistics Systems. Submitted to *Operations Research*, 2012.

Publications in refereed conference proceedings

27. A.C. Begen, Y. Altunbasak, and Ö. Ergun. Multi-path selection for multiple description encoded video streaming. IEEE International Conference on Communications, Anchorage, AK, May 2003.
28. A.C. Begen, Y. Altunbasak, Ö. Ergun, and Mehmet A. Begen. Multi-path selection for real-time multiple description and layered encoded video streaming. IEEE International Conference on Computers and Communications, Antalya, Turkey, July 2003.
29. A.C. Begen, Y. Altunbasak, and Ö. Ergun. Fast heuristics for multi-path selection for multiple description encoded video streaming. IEEE International Conference on Multimedia and Expo, Baltimore, MD, July 2003.
30. Ö. Ergun, G. Kuyzu, and M. Savelsbergh. Collaborative Logistics: The Shipper Collaboration Problem. TRISTAN, Guadeloupe, June 2004.
31. Ö. Özener and Ö. Ergun. Collaborative Logistics: Cost allocation for the Shipper Collaboration Problem. Manufacturing and Service Operations Management, Atlanta, GA, June 2006.
32. R. Agarwal and Ö. Ergun. Designing Mechanisms for Sustainable Carrier Alliances in Transportation Networks. Proceedings of the Sixth Triennial Symposium on Transportation Analysis (TRISTAN IV), Phuket, Thailand, June 2007.
33. D. Altner and Ö. Ergun, Rapidly Solving an Online Sequence of Maximum Flow Problems with Extensions to Computing Robust Minimum Cuts. L. Perron and M. A. Trick (eds.). *Integration of AI and OR Techniques in Constraint Programming for Combinatorial Optimization Problems (CPAIOR) 2008*. Lecture Notes in Computer Science 5015, pp. 283-288, Springer 2008.
34. L. Gui and Ö. Ergun. Dual Payoffs, Core and a Collaboration Mechanism Based on Capacity Exchange Prices in Multicommodity Flow Games. C. Papadimitriou and S. Zhang (eds.). *Workshop on Internet and Network Economics (WINE) 2008*. Lecture Notes in Computer Science 5385, pp 61-69, Springer 2008.
35. Ö. Ergun, G. Karakus, P. Keskinocak, J. Swann, and M. Villarreal. Humanitarian Supply Chain Management - An Overview. C. Barnhart, U. Clausen, U. Lauther, and R. H. Möhring (eds). *Models and Algorithms for Optimization in Logistics Dagstuhl Seminar Proceedings*, 2009.

36. Ö. Ergun, J.A. Carbajal, P. Keskinocak, M. Stilp, M. Villarreal, Managing Debris Collection and Disposal Operations, Proceedings of the Seventh Triennial Symposium on Transportation Analysis (TRISTAN VII), Tromso, Norway, June 20-25, 2010.
37. N.M. Viljoen, W. Cao, M. Celik, Ö. Ergun, J. Swann. Keeping it simple in a data-sparse environment: The case of donor breastmilk demand and supply in South Africa. Proceedings of the 41st Annual Conference of the Operations Research Society of South Africa. Muldersdrift, South Africa. September 16-19, 2012.

(C) Other publications

Working papers

1. L. Houghtalen, Ö. Ergun, and J. Sokol. Fairness Considerations in Allocation Mechanisms for Carrier Alliances. Working paper, 2009.
2. Ö. Ergun, G. Kuyzu, and M. Savelsbergh. Bid price optimization for simultaneous truckload transportation auctions. Working paper, 2009.
3. J. A. Carbajal, K. Stilp, M. Villarreal, Ö. Ergun, and P. Keskinocak. Managing Debris Collection and Disposal Operations. Working paper, 2011.
4. R. Alvarenga, D. Slaton and J. Stone, and Ö. Ergun. Increasing Food Delivery Through Port Simulation and Overland Transportation Route Optimization. Working paper, 2011.
5. J. Wade, S. Aviles, E. Bah, M. Jimenez, L. Li, A. Morales, Ö. Ergun, and J. Swann. Global Humanitarian Supply Chain Improvements for the World Food Programme. Working paper, 2011.
6. K. Stilp and Ö. Ergun. Observations on Maximum Flow Network Interdiction. Working paper, 2011.
7. L. Gui and Ö. Ergun. Managing Decentralized Resource Sharing in Multicommodity Networks. Working paper, 2011.
8. W. Cao, Ö. Ergun, E. Johnson, L. Zhan, A. Daniels. Long-Term Crew Rostering and Integration in Fractional Airlines. Working paper, 2012.
9. L. Gui, A. Atasu, Ö. Ergun and B. Toktay. Design Incentives, Fairness and Cost Efficiency: A Network Perspective on Extended Producer Responsibility. Working paper, 2012.
10. J. Jopling, B. Ergun, Ö. Ergun, L. Harris, P. Keskinocak, H. Smalley, B. J. Pettitt, K. Yee, K. A. Delman. Collaboration for Understanding the Impact of Increased Duty hour Restrictions on Resident Scheduling. Working paper, 2012.

In Press

1. R. DesRoches, Ö. Ergun, and J. Swann. ‘Haiti’s Eternal Weight.’ Op-ed in New York Times, July 7, 2010.
2. Ö. Ergun, P. Keskinocak, and J. Swann. ‘Logistics ignored in disaster relief.’ Op-ed in Atlanta Journal-Constitution, Feb 3, 2010.
3. Ö. Ergun, P. Keskinocak, J. Swann, J.H. Stamm and M. Villarreal. How to Improve Humanitarian Logistics. Analytics, Winter, 31-34, 2010.

4. Ö. Ergun, P. Keskinocak, J. Swann, and M. Villarreal. Humanitarian Logistics: Uncertainty, Damaged Infrastructure, and Politics Highlight Top- 10 Challenges Facing Analysts during Disasters. *Analytics*, Spring, 31-34, 2009.
5. Ö. Ergun, P. Keskinocak, and J. Swann. Humanitarian Relief Logistics. *ORMS Today*, December 2007.
6. Ö. Ergun, P. Keskinocak, J. Swann, Global Red Alert: Humanitarian Logistics Research at the Stewart School of ISyE, Georgia Tech ISyE /Engineering Enterprise/, Summer 2007.
7. R. Agarwal and Ö. Ergun, Collaborative logistics in sea cargo industry. *ORMS Tomorrow*, Fall 2005.
8. Ö. Ergun. Tips for Embedding Operations Research into Transportation Management Software. *ORMS Today*, December 1998.

(D) Presentations

Invited seminars

1. Humanitarian Logistics: A case study on post-disaster debris operations, MIT, Civil and Environmental Engineering, May 2013.
2. Analyzing and Managing Service Networks with Self-routing Users, Northeastern University, Mechanical and Industrial Engineering, April 2013.
3. Analyzing and Managing Service Networks with Self-routing Users, Harvard University, Computer Science Colloquium, November 2012.
4. Humanitarian Logistics: A case study on post-disaster debris operations and solving multi-period network capacity expansion problems, Texas A&M, Industrial and Systems Engineering Seminar Series, November 2012.
5. Humanitarian Logistics: A case study on post-disaster debris operations and solving multi-period network capacity expansion problems, Rensselaer Polytechnic Institute, Industrial and Systems Engineering Seminar Series, May 2012.
6. Humanitarian Logistics: A case study on post-disaster debris operations and solving multi-period network capacity expansion problems, MIT, Operations Management Seminars, March 2012.
7. Humanitarian Logistics: A case study on post-disaster debris operations and solving multi-period network capacity expansion problems, Harvard University, Wildly Applied Mathematics Seminars, February 2012.
8. Managing Collaborative Networks with Capacity Exchange Mechanisms, Harvard University, Econ/CS Group Seminars, December 2011.
9. Humanitarian Logistics: A case study on post-disaster debris operations and solving multi-period network capacity expansion problems, Michigan University, IOE Department Seminar Series, November 2011.
10. Fair and Efficient Implementation of Collective Extended Producer Responsibility Legislation, Columbia University IEOR-DRO Distinguished Seminar Series, November 2010.

11. Humanitarian Logistics, Keynote at the Moore School Industry Summit, University of South Carolina, April 2010.
12. Applying lessons learned from Haiti to US earthquake, panelist at the FEMA-US Army Corps of Engineers Senior Leaders Symposium, Washington DC., April 2010.
13. Industrial Engineering for a Better World: Doing Good with Good IE, Plenary at the ACC Undergraduate Research Conference, April 2010.
14. Pre-positioning in Humanitarian Logistics, presented at the IQPC Defence Logistics Middle East Summit 2010, Abu Dhabi, UAE, January 2010.
15. System Transformations and Capability Development for Humanitarian Logistics, presented at the IQPC Defence Logistics Middle East Summit 2009, Abu Dhabi, UAE, January 2009.
16. Strategic Planning in Fractional Aircraft Ownership Programs, presented at the Operations Management Seminar Series, Sloan School of Management, MIT, Cambridge, MA, December 2006.
17. Carrier Alliances: How Should Carrier Alliances Design Service Networks and Allocate Capacity, Revenue, and Costs?, presented at the Decision and Information Technologies Seminar Series, R.H. Smith School of Business, University of Maryland, College Park, MD, September 2006.
18. Collaborative Logistics, presented at the Operations Research Center Seminar Series, MIT, Cambridge, MA, February 2004.
19. Collaborative Logistics, presented at the National University of Singapore, Singapore, November 2003.
20. Collaborative Logistics, presented at the Department of Industrial Engineering, Kasetsart University, Bangkok, Thailand, November 2003.
21. Very Large Scale Neighborhood Search for Solving Sequencing Problems. Local Search Society Lecture Series, City University, London, UK, February 2001.

Conference presentations (invited or sponsored sessions)

1. D. Nazzal, Ö. Ergun, P. Keskinocak, and J. Swann. Supply Chain Optimization: Food Aid Delivery in the Horn of Africa, Transportation Research Board Meeting (Invited Presentation), Washington, DC, January 13-17, 2013.
2. L. Gui and Ö. Ergun, A Robustness Analysis of a Capacity Exchange Mechanism in Multicommodity Networks under Demand Uncertainty. Workshop on Risk-aversion and Non-expected Utility Theories in Algorithmic Game Theory & Mechanism Design, 13th ACM Conference on Electronic Commerce. Valencia, Spain, June 2012.
3. M. Soldner and Ö. Ergun. Humanitarian Staff Reassignment: Designing Mechanisms to Ensure Equity and Balance Trade-offs in Individual and Centralized Preferences. Workshop on Women in Industrial Engineering Academia. Istanbul, Turkey. May 30 - June 2, 2012.
4. L. Gui, A. Atasu, Ö. Ergun, and B. Toktay. Design Incentives and Cost Efficiency: A Network Perspective on Extended Producer Responsibility. MSOM Annual Conference, New York, June 2012.

5. L. Gui, A. Atasu, Ö. Ergun, and B. Toktay. Fair and Efficient Implementation of Collective Extended Producer Responsibility Legislation. MSOM Special Interest Group Conference in Sustainable Operations. Columbia University, June 2012.
6. L. Gui, A. Atasu, Ö. Ergun, and B. Toktay. Fair and Efficient Implementation of Collective Extended Producer Responsibility Legislation. ARCS Fourth Annual Research Conference, Yale University Center for Business and Environment, May 2012.
7. L. Gui, A. Atasu, Ö. Ergun, and B. Toktay. Fair and Efficient Implementation of Collective Extended Producer Responsibility Legislation. Annual POMS conference, Chicago, IL, April 2012.
8. I. Alev, A. Atasu, Ö. Ergun, and B. Toktay. Extended Producer Responsibility for Pharmaceuticals. Annual POMS conference, Chicago, IL, April 2012.
9. L. Gui, A. Atasu, Ö. Ergun, and B. Toktay. Fair and Efficient Implementation of Collective Extended Producer Responsibility Legislation. INFORMS Annual Meeting, Charlotte, NC, November 2011.
10. M. Stilp, Ö. Ergun, P. Keskinocak Management of Debris Operations. INFORMS Annual Meeting, Charlotte NC, November 2011.
11. M. Celik, Ö. Ergun and P. Keskinocak, The Debris Clearance Problem with Incomplete Information, INFORMS Annual Meeting, Charlotte NC, November 2011.
12. M. Celik, W. Cao, N. Viljoen, Ö. Ergun and J.L. Swann, Network Expansion Model for the South African Breastmilk Reserve, INFORMS Annual Meeting, Charlotte NC, November 2011.
13. W. Cao, Ö. Ergun, E. Johnson, L. Zhan, A. Daniels. Long-Term Crew Rostering and Integration in Fractional Airlines. INFORMS Annual Meeting 2011, Charlotte NC, November 2011.
14. M. Soldner and Ö. Ergun. World Food Programme Supply Chain Assessment. Georgia Tech Research and Innovation Conference (GTRIC). Atlanta, GA. February, 2011.
15. M. Villarreal, M. Drake, Ö. Ergun, G. Karakus, P. Kerl, P. Keskinocak, and J. Swann. A Leader Home Improvement Retailer Commitment to Disaster Response. INFORMS, Austin, TX, November 2010.
16. J. Heier Stamm, Ö. Ergun, P. Keskinocak, and J. Swann. Coordination and Collaboration: Supply Chain Challenges in Haiti. INFORMS, Austin, TX, November 2010.
17. M. Stilp, A. Carbajal, Ö. Ergun, P. Keskinocak, and M. Villarreal. Debris Operations. INFORMS, Austin, TX, November 2010.
18. M. Stilp, Ö. Ergun, and P. Keskinocak. Over Restriction of Network Expansion Big M Constraints. INFORMS, Austin, TX, November 2010.
19. W. Cao, E. Johnson, and Ö. Ergun. Crew Rostering in Fractional Airlines. INFORMS, Austin, TX, November 2010.

20. L. Gui, A. Atasu, Ö. Ergun, and B. Toktay. Fair and Efficient Implementation of Collective Extended Producer Responsibility Legislation. INFORMS, Austin, TX, November 2010.
21. J. Wade, S. Aviles, E. Bah, M. Jimenez, L. Li, A. Morales, Ö. Ergun, and J. Swann. Global Humanitarian Supply Chain Improvements for the World Food Programme. INFORMS, Austin, TX, November 2010.
22. J. Stone, R. Alvarenga, D. Slaton and Ö. Ergun. Increasing Food Delivery Through Port Simulation and Overland Transportation Route Optimization. INFORMS, Austin, TX, November 2010.
23. M. Celik, Ö. Ergun, M. Soldner, and J. Swann. Policies for Blood Allocation in Developing Countries. INFORMS, Austin, TX, November 2010.
24. J. Heier Stamm, Ö. Ergun, N. Serban, and J. Swann. Scarce Resource Allocation in Humanitarian Logistics Systems with Individual Decision Making. INFORMS, Austin, TX, November 2010.
25. Ö. Ergun, Overall findings of the Civil and Environmental Engineering related grants. NSF Haiti RAPIDS and Research Needs Workshop. Arlington, VA, September 2010.
26. Ö. Ergun, J.A. Carbajal, P. Keskinocak, M. Stilp, M. Villarreal. Managing Debris Collection and Disposal Operations, Seventh Triennial Symposium on Transportation Analysis (TRISTAN VII), Tromso, Norway, June 2010.
27. L. Gui, A. Atasu, Ö. Ergun, and B. Toktay. Fair and Efficient Implementation of Collective Extended Producer Responsibility Legislation. Behavioral and Quantitative Game Theory: Conference on Future Directions. Newport Beach, CA 2010.
28. B. Toktay, A. Atasu, Ö. Ergun, and L. Gui. Fair and Efficient Implementation of Collective Extended Producer Responsibility Legislation. Operations Research for the Public Interest Conference, Palo Alto, CA, June 2010.
29. Ö. Ergun, J. A. Carbajal, K. Stilp, M. Villarreal and P. Keskinocak. Managing Debris Collection and Disposal Operations. DHS Workshop on Grand Challenges in Modeling, Simulation, and Analysis for Homeland Security, Arlington, VA, March 2010.
30. Ö. Ergun, J. L. Heier, P. Keskinocak, and J. Swann. Design and Optimization of Agent-Based Emergency Supply Chains. DHS Workshop on Emergency Management: Incident, Resource, and Supply Chain Management, Irvine, CA, November 2009.
31. J. Swann, Ö. Ergun, and P. Keskinocak. When Disaster Strikes: Lessons from Emergency Supply Chains of Industry and NGOs. Decision Sciences Institute Annual Conference, New Orleans, LA, November 2009.
32. J. A. Carbajal, M. Villarreal, Ö. Ergun, P. Keskinocak, Debris Clearance During Disaster Response Operations, INFORMS Annual Conference, San Diego, CA, October 2009.
33. J. L. Heier Ö. Ergun, P. Keskinocak, and J. Swann. Waffle House Restaurants

- Hurricane Response: A Case Study, INFORMS Annual Conference, San Diego, CA, October 2009.
34. Ö. Ergun, P. Keskinocak, and J. Swann, Humanitarian Logistics - An Overview, INFORMS Annual Conference, San Diego, CA, October 2009.
 35. L. Houghtalen, Ö. Ergun, and J. Sokol. Designing Fair Allocations for Carrier Alliances, INFORMS Annual Conference, San Diego, CA, October 2009.
 36. Ö. Ergun and L. Gui, On a Collaborative Mechanism based on Exchange Prices in Multicommodity Flow Networks, INFORMS Annual Conference, San Diego, CA, October 2009.
 37. J. L. Heier, Ö. Ergun, and J. Swann. Locating Humanitarian and Health Care Facilities in Systems with Self-routing Users, INFORMS Annual Conference, San Diego, CA, October 2009.
 38. J. Wade, S. Aviles, E. Bah, Ö. Ergun, M. Jimenez, L. Li, A. Morales, Supply Chain Optimization for the World Food Programme, INFORMS Annual Conference, San Diego, CA, October 2009.
 39. O. Ö. Özener, Ö. Ergun, and M. Savelsbergh, Collaboration for Truckload Carriers, INFORMS Annual Conference, San Diego, CA, October 2009.
 40. L. Gui and Ö. Ergun, Design of a Collaboration Mechanism based on Capacity Exchange Prices in Multicommodity Flow Networks, International Symposium on Mathematical Programming, Chicago, August 2009.
 41. K. Stilp, D. S. Altner, Ö. Ergun, Combinatorial Results for Network Interdiction, International Symposium on Mathematical Programming, Chicago, August 2009.
 42. Ö. Ergun, Humanitarian Logistics - An Overview, Dagstuhl Seminar on Models and Algorithms for Optimization in Logistics, Wadern, Germany, June 2009.
 43. Ö. Ergun, J. A. Carbajal, P. Keskinocak, A. Siddhanthi, and M. C. Villarreal, Debris Management Operations, Odysseus 2009, Cesme, Turkey, May 2009.
 44. D. S. Altner, Ö. Ergun and N. A. Uhan, Separating Valid Inequalities for Cardinality Maximum Flow Network Interdiction, INFORMS Computing Society Conference, Baltimore, MD, January 2009
 45. L. Gui and Ö. Ergun. Dual Payoffs, Core and a Collaboration Mechanism Based on Capacity Exchange Prices in Multicommodity Flow Games. 4th WINE (Workshop on Internet and Network Economics), Shangai, China, December 2008.
 46. Ö. Ergun, M. Drake, J. Heier, P. Kerl, P. Keskinocak, and J. Swann. When Disaster Strikes: Lessons from Logistics at Home Depot and Waffle House. Meeting on: Improving Disaster Supply Chain Management: Key supply chain factors for humanitarian relief. Stephenson Disaster Management Institute, and ISDS Department of Louisiana State University, Baton Rouge, LA, November 2008.
 47. L. Houghtalen, Ö. Ergun, and J. Sokol. Designing Robust Allocation Methods for Carrier Alliances DSI Annual Meeting, Baltimore, MD, November 2008.
 48. K. Stilp and Ö. Ergun. Column generation for cooperative games. ARC2, Algorithms and Randomness Center, Georgia Institute of Technology, Atlanta, GA,

October 2008.

49. F. Qian, Ö. Ergun, W. Hall, and E. A Scenario Based Approach for Scheduling in a Fractional Ownership Program, INFORMS Annual Conference, Washington, DC, October 2008.
50. Ö. Ergun, Role of Operational Research in Health Care and Development Assistance for Least Developed Countries: Insights and Panel Discussion , INFORMS Annual Conference, Washington, DC, October 2008.
51. Ö. Ergun, S. Butt, O. Carroll, E. Sarver, J. Stowe, and J. Zhang. Procuring Transportation for US Food Aid, INFORMS Annual Conference, Washington, DC, October 2008.
52. D. S. Altner, Ö. Ergun and N. A. Uhan, Separating Valid Inequalities for Cardinality Maximum Flow Network Interdiction, INFORMS Annual Conference, Washington, DC, October 2008.
53. J. L. Heier, Ö. Ergun, and J. Swann. Optimizing Emergency Systems with Self-Routing Users. INFORMS Annual Conference, Washington, DC, October 2008.
54. D. Altner and Ö. Ergun. Rapidly solving a sequence of online maximum flow flow problems with extensions to computing robust minimum cuts. CPAIOR, Paris, France, May 2008.
55. Ö. Ergun, M. Drake, J. Heier, P. Kerl, P. Keskinocak, and J. Swann. When Disaster Strikes: Lessons from Logistics at Home Depot and Waffle House. INFORMS Practice Conference, Baltimore, MD, April 2008.
56. J. L. Heier, Ö. Ergun, and J. Swann. Optimizing Emergency Systems with Self-Routing Users. INFORMS Optimization Society Conference, Atlanta, GA, March 2008.
57. O. Ö. Özener, Ö. Ergun, and M. Savelsbergh. Allocating Costs in Inventory Routing Problem. INFORMS, Seattle, WA, November 2007.
58. M. Novak, Ö. Ergun, and C.C. White. Effects on Benefit of Split Loads for the Pickup and Delivery Problem. INFORMS, Seattle, WA, November 2007.
59. L. Houghtalen, Ö. Ergun, and J. Sokol. Fairness Considerations in Allocation Mechanisms for Carrier Alliances. INFORMS, Seattle, WA, November 2007.
60. J. Heier, Ö. Ergun, and J. Swann. Incorporating Behavior in Decentralized Facility Location Problems. INFORMS, Seattle, WA, November 2007.
61. R. Agarwal and Ö. Ergun. Liner Shipping Alliances and the Theory of the Core. INFORMS, Seattle, WA, November 2007.
62. Ö. Ergun and R. Agarwal. Network Design and Allocation Mechanisms for Carrier Alliances in Liner Shipping. INFORMS, Seattle, WA, November 2007.
63. A. Ekici, Ö. Ergun, P. Keskinocak, and M.G. Lagaoudakis. Optimal Job Splitting on a Multi-slot Machine with Applications in the Printing Industry. INFORMS, Seattle, WA, November 2007.
64. A. Ak, J.L. Heier, C.L. Wardell III, Ö. Ergun, P. Keskinocak, and J. Fitzimmons. Quantitative Models for Vaccine Procurement. INFORMS, Seattle, WA, November

- 2007.
65. D. Altner and Ö. Ergun. The Maximum Flow Reoptimization Problem. INFORMS, Seattle, WA, November 2007.
 66. G. Kuyzu, Ö. Ergun, and M. Savelsbergh. Bidding Algorithms for Simultaneous Transportation Procurement Auctions. ROUTE 2007, Jekyll Island, GA, May 2007.
 67. D. Altner, Ö. Ergun, and N. Uhan. Local Search in Maximum Flow Network Interdiction. INFORMS, Pittsburgh PA, November 2006.
 68. R. Agarwal and Ö. Ergun. Mechanism Design for Sustainable Alliances Among Sea Carriers. INFORMS, Pittsburgh, PA, November 2006.
 69. L. Houghtalen, Ö. Ergun, and J. Sokol. Designing Membership and Allocation Mechanisms for Air Cargo Alliances. INFORMS, Pittsburgh, PA, November 2006.
 70. Y. Yao and Ö. Ergun, and E. Johnson. Scheduling And Decision Support in The Time-Share Air Transportation. INFORMS, Pittsburgh, PA, November 2006.
 71. O. Ö. Özener and Ö. Ergun. Allocating Costs of a Collaboration in Transportation Procurement in a Multi Carrier Environment. INFORMS, Pittsburgh, PA, November 2006.
 72. G. Kuyzu, Ö. Ergun, and M. Savelsbergh. Bidding Algorithms for Simultaneous Transportation Procurement Auctions. INFORMS, Pittsburgh, PA, November 2006.
 73. D. Altner, Ö. Ergun, and N. Uhan. Local Search in Maximum Flow Network Interdiction. International Symposium on Mathematical Programming, Rio De Janeiro, August 2006.
 74. R. Agarwal and Ö. Ergun. Mechanism Design for Sustainable Alliances Among Sea Carriers. INFORMS, Pittsburgh, PA, November 2006.
 75. D. Altner, Ö. Ergun, and N. Uhan. Local Search in Maximum Flow Network Interdiction. INFORMS, Pittsburgh PA, November 2006.
 76. L. Houghtalen, Ö. Ergun, and J. Sokol. Designing Membership and Allocation Mechanisms for Air Cargo Alliances. INFORMS, Pittsburgh, PA, November 2006.
 77. Y. Yao and Ö. Ergun, and E. Johnson. Scheduling And Decision Support in The Time-Share Air Transportation. INFORMS, Pittsburgh, PA, November 2006.
 78. O. Ö. Özener and Ö. Ergun. Allocating Costs of a Collaboration in Transportation Procurement in a Multi Carrier Environment. INFORMS, Pittsburgh, PA, November 2006.
 79. G. Kuyzu, Ö. Ergun, and M. Savelsbergh. Bidding Algorithms for Simultaneous Transportation. INFORMS, Pittsburgh, PA, November 2006. Procurement
 80. R. Agarwal and Ö. Ergun. Optimization Problems and Computational Challenges in Ship Scheduling and Containerized Cargo Routing. DIMACS and ExxonMobil Workshop on Computational Optimization and Logistics Challenges in the Enterprise, Annandale, NJ, April 2006.
 81. Ö. Ergun. Do's and Do not's of NSF Grant Proposals. INFORMS, San Francisco, CA, November 2005.

82. Fei Qian and Ö. Ergun. A Network Design Game with Fixed and Variable Edge Costs. INFORMS, San Francisco, CA, November 2005.
83. M. Novak, Ö Ergun, and C.C. White. Pick-up and Delivery with Split Loads. INFORMS, San Francisco, CA, November 2005.
84. L. Houghtalen, Ö Ergun and J. Sokol. Collaborative Logistics in the Air Cargo Industry. INFORMS, San Francisco, CA, November 2005.
85. Y. Yao, Ö. Ergun, and E. Johnson. An Integrated Scheduling Model in Fractional Airlines Operations. INFORMS, San Francisco, CA, November 2005.
86. G. Kuyzu, Ö. Ergun, and M. Savelsbergh. Transportation Procurement Based on Auctions. INFORMS, San Francisco, CA, November 2005.
87. Ö. Özener and Ö Ergun. Cost Allocation Mechanisms for a Shippers' Collaboration Network. INFORMS, San Francisco, CA, November 2005.
88. R. Agarwal and Ö. Ergun. Ship Routing and Network design for the Sea Cargo Industry. INFORMS, San Francisco, CA, November 2005.
89. Ö. Ergun, J.B. Orlin, and A. Steele-Feldman. Creating Very Large Scale Neighborhoods out of Smaller Ones by Compounding Moves: A Case Study on the Vehicle Routing Problem. INFORMS Computing Society Conference, Annapolis, MD, January 2005.
90. Y. Yao, Ö. Ergun, and E. Johnson. A Scheduling Problem in Fractional Ownership Airlines. INFORMS, Denver, CO, October 2004.
91. Ö. Ergun, M. Novak, and C. White. Pickup and Delivery Problem with Split Loads. INFORMS, Denver, CO, October 2004.
92. R. Agarwal and Ö. Ergun. Collaborative Logistics in Sea Cargo Industry. INFORMS, Denver, CO, October 2004.
93. Ö. Ergun, G. Kuyzu, and M. Savelsbergh. Collaborative Logistics: The Shipper Collaboration Problem. INFORMS, Denver, CO, October 2004.
94. Ö. Ergun, G. Kuyzu, and M. Savelsbergh. Collaborative Logistics: The Shipper Collaboration Problem. INFORMS, Atlanta, GA, October 2003.
95. R. Agarwal, Ö. Ergun, J.B. Orlin, and C.N. Potts. Solving Scheduling Problems with Very Large Scale Neighborhood Search. INFORMS, Atlanta, GA, October 2003.
96. S. Ahmed, Ö. Ergun, C.H. Hung, and J. Sokol. Solving the Inverse Shortest Path Length Problem. INFORMS, Atlanta, GA, October 2003.
97. R. Agarwal, Ö. Ergun, J.B. Orlin, and C.N. Potts. Improvement Graphs in Large-Scale Neighborhood Search: A Case Study on Scheduling. EURO - INFORMS Joint International Meeting, Istanbul, Turkey, July 2003.
98. Ö. Ergun, G. Kuyzu, and M. Savelsbergh. Collaborative Logistics: The Shipper Collaboration Problem. Odysseus, Second International Workshop on Freight Transportation and Logistics, Palermo, Sicily, Italy, May 2003.
99. Ö. Ergun and J.B. Orlin. Very Large Scale Neighborhoods Induced from Dynamic Programs. INFORMS, San Jose, CA, November 2002.

100. Ö. Ergun, and J.B. Orlin. Large Scale Neighborhood Search for Routing and Scheduling. IFORS, Edinburgh, Scotland, July 2002.
101. Ö. Ergun, and J.B. Orlin. A Large Scale Neighborhood Search Approach for Solving Routing and Scheduling Problems, presented at The Local Search Workshop, London, UK, April 2002.
102. Ö. Ergun, J.B. Orlin, and A. Steele-Feldman. Very Large-Scale Neighborhood Search Heuristic for the VRP with Capacity and Distance Restrictions. INFORMS, Miami, FL, November 2001.
103. Ö. Ergun, and J.B. Orlin. Very Large Scale Neighborhood Search Using DP State Space Reductions. INFORMS meeting, San Antonio, TX, November 2000.
104. Ö. Ergun, and J.B. Orlin. New Polynomial Time Methods for Searching Exponentially Large Neighborhoods for Combinatorial Optimization Problems. International Symposium on Mathematical Programming, Atlanta, GA, August 2000.
105. R.K. Ahuja, Ö. Ergun, and J.B. Orlin. Very Large Scale Neighborhood Search Algorithms for Set Partitioning Problems. INFORMS, Philadelphia, PA, November 1999.
106. Ö. Ergun, R.M. Freund, and J.B. Orlin. Inverse Optimization. INFORMS, Seattle, WA, October 1998.

(E) Patent applications and invention disclosures

1. A.C. Begen, Y. Altunbasak, and Ö Ergun. Multimedia transport protocol: Optimal multi-path selection for multiple description encoded streaming. Filed in the USPTO (GTRC ID: 2739), August 2002.

V. SERVICE

(A) Professional contributions

Service in professional organizations

1. Vice President of Membership and Professional Recognition, INFORMS Board of Directors, 2011 - 2013.
2. President, INFORMS Section on Public Programs, Service and Needs, 2013.
3. President-elect, INFORMS Section on Public Programs, Service and Needs, 2012.
4. Member. Prize committee, INFORMS Doing Good with Good OR Student Paper Competition, 2010.
5. Co-chair. Prize committee, INFORMS Doing Good with Good OR Student Paper Competition, 2009.
6. Co-chair. Committee for establishing the INFORMS Doing Good with Good OR Student Paper Competition, 2008.
7. Senior VP-Communications. INFORMS Forum for Women in OR/MS (WORMS), since Spring 2008.

8. Junior VP-Communications. INFORMS Forum for Women in OR/MS (WORMS), Spring 2007 - 2008.
9. Judge MSOM Student Paper Competition, INFORMS, 2007.
10. Volunteer for the INFORMS Public Awareness Committee (PAC) plan to reach out and introduce high school math teachers to the history and concepts of operations research, 2002.

Editorial

1. Associate editor, Operations Research, Policy Modeling and the Public Sector Area, 2012 - present.
2. Associate editor, Surveys in Operations Research and Management Science, 2013 - present.
3. Area editor, Computers & Industrial Engineering, Logistics and Inventory Systems Area, 2012 - present.
4. Associate editor, MSOM special issue on Environment, 2011 - 2012.
5. Co-editor with P. Keskinocak and J. Swann. INTERFACES: Special Issue on Humanitarian Applications: Doing Good with Good OR, 2009-2010.

Conference/cluster/session organization

1. Co-chair. Health and Humanitarian Logistics Conference, Malaysia Institute of Supply Chain Innovation, Kuala Lumpur, Malaysia, June 2013.
2. Co-chair. Health and Humanitarian Logistics Conference, KLU Logistics University, Hamburg, Germany, March 2012.
3. Co-chair. Health and Humanitarian Logistics Conference, Georgia Institute of Technology, Atlanta, GA, March 2011.
4. Co-chair. Sponsored cluster for Section on Public Programs, Service and Needs, INFORMS, San Antonio, TX, November 2010.
5. Member. Steering committee for the NSF Haiti RAPIDs and Research Needs Workshop, Washington DC., September 2010.
6. Co-chair. Health and Humanitarian Logistics Conference, Georgia Institute of Technology, Atlanta, GA, March 2010.
7. Co-organizer. Invited cluster on Humanitarian Relief and Disaster Preparedness, INFORMS, San Diego, CA, October 2009.
8. Co-chair. Humanitarian Logistics Conference, Georgia Institute of Technology, Atlanta, GA, February 2009.
9. Co-organizer. Invited cluster on Humanitarian Relief and Disaster Preparedness, INFORMS, Washington D.C., October 2008.
10. Organizer. Collaborative Logistics Workshop. Atlanta, GA, September 2007.
11. Member of the organizing committee and Chair for the sponsored sessions. INFORMS, Atlanta, GA, November 2003.

12. Cluster chair. Large Scale Optimization. EURO/INFORMS joint International Meeting, Istanbul, Turkey, July 2003.
13. Session chair/co-chair for various sessions in all INFORMS meetings since 2003.

Board memberships

1. Advisory Board member, Computational Science and Engineering Program, Institute for Applied Computational Science, Harvard University, 2011 - present.

Referee for technical journals and conferences

1. Annals of Operations Research
2. Central European Journal of Operational Research
3. Discrete Applied Mathematics
4. Discrete Optimization
5. IEEE INFOCOM
6. IIE Transactions
7. INFORMS Journal on Computing
8. Journal of Heuristics
9. Journal of Scheduling
10. Management Science
11. Manufacturing and Service Operations Management
12. Naval Research Logistics
13. Networks
14. Journal of the Operational Research Society
15. Operations Research
16. Operations Research Letters
17. Transportation Science

Reviewer for funding organizations

1. NordForsk, Sustainable Freight and Logistics in a Nordic Context Program.
2. National Science Foundation, Operations Research, Service Enterprise Engineering, Education, and International Collaboration Programs.

Memberships

1. Member, INFORMS, 1997 - present.
2. Member, Mathematical Programming Society, 2000 - present.

(B) Campus contributions

Institute activities

1. Organizer, Institute for Applied Computational Science Computational Challenge, Harvard University, 2012.
2. Member, College of Engineering, Promotion, Tenure and Critical Review Committee, 2008-2010.

Departmental activities

1. Co-founder and co-director, Humanitarian Logistics Research Center at the Supply Chain and Logistics Institute, Georgia Tech, March 2007-present.
2. Member, ISyE Department Chair Search Committee, June 2010 - 2011.
3. Member, ISyE Awards Committee, 2009 - 2011.
4. Chair, ISyE Mentoring Committee, January 2009 - 2010.
5. Member, ISyE Ph.D. comprehensive examination committee in Optimization, 2008-2009.
6. Chair, ISyE Graduate Committee, 2006-2007.
7. Member, ISyE Graduate Committee, 2005-2007 and 2009 - present.
8. Developed and organized ISyE Logistics and Supply Chain Seminar series, Spring 2005.
9. Organized and ran Collaborative Logistics group meetings and seminars, 2004-2005.
10. Member, Ph.D. comprehensive examination committee in Algorithms, Combinatorics, and Optimization (joint program with CoC and Math), 2004 and 2009.
11. Member, ISyE Ph.D. comprehensive examination committee in Manufacturing and Logistics, 2002-2003.
12. Coordinator, MIT Operations Research Center seminar series, Fall 1998.
13. Vice-president, MIT INFORMS student chapter, 1997-1998.

Doctoral thesis committees

1. Ahmet Keha (ISyE), 2003.
2. Cheng-Huang Hung (ISyE), 2003.
3. Kai Huang (ISyE), 2004.
4. Wuthichai Wongthatsanekorn (ISyE), 2005.
5. Brian Lewis (ISyE), 2005.
6. Maciek Novak (ISyE), 2005.
7. Ali C. Begen (ECE), 2006.
8. Gutekin Kuyzu (ISyE), 2006.
9. Burak Karacik (ISyE), 2006.
10. Ozgun Caliskan Demirag (ISyE), 2007.
11. Amandeep Parmar (ISyE), 2007.
12. Lori Houghtalen (ISyE), 2007.
13. Richa Agarwal (ISyE), 2007.
14. Kathe Yao (ISyE), 2007.
15. Steve Morris (ISyE), 2007.
16. Umut Demircin (ECE), 2008.
17. Doug Altner (ISyE), 2008.
18. Orsan Ozener (ISyE), 2008.

19. Emrah Uyar (ISyE), 2008.
20. Michael Hewit (ISyE), 2009.
21. Gizem Keysan (ISyE), 2009.
22. Ali Ekici (ISyE), 2009.
23. Kael Stilp (ACO), 2009.
24. Fei Qian (ACO), 2010.
25. Jenifer Heier (ISyE), 2010.
26. Anotonio Carbajal, 2011.
27. Luyi Gui (ISyE), 2013.
28. Yaxian Li (ISyE), 2013.
29. Marie-ve Rancourt (HEC Montral), 2013.

VI. GRANTS AND CONTRACTS

(A) As principal or co-principal investigator

Ongoing

1. United Nations World Food Program, Logistics Development Unit (\$39,674 August 2012 - May 2013). Supply Chain Optimization and Key Performance Indicators. PI: Ö. Ergun.
2. Air Force Office Of Scientific Research Program (\$ 520,804 April 2012 - March 2015). New Approaches for Very Large-Scale Integer Programming. PI: G. Nemhauser, Co-PI: Ö. Ergun.
3. NSF (CMMI \$412,268.00 July 2010 - June 2013). Fair and Efficient Implementation of Collective Extended Producer Responsibility Legislation. PI: B. Toktay, Co-PIs: A. Atasu, and Ö. Ergun.
4. NSF (CMMI \$330,00 April 2010 - March 2014). Managing Debris Collection and Disposal Operations. PI: Ö. Ergun, Co-PI: P. Keskinocak.
5. Grant from the Zalesky family (\$350,000 January 2010 - January 2015). Humanitarian Logistics. PIs: Ö. Ergun, P. Keskinocak, J. Swann.
6. Citation Shares (\$50,000 per year since 2002). Scheduling for Time-Shared Jets. PI: Dr. E. Johnson, Co-PI: Ö. Ergun.

Completed

7. Gift from Speedwell Foundation (\$ 325,000 September 2011 - August 2012). Reducing Seismic Risks for Developing Countries in the Caribbean (CHAMPS). PI: R. DesRoches Co-PIs: Ö Ergun, S. French, D. Frost, P. Keshinocak, L. Kovalchick, K. Kurtis, P. Pekgun, G. Rix, J. Swann, A., Chakos Other Investigators: B. Lynch, R. Uwaifo, P. Webster.
8. Centers for Disease Control and Prevention (\$52,805 September 2011 - July 2012). Evaluation of Health Kits. PI: J. Swann, Co-PI: Ö. Ergun

9. Support for the 2012 Health and Humanitarian Logistics Conference (\$62,500 September 2011 - August 2012) PIs: Ö. Ergun, P. Keskinocak, J. Swann.
 - UPS Foundation (\$25,000), Focus Humanitarian Assistance (\$5,000), SAIC (\$5,000), Northrop Grumman (\$2,500)
 - Georgia Tech: Executive Vice President for Research (\$10,000), Health Systems Institute (\$5,000), College of Engineering (\$5,000), Institute for Leadership and Entrepreneurship (\$5,000), Distance Learning and Professional Education (contribution in kind).
10. Support for the 2011 Health and Humanitarian Logistics Conference (\$62,500 September 2010 - August 2011) PIs: Ö. Ergun, P. Keskinocak, J. Swann.
 - UPS Foundation (\$25,000), Focus Humanitarian Assistance (\$5,000), SAIC (\$5,000), Northrop Grumman (\$2,500)
 - Georgia Tech: Executive Vice President for Research (\$10,000), Health Systems Institute (\$5,000), College of Engineering (\$5,000), Institute for Leadership and Entrepreneurship (\$5,000), Distance Learning and Professional Education (contribution in kind).
11. Grant from Georgia Tech Distance Learning and Professional Education (\$50,000 August 2010 - June 2011). Teaching Material and Course Development in Humanitarian Logistics. PIs: Ö. Ergun, P. Keskinocak, J. Swann.
12. NSF (RAPID \$38,800 April 2010 - March 2011). RAPID: Earthquake Debris Management in Haiti: Data-Driven Decision-Support. National Science Foundation PI: Ö. Ergun, Co-PIs: R. DesRoches, P. Keskinocak.
13. Grant from Andrea Laliberte and Coach Inc (\$74,000 for May 2009 - June 2011). Humanitarian Logistics. PIs: Ö. Ergun, P. Keskinocak, J. Swann.
14. United Nations World Food Program (\$14,000 2010). Supply Chain Optimization. PI: Ö. Ergun.
15. Support for the 2010 Health and Humanitarian Logistics Conference (\$55,500 September 2009 - August 2010) PIs: Ö. Ergun, P. Keskinocak, J. Swann.
 - UPS Foundation (\$10,000), Kuehne & Nagel (\$5,000), Coca Cola Company (\$5,000), Focus Humanitarian Assistance (\$5,000)
 - Georgia Tech: Distance Learning and Professional Education Program (\$10,000), ISYE (\$5,000), Health Systems Institute (\$5,000), College of Engineering (\$5,000), Supply Chain and Logistics Institute (\$2,000), GTRI (\$3,000), College of Computing (\$500).
16. Georgia Tech (Bradley-Turner Servant Leadership Funds \$20,000 for Oct 2008 - Sept 2010). Servant Leadership through Undergraduate Projects in Humanitarian Logistics. PIs: Ö. Ergun, P. Keskinocak, J. Swann.
17. Harold R. and Mary Anne Nash Junior Faculty Endowment Fund (\$89,225 for 2008-2010). Humanitarian Relief Logistics. PIs: Ö. Ergun, P. Keskinocak, J. Swann.
18. NSF (CMMI \$30,000 for Sept 2008 - Nov 2009). Conference on Disaster Preparedness and Response. PI: Dr. P. Keskinocak, Co-PIs: Ö. Ergun and J. Swann.

19. Georgia Tech (FRP \$30,000 for July 2008 - June 2009). Focused Research Program in Humanitarian Response. PI: Dr. J. Swann, Co-PI's: A. Amekudzi, M. Best, M. Castillo, Ö.Ergun, P. Keskinocak, L. McCook, and E. Whitaker.
20. NSF CAREER (DMI-0238815, \$400,000 for 2003-2010). Efficient Network Design and Routing Algorithms for Logistics and Communications Networks. PI: Ö. Ergun, awarded February 2003.
21. NSF ITR (DMI-0427446, \$1,100,000 for 2004-2008). (ITR-ECS)-(DMC): Collaborative Research: Collaborative Logistics. PI: Dr. Savelsbergh, co-PI's: Drs. J. Bartholdi, Ö. Ergun A. Kleywegt, G. Nemhauser and A. Schulz (\$200,000 subcontracted to MIT), awarded September 2004.
22. USDOT/FHWA award to Transportation Research Center at Georgia Tech (\$30,000 subcontracted amount to Ö. Ergun for 2007-2009). Managing Transportation Networks with Selfish Agents. PI: Ö. Ergun, awarded August 2007.
23. ASTAR and EDB of Singapore award to TLI-Asia Pacific (\$120,000 approximate amount to Ö. Ergun for 2003-2005). Sea-Cargo Logistics. PI: Dr. G. Nemhauser, co-PI's: Drs. Ö. Ergun, A. Kleywegt, and J. Swann.

Pending

24. NSF (CMMI \$511,268 for 2013-2016). An Economic and Operational Analysis of Voluntary and Regulated Pharmaceutical Take-Back Programs . PI: A. Atasu, Co-PIs: O. Ergun, B. Toktay.
25. NSF (SEES \$3,000,000 for 2013-2017). Hazards SEES Type 2: Science of Hazard Anticipation, Resilience, and Preparedness (SHARP). PI: J. Swann, Co-PIs: K. Isett, P. Kesknocak, P. Webster, S. Vempala, Senior Personnel: T. Birkland, W. Eller, O. Ergun, J. Hess, E.Martin, D. Nazzal, P. Suarez, B. Waugh, B.Wright.
26. Centers for Disease Control and Prevention (CDC) (Submitted summer 2012). Blanket Purchase Agreement for OPHPR Technical Support Services. Prime, Northrop Grumman. GT as subcontract, as needed on task orders. Co-PIs: O. Ergun, D. Goldsman, P. Keskinocak, J. Swann.

VII. HONORS AND AWARDS

- Runner-up, The Production and Operations Management Society (POMS) College of Humanitarian Operations & Crisis Management best paper award 2013, with “Post-Disaster Debris Clearance with Incomplete Information.”
- Honorable mention, 2012 INFORMS Section on Public Programs, Service and Needs best paper competition with “ Fair and Efficient Implementation of Collective Extended Producer Responsibility Legislation.”
- Winner, 2011 Senior Faculty Outstanding Undergraduate Research Mentor Award, Georgia Tech Faculty Honors.

- 3rd place, INFORM-ED 2010 Case Competition with “A Leader Home Improvement Retailer Commitment to Disaster Response.”
- First runner-up, INFORM-ED 2009 Case Competition with “Waffle House Restaurants Hurricane Response: A Case Study.”
- Winner, EURO/INFORMS 2007 Management Science Strategic Innovation Prize (12,000 Euros) given on the subject of *Logistics* in 2007 with “Designing mechanisms for the management of carrier alliances.”
- Finalist, INFORMS 2007 Junior Faculty Interest Group Paper Competition with “Network design and allocation mechanisms for carrier alliances in liner shipping.”
- Most Cited Paper Award, Signal Processing: Image Communication given to the most cited paper published between the years 2005-2007 with “A multi-path selection for multiple description video streaming over overlay networks.”
- CAREER Award, National Science Foundation, 2003.
- UPS Fellowship, Center for Transportation Studies, MIT, 1998-99.
- International Student Scholarship, Cornell University, 1992-96.

Student Awards

- Carl Dahl, Thomas T. Hoopes Prize, Harvard University 2013, with his senior thesis “Facility location problem in service networks with self-routing users.”
- Isil Alev, The Production and Operations Management Society (POMS) College of Sustainable Operations Dissertation Proposal Award 2013, with her thesis proposal “Operational perspectives on extended producer responsibility for durable and consumable goods.”
- Jiajin Yu, ARC Fellowship Georgia Tech Spring 2012, “Atomic Congestion Games with Taxes on Resources.”
- L. Gui, Blanchard Graduate Scholarship Award 2012. Scholarship is awarded to an exemplary ISyE graduate student in sustainability to honor 2012 Blanchard Award recipient Ray Anderson.
- Jessica Heier Stamm, INFORMS Transportation Science and Logistics Society Dissertation Prize, 2011.
- Honorable mention, J. Wade, 2010 INFORMS undergraduate student paper competition with “Supply Chain Improvements for the World Food Programme.”
- Second place, Rene Alvarenga, Dani Slaton and Jordan Stone, 2010 INFORMS Doing Good with Good OR student paper competition with “Increasing Food Delivery Through Port Simulation and Overland Transportation Route Optimization.”
- Winner, J. Wade, 2010 Outstanding Undergraduate Researcher Georgia Tech College of Engineering with research on “Supply Chain Improvements for the World Food Programme.”

- L. Gui, ARC Fellowship Georgia Tech Fall 2009, “Collaboration Mechanism Design under Data Uncertainty in Multicommodity Flow Networks.”
- Runner-up, J. Wade, SAIC 2009 Georgia Tech Student Paper Competition with “Supply Chain Optimization for the World Food Programme.”
- Kael Stilp, ARC Fellowship Georgia Tech Fall 2008, “Searching for the Core with Column Generation.”
- Runner-up, R. Agarwal, INFORMS 2007 Computing Society Student Paper Competition with “Ship scheduling and network design for cargo routing in liner shipping.”
- Honorable Mention, R. Agarwal, SAIC 2007 Georgia Tech Student Paper Competition with “Network design and allocation mechanisms for carrier alliances in liner shipping.”
- Finalist, Honda senior design team, Fall 2009 ISyE Senior Design Competition with “Routing Dealers within the Alpharetta, GA Parts Distribution Network for American Honda Motor Company, Inc.”
- Finalist, WFP senior design team, Fall 2008 ISyE Senior Design Competition with “Supply Chain Optimization for the World Food Programme.”
- Finalist, NextWave senior design team, Spring 2008 ISyE Senior Design Competition with “Procuring Transportation In US Food Aid Auctions.”
- Winner, Newell Rubbermaid senior design team, Spring 2006 ISyE Senior Design Competition with “Realignment of Supply Chain Logistics for Newell Rubbermaid.”