HAKAN YILDIZ

Eli Broad College of Business Michigan State University East Lansing, MI 48824 (517) 432-6439 yildiz@msu.edu

Research Interests

Logistics and supply chain optimization, (personnel, vehicle) scheduling and routing, risk management and network design.

Academic Experience

Jan. 2009 - Present	Assistant Professor, Dept. of Supply Chain Management, Eli Broad College
	of Business, Michigan State University

- Aug. 2008 Dec. 2008 Visiting Assistant Professor, Dept. of Supply Chain Management, Eli Broad College of Business, Michigan State University
- Aug. 2002 Aug. 2008 Graduate Assistant, Tepper School of Business, Carnegie Mellon Univ.
- Aug. 2001 May 2002 Teaching Assistant, Dept. of Industrial Engineering, Univ. of Pittsburgh
- Sep. 2000 May 2001 Teaching Assistant, Dept. of Industrial Engineering, Bilkent University

Business Experience

- Consulting with Robert Bosch LLC (through Carnegie Bosch Institute),
 September 2007 April 2008.
- Summer intern, Customer Logistics Planning, Robert Bosch LLC, Charleston, SC, June 2007 – August 2007.

Education

- PhD, Industrial Administration (Operations Research), Carnegie Mellon University, 2008.
 Dissertation: Methodologies and Applications for Scheduling, Routing and Related Problems. Advisor: Michael Trick.
- MS, Industrial Administration (Operations Research), Carnegie Mellon University, 2004.
- BS, Industrial Engineering, Bilkent University, 2000.

Publications

- M. A. Trick, H. Yildiz and T. Yunes, Scheduling Major League Baseball Umpires and the Traveling Umpire Problem. *Interfaces*, forthcoming. doi:10.1287/inte.1100.0514
- M.A. Trick and H. Yildiz, Locally Optimized Crossover for the Traveling Umpire Problem. European Journal of Operational Research, 216(2), 286-292, January 2012. doi:10.1016/j.ejor.2011.07.049
- M.A. Trick and H. Yildiz, Benders' Cuts Guided Large Neighborhood Search for the Traveling Umpire Problem. *Naval Research Logistics*, 58(8), 771-781, December 2011. doi:10.1002/nav.20482
- H. Yildiz, R. Ravi and W. Fairey, Integrated Optimization of Customer and Supplier Logistics at Robert Bosch LLC. European Journal of Operational Research, 207(1), 456-464, 2010

Competitively Reviewed Conference Proceedings

- H. Yildiz, R. Ravi and W. Fairey, Optimization of Customer and Supplier Logistics at Robert Bosch LLC. In *Proceedings of the CSCMP Educators' Conference, 2009, Chicago, IL.*
- M.A. Trick and H. Yildiz, Bender's Cuts Guided Large Neighborhood Search for The Traveling Umpire Problem, in CP-AI-OR 2007, P. Van Hentenryck and L. Wolsey (Eds.), Lecture Notes in Computer Science, No. 4510, pp. 332-345, Springer, 2007. Acceptance rate for CPAIOR: ~1/3
- M.A. Trick and H. Yildiz, A Large Neighborhood Search Heuristic for Graph Coloring, in CP-AI-OR 2007, P. Van Hentenryck and L. Wolsey (Eds.), Lecture Notes in Computer Science, No. 4510, pp. 346-360, Springer, 2007. Acceptance rate for CPAIOR: ~1/3.
- H. Yildiz, M.P. Johnson and S. Roehrig, Policy Implications of a Planning Model for Home-Delivered Meals, in *Proceedings of the MSOM Conference*, 2006, Atlanta, Georgia.

Funding

- Qatar Foundation, A Framework for Upstream Natural Gas Supply Chain Design: LNG Distribution Network, (with F. Mutlu, S. Pokharel and R. Ravi), 2011-2014, \$629,737.44 (Yildiz portion: \$45,636).
- Center for Packaging Innovation and Sustainability, Michigan State University, Economic Viability and Sustainability of Returnable versus Single-Use Packaging Systems, (with R. Clarke and J. Macdonald), 2011-2012, \$57,656 (Yildiz portion: \$3,738)
- Kelly Services Inc., *Cycle Time Analysis for Talent Supply Chain Management,* (with D. Closs and S. Narayanan), 2011, \$11,500.

Presentations (Bold indicates presenter)

- Yildiz, H., Talluri, S., and Closs, D., "Reliable Supply Chain Network Design", *POMS Annual Conference, April 2012, Chicago, IL.*
- Yildiz, H., Talluri, S. and Kull, T., "Efficacies of Risk Mitigation Strategies in Supply Chains", POMS Annual Conference, April 2012, Chicago, IL.
- **Kull, T.,** Talluri, S. and Yildiz, H., "Efficiencies of Risk Mitigation Strategies Across Various Supply Chain Disruptions", *DSI Annual Conference, November 2011, Boston, MA.*
- **Yildiz, H.,** Talluri, S., and Closs, D., "Reliable Supply Chain Network Design", *INFORMS Annual Conference, November 2011, Charlotte, NC.*
- **Mutlu, F.,** and Yildiz, H., "A Framework for Upstream Natural Gas Supply Chain Design: LNG Distribution Network", *INFORMS Annual Conference, November 2011, Charlotte, NC.*
- **Yildiz, H.,** Talluri, S., and Closs, D., "Reliable Supply Chain Network Design", *INFORMS Annual Conference, November 2011, Charlotte, NC.*
- Yildiz, H., "Supply Chain Network Strategy", Invited Talk, 6th International Procurement, Logistics and Supply Chain Management Summit, October 2010, Istanbul, Turkey
- Yildiz, H., "Analytical Methods for Supply Chain Management", Workshop, 6th International Procurement, Logistics and Supply Chain Management Summit, October 2010, Istanbul, Turkey
- Yildiz, H., "Designing the Supply Chain Network", Invited Talk, 5th International Procurement, Logistics and Supply Chain Management Summit, October 2009, Istanbul, Turkey

- Yildiz, H., "Decision Making Models for Supply Chain Management", Workshop, 5th International Procurement, Logistics and Supply Chain Management Summit, October 2009, Istanbul, Turkey
- **Trick, M.,** and Yildiz, H., "Locally Optimized Crossover for the Traveling Umpire Problem", *Invited Talk, Informs Annual Conference, October 2009, San Diego, CA.*
- Yildiz, H., Ravi, R. and Fairey, W., "Optimization of Customer and Supplier Logistics at Bosch", CSCMP Educators' Conference, September 2009, Chicago, IL.
- **Yildiz, H.,** Trick, M., and Yunes, T., "Scheduling Major League Baseball Umpires and the Traveling Umpire Problem", *DSI Annual Conference, November 2008, Baltimore, MD.*
- Yildiz, H. and Ravi, R.., "Optimization of Customer and Supplier Logistics at a Large Automotive Parts Manufacturer", *Informs Annual Conference, October 2008, Washington, DC.*
- Yildiz, H. and Trick, M., "Logical Bender's Cuts Guided Local Search and a Greedy Heuristic for the Traveling Umpire Problem", *Invited Talk, Informs Annual Conference, November 2007, Seattle, WA.*
- **Trick, M.,** Yildiz, H., and Yunes, T., "Scheduling Umpires," *Invited Talk, EURO XXII, July 2007, Prague, Czech Republic.*
- Yildiz, H. and Trick, M., "Bender's Cuts Guided Large Neighborhood Search for The Traveling Umpire Problem," *CP-AI-OR, May 2007, Brussels, Belgium.*
- **Yildiz, H.** and Trick, M., "A Large Neighborhood Search Heuristic for Graph Coloring," *CP-AI-OR, May 2007, Brussels, Belgium.*
- Yildiz, H. and Trick, M., "The Traveling Umpire Problem," *Invited Talk, Informs Annual Conference, November 2006, Pittsburgh, PA.*
- **Yildiz, H.**, Johnson, M.P., and Roehrig S., "Policy Implications of a Planning Model for Home-Delivered Meals," *MSOM Conference*, *June 2006*, *Atlanta*, *GA*.
- Yildiz, H. and Johnson, M.P. "Policy Implications of a Planning Model for Home-Delivered Meals," *Invited Talk, Informs Annual Conference, November 2005, San Francisco, CA.*
- Yildiz, H., Johnson, M.P., and Roehrig S., "A Genetic Algorithm for the Home-Delivered Meals Location Routing Problem," *Invited Talk, IFORS Triennial 2005 Conference, Honolulu, HI.*
- Yildiz, H. and Trick, M., "A Large Neighborhood Search Heuristic for Graph Coloring," *Invited Talk, Informs Annual Conference, October 2004, Denver, CO.*

Professional Affiliations

- Institute for Operations Research and the Management Sciences (INFORMS)
- Decision Sciences Institute (DSI)
- Production and Operations Management Society (POMS)
- Council of Supply Chain Management Professionals (CSCMP)

Graduate Student Activity

- Ph.D. Committee Member: Christopher L. Fleming (Logistics, 2012), Jiho Yoon (Operations)
- M.S. in Supply Chain Management: Ben Binatebe (2011)

Teaching Experience

Instructor

- @ Eli Broad College of Business, Michigan State University
 - » Transportation Management, BA Elective, Every semester since Fall 2008.
- @ Tepper School of Business, Carnegie Mellon University
 - » Optimization Models for Logistics, MBA elective, Spring 2007.
 - » Logistics and Supply Chain Management, BS elective, Spring 2007.
 - » OR Models for Routing and Distribution, MBA elective, Spring 2006.

Guest Lecturer

- @ Eli Broad College of Business, Michigan State University
 - "Network Analysis Research," in Logistics and Public Policy, PhD core (David Closs, instructor, November 28, 2011.
 - "Optimization Methods for Logistics," in Logistics and Public Policy, PhD core (Ed Morash, instructor, November 7, 2008.
- @ H. John Heinz III School of Public Policy and Management, Carnegie Mellon University
 - "Local Search and Genetic Algorithms," in Operations Research for the Public Sector, MS Elective, (Michael P. Johnson, instructor), November 15, 2006.

Teaching Assistant

» Many MBA and Undergraduate level Operations Research and Management classes.

Service to Profession

- Scientific Committee Member: 9th International Logistics & Supply Chain Congress
- Track Co-Chair: CSCMP Educators' Conference (2009)
- Panel Participant: Logistics/Supply Chain Doctoral Symposium (2009)
- Reviewer:
 - Computers and Operations Research
 - IEEE Transactions on Engineering Management
 - International Journal on Production Economics
 - Journal of Operational Research Society
 - Society of Logistics Engineers, Doctoral Dissertation Proposal Award, 2009-
 - DSI Annual Meeting, 2009
- Session Chair:
 - POMS (2012)
 - DSI Annual Meeting (2011)
 - INFORMS Annual Meeting (2008)
- Volunteer:
 - INFORMS Annual Meeting (2006)
 - The 5th international conference on the Practice And Theory of Automated Timetabling (2004)

Service to Michigan State University

• Served in a Faculty Grievance Hearing Panel (2010)

Awards and Honors

- DSI Doctoral Consortium participant, 2007.
- INFORMS Doctoral Colloquium participant, 2007.
- William Larimer Mellon Fellowship for doctoral studies at Carnegie Mellon University, 2002

 2005.
- Full academic scholarship for graduate studies, Bilkent University, 2000 2001.
- Full academic scholarship for undergraduate studies, Bilkent University, 1996 2000.
- Ranked 10th out of 41,000 in the Graduate School Admission Examination in Mathematical Sciences in Turkey, 1999.
- Ranked 4th in the first stage, and ranked 9th in the second stage of the University Admission Examination in Turkey among more than one million examinees, 1996.

Computer Skills

C, CPLEX Optimization Studio, SAS Enterprise Miner.

References

Available on request.