**HAKAN YILDIZ**

Assistant Professor

Department of Supply Chain Management

Eli Broad College of Business

Michigan State University

East Lansing, MI 48824

(517) 281-3636

[yildiz@broad.msu.edu](mailto:yildiz@broad.msu.edu)

# Academic Work Experience

# 2009 - Present Assistant Professor, Department of Supply Chain Management, Eli Broad College of Business, Michigan State University

# 2008 – 2009 Visiting Assistant Professor, Department of Supply Chain Management, Eli Broad College of Business, Michigan State University

# Education

## PhD, Industrial Administration (Operations Research), Tepper School of Business, Carnegie Mellon University, 2008. Dissertation: Methodologies and Applications for Scheduling, Routing and Related Problems. (Advisor: Michael Trick)

## MS, Industrial Administration (Operations Research), Tepper School of Business, Carnegie Mellon University, 2004.

## BS, Industrial Engineering, Bilkent University, 2000.

# Research Interests

Supply chain risk management, resource management in services, logistics optimization, supply chain analytics, talent supply chain management

# Peer-Reviewed Publications

## **Yildiz, H.**, Yoon, J., Talluri, S., and Ho, W. Reliable Supply Chain Network Design. Decision Sciences Journal, 47(4), pp. 661-698, 2016.

## **Yildiz, H.**, Duhadway, S., Narasimhan, R., and Narayanan, S. Production Planning Using Evolving Demand Forecasts in the Automotive Industry. IEEE Transactions on Engineering Management, 63 (3), pp. 296 – 304, 2016.

* Yoon, J., **Yildiz, H.,** and Talluri, S. Risk Management Strategies in Transportation Capacity Decisions: An Analytical Approach. *Journal of Business Logistics,* 37: 364–381, 2016.

## Mutlu, F., Msakni, M.K., **Yildiz, H.**, Sonmez, E., and Pokharel, S. A Comprehensive Annual Delivery Program for Upstream Liquefied Natural Gas Supply Chain. European Journal of Operational Research, 250(1), pp.120-130, 2016.

## Ho, W., T. Zheng, **Yildiz, H.,** and Talluri, S. Supply Chain Risk Management: A Literature Review. International Journal of Production Research, vol. 53, no. 16, 2015.

## Talluri, S., Kull, T., **Yildiz, H.**, and Yoon, J. Assessing the Efficiency of Risk Mitigation Strategies in Supply Chains. Journal of Business Logistics, vol.34, no. 4, pp. 253-269, 2013.

## **Yildiz, H.**, Johnson, M.P., and Roehrig, S. Planning for Meals-on-Wheels: Algorithms and Application. Journal of the Operational Research Society, vol. 64, no. 10, pp. 1540–1550, October 2013.

* Trick, M.A., **Yildiz, H.**, and Yunes, T. Scheduling Major League Baseball Umpires and the Traveling Umpire Problem. *Interfaces*, vol. 42, pp. 232–244, May/June 2012. (*author names in alphabetical order; corresponding author: Yunes, T.*)
* Trick, M.A. and **Yildiz, H.** Locally Optimized Crossover for the Traveling Umpire Problem. *European Journal of Operational Research*, vol. 216, no. 2, pp. 286-292, January 2012. (*author names in alphabetical order; corresponding author:* ***Yildiz, H.***)
* Trick, M.A. and **Yildiz, H.** Benders’ Cuts Guided Large Neighborhood Search for the Traveling Umpire Problem. *Naval Research Logistics,* vol.58, no. 8, pp. 771-781, December 2011. (*author names in alphabetical order; corresponding author:* ***Yildiz, H.*** *H. Yildi*)
* **Yildiz, H.**, Ravi, R., and Fairey, W. Integrated Optimization of Customer and Supplier Logistics at Robert Bosch LLC.  *European Journal of Operational Research*, vol.207, no. 1, pp. 456-464, 2010.

## **Under Review**

## Mutlu, F., **Yildiz, H.**, Sonmez, E., and Pokharel, S. Journal: Annals of Operations Research. Topic: LNG Shipment Planning (Under 2nd Round Review.)

## Yoon, J., Talluri, S., **Yildiz, H.** and Ho, W. Journal: International Journal of Production Research. Topic: Supply risk management (Revised for 2nd Round Review.)

## **Research in Progress**

## Talluri, S., **Yildiz, H.**, Yoon, J., and Wassick, J. Target Journal: Decision Sciences Journal. Topic: Supply chain analytics (Manuscript is in preparation for submission.)

## Narayanan, S., **Yildiz, H.** and Pentland, B. Target Journal: Production and Operations Management. Topic: Talent supply chain management (Manuscript is in preparation for submission.)

## Mutlu, F., **Yildiz, H.**, Sonmez, E., and Pokharel, S. Target Journal: International Journal of Production Research. Topic: Robust Plans for LNG Shipments (Manuscript is in preparation for submission.)

## **Yildiz, H.** and Wiedmer, R. Target Journal: European Journal of Operational Research. Topic: Risk management in vehicle routing (Analysis is in progress).

## **Yildiz, H.**, and Acimovic, J. Target Journal: Production and Operations Management. Topic: Logistics optimization in services (Analysis is in progress).

## Bhattacharjee, A., Chakraborty, S., Maiti, T., Talluri, S., and **Yildiz, H.** Target Journal: Decision Sciences Journal. Topic: Supply chain networks and risk management (Analysis is in progress).

## Suzuki, Y. and **Yildiz, H**. Target Journal:Journal of Business Logistics Topic: Transportation procurement monitoring (In development phase)

## **Peer-Reviewed Conference Proceedings**

## Mutlu, F., **Yildiz, H.**, Sonmez, E., and Pokharel, S. A Simulation Model for Comparing the Robustness of Alternative Liquefied Natural Gas (LNG) Annual Delivery Programs (ADPs) In Proceedings of Decision Sciences Institute Conference, 2016, Austin, TX.

## Talluri, S., **Yildiz, H.**, Yoon, J., and Wassick, J. Models for Monitoring Supply Chain Network Design Efficiency. In Proceedings of CSCMP Educators’ Conference, 2015, San Diego, CA.

## Yoon, J., **Yildiz, H.**,and Talluri, S. Risk Management Strategies in Transportation Capacity Decisions: An Analytical Approach. In Proceedings of the CSCMP Educators’ Conference, 2014, San Antonio, TX.

* **Yildiz, H.**, Ravi, R., and Fairey, W. Optimization of Customer & Supplier Logistics at Robert Bosch LLC. In *Proceedings of the CSCMP Educators’ Conference*, 2009, Chicago, IL.
* Trick, M.A. and **Yildiz, H.** 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.
* Trick, M.A. and **Yildiz, H.** 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.
* **Yildiz, H.**, Johnson, M.P., and Roehrig, S. Policy Implications of a Planning Model for Home-Delivered Meals. In *Proceedings of the MSOM Conference*, 2006, Atlanta, GA.

# Research Grants

* Midland Research Institute for Value Creation, *A Methodology for Monitoring Efficiency of Supply Chain Network Design* (with Srinivas Talluri), 2015-2016,**Amount funded: $58,360**
* Midland Research Institute for Value Creation, *A Methodology for Monitoring Efficiency of Supply Chain Network Design* (with Srinivas Talluri), 2014-2015,**Amount funded: $69,360**
* Kelly OCG Inc., *Value Drivers and Productivity in Talent Supply Chain Management,* (with Closs, D. and Narayanan, S.), 2012-2013, **Amount funded: $33,765**
* Qatar Foundation, *A Framework for Upstream Natural Gas Supply Chain Design: LNG Distribution Network* (with Mutlu, F., Pokharel, S., and Ravi, R.), 2012-2015, **Amount funded: $629,737.44**
* Kelly OCG Inc., *Cycle Time Analysis for Talent Supply Chain Management* (with Closs, D. and Narayanan, S.), 2011, **Amount funded: $11,500**.
* 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, **Amount funded: $57,656**

Eli Broad College of Business Summer Research Grants:

* *Transportation and Process Planning for Beverage Container Recycling*, 2017, **Amount funded: $15,000**
* *Data Analytics for Logistics Risk Monitoring*, 2016, **Amount funded: $13,000**
* *A Network Analysis of US Auto Industry Supply Chains,* 2015, **Amount funded: $15,000**
* *Resource Routing and Scheduling in the Services Industry,* 2014, **Amount funded: $10,000**
* *Planning for Equipment Rentals in the Entertainment Industry,* 2013, **Amount funded: $8,000**
* *Reliable and Robust Supply Chain Network Design,* 2012, **Amount funded: $7,000**

# Research Projects with Firms

Bosch, Major League Baseball, Kelly OCG, Lear Corp., Dow Chemical, SGA Production Services, UBCR

# Invited Seminars

* University of Rhode Island, “Reliable Supply Chain Network Design”, 10/2014
* Albion College, “Decision Models for Logistics Management”, 03/2015
* University of Michigan-Dearborn, “Decision Models for Logistics Management”, 04/2015

# Conference Presentations

* **Yildiz, H.**, Talluri, S., Yoon, J., and Wassick, J. “Models for Monitoring Supply Chain Network Design Efficiency”, *DSI Annual Conference*, November, 2016, Austin, TX.
* **Yildiz, H.**, Duhadway, S., Narasimhan, R., and Narayanan, S. “Production Planning Using Evolving Demand Forecasts in the Automotive Industry”, *DSI Annual Conference*, November, 2016, Austin, TX.
* **Yildiz, H.**, Talluri, S., Yoon, J., and Wassick, J. “Models for Monitoring Supply Chain Network Design Efficiency”, *INFORMS Annual Conference*, November, 2016, Nashville, TN.
* **Yildiz, H.**, Mutlu, F., Sonmez, E., and Pokharel, S. “Robust Plans for the Delivery of Liquefied Natural Gas”, *CSCMP Educators’ Conference*, September, 2016, Orlando, FL.
* **Yildiz, H.,** and Narayanan, S. “3PLs of the Talent Supply Chains: Identification of Key Capabilities through Extensive Field Study”, *CSCMP Educators’ Conference*, September, 2016, Orlando, FL.
* **Yildiz, H.**, Mutlu, F., Msakni, M.K., Sonmez, E., and Pokharel, S. “Optimizing Delivery Plans for LNG Supply Chains”, *INFORMS Southeast Michigan Symposium*, May 2016, Rochester, MI.
* **Yildiz, H.,** Talluri, S., Yoon, J., and Wassick, J. “Models for Monitoring Supply Chain Network Design Efficiency”, CSCMP Educators’ Conference, September, 2015, San Diego, CA.
* **Yildiz, H.**,Talluri, S., Kull, T., and Yoon, J. “Assessing the Efficiency of Risk Mitigation Strategies in Supply Chains”, *INFORMS Annual Conference*, November 2014, San Francisco, CA.
* **Yildiz, H.**, Yoon, J., and Talluri, S. “Reliable Supply Chain Network Design”, *INFORMS Southeast Michigan Symposium*, November 2013, Detroit, MI.
* **Yildiz, H.** “Planning for Equipment Rentals and the Traveling Equipment Problem”, *INFORMS Annual Conference*, October 2013, Minneapolis, MN.
* **Yildiz, H.**,Trick, M.A., and Yunes, T. “Traveling Umpire Problem: A New Challenging Test-Bed for Optimization”, *Turkish Operations Research and Industrial Engineering Conference*, June 2012, Istanbul, Turkey.
* **Yildiz, H.**,Talluri, S., and Closs, D. “Reliable and Robust Supply Chain Network Design”, *European DSI Conference*, June 2012, Istanbul, Turkey.
* **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.
* **Yildiz, H.,** Talluri, S., and Closs, D. “Reliable Supply Chain Network Design”, *INFORMS Annual Conference*, November 2011, Charlotte, NC.
* **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.A., 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.A. “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.
* **Yildiz, H.** and Trick, M.A. “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. “A Large Neighborhood Search Heuristic for Graph Coloring,” *CP-AI-OR*, May 2007, Brussels, Belgium.
* **Yildiz, H.** and Trick, M.A. “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.**, 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 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.** and Trick, M.A. “A Large Neighborhood Search Heuristic for Graph Coloring,” Invited Talk, *INFORMS Annual Conference*, October 2004, Denver, CO.

# Non-refereed Reports

* Closs, D., Narayanan, S., and **Yildiz, H.** “Fundamentally Different: Competencies for Managing Contingent Talent,” white paper published by Kelly OCG, 2014.

# In Popular Press

* Incorporation of Kewill Transport TMS into the Transportation Management course announced in a [press release](http://finance.yahoo.com/news/michigan-state-university-selects-kewill-130000416.html) on *Reuters and Yahoo Finance* on July 24, 2015.
* [Appearance](http://wkar.org/term/supply-chain-management) on WKAR Radio’s *Current State* on July 10, 2014.
* [Quoted](http://bit.ly/1gE34cO) in *MHI Solutions Magazine*, Vol. 2, No. 1, 2014.
* Paper on MLB umpire scheduling covered in various news outlets in 2011, including: [*Scientific American*](http://www.scientificamerican.com/podcast/episode/researchers-tell-umpires-where-to-g-11-08-18/)*, United Press International,* *Business Miami Magazine,* [*WAMC Northeast Public Radio Academic Minute*](http://wamc.org/post/dr-tallys-yunes-university-miami-umpire-scheduling)*, Miami New Times, phys.org,* [*HPCwire.com*](http://moya.bus.miami.edu/~tallys/docs/umpires-hpcwire.pdf)*,* [*thepostgame.com*](http://www.thepostgame.com/blog/dish/201107/turkish-soccer-fan-helps-major-league-baseball-umps)*, sciencedaily.com, futurity.org, esciencenews.com*.

# Graduate Student Activity

* PhD Committee Member: Christopher L. Fleming (Logistics), Jiho Yoon (Operations Management).
* MS in Supply Chain Management, Thesis Advisors: Ben Binate and Mark Ford

# Teaching Experience

## Instructor

@ Eli Broad College of Business, Michigan State University

* Logistics and Transportation Management, BA Core, each year since Spring 2013
* Transportation Management, BA Elective, each year since Fall 2008.

@ Tepper School of Business, Carnegie Mellon University

* Optimization Models for Logistics, MBA elective, Spring 2007.
* Logistics and Supply Chain Management, BA elective, Spring 2007.
* OR Models for Routing and Distribution, MBA elective, Spring 2006.

*Executive Education*

@ School of Packaging, Michigan State University, “Supply Chain Technologies: New Trends”, May 12, 2016, East Lansing, MI

@ Kelly OCG, “Talent Supply Chain Management”, 2013, Troy, MI

@6th International Procurement, Logistics and Supply Chain Management Summit, October 2010, Istanbul, Turkey

* A talk on “Supply Chain Network Strategy”
* A workshop on “Analytical Methods for Supply Chain Management”

*Guest Lecturer*

@ Eli Broad College of Business, Michigan State University

* “Network Design Optimization” in Supply Chain Decision Modeling, BA elective (Srinivas Talluri, Instructor), April 10, 2014.
* “Network Models and Optimization,” in Logistics and Public Policy, PhD core (Patricia Daugherty, Instructor), September 24, 2013.
* “Metaheuristics,” in SCM Applied Decision Models, PhD (Srinivas Talluri, Instructor), March 28, 2013.
* “Vehicle Routing,” in Logistics and Transportation Management, BA core (Yemisi Bolumole, Instructor), Spring 2013 and Spring 2014.
* “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 Interests

Logistics; Supply Chain Management; Transportation Management; Business Analytics; Decision Making Models; Optimization; Metaheuristics

# Service to Academic Profession

* *Officer:* INFORMS Southeast Michigan Chapter, Jan. 2014-Dec. 2015
* *Symposium Co-Organizer:*
* INFORMS Southeast Michigan Research Symposium, East Lansing, MI, 2014
* “Data in the D" Big Data Analytics Conference, Detroit, MI, 2015
* *Track Chair:*
* DSI Annual Meeting, Seattle, WA, 2015
* CSCMP Educators’ Conference, Chicago, IL, 2009
* *Panel Organizer* :
* “Practicality vs tractability in using decision models for logistics problems”, DSI Annual Meeting, Seattle, WA, 2015
* “External letters of recommendation for tenure: Hear from those who write and read them”, INFORMS Annual Meeting, San Francisco, CA, 2014
* *Panel Participant:*
* Logistics/Supply Chain Doctoral Symposium, East Lansing, MI, 2009
* INFORMS Future Academician Colloquium, Minneapolis, MN, 2013
* *Session Chair:*
* INFORMS Annual Conference (2008, 2014)
* DSI Annual Conference (2011, 2015, 2016)
* POMS Conference, Chicago, IL, 2012
* Turkish Operations Research and Industrial Engineering Conference, Istanbul, Turkey, 2012
* *Scientific Committee Member:* 9th International Logistics & Supply Chain Congress, Izmir, Turkey, 2011
* *Judge:* Society of Logistics Engineers, Doctoral Dissertation Proposal Award, 2009-2011
* *Editorial Review Board Member:*
* IEEE Transactions on Engineering Management, 2014-present
* *Ad-Hoc Reviewer:*
* Journal of Business Logistics
* Decision Sciences Journal
* European Journal of Operational Research
* International Journal on Production Research
* International Journal on Production Economics
* Journal of Operational Research Society
* Computers and Operations Research
* Optimization. A Journal of Mathematical Programming and Operations Research
* International Transactions in Operational Research
* Transportation Research Part B

# Service to Michigan State University

# Faculty Grievance Hearing Panel (2010)

# Undergraduate Interest Group (2010)

# Ad-hoc departmental committee for department strategy (2012-2014)

* Ad-hoc departmental committee for doctoral program (2016)
* Faculty Advisor, GM-Wayne State University Supply Chain Case Competition (2016)
* Judge, MSU SCM Internal Case Competition (2016)

# Professional Affiliations

* Institute for Operations Research and the Management Sciences (INFORMS)
* Council of Supply Chain Management Professionals (CSCMP)
* Decision Sciences Institute (DSI)

# Honors

* Broad Integrative Fellow, Eli Broad College of Business (2017)
* 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 9th in the second stage of the University Admission Examination in Turkey among more than one million examinees, 1996