Maryam Hamidi, Ph.D.

Assistant Professor
Department of Industrial Engineering
Center for Advances in Port Management
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EDUCATION

Ph.D., Systems and Industrial Engineering Aug 2011 - May 2016
University of Arizona, Tucson, AZ

M.B.A Aug 2008 - May 2010
Sharif University of Technology, Tehran, Iran

B.S., Electrical Engineering Aug 2002 - May 2007
Amir-Kabir University of Technology, Tehran, Iran

PROFESSIONAL EXPERIENCE

Assistant Professor Sept 2016 - Present
Department of Industrial Engineering
Center for Advances in Port Management, Lamar University, Beaumont, TX.

Graduate Research/Teaching Assistant 2011 - 2016
Department of Systems and Industrial Engineering, University of Arizona, Tucson, AZ.

RESEARCH INTERESTS

Waterway Operational Efficiency, Port and Terminal Decision Making
Reliability Engineering and Statistical Failure Analysis, Maintenance Optimization
Game Theory, Leasing and Outsourcing Contract Design

FUNDED RESEARCH PROJECTS

Deep Learning-based Anomaly Detection for Midstream Infrastructures, (Awarded $29,652; 04/2020-08/2021). PI - Zhang, J., Co-PI - **Hamidi, M.**, Funded by Center for Midstream Management and Science, Lamar University.

A Railyard Management Software, (Awarded $52,111; 01/2020-12/2020). PI - **Hamidi, M.**, Co-PI - Craig, B., Funded by Iron Horse Terminals, TX.

A Decision Framework for Enhancing Waterway Utilization with Application to Houston Ship Channel, (Awarded $32,000; 09/2018-09/2019). PI - **Hamidi, M.**, Co-PI - Wu, X., Funded by Center for Advances in Port Management, Lamar University.

Mitigating Impacts of Waterway Closures on Vessel Traffic, (Awarded $33,000; 09/2017-12/2017). PI - **Hamidi, M.**, Funded by Harris County Toll Road Authority, Houston, TX.

A Bi-Level Framework for Port Warehouse Storage Policy: A Port of Beaumont Case Study, (Awarded $5,000; 09/2017-09/2018). PI - **Hamidi, M.**, Funded by Research Enhancement Grant, Lamar University.

A Reliability-Centered Track Geometry Maintenance Methodology for Railroad: A BNSF Case Study, (Awarded $35,000, Received due to hiring freeze $19,000; 2/2017-12/2017). PI - **Hamidi, M.**, Co-PI - Cho, J., Funded by Center for Advances in Port Management, Lamar University.

Designing a Resilient Cyber-Physical Energy Infrastructure for Port and Coastal Areas, (Awarded $32,000, Received due to hiring freeze $17,000; 2/2017-12/2017). PI - Barzegaran, R., Co-PI - **Hamidi, M.**, Funded by Center for Advances in Port Management, Lamar University.

Utilization of Unmanned Arial Vehicles for Port Operations, (Awarded $35,000, Received due to hiring freeze $19,000; 2/2017-12/2017). PI - Cho, J., Co-PIs - **Hamidi, M.**, Tokgoz, B., Funded by Center for Advances in Port Management, Lamar University.

PUBLICATIONS

* denotes student coauthor, @ denotes corresponding author

Refereed Journal Publications

- Rahimi, B.*, **Hamidi, M.**@, Mohassel, A., & Craig, B. (2020) " Imperfect condition-based maintenance strategy for a deteriorating rail track system with multiple competitive failure modes." *Transportation Engineering, Part A: Systems*, 146(9), 04020088.

- Wu, X., Roy, U.*, **Hamidi, M.**, & Craig, B. (2020). Estimate travel time of ships in narrow channel based on AIS data. *Ocean Engineering*, 202, 106790.

- Rahimi, B.*, Mohassel, A., & **Hamidi, M.**@ (2020). Railroad track geometry degradation analysis: a BNSF case study. *Transportation Engineering, Part A: Systems*, 146(2), 04019068.

- Kaneria, A.*, **Hamidi, M.**@, Zhu, W., & Craig, B. (2019). Traffic simulation of Houston Ship Channel for assessing the impact of waterway closures on vessel waiting time. *Journal of Waterway, Port, Coastal, and Ocean Engineering,* ASCE, 145(4), 04019014.

- Rahimi, B.*, Abedi, A.*, **Hamidi, M.**@, & Cho, J. (2018). Simulation modeling of Houston Ship Channel vessel traffic for optimal closure scheduling. *Simulation Modelling Practice & Theory,* 80, 89–103.

- **Hamidi, M.**, Liao, H., & Szidarovszky, F. (2016). Noncooperative and cooperative game-theoretic models for usage-based lease contracts. *European Journal of Operational Research,* 255 (1), 163–174.

- **Hamidi, M.**, & Szidarovszky, F. (2016). New one cycle criteria for optimizing preventive replacement policies. *Reliability Engineering & System Safety*, 154, 42–48.

- Kucuksari, S., Khaleghi, A., **Hamidi, M.**, Zhang, Y., Szidarovszky, F., Bayraksan, G., & Son, Y. (2014). An integrated GIS, optimization and simulation framework for optimal PV size and location in campus area environments. *Applied Energy*, 113, 1601–1613.

Refereed Conference Proceedings

- Mobtahej, P.*, Zhang, X.,*, **Hamidi, M.**, & Zhang, J., "Deep learning-based anomaly detection for compressors using audio data". In: *Proc. of Reliability and Maintainability Symposium (RAMS)*, January 2021.

- Jafari, M.*, Zohoori, S.*, Abbasi, E., Li, Y., & **Hamidi, M.** "Predicting the Price of Second-hand Vehicles Using Data Mining Techniques". In: *Proc. of Institute of Industrial and Systems Engineers*, May 2020.

- Thapa, K.*, **Hamidi, M.**, Zhu, W., & Craig, B. "A storage yard cargo assignment model: Port of Beaumont case study". In: *Proc. of Institute of Industrial and Systems Engineers*, May 2018.

- Rahimi, B.*, **Hamidi, M.**, & Moghaddas, R. "A railroad track geometry degradation analysis: a BNSF case study". In: *Proc. of Reliability and Maintainability Symposium (RAMS)*, Jan 2018.

- **Hamidi, M.**, Gharehgozli, A., & Szidarovszky, F. "Interactive decision making models for maritime freight carriers". In: *Proc. of Western Decision Sciences Institute*, April 2018.

- **Hamidi, M.**, Matsumoto, A., Szidarovszky, F. & Rahimi, B.* "Optimal imperfect maintenance of a machine shop with different virtual ages". *Proc. of West. Decision Sciences Inst.*, Apr 2018.

- Rahimi, B.*, Abtahi, A.*, **Hamidi, M.** , Cho, J. & Stromberg, E. "Optimal ship channel closure scheduling for a bridge construction". *Proc. of IISE*, 530–536, May 2017.

- **Hamidi, M.**, Matsumoto, A. & Szidarovszky, F. "Optimal schedule of repair or replacement after degradation is noticed". In: *Proc. of Western Decision Sciences Institute*, April 2017.

   – **Hamidi, M.**, Szidarovszky, F., & Matsumoto, A. "A one-cycle model in scheduling preventive replacement". In: *Proc. of Western Decision Sciences Institute*, #4, April 2016.

Book Chapter

   – **Hamidi, M.**, Maihami, R., & Rahimi, B.* (2020). "Optimizing imperfect preventive maintenance policy for a multi-unit system with different virtual ages". *Games and Dynamics in Economics*, Springer.

   – **Hamidi, M.**, & Liao, H. (2017). "Maintenance outsourcing contracts based on bargaining theory". Chapter 12 in *Optimization and Dynamics with their Applications*, Springer Nature.

PRESENTATIONS and INVITED TALKS

–Jafari Kang, M., Zohoori, S., Hamidi, M., "Waterway resiliency measures using AIS data: a case study of Houston Ship Channel". *Transportation Research Board*, DC, Jan 2020.

–Roy, U., Zohoori, S, Hamidi, M., & Wu, X., "An AIS-data based one way traffic delay analysis in Houston Ship Channel". *Transportation Research Board*, DC, Jan 2020.

– Zohoori, S., Jafari Kang, M., Hamidi, M., "Measuring the waterway congestion using AIS data: A case study of Houston Ship Channel", *INFORMS*, Seattle, Oct 2019.

– Hamidi, M., "Mitigating impact of waterway closure on vessel traffic", *Dredging Your Docks*, Beaumont, Oct 2019.

– Jafari Kang, M., Zohoori, S., Hamidi, M., "A new optimization model for warehouse space utilization problem in port management: A Port of Beaumont case study." *Annual Graduate Research Celebration*, Lamar University, April, 2019.

–Hamidi, M., Wu, X., "Analysis of AIS data at Houston ship Channel", *Houston Pilots*, October 19, 2018.

– Hamidi, M., "Challenges facing infrastructure owners and the benefits of a strategic AM program", Strategic Asset Management Workshop, *West Gulf Maritime Association*, June 20, 2018.

– Hamidi, M., Zhu, W., Kaneria, A.*, "Mitigating impacts of Houston Ship Channel closures on vessel traffic'". *Harris County Toll Road Authority*, Houston, October 17, 2017 and *Houston Pilots Water Utilization Committee Meeting*, Houston, August 9, 2017.

– Hamidi, M., "Game theory applications in optimizing energy/water systems". *Center for Sustainable Energy Systems*, University of Wisconsin-Milwaukee, Milwaukee, August 11, 2017.

– Cho, J., Hamidi, M., Tokgoz, B., "Risk assessment of UAV-aided port operations", *Texas Hurricane Conference*, Houston, August 4, 2017, and *ISERC*, Pittsburgh, PA, May 22, 2017.

– Hamidi, M., "Optimal maintenance policy for port pavement management". *ISERC*, Pittsburgh, PA, May 22, 2017.

- -Hamidi, M., "A Modified Age Replacement Model". *INFORMS Annual Meeting*, Nashville, TN, November 14, 2016.

– Hamidi, M., "A Review of Maintenance Policies". *University of Houston*, Houston, TX, October 7, 2016.

PROFESSIONAL AFFILIATIONS

Member of Women in Operations Research and Management Science (WORMS), Transportation Research Board (TRB), IIE, INFORMS, Society of Reliability Engineers, and Western Decision Science Institute.