

**BERNA EREN TOKGOZ, Ph.D.**

Associate Professor

Department of Industrial and Systems Engineering, Lamar University, Beaumont, TX, 77710

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**EDUCATION**

**Old Dominion University**

**Norfolk, VA**

Ph.D., Engineering Management and Systems Engineering

August 2012

Dissertation Probabilistic resilience quantification and visualization building performance to hurricane wind speeds.

Concentration Critical Infrastructures, Risk and Resilience Assessment, and Resilience Engineering.

**Hacettepe University**

**Ankara, Turkiye**

Master of Science, Chemical Engineering

June 2000

Thesis Production of cellulose-based affinity membranes and investigation of their application potentials.

Concentration Polymer Technology, Bioengineering, Membrane Technology and Drug Release Systems.

**Hacettepe University**

**Ankara, Turkiye**

Bachelor of Science, Chemical Engineering

June 1997

Concentration Polymer Engineering.

**EXPERIENCE**

**Department of Industrial Engineering**

**Beaumont, TX**

**Lamar University**

Associate Professor

Sep 2020-Current

**Department of Industrial Engineering**

**Beaumont, TX**

**Lamar University**

Assistant Professor

Aug 2014-Aug 2020

**Department of Engineering Management and Systems Engineering**

**Norfolk, VA**

**Old Dominion University**

Post-Doctoral Student

Feb 2013-Feb 2014

**Department of Engineering Management and Systems Engineering**  
**Old Dominion University**  
Graduate Research Assistant

**Norfolk, VA**

Jan 2006-Aug 2012

**Department of Chemical Engineering**  
**Hacettepe University**  
Graduate Research Assistant

**Ankara, Turkiye**

Nov 1997-June 2000

**Polisan Chemical Industries, Inc.**  
Intern

**Gebze, Turkiye**  
July 1996-Sep 1996

**Research areas:** Engineering Management, Resilience Engineering, Risk Analysis, Critical Infrastructures, Port Engineering Management, Port Scheduling Optimization, Engineering Education.

## RESEARCH ACTIVITIES

## PUBLICATIONS

### Books

Fundamentals of Lean Manufacturing, by Don Phillips and **Berna Eren Tokgoz**, Virtualbookworm.com Publishing, ISBN-10: 1951985710, ISBN-13: 978-1951985714.

### Journal Publications

1. Thinesh Selvaratnam, Rinaz Riyaz Mohamed, **Berna Eren Tokgoz**, Liv Haselbach, Ginger Gummelt, Brian D. Williams, and Matthew I. Pyne. "A Data-Driven Approach for Decision Making in a Regional Interdisciplinary Resiliency Center", *International Journal of Disaster Risk Science*, 16, pp.513-520, **2025**. doi: <https://doi.org/10.1007/s13753-025-00643-4>.
2. Burak Cankaya, Kamil Ciftci, Joao S. D. Garcia, Nader Madkour, **Berna Eren Tokgoz**, and Khem Poudel. "Operational Performance Analysis for Brazilian Aviation System Using XAI: Case Study for Load Factor Analysis", *Journal of Supply Chain and Operations Management*, 22(1), **2024**.
3. Thinesh Selvaratnam, Liv Haselbach, **Berna Eren Tokgoz**, Ginger Gummelt, Kyle Boudreaux, Brian D. Williams, Matthew I. Pyne, Igor Linkov. "Establishing a Regional Interdisciplinary Resilience Center: A Bottom-Up Approach", *Environment Systems and Decisions*, (1-9), **2023**. doi: <https://doi.org/10.1007/s10669-023-09898-y>.
4. Premkumar Ravishankar, Seokyon Hwang, Jing Zhang, Ibrahim X. Khalilullah, and **Berna Eren Tokgoz**. "DARTS-Drone and Artificial Intelligence Reconsolidated Technological Solution for Increasing the Oil and Gas Pipeline Resilience", *International*

- Journal of Disaster Risk Science*, 13(5), 2022. doi: <https://doi.org/10.1007/s13753-022-00439-w>.
5. M. Burak Cankaya, **Berna Eren Tokgoz**, Ali Dag, and KC Santosh. “Automated Chemical Tanker Cleaning Activity Prediction at the Port Using Geo-Spatial Data”, *Journal of Modelling in Management*, 16(4) 2021. <https://doi.org/10.1108/JM2-12-2019-0284>.
  6. Jianyuan Ni, **Berna Eren Tokgoz**, Fei Gao, and Yueqing Li. “Practical Risk Assessment Tool for the Frequently Transported Chemicals at the Gulf of Mexico Ports”, *Int. J. of Critical Infrastructures*, 16(4) 2020. doi: [10.1504/IJCIS.2020.112043](https://doi.org/10.1504/IJCIS.2020.112043).
  7. Md Morshedul Alam, Zhanbo Zhu, **Berna Eren Tokgoz**, Jing Zhang, and Seokyon Hwang. “Automatic Assessment and Prediction the Resilience of Utility Poles Using UAV and Computer-Vision Techniques” *International Journal of Disaster Risk Science* 11(1) 2020. doi:10.1007/s13753-020-00254-1.
  8. Ayberk Karakavuz, **Berna Eren Tokgoz**, Victor Zaloom, and Alberto Marquez. “Risk Assessment of Commonly Transported Chemicals in the Port of Houston”, *Int. J. of Critical Infrastructures* 16(1) 2020. doi: 10.1504/IJCIS.2020.10024083.
  9. M. Burak Cankaya, Ezra Wari, and **Berna Eren Tokgoz**. “A Chemical Tanker Scheduling Problem: Port of Houston Case Study”, *Int. J. of Planning and Scheduling* 3(1) 2019.
  10. Md Morshedul Alam, **Berna Eren Tokgoz**, and Seokyon Hwang. “Framework for Measuring the Resilience of Utility Poles of an Electric Power Distribution Network”, *International Journal of Disaster Risk Science*, 10(2) 2019. doi: 10.1007/s13753-019-0219-8.
  11. Burak Cankaya, Ezra Wari, and **Berna Eren Tokgoz**. “A Practical Approach to Chemical Tanker Scheduling in a Port: A Case Study”, *Maritime Economics & Logistics* 21(1-3) 2019. doi:10.1057/s41278-019-00122-w.
  12. **Berna Eren Tokgoz**, Mahdi Safa, and Seokyon Hwang. “Resilience Assessment of Power Distribution Systems” *International Journal of Civil, Environmental, Structural, Construction, and Architectural Engineering*, Vol.11 (6), p. 802-807, 2017.
  13. **Berna Eren Tokgoz** and Adrian V. Gheorghe. “Probabilistic Resilience for Building Systems Exposed to Natural Disasters”, *J. of Critical Infrastructures*. Vol. 10, 3(4), p.375-397, 2014.
  14. **Berna Eren Tokgoz** and Adrian V. Gheorghe. “Resilience Quantification and Its Application to a Residential Building Subject to Hurricane Winds”, *Int. J. Disaster Risk Sci.* Vol. 4(3), September 2013.
  15. **Berna Eren Tokgoz** and Adrian V. Gheorghe. “Resilience: An Emergent Characterization of Complex Interdependent Critical Infrastructures”, *European Journal of Critical Services and Infrastructure Protection*, October 2013.

### Conference Proceedings

1. Mohammadsaleh Malekinejad and **Berna Eren Tokgoz**. “Application of principal component analysis as an unsupervised machine learning method to model socio-economic status of a community under natural disaster” *Proc. of Institute of Industrial and Systems Engineering Research Conference, Atlanta, GA*, June 2025.

2. Mohammadsaleh Malekinejad, **Berna Eren Tokgoz**, Cagatay Tokgoz, and Thinesh Selvaratnam. "CRISYS community resilience framework as a practical guideline for decision makers in case of natural hazards" *Proc. of the American Society for Engineering Management Annual Conference, Virginia Beach, VA*, November 2024.
3. Mohammadsaleh Malekinejad, **Berna Eren Tokgoz**, Thinesh Selvaratnam, and Mahmoud T. Khasawneh. "Development a custom framework to assess and calculate physical infrastructure resilience index- Data-driven approach" *Proc. of Institute of Industrial and Systems Engineering Research Conference, Montreal, CA*, May 2024.
4. Negar Saraei, Thinesh Selvaratnam, Nader Madkour, Premkumar Ravishankar, and **Berna Eren Tokgoz**. "Development of a Regional Community Resilience Framework with Expert Judgement" *Proc. of Institute of Industrial and Systems Engineering Research Conference, New Orleans, LA, USA*, May 2023.
5. Nader Madkour, **Berna Eren Tokgoz**, Reda Amer, and Burak Cankaya. "A GIS Based Approach Towards a Change Detection Framework for Assessing Land Cover in Coastal Lands" *Proc. of Institute of Industrial and Systems Engineering Research Conference, New Orleans, LA, USA*, May 2023.
6. Nader Madkour, **Berna Eren Tokgoz**, J. Zhang, S. Hwang, and Z. Luo. "Debris Assessment for Waterways and Ports with Drone and Artificial Intelligence" *Proc. of Institute of Industrial and Systems Engineering Research Conference, Seattle, WA, USA*, May 2022.
7. Premkumar Ravishankar, S. Hwang, J. Zhang, **Berna Eren Tokgoz**, and Z. Luo. "Oil and Gas Pipeline Resilience Enhancement" *Proc. of Institute of Industrial and Systems Engineering Research Conference, Seattle, WA, USA*, May 2022.
8. Premkumar Ravishankar, **Berna Eren Tokgoz**, J. Zhang, S. Hwang, and Z. Luo. "Increasing the Oil and Gas Pipeline Resilience Based on UAV's Data" *Proc. of Institute of Industrial and Systems Engineering Research Conference, Seattle, WA, USA*, May 2022.
9. Robert Kelley Bradley, James C Curry, Victor Zaloom, Brian Craig, **Berna Eren Tokgoz**, Alberto Marquez, Yueqing Li, Maryam Hamidi, Weihang Zhu, Xinyu Liu, and Acyut Kaneria. "Results of the First Six Years of a 2+2 Online BS Industrial Engineering Degree Pathway" *Proc. of American Society for Engineering Education Virtual Annual Conference*, July 2021.
10. Ruobing Zhao, Yi Liu, Yueqing Li, and **Berna Eren Tokgoz**. "An Investigation of Resilience in Human Driving and Automatic Driving in Freight Transportation System" *Proc. of Institute of Industrial and Systems Engineering Virtual Research Conference*, May 2021.
11. Premkumar Ravishankar, **Berna Eren Tokgoz**, X. Zhang, J. Zhang, and S. Hwang. "Detecting Defects of Railway Tracks by Using Computer Vision Methodology" *Proc. of Institute of Industrial and Systems Engineering Virtual Research Conference*, May 2021.
12. Nader Madkour and **Berna Eren Tokgoz**. "Predicting Non-Emergency 311 Calls for an Effective Resource Allocation After a Disaster" *Proc. of Institute of Industrial and Systems Engineering Virtual Research Conference*, October 2020.
13. Emily Ingram, Ozge Gunaydin-Sen, **Berna Eren Tokgoz**, Ashikur Rahman Abid, Md Morshedul Alam, and Mamta Singh. "Effects of Entry-Level Chemistry Courses in STEM Majors" *Proc. of Institute of Industrial and Systems Engineering Virtual Research Conference*, October 2020.

14. Md Morshedul Alam, **Berna Eren Tokgoz**, Zhanbo Zhu, Jing Zhang, and Seokyon Hwang. "Resilience Enhancements of Power Distribution Lines Using Computer Vision Technology" *Proc. of Institute of Industrial and Systems Engineering Research Conference, Orlando, FL, USA*, May 2019.
15. Zhanbo Zhu, Md Morshedul Alam, **Berna Eren Tokgoz**, Seokyon Hwang, and Jing Zhang. "Monitoring Utility Pole Health Conditions Using UAV and Deep Learning" *Proc. of Institute of Industrial and Systems Engineering Research Conference, Orlando, FL, USA*, May 2019.
16. Md Morshedul Alam, **Berna Eren Tokgoz**, Ozge Gunaydin-Sen, and Mamta Singh. "The Importance of Success in General Chemistry for STEM Majors" *Proc. of Institute of Industrial and Systems Engineering Research Conference, Orlando, FL, USA*, May 2019.
17. Ayberk Karakavuz, **Berna Eren Tokgoz**, and M. Burak Cankaya. "Risk Assessment of Commonly Transported Chemicals in Ports" *Proc. of Institute of Industrial and Systems Engineering Research Conference, Orlando, FL, USA*, May 2018.
18. Md Morshedul Alam, **Berna Eren Tokgoz**, Mahdi Safa, and Seokyon Hwang. "Evaluation of Effects of Wind Speed on Resilience of Electric Poles" *Proc. of Institute of Industrial and Systems Engineering Research Conference, Orlando, FL, USA*, May 2018.
19. Md Morshedul Alam, **Berna Eren Tokgoz**, Ozge Gunaydin-Sen, and Mamta Singh. "Survey Study on the Retention Rate for Undergraduate Students in STEM" *Proc. of Institute of Industrial and Systems Engineering Research Conference, Orlando, FL, USA*, May 2018.
20. Mahdi Safa, Seokyon Hwang, and **Berna Eren Tokgoz**. "Improving Disaster Resilience of Power Distribution Network Using Photogrammetry Technology" *Proc. of Canadian Society for Civil Engineering Annual Conference in Leadership in Sustainable Infrastructure, Vancouver, CA*, June 2017.
21. **Berna Eren Tokgoz**, Mahdi Safa, and Seokyon Hwang. "Resilience Assessment of Power Distribution Systems" *Proc. of 19<sup>th</sup> Conference on Critical Infrastructure Systems Engineering, San Francisco, CA*, June 2017.
22. **Berna Eren Tokgoz**, Seokyon Hwang, and Mahdi Safa. "An Innovative Approach to Increasing Power Distribution Network Resilience" *Proc. of International Conference on Maintenance and Rehabilitation of Constructed Infrastructure Facilities, South Korea*, July 2017.

### Referred Conference Presentations

1. MohammadSaleh Malekinejad, **Berna Eren Tokgoz**, Thinesh Selvaratnam, Ginger Gummelt, Brian Williams, Cagatay Tokgoz, Seokyon Hwang, and Chris Boone. "Application of Entropy Weight Method in CRISys Framework" *Center for Resiliency 3<sup>rd</sup> Annual Showcase, Beaumont, TX*, August 2024 (Poster presentation).
2. MohammadSaleh Malekinejad, Thinesh Selvaratnam, and **Berna Eren Tokgoz**. "Application of Principal Component Analysis to Dimensionality Reduction in Community Resilience", *Presented in Lamar University Research EXPO*, April 2024.
3. MohammadSaleh Malekinejad, **Berna Eren Tokgoz**, Thinesh Selvaratnam, Ginger Gummelt, Brian Williams, Cagatay Tokgoz, Seokyon Hwang, and Chris Boone. "CRISys Community Resilience Indicator System: Developing a Community Resilience

- Framework in Response to Natural Disasters” *Center for Resiliency 2<sup>nd</sup> Annual Showcase, Beaumont, TX, August 2023 (Poster presentation).*
4. Premkumar Ravishankar Nader Madkour, S. Hwang, J. Zhang, and **Berna Eren Tokgoz** “Influence of Clay Content and Cation Exchange Capacity to Create Resilient Railroad Infrastructure” *Institute of Industrial and Systems Engineering Research Conference, New Orleans, LA, USA, May 2023.*
  5. Burak Cankaya, K. N. Poud, J.S.D. Garcia, **Berna Eren Tokgoz**, and Nader Madkour. “Load Factor Analysis Using Machine Learning for Brazilian Aviation System” *Institute of Industrial and Systems Engineering Research Conference, New Orleans, LA, USA, May 2023.*
  6. Mohammadsaleh Malekinejad, **Berna Eren Tokgoz**, Thinesh Selvaratnam, Cagatay Tokgoz, Ginger Gummelt, Brian Williams, Angela Clavijo, Seokyon Hwang, Chris Boone. “CRISys-Community Resilience Indicator System: Developing a Community Resilience Framework in Response to Natural Disasters”, *Center for Resiliency 1<sup>st</sup> Annual Showcase, Lamar University, September 2022 (Poster presentation).*
  7. Nader Madkour, Reda Amer, and **Berna Eren Tokgoz**. “Assessment of Soil Erosion Using Remote Sensing and GIS” *Institute of Industrial and Systems Engineering Research Conference, Seattle, WA, USA, May 2022.*
  8. Premkumar Ravishankar, Seokyon Hwang, Jing Zhang, and **Berna Eren Tokgoz** “Increasing the Oil and Gas Pipeline Resiliency Using Image Processing Algorithm” *10<sup>th</sup> Annual Texas STEM Conference, November 2022. 1<sup>st</sup> place in oral graduate research presentation.*
  9. Nader Madkour, Reda Amer, and **Berna Eren Tokgoz**. “A Critical Approach Towards a Change Detection Framework for Assessing Soil Degradation Rates” *10<sup>th</sup> Annual Texas STEM Conference, November 2022.*
  10. Negar Saraei, Thinesh Selvaratnam, and **Berna Eren Tokgoz**. “Developing a Resilience Framework for Jefferson Count, TX” *10<sup>th</sup> Annual Texas STEM Conference, November 2022.*
  11. Nader Madkour, Seokyon Hwang, Jing Zhang, **Berna Eren Tokgoz**, and Zhe Luo. “Drone and Artificial Intelligence-Based Evaluation of Debris for Waterways and Ports” *9<sup>th</sup> Annual Texas STEM Conference, October 2021. 2<sup>nd</sup> place in oral graduate research presentation.*
  12. Premkumar Ravishankar, Ibrahim Khalilullah, Seokyon Hwang, Jing Zhang, **Berna Eren Tokgoz** and Zhe Lou. “Increasing Oil and Gas Pipeline Resiliency Using Drones and Image Processing Algorithm” *9<sup>th</sup> Annual Texas STEM Conference, October 2021.*
  13. Premkumar Ravishankar, S. Hwang, J. Zhang, and **Berna Eren-Tokgoz**. “Increasing the oil and gas pipeline resiliency using drones and image processing algorithm” *Institute of Industrial and Systems Engineering Virtual Research Conference, May 2021.*
  14. Premkumar Ravishankar, Xuling Zhang, Seokyon Hwang, Jing Zhang, **Berna Eren Tokgoz**. “Detecting Defects of Railway Tracks by Using Computer Vision Methodology” *8<sup>th</sup> Annual Texas STEM Conference, November 2020.*
  15. Nader Madkour and **Berna Eren Tokgoz**. “Towards an Effective Resource Allocation by Using Non-Emergency Requests” *8<sup>th</sup> Annual Texas STEM Conference, November 2020.*
  16. Oluseye Fafiolu, **Berna Eren Tokgoz**, Jaeyoung Cho. “Reliability Prediction Model for Rail Track Geometry” *7<sup>th</sup> Annual Texas STEM Conference, November 2019.*

17. Ashikur Rahman Abid, **Berna Eren Tokgoz**, Seokyon Hwang, and Jing Zhang. "Evaluation of Condition of Utility Poles of Electric Power Distribution Networks for Natural Disasters", *7<sup>th</sup> Annual Texas STEM Conference*, November 2019.
18. Nader Madkour and **Berna Eren Tokgoz**. "Analysis of Non-Emergency Calls for Efficient Resource Allocation in Houston, TX", *7<sup>th</sup> Annual Texas STEM Conference*, November 2019.
19. Dikshant Singh, **Berna Eren Tokgoz**, and Cagatay Tokgoz. "Risk Evaluation of Frequently Transported Chemicals in Ports of Gulf Region", *6<sup>th</sup> Annual Undergraduate Research & Creativity Expo*, April 2019 (oral, local), 2nd Place in oral presentation.
20. **Berna Eren Tokgoz**, Dikshant Singh, and Fei Gao. "Risk Prioritization of Chemicals at Gulf of Mexico Ports" *Industrial and Systems Engineering Research Conference, Orlando, FL, USA, May 2019*.
21. Jianyuan Ni, Ruobing Zhao, Jing Zhang, **Berna Eren Tokgoz**, Seokyon Hwang. "Using Unmanned Aerial Vehicle with Deep Learning Neural Network to Monitor the Health Conditions of Utility Poles", *CICE Innovation Showcase*, October 2019.
22. Zeina Bousaid, Alberto Marquez, and **Berna Eren Tokgoz**. "Determining Inventories of Medical Supplies During Disaster Response Operations" *Industrial and Systems Engineering Research Conference, Orlando, FL, USA, May 2018*.
23. Md Morshedul Alam, **Berna Eren Tokgoz**, and Seokyon Hwang. "Optimal Resource Allocation to Enhance Utility Pole Resilience to Natural Disasters" *6<sup>th</sup> Annual Texas STEM Conference*, Beaumont, TX, November 2018.
24. Dikshant Singh, **Berna Eren Tokgoz**, and Cagatay Tokgoz. "Public and Environmental Risk Identification of Commonly Transported Chemicals at Ports in Gulf of Mexico" *6<sup>th</sup> Annual Texas STEM Conference*, Beaumont, TX, November 2018. 2<sup>nd</sup> Place in oral presentation.
25. Burak Cankaya, Ezra Wari, and **Berna Eren Tokgoz**. "Pilot and Chemical Tanker Scheduling Problem in a Port" *INFORMS Annual Meeting*, Houston, TX, October 2017.
26. Jaeyoung Cho, Maryam Hamidi, and **Berna Eren Tokgoz**. "Utilization of Unmanned Aerial Vehicles in Port Operations" *INFORMS Annual Meeting*, Houston, TX, October 2017.
27. Md Morshedul Alam, Mahdi Safa, Seokyon Hwang, and **Berna Eren Tokgoz**. "Damage Prediction Methodology for Electric Poles Exposed to Hurricane Winds" *5<sup>th</sup> Annual Texas STEM Conference*, Beaumont, TX, October 2017. 2<sup>nd</sup> Place in oral presentation.
28. Ayberk Karakavuz and **Berna Eren Tokgoz**. "Risk Assessment of Commonly Transported Chemicals in Ports" *5<sup>th</sup> Annual Texas STEM Conference*, Beaumont, TX, October 2017.
29. Ayberk Karakavuz, Jaeyoung Cho, Maryam Hamidi, and **Berna Eren Tokgoz**. "Risk Assessment of UAV-Aided Port Operations" *Texas Hurricane Conference, University of Houston*, Houston, TX, August 2017.
30. Md Morshedul Alam, Mahdi Safa, Seokyon Hwang, and **Berna Eren Tokgoz**, "Resilience Metric Determination for the Electric Distribution Poles" *Texas Hurricane Conference, University of Houston*, Houston, TX, August 2017.
31. Burak Cankaya and **Berna Eren Tokgoz**. "A Comparative Study on Chemical Tanker Scheduling" *Institute of Industrial and Systems Engineering Annual Research Conference and Expo*, Pittsburg, PA, May 2017.

32. Burak Cankaya and **Berna Eren Tokgoz**. “Understanding Moving Object Patterns with Machine Learning Methods” *Institute of Industrial and Systems Engineering Annual Research Conference and Expo*, Pittsburg, PA, May 2017.
33. Maryam Hamidi, **Berna Eren Tokgoz**, Alberto Marquez, and Brian Craig. “A Framework for Port Warehouse Space Assignment Problem” *Institute of Industrial and Systems Engineering Annual Research Conference and Expo*, Pittsburg, PA, May 2017.
34. Burak Cankaya and **Berna Eren Tokgoz**. “Understanding Vehicle Movement Patterns with Machine Learning Algorithms” *INFORMS Annual Conference*, Nashville, TN, USA, November 2016.
35. Burak Cankaya and **Berna Eren Tokgoz**. “Understanding Vehicle Movement Patterns with Artificial Neural Networks” *INFORMS Annual Conference*, Nashville, TN, USA, November 2016.
36. Burak Cankaya and **Berna Eren Tokgoz**. “Waste Reduction in Port Management Activities with Six Sigma” *Institute of Industrial and Systems Engineering Lean and Six Sigma Conference*, San Antonio, TX, USA, September 2016.
37. Burak Cankaya and **Berna Eren Tokgoz**. “Vessel Traffic Optimization with Machine Learning using Geospatial Data” *Mission Critical Big Data Analytics Workshop*, Prairie View A&M University, May 2016. 2<sup>nd</sup> place in a student poster presentation.
38. **Berna Eren Tokgoz** and M. Burak Cankaya. “Systems Design Approach to Port Operations” *Institute of Industrial and Systems Engineering Annual Research Conference and Expo*, Anaheim, CA, USA, May 2016.
39. Burak Cankaya and **Berna Eren Tokgoz**. “Sustainable Planning of the HAZMAT Evacuation Logistics Process” *Institute of Industrial and Systems Engineering Annual Research Conference and Expo*, Anaheim, CA, USA, May 2016.
40. Burak Cankaya and **Berna Eren Tokgoz**. “A Novel Decision Support Methodology for Port Logistics” *Institute of Industrial and Systems Engineering Annual Research Conference and Expo*, Anaheim, CA, USA, May 2016.
41. Burak Cankaya and **Berna Eren Tokgoz**. “Optimization of Scheduling for Terminals and their Economic Impacts” *Institute of Industrial and Systems Engineering Annual Research Conference and Expo*, Anaheim, CA, USA, May 2016.
42. **Berna Eren Tokgoz** and Adrian V. Gheorghe. “Implementation of Quantification of Resilience to Essential Facilities” *Institute of Industrial and Systems Engineering Annual Research Conference*, Nashville, TN, USA, June 2015.
43. **Berna Eren Tokgoz** and Adrian V. Gheorghe. “Efforts to Quantify Resilience Against Hurricane Wind Speed at Community Level”, *The 4<sup>th</sup> Conference on Next Generation Infrastructures*, Virginia Beach, VA, USA, November 2011.
44. **Berna Eren Tokgoz** and Adrian V. Gheorghe. “A Quantification effort for resilience of essential facilities against hurricanes at local level”, *The 2<sup>nd</sup> Conference of the International Society for Integrated Disaster Risk Management*, Los Angeles, CA, USA, 2011.
45. **Berna Eren Tokgoz** and Adrian V. Gheorghe, “A Quantification approach for resilience of essential facilities against hurricanes at regional level”, *The Infrastructure Security Partnership Conference*, Dallas, TX, USA, December 2010.
46. **Berna Eren Tokgoz**, Volkan Cakir, and Adrian V. Gheorghe, "Handling Emergency Management in Object Oriented Modeling Environment" *MODSIM World Conference & Expo*, Virginia Beach, VA, USA, 2009.



47. **Berna Eren Tokgoz**, Volkan Cakir, and Adrian V. Gheorghe, "Managing Hampton Roads Resiliency with an Object-Oriented Paradigm" *HRA INCOSE Requirements, Management & Analysis Seminar*, Newport News, VA, USA, 2008.

## RESEARCH GRANTS

1. Title           The FloodSmart Southeast Texas Youth Initiative for Environmental Literacy and Community Resilience (FLOWS)  
     Source        Gulf Research Program, National Academies of Science  
     Amount       \$678,003  
     Duration     10/2025 – 9/2028  
     PI            Berna Eren Tokgoz (co-PI), Thinesh Selvaratnam (co-PI), Liv Haselbach (co-PI), Qin Qian (co-PI), Mamta Singh (co-PI)
  
2. Title           **CRISys - Community Resilience Indicator System**: Developing a Community Resilience Framework in Response to Natural Disasters- Phase IV  
     Source        Center for Resiliency, Lamar University  
     Amount       \$25,000  
     Duration     11/2024 – 8/2025  
     PI            Berna Eren Tokgoz (PI), Seokyon Hwang (co-PI), Ginger Gummelt (co-PI), Brian Williams (co-PI), Cagatay Tokgoz (co-PI), Marilyn Guidry (Senior Personnel), Chris Boone (Senior Personnel), Angela Claviho (Senior Personnel)
  
3. Title           **CRISys - Community Resilience Indicator System**: Developing a Community Resilience Framework in Response to Natural Disasters- Phase III  
     Source        Center for Resiliency, Lamar University  
     Amount       \$49,061  
     Duration     11/2023 – 8/2024  
     PI            Berna Eren Tokgoz (PI), Seokyon Hwang (co-PI), Ginger Gummelt (co-PI), Brian Williams (co-PI), Cagatay Tokgoz (co-PI), Marilyn Guidry (Senior Personnel), Chris Boone (Senior Personnel), Angela Claviho (Senior Personnel)
  
4. Title           Research, Education, and Outreach Toward a Center for Resiliency and Reliability of Semiconductor Packaging, Phase II.  
     Source        Center for Resiliency, Lamar University  
     Amount       \$49,679  
     Duration     11/2023 – 8/2024  
     PI            Berna Eren Tokgoz (co-PI), Paul Bernazzani (PI), Xuejun Fan (co-PI), Susil Doranga (co-PI), Ping He (co-PI), Jenny Zhou (co-PI)
  
5. Title           Developing Reliability Indexes for Southeast Texas's Energy Grid  
     Source        Center for Resiliency, Lamar University  
     Amount       \$23,742  
     Duration     03/2023 – 8/2023  
     PI            Thinesh Selvaratnam (PI), Berna Eren Tokgoz (co-PI)

6. Title **CRISys - Community Resilience Indicator System: Developing a Community Resilience Framework in Response to Natural Disasters- Phase II**  
 Source Center for Resiliency, Lamar University  
 Amount \$50,988  
 Duration 11/2022 – 8/2023  
 PI Berna Eren Tokgoz (PI), Thinesh Selvaratnam (co-PI), Seokyon Hwang (co-PI), Ginger Gummelt (co-PI), Brian Williams (co-PI), Cagatay Tokgoz (co-PI), Marilyn Guidry (Senior Personnel), Chris Boone (Senior Personnel), Angela Claviho (Senior Personnel)
  
7. Title Research, Education, and Outreach Toward a Center for Resiliency and Reliability of Semiconductor Packaging  
 Source Center for Resiliency, Lamar University  
 Amount \$50,834  
 Duration 04/2022 – 8/2022  
 PI Berna Eren Tokgoz (co-PI), Xuejun Fan (PI), Paul Bernazzani (co-PI), Susil Doranga (co-PI), Ping He (co-PI), Jenny Zhou (co-PI)
  
8. Title **CRISys - Community Resilience Indicator System: Developing a Community Resilience Framework in Response to Natural Disasters-Phase I**  
 Source Center for Resiliency, Lamar University  
 Amount \$50,000  
 Duration 04/2022 – 8/2022  
 PI Berna Eren Tokgoz (PI), Thinesh Selvaratnam (co-PI), Seokyon Hwang (co-PI), Ginger Gummelt (co-PI), Brian Williams (co-PI), Matthew Pyne (co-PI), Kyle Boudreaux (Senior Personnel), Chris Boone (Senior Personnel), Angela Claviho (Senior Personnel)
  
9. Title Increasing the Oil and Gas Pipeline Resiliency using Drones and Image Processing Algorithm  
 Source Center for Resiliency, Lamar University  
 Amount \$14,000  
 Duration 12/2021 – 8/2022  
 PI Berna Eren Tokgoz (PI), Seokyon Hwang (co-PI), and Jing Zhang (co-PI)
  
10. Title Use Connected Vehicle Environments to Improve Resiliency of Transportation System in Severe Weathers  
 Source Center for Resiliency, Lamar University  
 Amount \$14,000  
 Duration 12/2021 – 8/2022  
 PI Berna Eren Tokgoz (co-PI), Yueqing Li (PI), and Xing Wu (co-PI)
  
11. Title Increasing Resiliency and Safety of Waterways and Ports: A Noble Approach Based on Drone and Artificial Intelligence  
 Source Center for Advances in Port Management, Lamar University  
 Amount \$35,000

- Duration 2/1/2021 – 8/31/2021  
 PI Berna Eren Tokgoz (co-PI), Seokyon Hwang (PI), and Jing Zhang (co-PI), Zhe Luo (co-PI)
12. Title DARTS- Drone and Artificial Intelligence Reconsolidated Technological Solution for Increasing the Oil and Gas Pipeline Resilience  
 Source Center for Advances in Port Management, Lamar University  
 Amount \$20,000  
 Duration 10/1/2021 – 8/31/2021  
 PI Berna Eren Tokgoz (co-PI), Seokyon Hwang (PI), and Jing Zhang (co-PI), Zhe Luo (co-PI)
13. Title An Automatic System for Monitoring and Assessing the Health of Railroad Tracks Using Artificial Intelligence Technologies  
 Source Center for Advances in Port Management, Lamar University  
 Amount \$25,200  
 Duration 3/1/2020 – 8/31/2020  
 PI Berna Eren Tokgoz (co-PI), Seokyon Hwang (PI), and Jing Zhang (co-PI)
14. Title Monitoring the Health Conditions of Utility Poles and Vegetation Clearance Using Unmanned Aerial Vehicle and Deep Learning Neural Network  
 Source Lamar University CICE Summer Innovation Grant  
 Amount \$3,800  
 Duration 6/15/2019 – 8/31/2019  
 PI Berna Eren Tokgoz (co-PI), Jing Zhang (PI), and Seokyon Hwang (co-PI)
15. Title Risk Assessment of Chemicals at Ports  
 Source Lamar University Research Enhancement Grant  
 Amount \$5,000  
 Duration 9/2018 – 8/2019  
 PI Berna Eren Tokgoz (PI)
16. Title Public and Environmental Risk Identification of Commonly Transported Chemicals at Ports in Gulf of Mexico  
 Source The Office of Undergraduate Research (SURF Grant), Lamar University  
 Amount \$4,600  
 Duration 6/2018 – 8/2018  
 PI Berna Eren Tokgoz (PI), Cagatay Tokgoz (co-PI)
17. Title Academic Leadership for Women Engineers  
 Source NSF and Henry Luce Foundation, Inc.  
 Amount \$2,000  
 Duration October 2018  
 PI Berna Eren Tokgoz (Travel Grant Recipient)

18. Title      A Study on Innovative Port System: Utilization of Unmanned Aerial Systems in Port Operations  
 Source      Center for Advances in Port Management, Lamar University  
 Amount      \$35,000  
 Duration    2/2017 – 8/2017  
 PI          Berna Eren Tokgoz (co-PI), Jaeyoung Cho (PI), Maryam Hamidi (co-PI)
19. Title      Optimization of Vessel Scheduling Problem and Evacuation Decision Making Using Real Time Location Data and Their Economic Impacts: A Case Study for Port of Houston  
 Source      Center for Advances in Port Management, Lamar University  
 Amount      \$34,200  
 Duration    5/2016 – 8/2017  
 PI          Berna Eren Tokgoz (PI), Mehmet Burak Cankaya (co-PI)
20. Title      Academic Leadership for Women Engineers  
 Source      NSF and Henry Luce Foundation, Inc.  
 Amount      \$2,000  
 Duration    October 2017  
 PI          Berna Eren Tokgoz (Travel Grant Recipient)
21. Title      An Innovative Approach to Increasing Power Distribution Network Resilience under Pre- and Post-disaster Situation  
 Source      Lamar University Proposal Writing Research Enhancement Grant  
 Amount      \$15,000  
 Duration    9/2016 – 8/2017  
 PI          Berna Eren Tokgoz (co-PI), Mahdi Safa (PI), Seok Hwang (co-PI)
22. Title      Implementation of a Methodology for Quantification of Resilience for Essential Facilities During a Hurricane Event  
 Source      Lamar University Research Enhancement Grant  
 Amount      \$5,000  
 Duration    9/2015 – 8/2016  
 PI          Berna Eren Tokgoz (PI)
23. Title      Mariner Personnel Safety  
 Source      American Bureau of Shipping  
 Amount      \$469,402  
 Duration    Summer II, 2015  
 PI          Brian Craig (PI), (co-PIs) Berna Eren Tokgoz, James Curry, Weihang Zhu

## STUDENT SUPERVISIONS

### Graduate Students

Doctor of Engineering Advisor

- Arif Ibrahim Uyanik, Doctor of Engineering in Industrial Engineering, Fall 2024-*present*.
- Mohammadsaleh Malekinejad, Doctor of Engineering in Industrial Engineering, graduated in 2025.
- Nader Madkour, Doctor of Engineering in Industrial Engineering, graduated in 2023.
- Premkumar Ravishankar, Doctor of Engineering in Industrial Engineering, graduated in 2023.
- Mehmet Burak Cankaya, Doctor of Engineering in Industrial Engineering, graduated in 2017.

Doctor of Engineering Committee

- Oghosa P. Idahosa, Doctor of Engineering in Industrial Engineering, graduated in 2024;
- Ashraf A. Almgadi, Doctor of Engineering in Industrial Engineering, graduated in 2024;
- Samuel Casco, Doctor of Engineering in Industrial Engineering, graduated in 2023;
- Jian Fang, Doctor of Philosophy in Chemical Engineering, graduated in 2022;
- Zeina Bousaid, Doctor of Engineering in Industrial Engineering, graduated in 2018;
- Tamaraebi Clement Atuwu, Doctor of Engineering in Industrial Engineering, graduated in 2018;
- Sujay Mahalle, Doctor of Engineering in Industrial Engineering, graduated in 2017;
- Serkan Varol, Doctor of Engineering in Industrial Engineering, graduated in 2016.

Doctor of Engineering Committee (ongoing)

- Emad Zeni, Doctor of Engineering in Industrial Engineering, proposal defense in Fall 2025;
- Kushum K.C., Doctor of Engineering in Civil and Environmental Engineering, Candidacy exam, in Fall 2024.

Master Thesis Advisor

- Nader Madkour, MES in Industrial Engineering, graduated in 2020;
- Md Morshedul Alam, MES in Industrial Engineering, graduated in 2018;
- Santhoshi Kethineedi, MES in Industrial Engineering, graduated in 2018;
- Ayberk Karakavuz, MES in Industrial Engineering, graduated in Spring 2018;
- Darshil Patel, MES in Industrial Engineering, graduated in 2017.

Master Thesis Committee

- Bianca Vitale, MES in Industrial Engineering, graduated in 2023;
- Prashant Raut, MES in Industrial Engineering, graduated in 2023;
- Emedem Sunday, MES in Industrial Engineering, graduated in 2021;
- Jianyuan Ni, MES in Computer Science, graduated in 2020;
- Binod Adhikari, MES in Civil and Environmental Engineering, graduated in 2019;
- Karankumar Vijaykumar X Modi, MES in Industrial Engineering, graduated in 2018;

- Pratik Pokharel, MES in Civil and Environmental Engineering, graduated in 2018;
- Bipul Mainali, MES in Civil and Environmental Engineering, graduated in 2018;
- Datta Tele, MES in Industrial Engineering, graduated in 2017;
- Omkar V Dhok, MES in Industrial Engineering, graduated in 2017;
- MM Shakiul Haque, MES in Civil and Environmental Engineering, graduated in 2017.

### Undergraduate Students

#### Undergraduate Research Advisor

- Dikshant Singh, Summer Undergraduate Research Fellow, Summer 2018.

#### Senior Design Mentor

- Jose Alvirde, Fall 2025
- Ali Syed, Alex B. Cline, Clifford Odobo, Spring 2021
- Manuel Martinez, Ana Moreno, Jesus Perez, Jason Higgins, Fall 2018 to Spring 2019;
- Taylor J. Landry, De'Andrez Johnson, Hunter Rising, Fall 2017 to Spring 2018;
- Veronica Ochoa, Kaley Sanford, Erica Borel, Daliwealth Chou, Fall 2016 to Spring 2017;
- Huy Luong, Scorpio Collins, Khalid Almutwa, Fall 2015 to Spring 2016.

### **CONFERENCES, WORKSHOPS, AND SEMINARS ATTENDED**

1. Motiva Professor Externship, 3-day onsite training at Motiva Refinery, July **2025**.
2. American Society of Engineering Management (ASEM) Annual Conference, Virginia Beach, VA, November **2024**.
3. "CRISys - Community Resilience, Infrastructure, Disaster Management, Resilience Framework in Response to Natural Disasters", CfR 3<sup>rd</sup> Annual Showcase (*Poster Presentation*), Fall **2024**.
4. "CRISys - Framework as a Practical Guideline for Decision Makers in Case of Natural Hazards", (*Oral Presentation*), CfR's Brown Bag Talk, Fall **2024**.
5. "Application of Principal Component Analysis to Dimensionality Reduction in Community Resilience" Lamar University Annual Research Expo (*Oral Presentation*), Spring **2024**.
6. Community Resilience, Infrastructure, Disaster Management, Resilience Framework in Response to Natural Disasters, CfR 2<sup>nd</sup> Annual Showcase (*Poster Presentation*), Fall **2023**.
7. "Increasing the Oil and Gas Pipeline Resiliency Using Image Processing Algorithm", (*Oral Presentation*), CfR's Brown Bag Talk, Spring **2023**.
8. Institute of Industrial and Systems Engineering (IISE) Annual Conference and Expo, New Orleans, LA May **2023**.
9. Southeast Texas Women in Industry Luncheon, Spring **2023**.
10. Developing a Community Resilience Framework in Response to Natural Disasters", *Center for Resiliency 1<sup>st</sup> Annual Showcase, Lamar University, September 2022 (Poster presentation)*.
11. "Fundamentals of Program Assessment", 3-day ABET Workshop, June 14-16, **2022**.

12. Institute of Industrial and Systems Engineering (IISE) Annual Conference and Expo, Seattle, WA May **2022**.
13. "Moving Resilience Research to Action in the Gulf Region", 3-day NSF Funded Workshop, May 9-11, **2022**.
14. "Resilience and Recovery Summit: Building a Collaborative Community", Center for Resiliency, Beaumont, TX, April 4-5, **2022**.
15. "Program Assessment Methods and Measures", ABET Workshop, October 27, **2021**.
16. "Basics of Program Assessment", ABET Workshop, October 20, **2021**.
17. "Digitalization: The Key to Improving Energy Infrastructure Data Integrity", The Center for Midstream and Management Science, May 11, **2021**.
18. "Newly Developed Rapid DNA Field Testing Technology for Corrosion Causing Microbes in Midstream Systems", The Center for Midstream and Management Science, March 16, **2021**.
19. "Corrosion issues in the Midstream Industry", The Center for Midstream and Management Science, November 10, **2020**.
20. "Major Issues Facing the Midstream Industry", The Center for Midstream and Management Science, September 21, **2020**.
21. "Corrosion/Big Data meeting with Emerson", The Center for Midstream and Management Science, September 10, **2020**.
22. "Meeting with the Midstream Director for research interest", The Center for Midstream and Management Science, June 9, **2020**.
23. "Association of College and University Educator (ACUE) Course in Effective Teaching Practices", **Fall 2019-Spring 2020**.
24. "AMSC Port Arthur Cyber Security Group Workshop", US Coast Guard, Port Arthur, TX, October **2019**.
25. "Southeast Texas Workforce Development Workshop", Lamar University, Beaumont, TX, October **2019**.
26. "Freight Transportation System Resiliency Recovery & Business Continuity Workshop, Port of Beaumont, Beaumont, TX, July **2019**.
27. Institute of Industrial and Systems Engineering (IISE) Annual Conference and Expo, Orlando FL, May **2019**.
28. IISE Student Regional Conference, Lamar University, Beaumont, TX, March **2019**.
29. Texas STEM Conference, Lamar University, Beaumont, TX, Novembers of **2023, 2022, 2021, 2018** and **2017**.
30. Women Engineering Conference, Minneapolis, MN, October **2018**.
31. Southeast Texas Youth Career Expo, Ford Arena, Beaumont, Texas, September **2018**.
32. "Strategic Asset Management Workshop", Industrial Safety Council, Beaumont, TX, June **2018**.
33. Institute of Industrial and Systems Engineering (IISE) Annual Conference and Expo, Orlando FL, May **2018**.
34. Undergraduate Research Expo, Lamar University, Beaumont, TX, Aprils of **2024, 2019, 2018**, and **2017**.
35. "Emergency Response Planning/2018 Hurricane Plan Exercise", Lamar University, Beaumont, TX, April **2018**.
36. "Grant writing NSF Workshop", Lamar University, Beaumont, TX, March **2018**.

37. “Port and Marine Terminal Physical Security: Key Issues and Trends”, Lamar University, Beaumont, TX, March **2018**.
38. “Risk Analysis in Decision Making: A Practical Primer”, Lamar University, Beaumont, TX, March **2018**.
39. “Sustainable Mobility in Logistics: The Future of Smart & Green Ports Workshop” University of Houston, German American Chamber of Commerce of the Southern US, Inc., Houston, TX, February **2018**.
40. “Planning for the next disaster: Lessons learned, best practices and next steps Workshop”, Lamar University, Beaumont, TX, December **2017**.
41. Institute for Operations Research and the Management Sciences (INFORMS) Conference, Houston, TX, November **2017**.
42. Women Engineering Conference, Austin, TX, October **2017**.
43. “Boot Camp for Lamar University: Fundamentals of Entrepreneurship Workshop”, Lamar University, Beaumont, TX, September **2017**.
44. Southeast Texas Youth Career Expo, Ford Arena, Beaumont, Texas, September **2017**.
45. 19<sup>th</sup> International Conference on Critical Infrastructures Systems Engineering, June **2017**.
46. Institute of Industrial and Systems Engineering (IISE) Annual Conference and Expo, Pittsburgh PA, May **2017**.
47. Panama Canal Director Seminar, Lamar University, Beaumont, TX, April **2017**.
48. “Enhancing Seaport Resilience in Maritime Operations Workshop”, Dania Beach, FL, December **2016**.
49. “Boot Camp for Lamar University: Fundamentals of Entrepreneurship Workshop”, Lamar University, Beaumont, TX, September **2016**.
50. Breakbulk America Conference, Houston, TX, September **2016**.
51. Harbor Safety Committee (HSC), Meeting, Houston, TX, September **2016**.
52. Institute of Industrial and Systems Engineering (IISE) Annual Conference and Expo, Anaheim CA, May **2016**.
53. “Avoiding Disasters: How to Reduce Impacts from the Next Big Storm Workshop” Rice University, Houston, TX, April **2016**.
54. Resilient Coastal Infrastructure Workshop”, Lamar University, Beaumont, TX, April **2016**.
55. PortVision360 launching event, Houston, TX, March **2016**.
56. Dredging your Docks Conference, Beaumont, TX, December **2015**.
57. The Western Gulf Coast Houston Pilot Association Conference, Houston, TX, September **2015**.
58. Institute of Industrial and Systems Engineering (IISE) Annual Conference and Expo, Nashville TN, May **2015**.
59. New Faculty Colloquium, IISE Annual Conference, Nashville, TN, May **2015**.
60. “Writing & Designing NSF Proposals Workshop”, Houston, TX, January **2015**.
61. ISA Southeast Texas Expo, Beaumont, TX, October **2014**.
62. ISA Southeast Texas Section Professional Engineering Ethics course, Beaumont, TX, October **2014**.
63. 1<sup>st</sup> Annual SETX Transportation Summit, Beaumont, TX, September **2014**.
64. “Improving Undergraduate STEM Education Development Seminar”, Beaumont, TX, August **2014**.



## **Certifications**

- Certificate in ABET Fundamentals of Program Assessment, June 2022.
- Certificate in ABET Program Assessment Methods and Measures, October 2021.
- Certificate in ABET Basics of Program Assessment Planning, October 2021.
- Certificate in Effective College Instruction, American Council on Education, April 2020.
- Certification of ISA Southeast Texas Section Professional Engineering Ethics Course, October 2016.
- Certificate of Attendance Fundamentals of Entrepreneurship Bootcamp, Lamar University, September 2016.
- Certificate of appreciation for serving as a Track Chair at ISERC, Anaheim CA, May 2016.
- Certificate on Completion from “Dredging your Docks” Conference, December 2015.
- The Western Gulf Coast Houston Pilot Association Conference Certificate of Completion, Brownwater University, September 2015.
- Certificate on Completion “Writing & Designing NSF Proposals Workshop” Houston, TX, January 2015.

## **TEACHING ACTIVITIES**

### **Courses Taught**

(9 different courses taught, and 4 new courses developed in face to face and online environment)

### **Undergraduate Courses Developed and Taught**

- INEN 4315 Industrial Management
- INEN 4369 Engineering Management
- INEN 4301 Systems Engineering
- INEN 4354 Lean Manufacturing
- INEN 4380 Project Management
- INEN 2301 Applications of Quantitative Methods

### **Graduate Courses Developed and Taught**

- INEN 5316 Industrial Management
- INEN 5369 Engineering Management
- INEN 5301 Systems Engineering
- INEN 5354 Lean Manufacturing
- INEN 5301 Risk Management
- INEN 5380 Project Management
- INEN 5301 Port Engineering Management
- INEN 6110 Professional Seminar

## **PROFESSIONAL ACTIVITIES**

## **Professional Affiliations**

- Member of Institute of Industrial and Systems Engineers (IISE)
- Member of Society of Women Engineers (SWE)
- Member of the Institute for Operations Research and the Management Sciences (INFORMS)

## **Services**

### Service at Lamar University:

- Master of Engineering Management Graduate Advisor, 2022-present;
- Member of Industrial Engineering (IEDAC) and Industrial Technology (ITPAC) Councils, 2014-present;
- Member of core research faculty group for the Center for Midstream Management and Science (Summer 2019-present);
- Member Advances in Port Management Steering Committee;
- Faculty Director of the Society of Women Engineering (September 2020-present);
- Member of LU Athletic Council (January 2020-September 2023);
- Member of Faculty Senate (May 2018-May 2021);
- Member of Research and Development Subcommittee (May 2018-May 2021);
- Member of the Judge Joe J. Fisher Lecture Series (July 2019- May 2021);
- Associate Director of the Society of Women Engineering (May 2015-August 2020);
- Founding Faculty and Advisor of Turkish Student Association since (September 2016 – May 2020)

### Service at the Conferences:

- Track Co-chair, IISE 2016 Systems Engineering and Design track;
- Session Chair, IISE 2015, 2016, 2017, 2023;
- Poster and oral presentations judge, Texas STEM Conference Lamar University, Falls of 2017, 2018, 2020, 2021, 2022, and 2023;
- Poster judge, Undergraduate Research Expos, Lamar University, Springs of 2017, 2018, 2019, 2023, 2024.

### Journal/Conference Reviewer:

- International Journal of Critical Infrastructures;
- International Journal of System of Systems Engineering;
- IISE Conference Proceedings of 2016 - 2023;
- Transportation Research Board, Channels and Harbors division;
- Computers, Environment and Urban Systems.

### Service as a Presenter or panelist:

- Presenter the Center for Resiliency Brown Bag Series “CRISys Community Resilience Framework as a Practical Guideline for Decision Makers in Case of Natural Hazards”, Fall 2024;
- Presenter the Center for Resiliency Brown Bag Series Increasing the Oil and Gas Pipeline Resiliency Using Image Processing Algorithm”, Spring 2023;
- Presenter Resilience and Recovery Summit “Increasing the Oil and Gas Pipeline Resiliency Using Drones and Image Processing Algorithm”, Spring 2022;
- Presenter the Center for Advances in Port Management Workshops at Lamar University: “Risk Analysis in Decision Making: A Practical Primer”, Spring 2018;
- Presenter, the Department of Industrial Engineering, University of Houston: “Probabilistic Resilience Quantification and Visualization Building Performance to Hurricane Wind Speeds”, Spring 2016;
- Presenter, “Resilient Coastal Infrastructure Workshop”, Lamar University, Spring 2016;
- Panelist, Lamar University STEM Teacher’s Workshop, Spring 2016.

#### Community Service

- Member of the Leadership Southeast Texas (LSET) Class of 2019.  
LSET Class of 2019 Theme: “Bringing Leaders Together to Solve Issues in SETX”

#### Awards and Honors

- Academic Leadership for Women Engineering NSF ASSIST Travel Grant, 2017 and 2018.
- Ihsan Dogramaci Supreme Success Award, 1997.
- Ranked 1<sup>st</sup> in Chemical Engineering, Hacettepe University, 1997.

#### Areas of Expertise

- Engineering management and systems engineering
- Resilience, quantification of resilience
- Risk modeling, assessment, and management
- Subject matter expert elicitation
- Port optimization, port engineering management
- Decision making
- Requirement analysis
- Life cycle analysis
- Cost estimation analysis

#### Professional Skills

- Experience with port management software **Microsoft Project**.
- Experience with programming languages **Matlab, Visual Basic 6.0 and NET and C++**.
- Experience with software packages such as **HAZUS, Expert Choice and ARENA**.
- Experience with business process software **TOPEASE**.