

LTRC Research (Section 19) Publications and Presentations FY 2022-2023

Publications

1. Abedi, K., J. Codjoe, & R. Thapa (2023). "A Nationwide Evaluation of the State of Practice of Performance Measurements for Intelligent Transportation Systems", *Journal of Transportation Technologies*, 13, 222-242.
2. Yeboah, A. F., J. Codjoe, and R. Thapa (2023). Estimating Average Daily Traffic on Low Volume Roadways in Louisiana. *Transportation Research Record: Journal of the Transportation Research Board* Vol. 2677(1) 1732-1740.
3. Rahman, M.A., S. Das, J. Codjoe, E. Mitran, X. Sun, K. Abedi, and M.M. Hossain (2023). Applying Data Mining Methods to Explore Animal-Vehicle Crashes. *Transportation Research Record: Journal of the Transportation Research Board*, <https://doi.org/10.1177/03611981231166688>.
4. Abedi, K., J. Codjoe, & V.K.A. Gopu (2022). "Data-Driven Decisions in Transportation – An Assessment of Louisiana's Freight Mobility Goals", *Journal of Modern Mobility Systems*, Issue 1, Volume 3.
5. Abedi, K., J. Codjoe, & V.K.A. Gopu (2022). "Evaluation of Louisiana's Commercial Vehicle Operations (CVO) – Example of Performance Measurement of Transportation Systems", *Journal of Modern Mobility Systems*, Issue 1, Volume 3.
6. Asaduzzaman, M., R. Thapa, and J. Codjoe (2022). Safety and Operational Effectiveness of Protected Only Versus Protected/Permitted Left Turn Signal Phase. *Transportation Research Record: Journal of the Transportation Research Board*, <https://doi.org/10.1177/03611981221086631>.
7. Hossain, A., X. Sun, R. Thapa, and J. Codjoe (2022). Applying Association Rules Mining to Investigate Pedestrian Fatal and Injury Crash Patterns Under Different Lighting Conditions. *Transportation Research Record: Journal of the Transportation Research Board*, <https://doi.org/10.1177/03611981221076120>.
8. Bian, R., Murray-Tuite, P., Edara, P., and Triantis, K., 2022 "Household Hurricane Evacuation Plan Adaptation in Response to Estimated Travel Delay Provided Prior to Departure," *Natural Hazards Review*.
9. Bian, R., and Tolford, T., 2022 "Evaluating the Impacts of the Complete Streets Policy in Louisiana: A Review of Practices and Projects in the Last 10 Years," *Transportation Research Record: Journal of the Transportation Research Board*.
10. Bian, R., Murray-Tuite, P., Edara, P., and Triantis, K., 2022 "Modeling the Impact of Traffic Management Strategies on Households' Stated Evacuation Decisions," *Progress in Disaster Science*.
11. Bian, R., Murray-Tuite, P., and Li, J., 2022 "Investigating COVID-19 Induced Taxi and For-Hire Vehicle Ridership Disparities," *Journal of Urban Planning and Development*.
12. Bian, R., Murray-Tuite, P., Edara, P., and Triantis, K., 2023 "Modeling Evacuees' Intended Responses to a Phased Hurricane Evacuation Order," *Applied Sciences*.

13. Gangireddy, S., Bian, R., Tolford, T., and Hasan, H., 2023 “Incorporating the Concept of Complete Streets into Pavement Preservation,” ASCE Conference Proceedings of the International Conference on Transportation & Development (Conference proceeding)
14. Tolford, T., and Bian, R. (2023). Complete Streets policy in Louisiana; Insights from a decade of state DOT implementation. Case Studies on Transport Policy. Vol 12, June 2023. 101012.
15. Bian, R., Tolford, T., Lie, S., and Gangireddy, S. (2023). Lessons learned from evaluating complete streets project outcomes with emerging data sources. Transportation Planning and Technology.
16. Moomen, M., Molan, A.M., Ksaibati, K., 2023 “A Random Parameters Multinomial Logit Model Analysis of Median Barrier Crash Injury Severity on Wyoming Interstates”. Sustainability (In Press).
17. Alrejfal, A., Moomen, M., and Ksaibati, K., 2022 “Evaluating the Impact of Traffic Violations on Crash Injury Severity on Wyoming Interstates: An Investigation with a Random Parameters Model with Heterogeneity in Means Approach”. Journal of Traffic and Transportation Engineering.
18. Alrejfal, A., Moomen, M., and Ksaibati, K., 2022 “Evaluating the Effectiveness of Law Enforcement in Reducing Truck Crashes for a Rural Mountainous Freeway in Wyoming”. Transportation Letters.
19. Rahman, M. A., Das, S., and Sun, X., 2023 “Single-Vehicle Run-Off Road Crashes Because of Cellphone Distraction: Finding Patterns with Rule Mining,” Transportation Research Record, vol. 2677, no. 3, pp. 1261–1277, doi: 10.1177/03611981221122781.
20. Rahman, M. A., Das, S., and Sun, X., 2023 “Understanding the drowsy driving crash patterns from correspondence regression analysis,” Journal of Safety Research, vol. 84, pp. 167–181, doi: 10.1016/j.jsr.2022.10.017.
21. Hossain, A., Sun, X., Rahman, A., and Khanal, S., 2023 “Safety evaluation of centerline rumble strips on rural two-lane undivided highways: Application of intervention time series analysis,” IATSS Research, (In Press), doi: 10.1016/j.iatssr.2023.05.001
22. Oliae, A.H., Das, S., Liu, J., and Rahman, M. A., 2023 “Using Bidirectional Encoder Representations from Transformers (BERT) to classify traffic crash severity types,” Natural Language Processing Journal, vol. 3, p. 100007, doi: 10.1016/j.nlp.2023.100007
23. Das, S., Tamakloe, R., Zubaidi, H., Obaid, I., and Rahman, M. A., 2023 “Bicyclist injury severity classification using a random parameter logit model,” International Journal of Transportation Science and Technology, (In Press), doi: <https://doi.org/10.1016/j.ijst.2023.02.001>
24. Das, S., Aman, J. J., and Rahman, M. A., 2023 “Content Analysis on Homelessness Issues at Airports by News Media Mining,” Transportation Research Record, vol. 2677, no. 2, pp. 635–647, doi: 10.1177/03611981221108151.
25. Abu-Farsakh, M., Souri, A., and Voyiadjis, G., 2023 “Numerical Simulation of a Barge Impact on Bridges with Different Configurations of Pile Group

- Foundations,” accepted for publication at the Journal of Transportation Research Record.
26. Shoaib, M., and Abu-Farsakh, M., 2023 “Exploring Tree-Based Machine Learning Models to Predict Ultimate Pile Capacity from Cone Penetration Test Data,” accepted for publication at the Journal of Transportation Research Record.
 27. Izadifar, M., Luo, N., Abu-Farsakh, M., and Chen, S., 2023 “Performance Evaluation of Design Methods for Geosynthetic-Reinforced Pile-Supported Embankments,” accepted for publication at the Journal of Transportation Research Record.
 28. Abu-Farsakh, M., Zadehmohamada, M., and Voyiadjisa G., 2023 “Incorporating the Benefits of Geosynthetic into MEPDG,” *Infrastructures Journal*, Vol. 8, No. 2.
 29. Ikbarieh, A., Izadifar, M., Abu-Farsakh, M., and Voyiadjis, G., 2023 “A parametric study of embankment supported by geosynthetic reinforced load transfer platform and timber piles tip on sand,” *Transportation Geotechnics Journal*, Vol. 38.
 30. Abu-Farsakh, M., and Rahman, M., 2023 “Incorporating Site Variability into LRFD Design of Pile Foundations,” *Proceedings of the Geo-Congress 2023 conference*, March 26-29, Los Angeles, California.
 31. Rahman, M., Abu-Farsakh, M., and Kameshwar, S., 2023 “Evaluating the Site variability using Bayesian Analysis,” *Proceedings of the Geo-Congress 2023 conference*, March 26-29, Los Angeles, California.
 32. Chaabani, W., Ramadna, M., and Abu-Farsakh, M., 2022 “Numerical Modeling of the Ultimate Bearing Capacity of Strip Footings on Reinforced Sand Layer Overlying Clay with Void,” *Infrastructures Journal*, Vol. 8, No. 1.
 33. Hanandeh S, Ardah, H., Ardah, A., and Abu-Farsakh M., 2022 “Prediction of the Resilient Modulus of Stabilized Weak Subgrade for pavement design structure,” *Transportation Geotechnics Journal*, Vol. 37.
 34. Idries, A., Abu-Farsakh, M., and Chen, S., 2022 “Effect of one cycle of heating-cooling on the clay-concrete pile interface shear strength parameters,” *Transportation Geotechnics Journal*, Vol. 36.
 35. Game, Daniel, Arce, Gabriel, Hassan, Marwa, Noorvand, Hassan, Subedi, Sujata, and Rupnow, Tyson. “Development of Practical and Cost-Effective Ultra-High-Performance Engineered Cementitious Composites Using Natural Sand and No Silica Fume.” *Transportation Research Record 2672*, Issue 7, TRB, National Research Council, Washington, D.C., pp. 312-328.
 36. Mousa, Momen, Hassan, Marwa, Hungria, Ricardo, Gavilanes, Andrea, Arce, Gabriel, Milla, Jose, and Rupnow, T. “Optimization of the Self-Healing Efficiency of Bacterial Concrete Using Impregnation of Three Different Precursors into Lightweight Aggregate.” *Transportation Research Record 2677*, Issue 3, TRB, National Research Council, Washington, D.C., pp. 1611-1624.
 37. Omar, Omar, Noorvand, Hassan, Hassan, Marwa, Milla, Jose, and Rupnow, Tyson. “Effect of Using Calcium Lactate with *Bacillus pseudofirmus* Bacteria on Self-Healing Efficiency of Bacterial Concrete.” *Tran-SET 2022 Conference*, August 31- September 2, 2022, San Antonio, TX.
 38. Omar, Omar, Noorvand, Hassan, Hassan, Marwa, Milla, Jose, and Rupnow, Tyson. “Effect of Using Calcium Lactate with *Bacillus pseudofirmus* Bacteria on

- Self-Healing Efficiency of Bacterial Concrete.” Tran-SET 2022 Conference, August 31- September 2, 2022, San Antonio, TX.
39. Chen, Q., Zhang, Z., and Gaspard, K, 2023. “Case Study on the Impact of Flooding and Inundation on Pavement Performance.” *Transportation Research Record: Journal of the Transportation Research Board*, Vol. 2677 (7), pp. 157-168.
 40. Akentuna, M., Chen, Q., Zhang, Z., 2023. “Performance Comparison of Break and Seal and Rubblization Rehabilitation Techniques for Reflection-Crack Mitigation: Case Study in Louisiana.” *Transportation Research Record: Journal of the Transportation Research Board*, Vol. 2677 (6), pp. 837-851.
 41. Wang, H., Zhu, Y., Zhang, W., Shen, S., Wu, S., Mohammad, L.N., She, X. (2022). Effects of Field Aging on Material Properties and Rutting Performance of Asphalt Pavement. *Materials*, 16 (1), 225. doi:10.3390/ma16010225
 42. Al-Hosainat, A., Nazzal, M.D., Abu Talha, S., Kim, S-S., Abbas, A., Mohammad, L., Biehl, E., Ricciardi, P. (2022). Evaluation of the Interlayer Bond Strength of Micro-Surfacing Mixes. *Transportation Research Record Journal of the Transportation Research Board*, 2676 (11), 596-608. doi:10.1177/03611981221094284
 43. Barghabany, P., Zhang, J., Mohammad, L.N., Cooper, S.B., Cooper, S.B. (2022). Chemical and Rheological Characterization of Asphalt Binders: A Comparison of Asphalt Binder Aging and Asphalt Mixture Aging. *Transportation Research Record Journal of the Transportation Research Board*, 2676 (5), 147-157. doi:10.1177/03611981211067977
 44. Akentuna, M., Mohammad, L.N., Boateng, K.A., Cooper, S. (2022). Warm Mix Asphalt Demonstration Projects in Louisiana: Case Study of Five to Eight Years of Field Performance. *Transportation Research Record Journal of the Transportation Research Board*, 2676 (9), 148-158. doi:10.1177/03611981221085521
 45. Elnaml, I., Mousa, M., Hassan, M.M., Idris, I., Mohammad, L. (2022). Development of Cost-Effective High-Modulus Asphalt Concrete Mixtures Using Crumb Rubber and Local Construction Materials in Louisiana. *Transportation Research Record Journal of the Transportation Research Board*, 2676 (6), 274-286. doi:10.1177/03611981221074377
 46. Barghabany, P., Zhang, J., Mohammad, L.N., Cooper, S.B., Cooper, S.B. (2022). Effect of Laboratory Aging Levels on Asphalt Binder Chemical/Rheological Properties and Fracture Resistance of Asphalt Mixtures. *Journal of Materials in Civil Engineering*, 34 (3), 04021491. doi:10.1061/(asce)mt.1943-5533.0004126
 47. Al-Hosainat, A., Nazzal, M.D., Abu Talha, S., Kim, S-S., Abbas, A., Mohammad, L. (2022). A comprehensive laboratory evaluation of the factors affecting the Micro-Surfacing interlayer bond strength. *Construction and Building Materials*, 323, 126538. doi:10.1016/j.conbuildmat.2022.126538
 48. Subedi, S., Arce, G.A., Hassan, M.M., Barbato, M., Mohammad, L.N., Rupnow, T. (2022). Feasibility of ECC with high contents of post-processed bagasse ash as

- partial cement replacement. *Construction and Building Materials*, 319, 126023.
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49. Abu Talha, S., Al-Hosainat, A., Nazzal, M.D., Soo Kim, S., Abbas, A.,
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50. Barghabany, P., Zhang, J., Mohammad, L.N., Cooper, S.B., Cooper, S.B. (2022).
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Bend Test as Fracture Parameter for Asphalt Mixtures Using an Artificial Neural
Network Approach. *Transportation Research Record Journal of the
Transportation Research Board*, 2676 (1), 388-400.
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51. Luan, Y., Zhang, W., Zhao, Y., Pan, Z., Niu, Z., Zeng, K., Chen, X., Mohammad,
L.N. (2022). Mechanical Property Evaluation for Steel Slag in Asphalt Mixture
with Different Skeleton Structures Using Modified Marshall Mix Design
Methodology. *Journal of Materials in Civil Engineering*, 34 (1), 04021382.
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52. Akentuna, M., Mohammad, L.N., Sachdeva, S., Cooper, S.B., Cooper, S.B.
(2022). Effectiveness of Loaded Wheel Tracking Test to Ascertain Moisture
Susceptibility of Asphalt Mixtures. *Transportation Research Record Journal of
the Transportation Research Board*, 2676 (1), 421-434.
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53. Elshoura, A., and Okeil, A. M.* (2022) “Simplified Method for Estimating
Restraint Moment Induced by Vertical Temperature Gradient in Continuous
Prestressed Concrete Bridges and Verification using AASHTO BDS,” *Structure
and Infrastructure Engineering*, Taylor & Francis.
DOI:10.1080/15732479.2022.2132518.
54. Ulger, T., and Okeil, A. M.* (2022) “Shear Performance of Steel Beams with
Bonded GFRP Stiffeners: Weathering and Cyclic Load Effects,” *J. of Composites
for Construction*, ASCE, 26(6):04022081. DOI: 10.1061/(ASCE)CC.1943-
5614.0001276
55. Elshoura, A., and Okeil, A. M.* (2022) “Calibration of Temperature Gradient
Load Factor for Service Limit State Design of Concrete Slab-on-Girder Bridges,”
J. of Bridge Engineering, ASCE, 27(11): 04022112. DOI:
10.1061/(ASCE)BE.1943-5592.0001959
56. Okeil, A. M. and Elshoura, A. (2022) “A reliability-based framework for
establishing load factors for thermal gradient effects on continuous prestressed
concrete slab-on-girder bridges,” 11th International Conference on Short and
Medium Span Bridges (SMSB 2022), July 19 – 22, 2022, Toronto, Ontario,
Canada.
57. Mahdi, M., Wu, Z., Liu, Y., 2023. “Investigation of In Situ Thermal Properties
and Early-Age Pavement Behavior in the Design and Performance Evaluation of

Roller Compacted Concrete in Louisiana,” Transportation Research Record: Journal of the Transportation Research Board, April 2023.

58. Wu, Z. and Mahdi, M. Application of Mechanistic-Empirical Pavement Design Approach into RCC Pavement Thickness Design, LTRC final report FHWA/LA.22/671. 2023
59. Abohamer, Hossam, Elseifi, Mostafa A, Mayeux, Corey, Cooper III, Samuel B and Cooper Jr, Samuel, 2022. “Laboratory Evaluation of Warm-Mix Asphalt Open-Graded Friction Courses,” Transportation Research Record. Vol. 2676, No. 10, pp. 507-519. SAGE Publications Sage CA: Los Angeles, CA.
60. Saunders, William J, Milla, Jose, Rupnow, Tyson and Cooper III, Samuel, 2022. “Feasibility and Advantages of Accepting Concrete Other Than 28 Days,” Report No. 676. Louisiana Transportation Research Center: Baton Rouge, LA.
61. Sarkar, Md Tanvir Ahmed, Elseifi, Mostafa A, Rahman, Md Nafiur, Cooper III, Samuel B and Cooper Jr, Samuel, 2023. “Investigating the Laboratory Performance of Crumb-Rubber-Modified and High-Float Polymer-Modified Asphalt Emulsions in Chip Sealing,” Transportation Research Record. Vol. 2677, No. 5, pp. 1120-1134. SAGE Publications Sage CA: Los Angeles, CA.
62. Abohamer, Hossam, Elseifi, Mostafa A, Mayeux, Corey, Cooper III, Samuel B and Cooper Jr, Samuel, 2023. “Effects of Asphalt Binder Additives and Industrial Fillers on the Mechanical and Functional Properties of Open Graded Friction Course,” Transportation Research Record. SAGE Publications Sage CA: Los Angeles, CA.
63. Abohamer, Hossam, Elseifi, Mostafa A, Mayeux, Corey, Cooper III, Samuel B and Cooper Jr, Samuel, 2023. “Effects of Air Void Content, Crumb Rubber, and Pozzolanic Fillers on OGFC Laboratory Performance,” Transportation Research Record. SAGE Publications Sage CA: Los Angeles, CA.
64. Abohamer, Hossam, Elseifi, Mostafa A, Mayeux, Corey, Cooper III, Samuel B and Cooper Jr, Samuel, 2023. “Investigating the Seepage Characteristics of an Open-Graded Friction Course Using Finite Element Modeling,” Transportation Research Record. SAGE Publications Sage CA: Los Angeles, CA.
65. Akentuna, Moses, Liu, Jun, Mohammad, Louay N, Sachdeva, Sanchit, Cooper III, Samuel B and Cooper Jr, Samuel B, 2023. “Moisture Susceptibility of Asphalt Mixtures: Conditioning and Testing Protocols,” Transportation Research Record. SAGE Publications Sage CA: Los Angeles, CA.
66. Elnaml, Ibrahim, Liu, Jun, Mohammad, Louay N, Cooper III, Samuel B and Cooper Jr, Samuel B. 2023. “Use of the Iron Chloride Type of Lewis Acid Catalyst in High Reclaimed Asphalt Pavement Content Asphalt Mixtures,” Transportation Research Record. SAGE Publications Sage CA: Los Angeles, CA.
67. Elnaml, Ibrahim, Liu, Jun, Mohammad, Louay N, Wasiuddin, Nazimuddin, Cooper III, Samuel B and Cooper Jr, Samuel B. 2023. “Use of the Iron Chloride Type of Lewis Acid Catalyst in High Reclaimed Asphalt Pavement Content Asphalt Mixtures,” Sustainability. Vol. 15, No. 13, pp. 9897. MDPI: Basel, Switzerland.
68. Ma, Ye, Liu, Jun, Mohammad, Louay N, Cooper III, Samuel B, Cooper Jr, Samuel B and Duvvuru, Mahesh Krishna Reddy. 2023. “Use of Random Forest to

- Predict Intermediate Temperature SCB Jc Parameter of Long-Term Aged Asphalt Mixtures,” Transportation Research Record. SAGE Publications Sage CA: Los Angeles, CA.
69. Akentuna, M., Chen, Q., & Zhang, Z., 2023. “Performance Comparison of Break and Seal and Rubblization Rehabilitation Techniques for Reflection-Crack Mitigation: Case Study in Louisiana.” Transportation Research Record, 2677(6), 837-851.
 70. Akentuna, M., Liu, J., Mohammad, L. N., Sachdeva, S., Cooper III, S. B., & Cooper Jr, S. B., 2023. Moisture Susceptibility of Asphalt Mixtures: Conditioning and Testing Protocols.” Transportation Research Record, 03611981221147214.
 71. Kwabena Abedi, Julius Codjoe, Vijaya K.A. Gopu, “Data-Driven Decisions in Transportation – An Assessment of Louisiana's Freight Mobility Goals”, Journal of Modern Mobility Systems, Issue 1, Volume 3, 2022
 72. Kwabena Abedi, Raju Thapa, Julius Codjoe, Vijaya K.A. Gopu, “Evaluation of Louisiana's Commercial Vehicle Operations (CVO) – Example of Performance Measurement of Transportation Systems”, Journal of Modern Mobility Systems, Issue 1, Volume 3, 2022

Presentations

1. Abedi, K., Codjoe, J., Thapa, R., and Gopu, V.K.A. 2022. “Making Data-Driven Decisions in Transportation Decisions for Freight Operations.” Journal of Transportation Technologies. Presented at the Gulf ITS Conference, April 4th, 2023, New Orleans, Louisiana.
2. Abedi, K., Codjoe, J., Thapa, R., and Gopu, V.K.A. 2022. “Making Data-Driven Decisions in Transportation Decisions for Freight Operations.” Journal of Transportation Technologies. Presented at the Alabama ITE/Deep South ITE Conference, May 31 – June 2, 2023, Gulf Shores, Alabama.
3. Hossain, A., Sun, X., Islam, S., Rahman, M. A., and Das, S., 2023 “Exploring Association Knowledge in Single-Vehicle Roadway Departure Crashes on Curved Segment of Rural Two-Lane Highways,” Presented at the Transportation Research Board Annual Meeting, January 8-12, Washington, DC.
4. Sun, M., Zhou, R., Sun, X., Jiao, C., and Rahman, M. A., 2023 “Investigation on Hazardous Material Truck Involved Fatal Crashes Using Cluster Correspondence Analysis,” Presented at the Transportation Research Board Annual Meeting, January 8-12, Washington, DC.
5. Rahman, M. A., Das, S., Codjoe, J., Hossain, M. M., and Sun, X., 2023 “Identifying Attribute Associations in Fatal Speeding Crashes with Latent Class Clustering and Association Rule Mining,” Presented at the Transportation Research Board Annual Meeting, January 8-12, Washington, DC.
6. Rahman, M. A., Das, S., Codjoe, J., Kong, X., Hossain, A., and Sun, X., 2023 “Using Cluster Correspondence Analysis to Explore Attribute Associations in Pedestrian-Involved Hit-and-Run Crashes,” Presented at the Transportation Research Board Annual Meeting, January 8-12, Washington, DC.
7. Rahman, M. A., Das, S., Codjoe, J., Mitran, E., Sun, M., Hossain, M. M. and Sun, X., 2023 “Using Association Rule Mining in Investigating Animal-Related Injury

- and Non-Injury Crashes on Louisiana Roadways,” Presented at the Transportation Research Board Annual Meeting, January 8-12, Washington, DC.
8. Gangireddy, S., Bian, R., Tolford, T., and Hasan, H., 2023 “Incorporating the Concept of Complete Streets into Pavement Preservation,” Presented at the American Society of Civil Engineers (ASCE) – International Conference on Transportation & Development (ICTD), June 14-17, Austin, TX.
 9. Blouin, M., Domingue, M., and Bian, R., 2023 “Analyze Crashes during Extreme Weather,” Presented at the American Society of Civil Engineers (ASCE) – International Conference on Transportation & Development (ICTD), June 14-17, Austin, TX.
 10. Bian, R., Smiley, K., Parr, S., Shen, J., and Murray-Tuite, P., 2023 “Analyzing Gas Station Visits during Hurricane Ida: Implications for Future Fuel Supply,” Presented at the Transportation Research Board 102nd Annual Meeting, January 8-12, Washington, D.C.
 11. Bian, R., Smiley, K., Parr, S., Shen, J., and Murray-Tuite, P., 2023 “Analyzing Gas Station Visits during Hurricane Ida: Implications for Future Fuel Supply,” Presented at the National Hurricane Conference (NHC), April 3-6, New Orleans, LA.
 12. Bian, R., and Tolford, T., 2023 “Analyzing Human Mobility for Active Transportation Planning in Louisiana,” Presented at the Louisiana Transportation Conference (LTC), March 12-15, Baton Rouge, LA.
 13. Bian, R., and Tolford, T., 2023 “Evaluating the Impacts of the Complete Streets Policy in Louisiana,” Presented at the Louisiana Transportation Conference (LTC), March 12-15, Baton Rouge, LA.
 14. Bian, R., 2022 “Analyze Crashes during Extreme Weather with Spatial Data Science,” Presented at the American Planning Association (APA) Louisiana 2022 Conference, November 9-11, New Orleans, LA.
 15. Gangireddy, S., Bian, R., Tolford, T., and Hasan, H., 2022 “Incorporating the Concept of Complete Streets into Pavement Preservation,” Presented at the American Planning Association (APA) Louisiana 2022 Conference, November 9-11, New Orleans, LA. 2022
 16. Bian, R., and Tolford, T., 2022 “Evaluating the Impacts of the Complete Streets Policy in Louisiana,” Presented at the American Planning Association (APA) Louisiana 2022 Conference, November 9-11, New Orleans, LA. 2022
 17. Tolford T., 2023 “Developing an Open-Source Web Tool to Prioritize Safer Streets.” Transportation Research Board Annual Meeting 2023: Moving Safety Research Into Practice. Washington, D.C., January 10, 2023.
 18. Elisabeta Mitran, “Safety Effectiveness of Cable Median Barriers in Louisiana”, 2023 Louisiana Transportation Conference, March 12–15, 2023, Baton Rouge, LA;
 19. Safkat Tajwar Ahmed, “Safety Effectiveness of Cable Median Barriers in Louisiana” Poster presentation at the 2023 Louisiana Transportation Conference, March 12–15, 2023, Baton Rouge, LA;
 20. Safkat Tajwar Ahmed, Xiaoduan Sun, Zakia Sultana Shorna, and Elisabeta Mitran “Development of Crash Modification Factors for Cable Median Barrier Using

- Improved Prediction Model”, TRB Annual Meeting 2023, January 8-12, 2023, Washington, DC.
21. Kunnah, H., Hassan, H. (2023). An Exploration of the Effects of Various Street Lighting Conditions on Driver Behaviors and Safety at Stop-controlled Intersections: A Driving Simulator Experiment, *Journal of Transportation Safety and Security*, Under review (submitted second revision of the paper by June 15, 2023);
 22. Nischal Khadka, Hany Hassan, “Evaluating the Safety and Traffic Operations at Cloverleaf Interchanges”, Louisiana Transportation Conference, March 12–15, 2023, Baton Rouge, LA;
 23. Anish KC, Hany Hassan, “Development of Statewide Design Guidelines for Improving Pedestrian Safety on High-Speed Arterials in Louisiana”, Louisiana Transportation Conference, March 12–15, 2023, Baton Rouge, LA;
 24. Ahmed Hossain, Xiaoduan Sun, and Farooq Azam Khanzada. “Investigating Pedestrian-vehicle Crashes on Louisiana Interstate Highways”. Louisiana Transportation Conference, Baton Rouge, LA, March 12–15, 2023;
 25. Ahmed Hossain, Xiaoduan Sun, Shahrin Islam, M. Ashifur Rahman, Subasish Das. “Exploring Association Knowledge in Single-Vehicle Roadway Departure Crashes on Curved Segment of Rural Two-Lane Highways” , TRB Annual Meeting 2023, January 8-12, 2023, Washington, DC;
 26. Ahmed Hossain, Niaz Zafri, Xiaoduan Sun, Julius Codjoe. “Investigating Pedestrian Crash Patterns at High-Speed Intersection and Road Segments: Findings from the Unsupervised Learning Algorithm”, TRB Annual Meeting 2023, January 8-12, 2023, Washington, DC;
 27. Abu-Farsakh, M., and Rahman, M., 2023 “Incorporating Site Variability into LRFD Design of Pile Foundations,” Presented at the Geo-Congress 2023 conference, March 26-29, Los Angeles, California.
 28. Rahman, M., Abu-Farsakh, M., and Kameshwar, S., 2023 “Evaluating the Site variability using Bayesian Analysis,” Presented at the Geo-Congress 2023 conference, March 26-29, Los Angeles, California.
 29. Abu-Farsakh, M., “Develop Machine Learning (ML) Models for Estimating the Ultimate Pile Capacity from Cone Penetration Test (CPT),” presented at the 2023 Louisiana Transportation Engineering Conference, Baton Rouge, Louisiana, March 12-15, 2023.
 30. Izadifar, M., Luo, N., Abu-Farsakh, M., and Chen, S., 2023 “Performance Evaluation of Design Methods for Geosynthetic-Reinforced Pile-Supported Embankments,” presented at the TRB 102nd Annual Meeting, Washington, D.C., January 8-12, 2023.
 31. Mojumder, M., and Abu-Farsakh, M., 2023 “Evaluating the Ultimate Capacity of Driven Pile from CPT Data using Artificial Neural Network,” presented at the TRB 102nd Annual Meeting, Washington, D.C., January 8-12, 2023.
 32. Zadehmohamad, M., and Abu-Farsakh, M., 2023 “Evaluating the Structural Benefits of Geosynthetic Reinforcement in Flexible Pavements using Multiple Regression Analysis and Machine Learning Techniques,” presented at the TRB 102nd Annual Meeting, Washington, D.C., January 8-12, 2023.

33. Abu-Farsakh, Rahman, M., and Jafari, N., 2023 “Assessment of different Spatial Interpolation Techniques for Generating Synthetic Soil Boring Data,” presented at the TRB 102nd Annual Meeting, Washington, D.C., January 8-12, 2023.
34. Abu-Farsakh, M., Souiri, A., and Voyiadjis, G., 2023 “Numerical Simulation of a Barge Impact on Bridges with Different Configurations of Pile Group Foundations,” presented at the TRB 102nd Annual Meeting, Washington, D.C., January 8-12, 2023.
35. Shoaib, M., and Abu-Farsakh, M., 2023 “Exploring Tree-Based Machine Learning Models to Predict Ultimate Pile Capacity from Cone Penetration Test Data,” presented at the TRB 102nd Annual Meeting, Washington, D.C., January 8-12, 2023.
36. Abu-Farsakh, M., Ikbarieh, A., and Izadifar, M., 2022 “FE parametric study of embankment supported by geosynthetic reinforced load transfer platform and timber piles tip on sand,” Presented at the Geoeath conference, September 22-23, Barcelona, Spain.
37. Coco, Mary Leah, Rupnow, Tyson, and Wheat, Garrett. “State Focus on Building the Future of Transportation Workforce.” Presented at the 102nd Annual Meeting of the Transportation Research Board, January 8-12, 2023, Washington, D.C.
38. Gavilanes, Andrea, Noorvand, Hassan, Hassan, Marwa, Arce, Gabriel, and Rupnow, Tyson. “Incorporation of Cellulose Nanocrystals Synthesized from Rice Husk in Engineered Cementitious Composites.” Presented at the 102nd Transportation Research Board Meeting, Washington, D.C., January 8-12, 2023.
39. Guidroz, Samuel, Noorvand, Hassan, Hassan, Marwa, and Rupnow, Tyson. “Effect of Portland Limestone Cement (Type II) Combined with Bagasse Ash on the Mechanistic Properties of Engineered Cementitious Composites.” Presented at the 102nd Transportation Research Board Meeting, Washington, D.C., January 8-12, 2023.
40. Omar, Omar, Noorvand, Hassan, Hassan, Marwa, Subedi, Sujata, Milla, Jose, and Rupnow, Tyson. “Evaluation of the Effect of Impregnating Sodium Lactate and Calcium Lactate Beside Bacteria on the Self-healing Efficiency and Mechanical Properties of Bacterial Concrete.” Presented at the 102nd Transportation Research Board Meeting, Washington, D.C., January 8-12, 2023.
41. Rupnow, Tyson. “Louisiana Department of Transportation and Development Resilience Efforts after Katrina, Rita, and the Floods of 2016.” Presented at the 102nd Transportation Research Board Annual Meeting, January 8-12, 2023, Washington, D.C.
42. Rupnow, Tyson. “Lafayette Consolidated Government: Transitioning Internal Curing from the Laboratory to the Field.” Presented for the EDC – 7: Enhancing Performance with Internally Cured Concrete (EPIC2), January 5, 2023, Virtual.
43. Rupnow, Tyson. “Civil Engineering.” 3rd Grade Parkview Baptist School, Baton Rouge, LA, January 18, 2023.
44. Rupnow, Tyson D. “Staffing and Research Update.” Presented at the CAAL Summer Convention, Destin, FL, June 5, 2023.
45. Rupnow, Tyson. “Concrete Comparison “Old vs. New.”” Presented at Glasgow Middle School, Baton Rouge, LA, January, 20, 2023.

46. Rupnow, Tyson. "Concrete Jointing." Presented at the CAAL Lunch & Learn, Lafayette, LA, May 24, 2023.
47. Rupnow, Tyson D. "Toller Compacted Concrete Overview, Research and Case Study." Presented at the Louisiana Transportation Conference, Baton Rouge, LA, March 12-15, 2023.
48. Mohammad, L. N., "FHWA Climate Challenge Initiatives on Louisiana's Balanced Asphalt Mixture Design." Presented at the 2023 Louisiana Transportation Conference, March 13-15, 2023, Baton Rouge, LA. (Invited Presentation).
49. Mohammad, L. N., "Louisiana's Efforts to Tie Balanced Mix Design (BMD) to Sustainability." Presented at the FHWA BMD Peer Exchange meeting, March 1-2, 2023, Baton Rouge, LA. (Invited Presentation).
50. Mohammad, L. N., "Sustainability through Development of Life Cycle Information Models for Pavements in Louisiana." Presented at the Louisiana Transportation Research Center Policy Committee Meeting, December 7, 2022, Baton Rouge, LA. (Invited Presentation).
51. Mohammad, L.N., "Research Activities on Pavement Sustainability and Resiliency." Presented at the TRB AKM20 Standing Committee on Binders for Flexible Pavement Sustainability Subcommittee, September 23, 2022, (Virtual Invited Presentation).
52. Mohammad, L.N., "Development of Life Cycle Assessment Framework of Pavements in Louisiana." Presented at the FHWA Climate Challenge Team, August 15, 2022, (Virtual Presentation).
53. Elnaml, I, Liu, J., Mohammad, L. N., Cooper, III, S., and Cooper, Jr., S. "The Use of Iron Chloride type of Lewis Acid Catalyst in High RAP Content Asphalt Mixtures." Poster Presentation. Transportation Research Board 102nd Annual Meeting, Washington D.C., January 9-13, 2023.
54. Ma, Y., Liu, J., Mohammad, L. N., Cooper, III, S., and Cooper, Jr., S. "Use of Random Forest to Predict Intermediate Temperature SCB Jc Parameter of Long-Term Aged Asphalt Mixtures." Presented at the Transportation Research Board 102nd Annual Meeting, Washington D.C., January 9-13, 2023.
55. Akentuna, M., Mohammad, L. N., Pant, S., Cooper, Jr., S., and Cooper, III, S., "Field Validation of the Effects of Improved Density Techniques on Performance." Poster Presentation. Transportation Research Board 102nd Annual Meeting, Washington D.C., January 9-13, 2023.
56. "Damage to Pre-Tensioned Prestressed Concrete Girder Ends in Continuous Bridges," (May 16, 2023) The Fourth International Conference on Damage Mechanics (ICDM4), May 15-18, 2023, Baton Rouge, LA.
57. "Field Monitoring and Measurements in Civil Engineering Education," (March 15, 2023) 2023 Louisiana Transportation Conference: Partnerships for Delivering

a Safe, Equitable, & Sustainable Transportation System, March 12-15, 2023, Baton Rouge, LA.

58. "Statistics of Temperature Gradient in Prestressed Concrete Bridges Based on Field Data," (October 24, 2022) ACI 2022 Fall Convention, October 23 – 27, 2022, Dallas, TX.
59. "Louisiana DOT Culverts Load Rating," (July 27, 2022) AASHTO Committee on Maintenance 2022 Annual Meeting, Bridge TWG, July 25 – 28, 2022, Washington, DC.
60. "Structural Health Monitoring as a Tool to Address Bridge Design and Load Rating Challenges," (July 21, 2022) 11th International Conference on Short and Medium Span Bridges, SMSB 2022, July 19 – 22, 2022, Toronto, Ontario, Canada.
61. "A reliability-based framework for establishing load factors for thermal gradient effects on continuous prestressed concrete slab-on-girder bridges," (July 21, 2022) 11th International Conference on Short and Medium Span Bridges, SMSB 2022, July 19 – 22, 2022, Toronto, Ontario, Canada.
62. Gautreau, G., "Louisiana Geotechnical Research" TRB AKG70 Mid-Year Meeting, 09/21/2023
63. Gautreau, G., "Louisiana Geotechnical Research/Data Management", Oregon DOT –11/22/2022.
64. Gautreau, G., "Geotechnical Asset Management for Louisiana," Louisiana Transportation Conference (LTC), 03/14/23 Geotechnical Data Management Practices – Session 46
65. Gautreau, G., "Geotechnical Database – Phase IV," Louisiana Transportation Conference (LTC) 2023 Swamp Tank – Session 76
66. Ferguson, N., "Maintenance of Roadway Edge Drop-Off Utilizing Readily Available Materials," Louisiana Transportation Conference (LTC) 2023 Swamp Tank – Session 76
67. Gautreau, G., "Secretary - Treasurer Report", Louisiana Engineering Society (LES) State Annual Meeting, 06/08/23
68. Gautreau, G., "Continuing Professional Development (CPD) CPD Chair Report", Louisiana Engineering Society (LES) State Annual Meeting, 06/08/23
69. Liu Y. and Wu. Z. "Short-Term Network-Level Pavement Distress Prediction Using the Adaptive Neuro-Fuzzy Inference System Approach: A Case Study in Louisiana." Poster Presentation, 102th Transportation Research Board Annual Meeting, Washington, DC, January 8-12, 2023.
70. Hungria, R., Mahdi, M. and Wu, Z., "Evaluation of Novel Jointless Engineered Cementitious Composites Ultrathin Whitetopping at Louisiana Pavement Research Facility", Presented at the APT Monthly Web Meeting organized by the TRB Standing Committee AKP40 - Committee on Pavement Structure Testing and Evaluation. November 10, 2022.

71. Mahdi, M., Wu, Z., Liu, Y., 2023. "Investigation of In Situ Thermal Properties and Early-Age Pavement Behavior in the Design and Performance Evaluation of Roller Compacted Concrete in Louisiana," Presented at the 102th Transportation Research Board Annual Meeting, Washington, DC, January 8-12, 2023.
72. SEAUPG 2022
73. TRB 2023
74. LTC 2023
75. LAPA 2023
76. Shasank P., Akentuna M., Mohammad, L. N., & Cooper Jr. S. B., 2023. "Field Evaluation of Crumb Rubber Modified Hot Mix Asphalt Pavement Sections in Louisiana." Accepted for Presentation at 2023 Annual Meeting of the Association of Asphalt Paving Technologists, September 25-28, San Diego, California.
77. Salari. S. "Evaluation of Saturates/Aromatics/Resins/Asphaltenes (SARA) Fractionation of Asphalt Binders in Louisiana." Presented at the 2023 Convention of the Louisiana Asphalt Pavement Association, May 31- June 4, 2023, Gulf Shores, Alabama
78. Salari, S. & Cooper III, S. B. "Low and Intermediate Temperature Evaluation of Binders through Dynamic Shear Rheometer." Presented at the 102nd Annual Meeting of the Transportation Research Board, January 8-12, 2023, Washington DC.
79. Akentuna M. & Chen Q., 2022. "Assessment of Structural Capacity and Level of Deterioration in Pavements Using Different Techniques: Two Case Studies in Louisiana." Presented at the 31st Annual Meeting of the Falling-Weight Deflectometer Users Group, October 24-26, 2022, Reno, Nevada.
80. Hota Ganga Rao, John Harper, Vijaya Gopu, and Walid Alaywan, "Response of Fiber Reinforced Polymer (FRP) Wraps for Timber Bridges", Proceedings of the 2023 International Conference and Exhibition on Reinforced Plastics, Mumbai, India, January 18-20, 2023
81. Gopu, V.K., "Performance of Light-Frame Structures in Hurricanes", Arkansas Engineering Forum, Southeast Symposium on Contemporary Engineering Topics, September 16, 2022
82. Gopu, V.K., "Research Funding Opportunities at Louisiana Transportation Research Center", Invited presentation at Louisiana Tech University, Ruston, LA, October 18, 2022
83. Kazemian, A. "Construction 3D Printing: Toward Full Automation of Construction", University of New Mexico (Online), Guest speaker for CE598 course, 2023.
84. Kazemian, A. "Construction-scale 3D Printing: Introduction, Possibilities, and Challenges", Georgia Institute of Technology (Online), Guest speaker for BC8813 course, 2023.

Dissertations/Theses

1. “Investigating Crash Severity Contributing Factors of Major Elevated Sections of Interstates in Louisiana: A Latent Class Clustering Approach” by Kofi Kakyire Ampofo-Twumasi, M.S. degree thesis, Fall 2022.
2. “Safety Effectiveness of Cable Median Barriers in Louisiana” by Zakia Sultana Shorna M.S. degree thesis, Fall 2022.
3. “Assessment of Cable Median Barrier Safety and Cost-Effectiveness Using the Improved Prediction Method” by Safkat Tajwar Ahmed, M.S. degree thesis, Spring 2023.
4. “Examining the impact of different street lighting schemes on traffic safety and drivers’ behaviors at unsignalized intersections” by Hisham Abdu Kunnah, M.S. degree thesis, Spring 2023.
5. Daniel Adaekele Obekpa, M. S. Thesis: “Estimating Saturation Flow Rate of Signalized Intersections using 511 Traveler System Cameras in Louisiana,” LTRC Project No. 23-3SS.
6. Mohammad Moontakim Shoaib, M.S. Thesis: “*Exploring Machine Learning In Deep Foundation And Soil Classification Application,*” LTRC Project No. 17-2GT.
7. Salman Sameer Abusalman, M.S. Thesis: “*Effect of Silt and Fine Sand Contents on the Empirical Correlation of SPT and Internal Friction Angle of Sand,*” LTRC Project No. 21-1GT.
8. Peyman Barghabany, Dissertation: “*Development of Cracking Resistance Prediction Model of Long-term Aged Asphalt Mixtures,*” LTRC Project No. 19-4B.