

4/01/19 to 9/30/19

Journal publications

1. Palese, J. W. and Zarembski, A. M., Methods for Aligning Near Continuous Railway Track Inspection Data, Proceedings of the Intuition of Mechanic Engineering, Part F: Journal of Rail and Rapid Transit, pp. 1-13, July 2019, DOI: 10.1177/0954409719860718207. (University of Delaware)
2. Lasisi, A. and Attoh-Okine, N. An Unsupervised Learning Framework for Track Quality Index and Safety, Journal Transportation Infrastructure and Geotechnology, pp. 1-12, July 2019. (University of Delaware)
3. Lasisi, A. and Attoh-Okine, N., Machine Learning Ensembles and Rail Defects Prediction: A multi-layer Stacking Methodology, ASCE-ASME Journal of Risk and Uncertainty in Engineering Systems, Part A: Civil Engineering, 2019. (University of Delaware)
4. Palese, J.W., Zarembski, A.M., and Ebersole, K., Stochastic Analysis of Transit Wheel Wear and Optimized Forecasting of Wheel Maintenance Requirements, Proceedings of the 2019 Joint Rail Conference, JRC2019, April 9-12, 2019, Snowbird, Utah. (University of Delaware)
5. Lasisi, A., Li, P. and Attoh-Okine, N., Risk Assessment Framework for Train Accidents in the United States: A Case Study of California Rail Network (2008-2017)” AREMA Railway Interchange Conference, Minneapolis, MN, September 2019. (University of Delaware)
6. Mortazavian, E., Wang, Z., and Teng, H., Repair of Rail Track through Restoration of the Worn Part of the Railhead Using Submerged Arc Welding Process, written for the Journal of Wear, September, 2019. (UNLV)
7. Ghafoori, N. and Hasnat A., Properties of Ultra-high-performance Concrete, paper 5112, pp. 1-7, Fifth International Conference on Sustainable Construction Materials and Technologies, London, UK, July 14-17, 2019. (UNLV)

Conference abstracts submitted

1. Considerations for sensor selection for detecting Top-OF-Rail (TOR) Lubrication, ASME 2020 Joint Rail Conference, April 20-22, 2020, St. Louis, MO. (Virginia Tech)
2. Lessons Learned from Development of Optical Sensors for Top-of-Rail (ToR) Lubricity Condition Monitoring, ASME 2020 Joint Rail Conference, April 20-22, 2020, St. Louis, MO. (Virginia Tech)
3. Simulation Evaluation of Fouled Ballast Thermal Characteristics, ASME 2020 Joint Rail Conference, April 20-22, 2020, St. Louis, MO. (Virginia Tech)
4. Discrete Element Modeling of Railway Ballast for Studying Railroad Tamping Operation, ASME 2020 Joint Rail Conference, April 20-22, 2020, St. Louis, MO. (Virginia Tech)
5. Surface Profile and Third-Body Layer Accumulation Measurement Using a 3D Laser Camera, ASME 2020 Joint Rail Conference, April 20-22, 2020, St. Louis, MO. (Virginia Tech)
6. Influence of Angle of Attack on Wheel-Rail Interface (WRI) Dynamics, ASME 2020 Joint Rail Conference, April 20-22, 2020, St. Louis, MO. (Virginia Tech)
7. Forward-Looking Infrared Radiometry (FLIR) Application for Detecting Ballast Fouling, ASME 2020 Joint Rail Conference, April 20-22, 2020, St. Louis, MO. (Virginia Tech)

8. Rail Track Quality and T-Stochastic Neighbor Embedding for Hybrid Track Index, accepted to IEEE Big Data 2019 Conference, December 2019, Los Angeles, CA. (University of Delaware)
9. Development of UAV-based rail track irregularity monitoring and measuring platform, the Fall Transportation Conference, October 31, 2019, Las Vegas, NV. (UNLV)
10. Non-Proprietary Ultra High-Performance Concrete for Ballast-Track High Speed Railroad Sleepers, the Fall Transportation Conference, October 31, 2019, Las Vegas, NV. (UNLV)
11. Transit Degradation Monitoring and Failure Prediction of Carbon Insert (Strip) in Pantograph Shoe, the Fall Transportation Conference, October 31, 2019, Las Vegas, NV. (UNLV)

Presentations

1. Palese, J.W., Zarembski, A.M., and Ebersole, K., Stochastic Analysis of Transit Wheel Wear and Optimized Forecasting of Wheel Maintenance Requirements, Presentation at the 2019 Joint Rail Conference, JRC2019, April 9-12, 2019, Snowbird, Utah. (University of Delaware)
2. Lasisi, A., Li, P. and Attoh-Okine, N., Risk Assessment Framework for Train Accidents in the United States: A Case Study of California Rail Network (2008-2017), Presentation at the AREMA Railway Interchange Conference, Minneapolis, MN. September 2019. U (University of Delaware)

Magazine articles

1. Zarembski, A. M., The Evolution of Data Analytics and its Potential for Safety, Railway Age, April 2019. (University of Delaware)
2. Zarembski, A. M., Big Data in Railroad Maintenance; Application of Data Analytics in Railroad Track Maintenance, Railway Track & Structures, March 2019. (University of Delaware)