4/01/20 - 9/30/2020

Publications

1. Mast, T., Neighborgall, C., Peterson, A., Holton, C., and Ahmadian, M., Sensor Selection Consideration for Top-of-Rail (TOR) Lubrication Detection, Proceedings of the 2020 Joint Rail Conference, St. Louis, MO, April 20-21, 2020. (Virginia Tech)
2. Radmehr, A., Ahangarnejad, A.H., Tajaddini, A., and Ahmadian, M., Surface Profile and Third-body Layer Accumulation Measurement Using a 3D Laser profiler, Proceedings of the 2020 Joint Rail Conference, St. Louis, MO, April 20-21, 2020. (Virginia Tech)
3. Afzalan, M., Jazizadeh, F.K., and Ahmadian, M., Towards Railway Automated Defect Detection from Onboard Data using Deep Learning, Proceedings of the 2020 Joint Rail Conference, St. Louis, Mo, April 20-21, 2020. (Virginia Tech)
4. Radmehr, A., Ahangarnejad, A.H., Tajaddini, A., and Ahmadian, M., Influence of Angle of Attack on Wheel-rail Interface (WRI) Dynamics Under Various Friction Conditions, Proceedings of the 2020 Joint Rail Conference, St. Louis, MO, April 20-21, 2020. (Virginia Tech)
5. Tan, Y., Hosseini, S-M, Chen, Y., and Ahmadian, M., Simulation Evaluation of Fouled Ballast Thermal Characteristics, Proceedings of the 2020 Joint Rail Conference, St. Louis, MO, April 20-21, 2020. (Virginia Tech)
6. Dama, N. and Ahmadian, M., Discrete Element Modeling of Railway Ballast for Studying Railroad Tamping Operation, Proceedings of the 2020 Joint Rail Conference, St. Louis, MO, April 20-21, 2020. (Virginia Tech)
7. Hosseini, S-M, Tan, Y., and Ahmadian, M., Forward-Looking Infrared Radiometry (FLIR) Application for Detecting Ballast Fouling, Proceedings of the 2020 Joint Rail Conference, St. Louis, MO, April 20-21, 2020. (Virginia Tech)
8. Radmehr, A., Ahangarnejad, A.H., Pan, Y., Tajaddini, A., and Ahmadian, M., Wheel-Rail Contact Patch Geometry Measurement and Shape Analysis Under Various Loading Conditions, Proceedings of the 2020 Joint Rail Conference, St. Louis, MO, April 20-21, 2020. (Virginia Tech)
9. Alsahli, A, Zarembski, A.M., and Attoh-Okine, N., Predicting Track Geometry Defect Probability Based on Tie Conditions Using Pattern Recognition Techniques, Proceedings of the ASME International Mechanical Engineering Congress and Exposition (IMECE2020), Portland, OR, November 2020. (University of Delaware)
10. Cronin, J.J., Zarembski A.M., and Palese J.W., Prediction of Rail Defect Development Using Parametric Bootstrapping Modified Weibull Equations, submitted to The Proceedings of the Institution of Mechanical Engineers, Part F: Journal of Rail and Rapid Transit, September 2020. (University of Delaware)
11. Ashley, G., and Attoh-Okine, N., Approximate Bayesian Computation for Railway Track Geometry Parameter Estimation", accepted by The Proceedings of the Institution of Mechanical Engineers, Part F: Journal of Rail and Rapid Transit, September 2020. (University of Delaware)
12. Hasnat, A., and Ghafoori, N., Freeze-Thaw Resistance of Non-Proprietary Ultra High Performance Concrete, submitted to the ASCE Journal of Cold Regions Engineering, June 2020. (UNLV)

13. Mortazavian, E., Wang, Z. and Teng, H., Finite Element Analysis of Thermal Kinetic-Mechanical Evolutions during Laser Metal 3D Printing Process as a Potential Technique for Rail Repair, submitted to the Journal of Manufacturing Science and Engineering, April 2020. (UNLV)
14. Mortazavian, E., Wang, Z. and Teng, H., A Finite Element Investigation on the Effect of Preheating and Deposition Material Type on the Residual Stress in a Rail Repaired via Laser Metal 3D Printing, submitted to the Journal of Additive Manufacturing, September 2020. (UNLV)

Presentations

1. Zarembski, A.M., Effect of Tie Condition Distribution on Life Expectancy of Wood Crosstie, American Railway Engineering Association Annual Conference, virtual conference, September 2020.