**Read me file:**

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**The excel files contain data reported in the paper: “Full scale measurements of train underbody flows and track forces” as follows:**

Figure 4. Sleeper movement ranges for the trains shown in Table 2.

Figure 5. Mean 1st and 99th percentile (a) cess end positive sleeper acceleration (b) ballast grain acceleration for different filtering cutoffs for the trains shown in Table 2.

Figure 6. Geophone A Run 7 filtered at 180 Hz (a) deflection (b) velocity (c) acceleration.

Figure 7. Geophone A Run 7 filtered at 40 Hz (a) deflection (b) velocity (c) acceleration.

Figure 8. MEMs data from a voided sleeper filtered with a high cut off at 40 Hz (a)

deflection (b) velocity (c) acceleration.

Figure 9. Time histories for run 7 (dotted lines indicate bogie passage).

Figure 10. Relationship between run 7 and ensembles.

Figure 11. Ensemble averages and standard deviations of velocities and pressures.

Figure 12. Velocity measurements away from the track centre line.

Figure 13. Velocity analysis.

Figure 14. Velocity autocorrelation functions for different heights above the top of rail.

Figure 15. Expanded velocity ensembles showing bogie positions

Figure 16 Forces on hypothetical cubic ballast particle

**Other figures in the paper are either photos or could be plotted from publically available equations.**

**Date of data collection: May 2016**

**Date that the file was created: Summer** **2017**