

# GROUND VIBRATION FROM TRAINS – A CROSS-SECTIONAL MODEL WITH ARBITRARY GROUND GEOMETRY NEAR THE TRACK

A two-dimensional model of the ground has been developed as part of the study of ground vibrations from trains. It allows for arbitrary cross-sectional geometry near the track and for vibration in an infinite horizontal layer of finite depth, using semi-infinite “layer-elements”.

This report describes the mathematics of semi-infinite layer elements, extends the model to include cubic polynomial layer elements, and validates the model against an existing two-dimensional model.