



Fig. S1. Placement of markers on rider and horse. Rider: chin, cervical vertebra 7 (C7), thoracic vertebra 12 (T12), shoulder, elbow, wrist, hip, knee, ankle and toe. Horse: the spinous processes of the 6th thoracic (T6) and the 1st lumbar (L1) vertebrae, dorsal side hind hoofs.

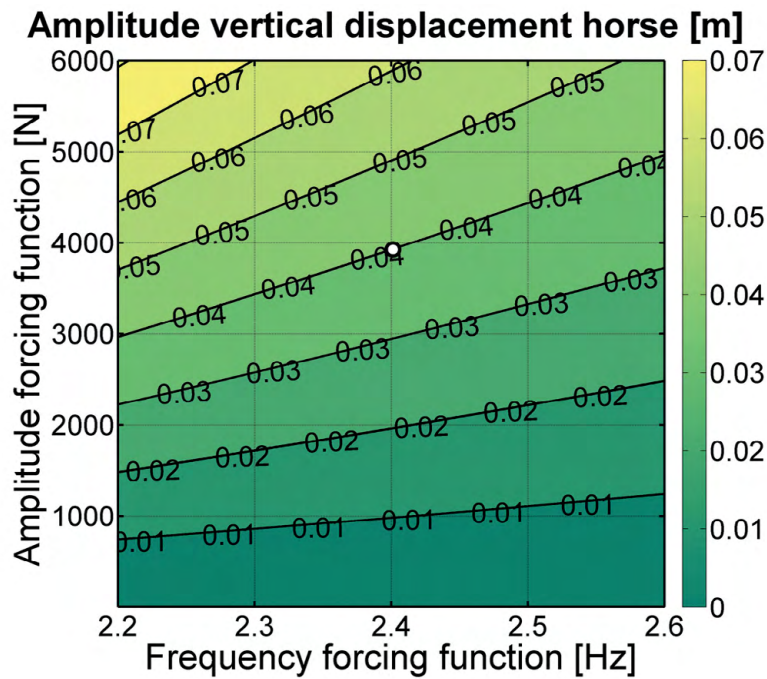


Fig. S2. Contour plot amplitude and frequency forcing function. The amplitude of the forcing function was determined using a contour plot of the frequency of the forcing function and the amplitude of the forcing function and the resulting vertical displacement of the horse. The experimental data showed that the vertical displacement of the horse was 0.08 m. This amplitude of the sine wave of the vertical displacement of the horse was therefore 0.04 m. The circle indicates that the combination of the measured frequency (2.4 Hz) and an amplitude of the forcing function of 3900 N will result in this measured vertical displacement of the horse. This amplitude of the forcing function was therefore used in the basic mass-spring model.