



**Fig. S1. Model-based activations and raw EMG activations for one representative subject across five running speeds.** (A) soleus model-based activations, (B) soleus high-pass filtered EMG activations, (C) gastrocnemius model-based activations, (D) MG high pass filtered EMG activations and (E) LG high pass filtered EMG activations. Time was normalized to stride cycle beginning and ending at contralateral toe-off. Model-based activations and EMG activations were normalised by the mean model-based activation and mean EMG activation calculated for the maximum sprinting condition, respectively. Note that the running speeds indicated are for one representative subject, and hence, may slightly differ to the group mean  $\pm 1$  s.d. running speed.