



Fig. S1. Touch-down of the posterior leg is used as reference point in time. Swing and stance phases are shown over time for a middle leg (ML; dashed line) and for a hindleg (HL; continuous line). The hindleg typically lifts off soon after touch-down of the middle leg. To project the touch-down position of the hindleg and the corresponding position of the middle leg into the same reference frame, we chose the body-fixed co-ordinate system at the instant of hindleg touch-down.