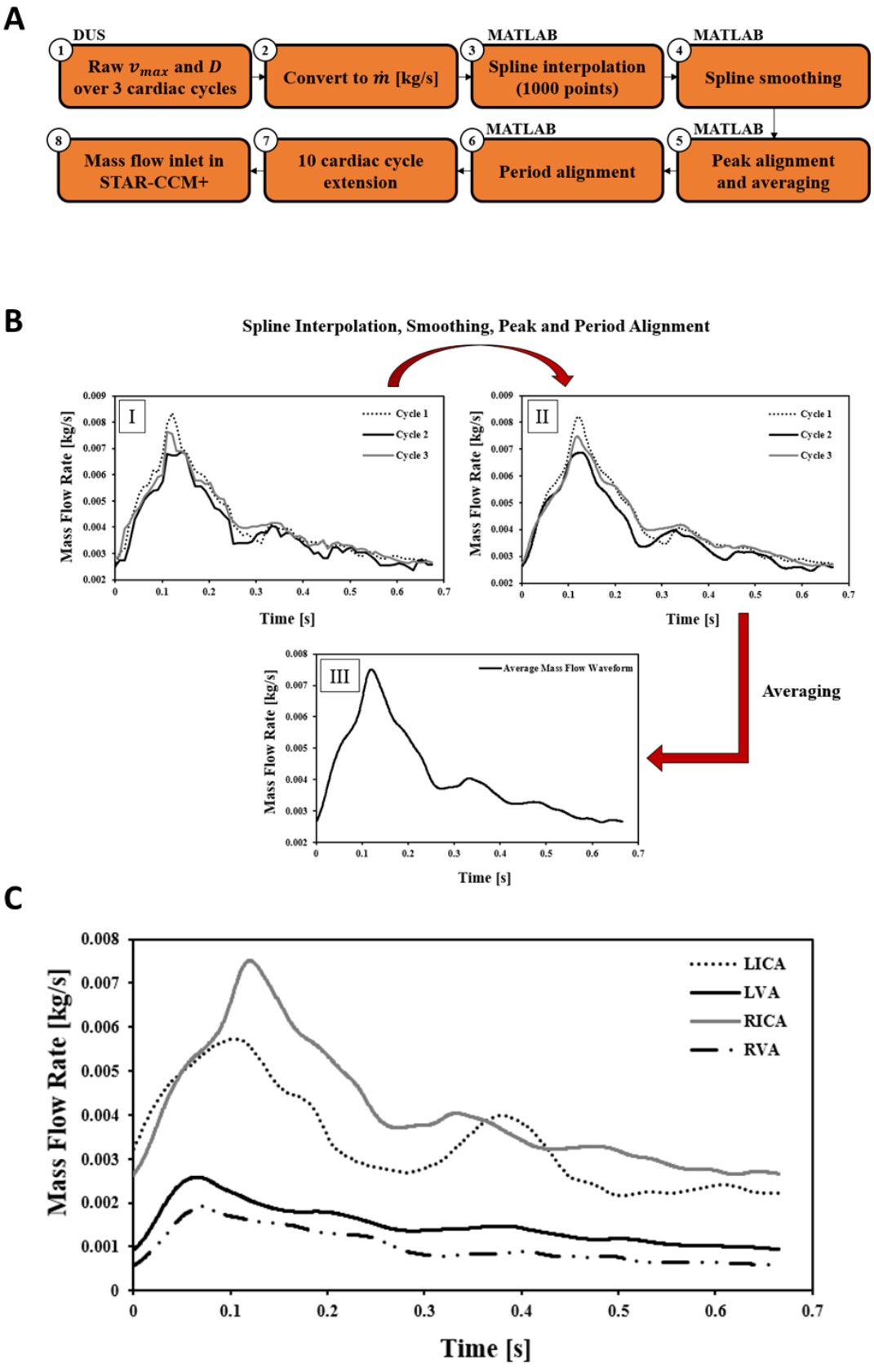
Figure S1: Inlet waveform preparation process, example inlet waveform processing and final inlet mass flow waveforms.



(A) Inlet waveform preparation process. Step 1 is using duplex ultrasound data (DUS). Steps 3 to 6 are completed in Matlab. **(B)** For the steps outlined in Matlab, an example inlet waveform processing for case 2's right internal carotid artery (RICA) at rest is presented. (I) Raw data from DUS for 3 cycles. (II) Spline interpolated over 1000 points, smoothed, peak and period aligned waveforms. (III) Averaged waveform. **(C)** Final inlet mass flow waveforms for case 2 at rest for the left internal carotid artery (LICA), left vertebral artery (LVA), right internal carotid artery (RICA) and right vertebral artery (RVA) for a single cardiac cycle.