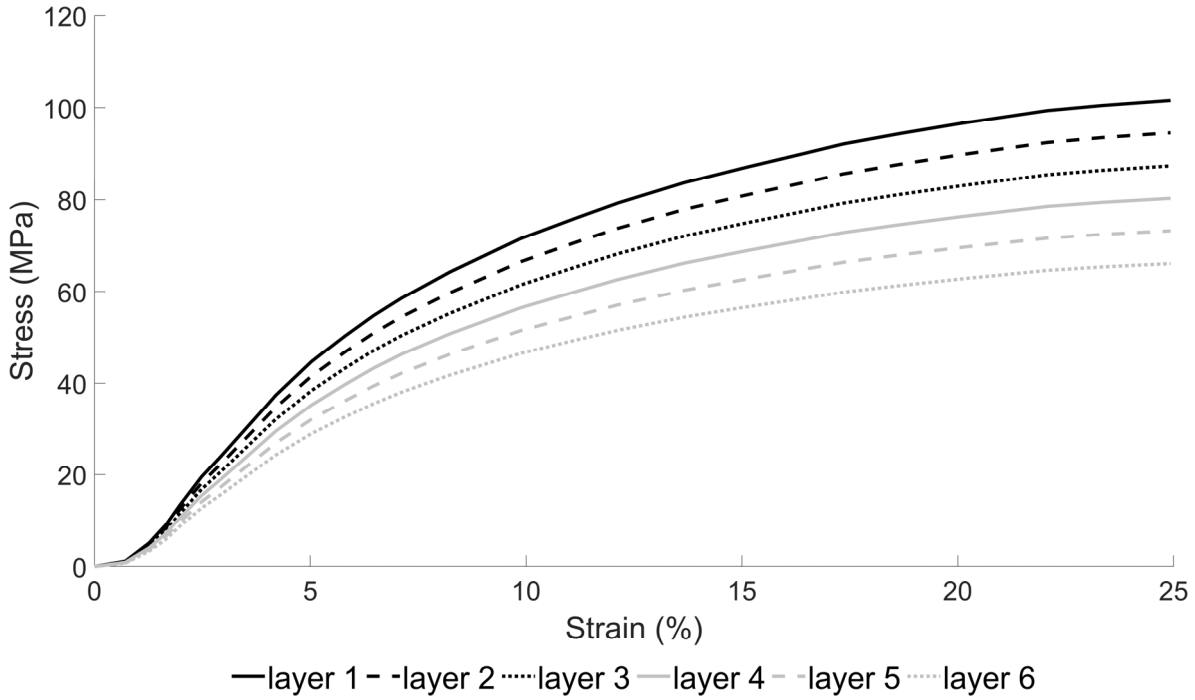

Figure S1: The nonlinear stress-strain relationships of the six different annulus fibre layers in the intervertebral disc. Layer 1 is the outermost and layer 6 is the innermost layer

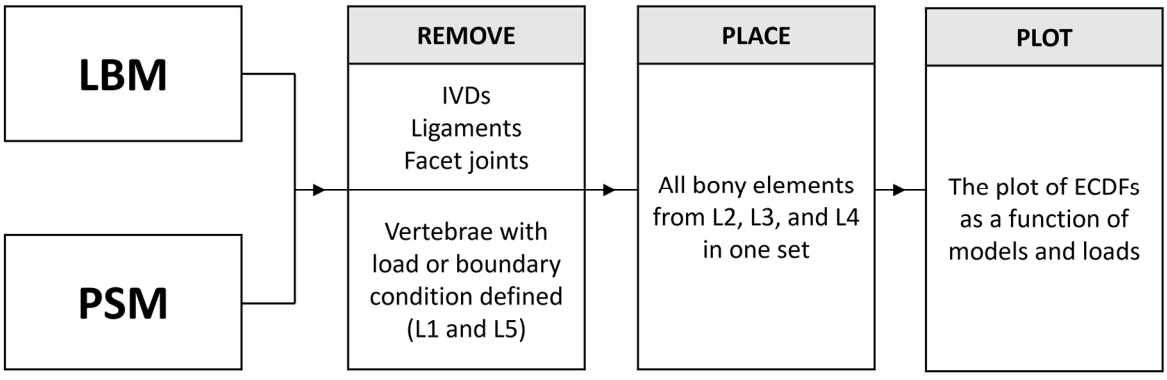

Figure S2: Schematic representation of the building steps to plot the empirical cumulative distribution functions

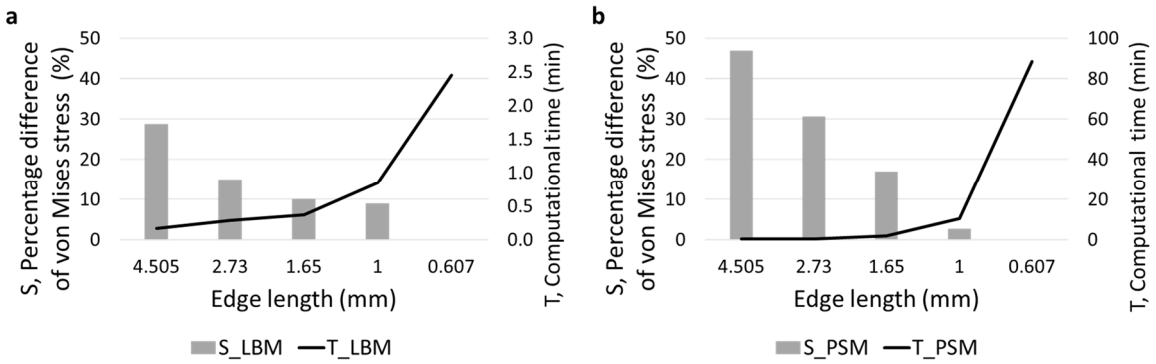

Figure S3. Von Mises stress and computational time of meshes with different edge lengths in the case of literature-based model (a) and patient-specific model (b)

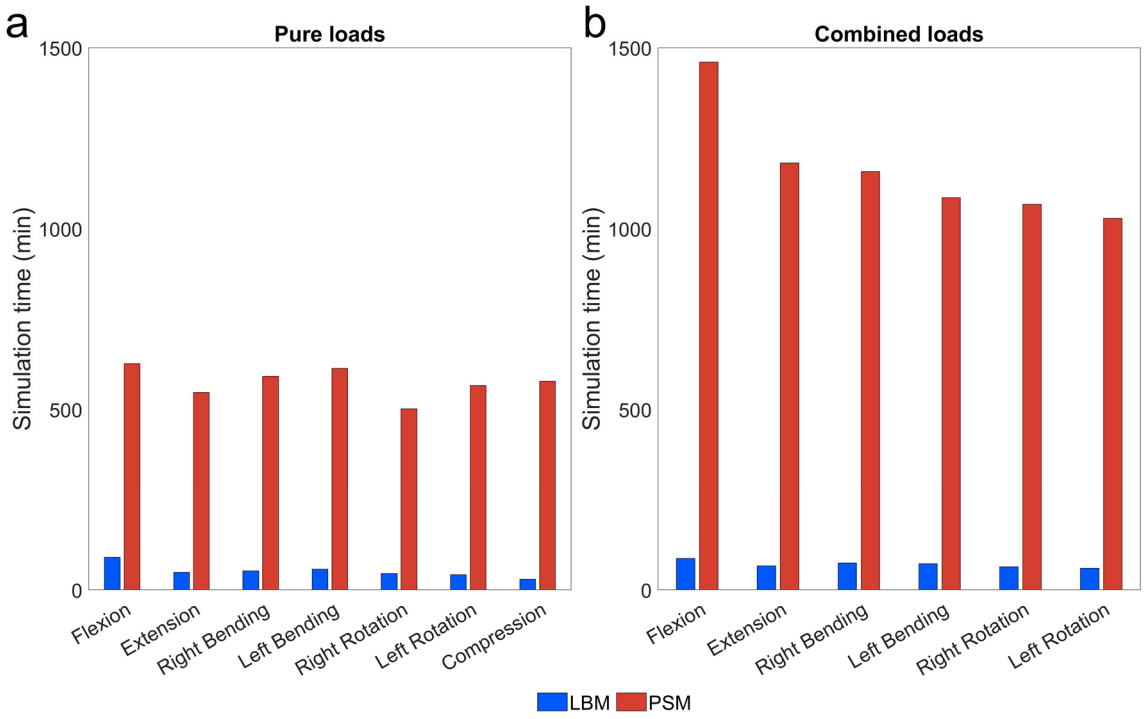

Figure S4: Required computational times for the LBM and PSM against (a) pure and (b) combined loads