

might affect the simulation results, the model geometry extended laterally by 5 cm in either direction from the centreline. Simulations were run until the axial displacement at the focal point returned to 1 % of it's maximal value during the entire simulation—at this point, the tissue was considered to be “relaxed” after being disturbed by the acoustic radiation force. Sample source code for calculating these finite-element models using COMSOL Multiphysics® is given in listing B.5 in Appendix B.

$$\vec{u} = 0, \quad \Gamma = \Gamma_{bottom} \quad (4.13a)$$

$$u_y = 0, \quad \Gamma = \Gamma_{top} \quad (4.13b)$$

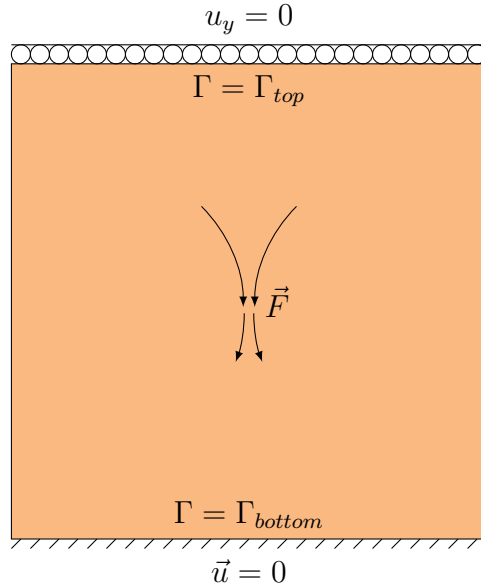


Fig. 4.1: Boundary conditions used in the finite-element calculations of soft tissue deformation.