

## Stent model

Abstract: The stents are elastic structures made of struts. They are inserted into the blood vessels in order to reduce the effects of stenosis or to bridge aneurysms. As they are designed they have very complex structure and are difficult to treat in detail. But, their global behavior is simple. After the application of the radial force stents will exhibit radial and longitudinal displacement. These displacements will be different along the stent, but the radial displacement at the middle of the stent as well as the longitudinal displacement at the stent ends gives good information of the overall behavior of the stent. The purpose of this work is to give a simple model for these quantities depending on the geometrical and mechanical parameters of the stent.