Floating elastic bodies from a variational perspective

The equilibrium of partially immersed bodies is a classical problem in mechanics and has attracted very early attention. The basic observation in this context has to be traced back more than two millennia to the work of Archimedes, who formulated his celebrated buoyancy principle. Despite its relevance in application, mathematical results on this problem are rather scant and mostly focusing on the rigid case. I will present some results in the elastic case instead, as a result of a joint work with Manuel Friedrich and Martin Kruzik.