Stability in Incompressible Finite Elasticity, with applications to a bifurcation problem

In the first part of this talk, I will discuss the classical necessary conditions for an energy-minimizing state of an incompressible finitely-elastic material. Particular emphasis will be given to Agmon's Condition and its implications for the mixed boundary-value problem. In the second part, I will discuss an instability phenomenon observed in rubber elasticity, and present some preliminary results on modeling it mathematically.

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