# Geometrische Mechanik

17. What is the fibre $\mathcal{EM}^{-1}(a, a, \frac{a^2}{2I_3} + \chi)$ of the energy-momentum mapping at the Hamiltonian Hopf bifurcation $a = \pm 2\sqrt{I_1 \chi}$ ?

18. Analyse the force free symmetric rigid body, or, equivalently, the Lagrange top with fixed centre of mass.