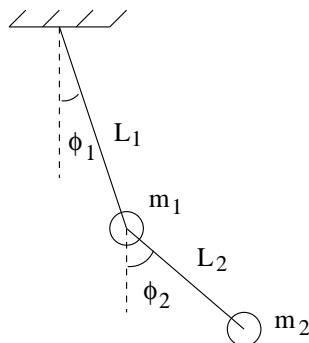


[mex20] Lagrangian of plane double pendulum

Consider a plane pendulum consisting of two point masses m_1 and m_2 and two rods of negligible mass and lengths L_1 and L_2 , respectively. Determine the Lagrangian of this dynamical system as a function of the generalized coordinates ϕ_1, ϕ_2 and the associated generalized velocities $\dot{\phi}_1, \dot{\phi}_2$.



Solution: