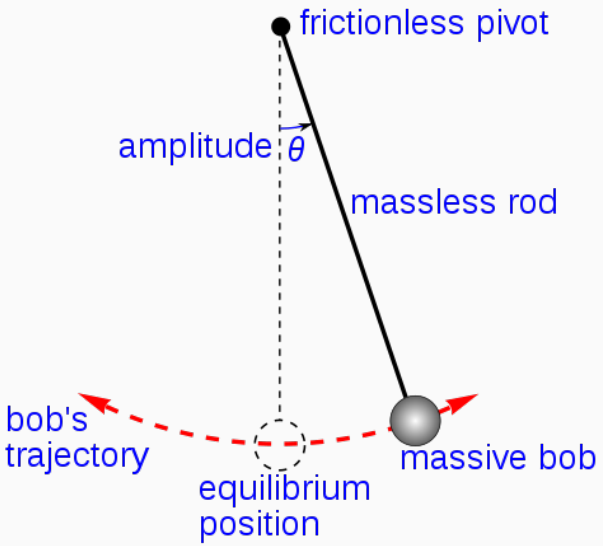
0D example : simple gravity pendulum:

- rope of length L, acceleration of gravity g:
$$\ddot{\theta}(t) + \frac{g}{L} \sin\theta(t) = 0, \text{ on } (0, T)$$
- initial conditions:
$$\theta(0) = \Theta_0, \text{ and } \dot{\theta}(0) = 0$$
- experimental data: θ_{exp}, assumed measured $\forall t \in (0, T)$



Inverse problem: identification of the acceleration of gravity g