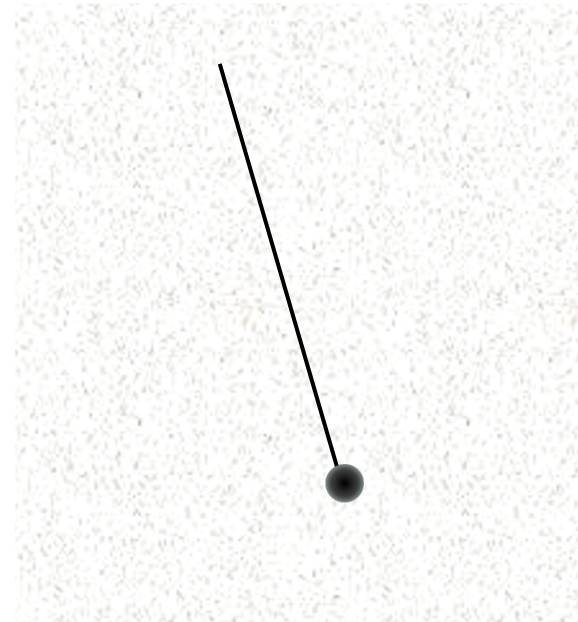


# Exercise: the pendulum

- Take the standard, *viscously damped* pendulum
- Consider torque as input and angle as output
- Write the input-output relation
- Linearize for small angles
- Find the frequency response
- Find the impulse response
- Find the free evolution
- Calculate the response to a Gaussian pulse



Length= 1 m, Damping time  
500 s, Mass= 1 kg