

Lab Session 06: Addendum

Practical Mechanical System: Shock Absorber

The practical mechanical system modelled in this lab session is a simple shock absorber system, often found in the suspension system of vehicles. Such systems are analogous to a simple mass-spring system with a single damping force. The mass M in this system is the tyre attached which is coupled to the suspension system's shaft by a spring of elastic coefficient K . The tyre is in contact with a road or other surface, which exerts a frictional force that can be quantized by the frictional coefficient B . The force F acting on the tyre is exerted by a bump in the road on which the vehicle is traveling.

