DC Motor
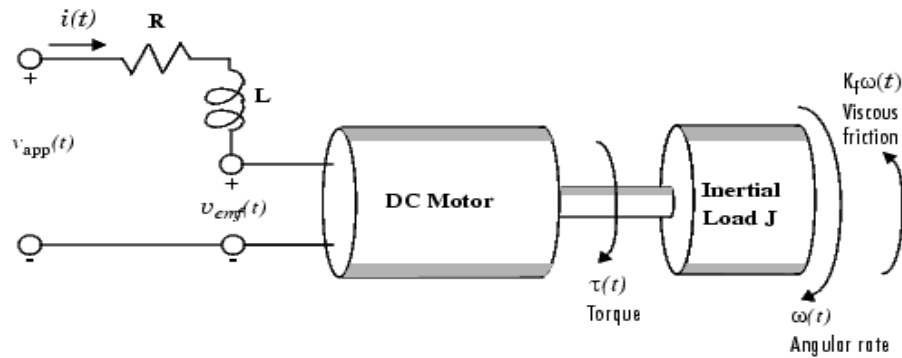

The system (motor driving a load) final equations are

$$\frac{di}{dt} = \frac{V_{app}}{L} - \frac{R}{L}i - \frac{K_\Phi}{L}\omega$$

$$\frac{d\omega}{dt} = \frac{K_\Phi}{J}i - \frac{b}{J}\omega$$

Where:
b   ➔viscous friction
J   ➔moment of inertia for the motor load
Kφ   ➔armature or emf constant

The values motor parameters are
L = 0.1 H
Kφ = 0.3
J = 0.1 Kg.m^2
b = 0.01
R = 2 Ω

 The motor is masked in this modified version,
so double click the motor block and update the parameters.

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