

System Identification of Robot Arm

System description: a flexible robot arm installed on an electrical motor.

Single input: reaction torque of the structure on the ground, in the form of periodic sine sweep.

Single Output: angular acceleration of the flexible arm.

Theoretical relationship: $T = a \cdot m \cdot L^2 / 2$.

a: angular acceleration; m: mass; L: arm length.

Modelling:

