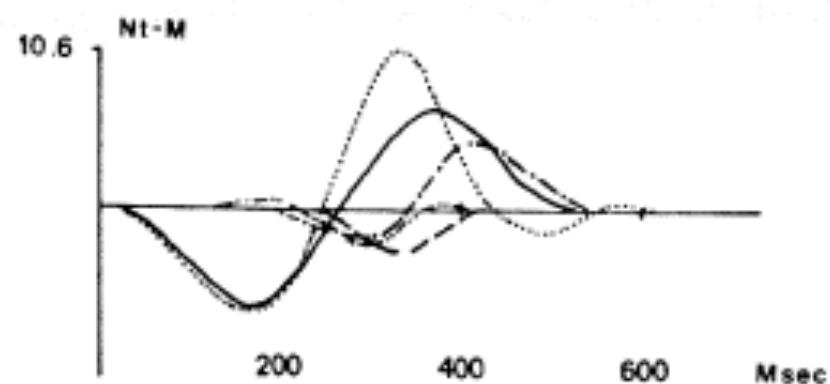
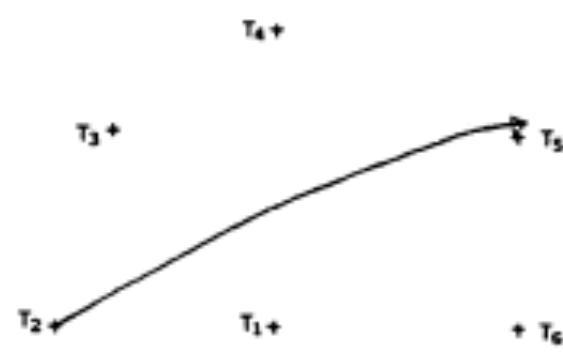


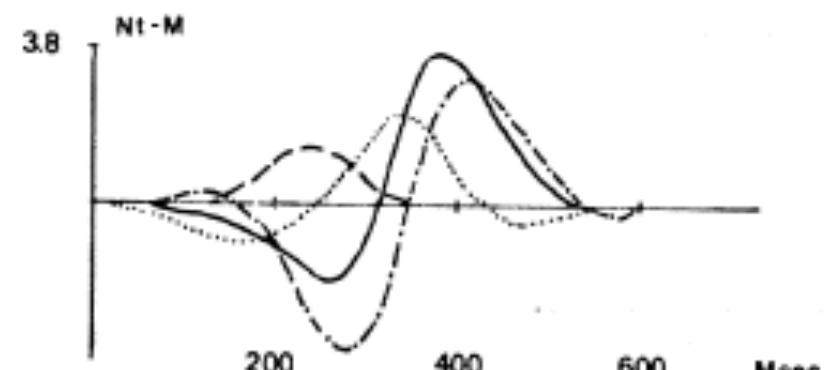
A



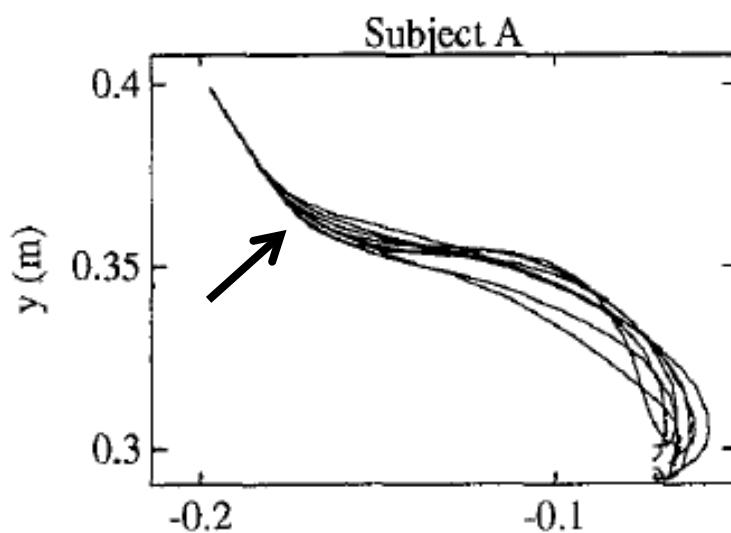
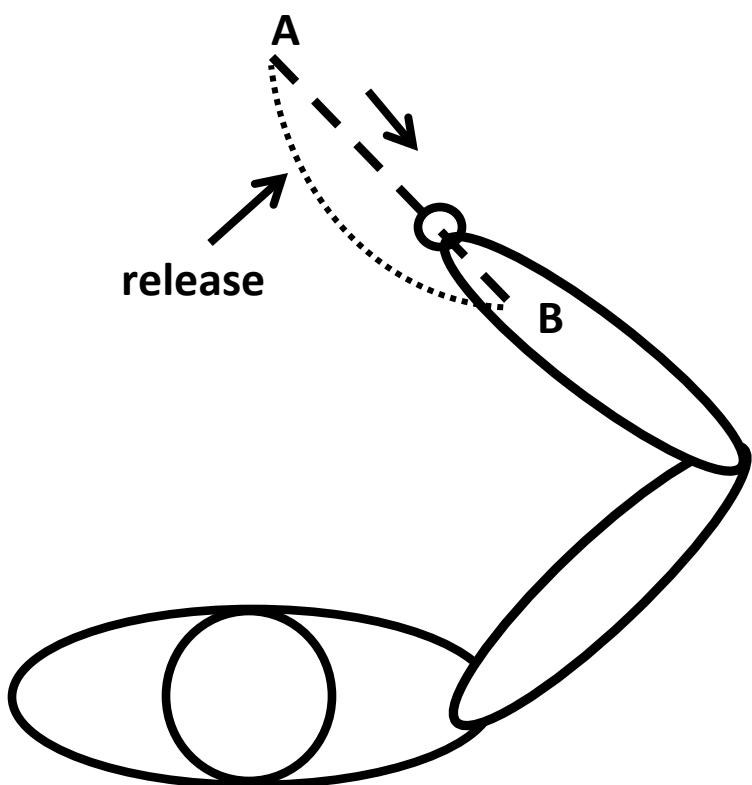
C

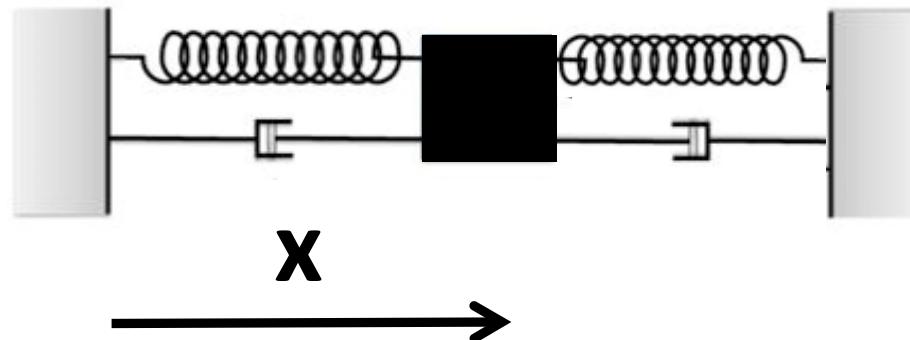
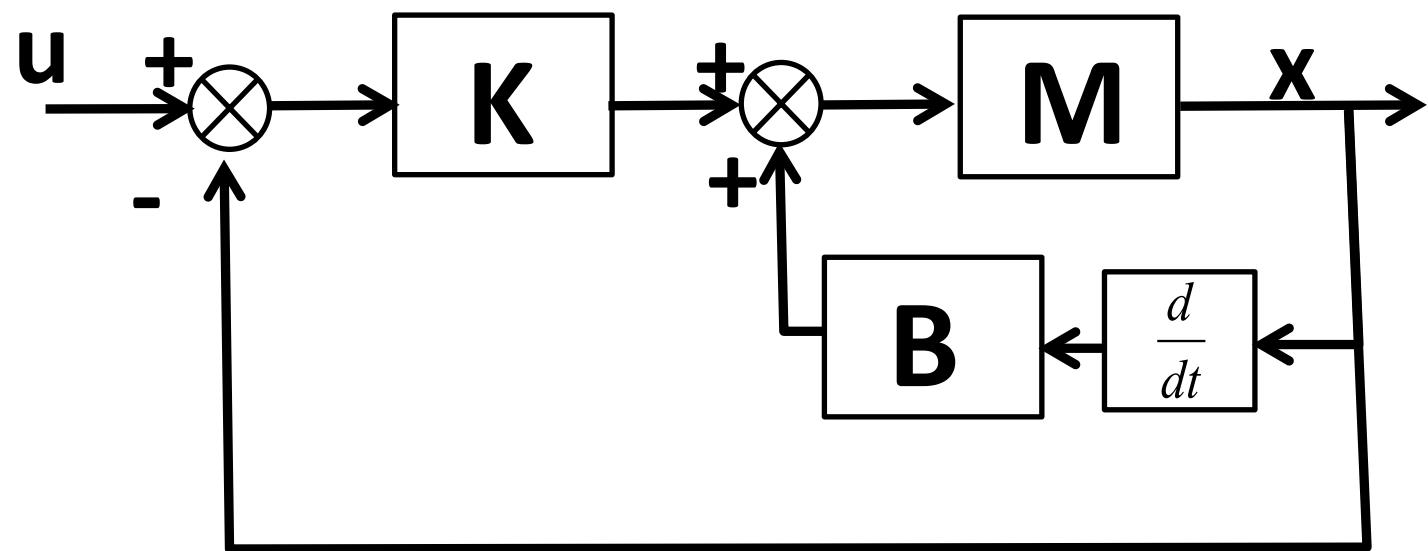


B



D



**A****B**

## Model Parameters

Arm Segments Length (L) 30 cm

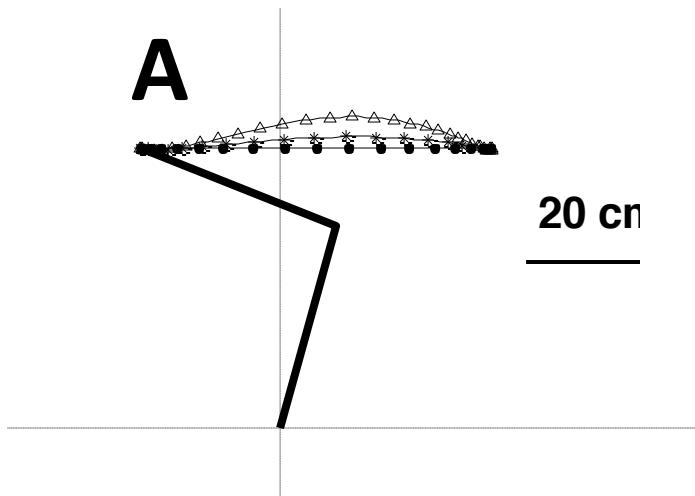
Arm Segments Mass (M) 3Kg

Arm Segments Inertia (I)  $2 \text{ Kg m}^2$

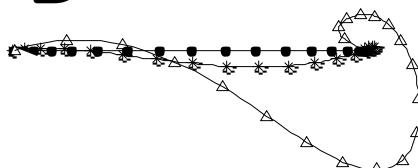
Stiffness (K)  $\begin{bmatrix} -15 & -6 \\ -6 & 16 \end{bmatrix}$  Nm/radians

Damping (B)  $\begin{bmatrix} -4.6 & -1.8 \\ -1.8 & -4.8 \end{bmatrix}$  Nm Sec/radians

**A**

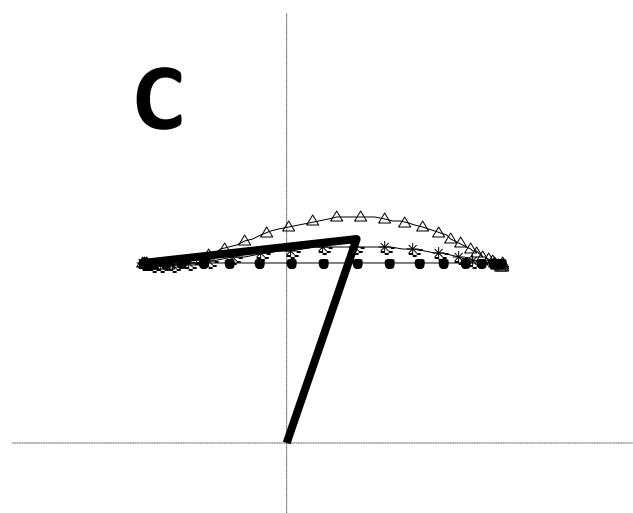


**B**

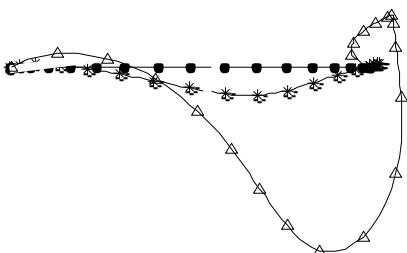


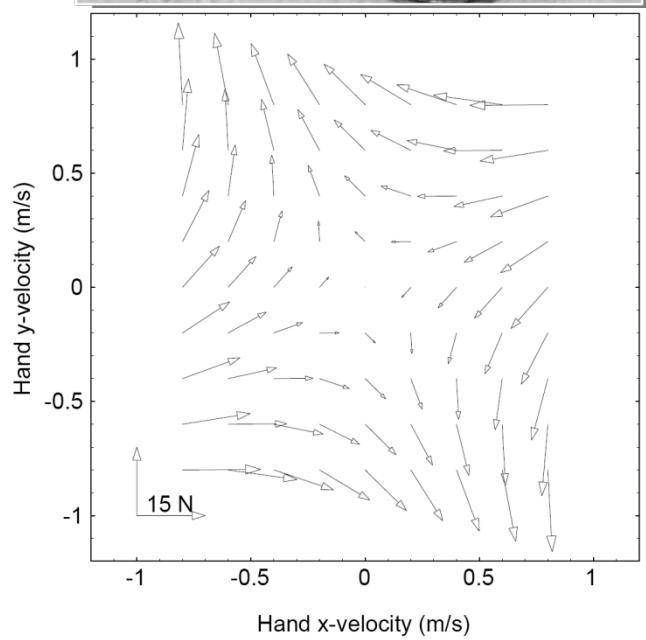
\* 2 seconds  
Δ .8 seconds

**C**



**D**



**A****C****B****D**