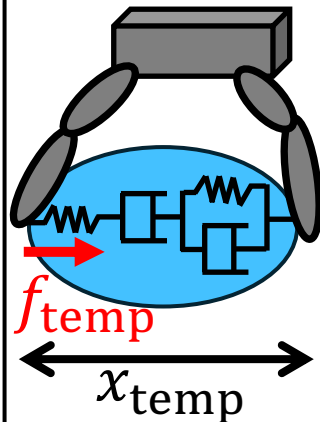


初期条件

$x_0 \leftarrow 5\text{次関数}(x_{\text{limit}})$
 $f_0 \leftarrow \text{柔軟物と接触}(x_0)$

直交行列Qの生成



$x_{\text{temp}} \leftarrow 5\text{次関数}(x_{\text{limit}} = 1)$
 $f_{\text{temp}} \leftarrow (\hat{p}, x_{\text{temp}})$
 $M_{\text{temp}} \leftarrow (\hat{p} \text{ から } x_{\text{temp}}, f_{\text{temp}})$
 $Q \leftarrow \text{qr分解}(M_{\text{temp}})$

境界条件

$x(0) = 0$
 $\dot{x}(0) = 0$
 $\ddot{x}(0) = 0$
 $x(\text{end}) = x_{\text{limit}}$
 $\dot{x}(\text{end}) = 0$

noise
 \hat{p}

対角行列Rの生成

$O(\gamma) \gg \frac{O(\text{noise})}{O(p)} \quad R \leftarrow \sqrt{\gamma} I_{4 \times 4}$

R

$M \leftarrow QR$
 $x \leftarrow (M \text{ の } 1\text{列目})$

x

