CMPE-242
Applied Feedback Control

Gabriel Hugh Elkaim

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$$D(z) = 5\,\frac{z + \frac{1}{2}}{z - \frac{1}{2}}\Bigg|_{z = e^{-j\omega_1 T}}$$

complex #

X

evaluate — do units

$H(z) = H(s)\Big|_{s = f(z)}$ ← TUSTIN… FORWARD… BACK…

$H(z)$.

$s = \frac{1}{T} \ln(z)$ ← exact mapping

$$D(z) = \frac{z + 0.3}{z - 1.3}$$

$0 \rightarrow -0.3$

$x \rightarrow +1.3$

$$o(n) - \frac{1}{T} \ln(-0.3)$$

$$x(n) - \frac{1}{T} \ln(1.3)$$