Kelvin-Voigt Material

$\overline{\sigma}(t)$

$\overline{\epsilon}(t)$

x

0 $\qquad$ 1

$E(x)$

$\nu(x)$

$\sigma(x,t)$

$\epsilon(x,t)$

Maxwell Material

0

x

1

$E(x)$ $\qquad$ $\nu(x)$

$\sigma(x,t)$

$\epsilon(x,t)$

$\overline{\sigma}(t)$

$\overline{\epsilon}(t)$

Average Strain

$$\overline{\epsilon}(t) = \int_0^1 \epsilon(x,t)dx$$

Average Stress

$$\overline{\sigma}(t) = \int_0^1 \sigma(x,t)dx$$

1D Kelvin-Voigt

$$\sigma(x,t) = \overline{\sigma}(t)$$

1D Maxwell

$$\epsilon(x,t) = \overline{\epsilon}(t)$$