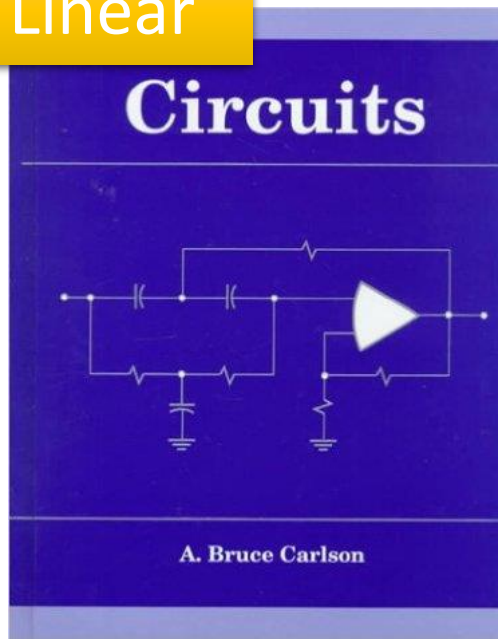


Linear Algebra v.s. Compulsory Courses

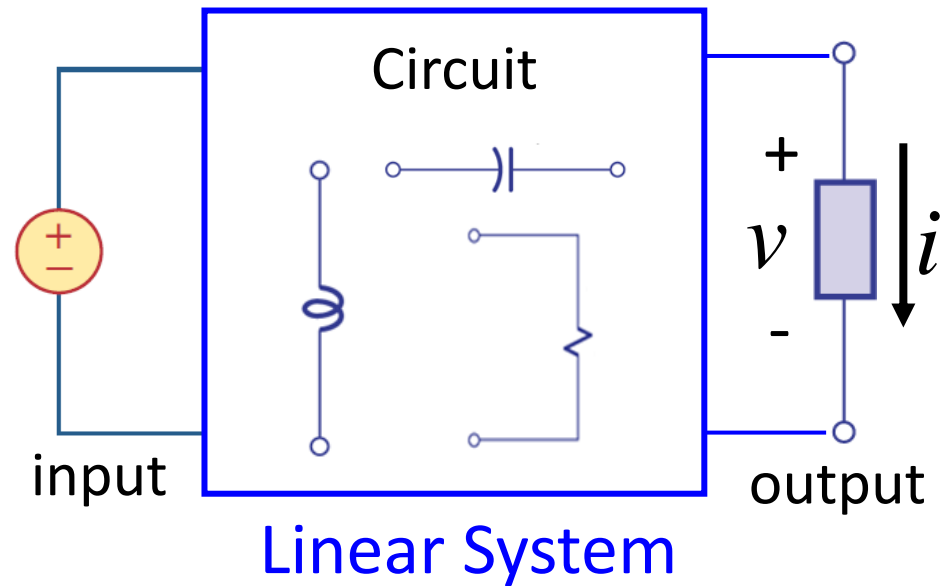
電路學

Linear

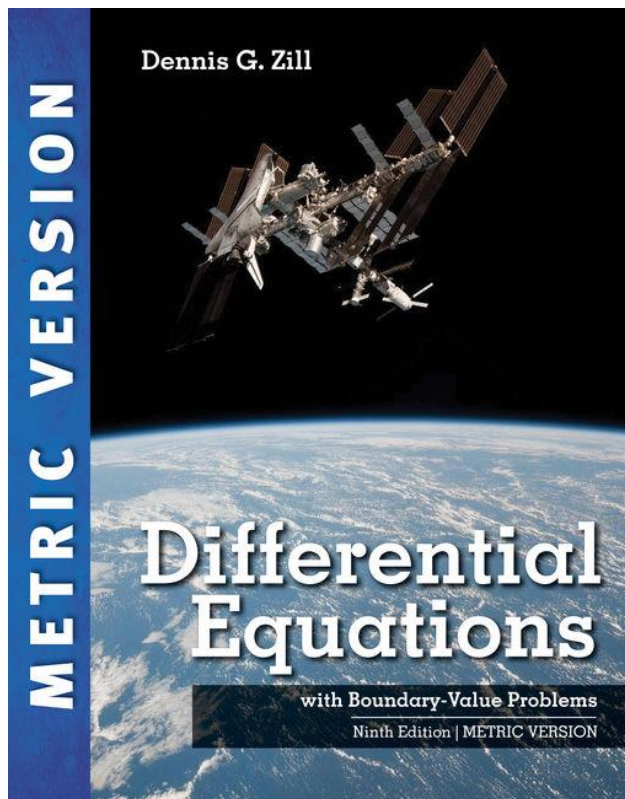


(大一必修)

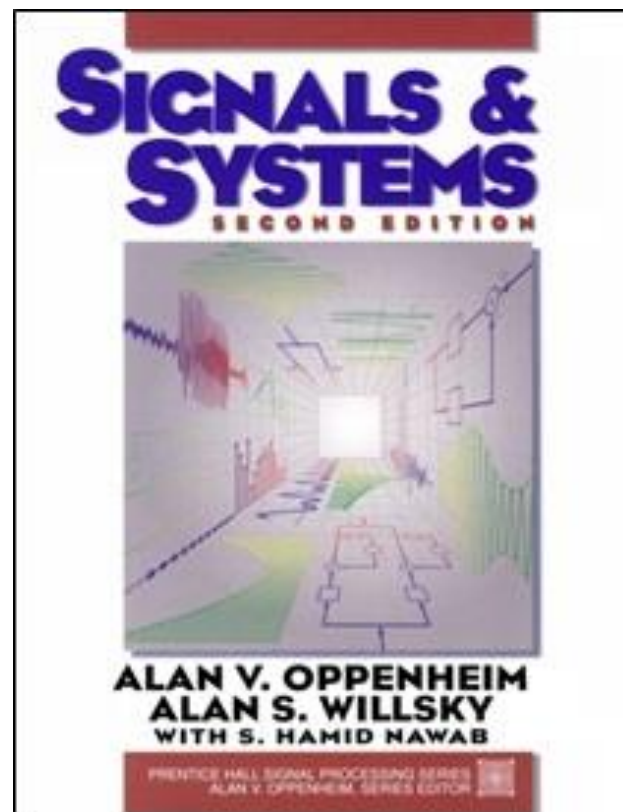
Input: voltage source, current source
output: voltage and current on the load (燈泡、引擎)



微分方程、信號與系統



(大二上必修)



(大二下必修)

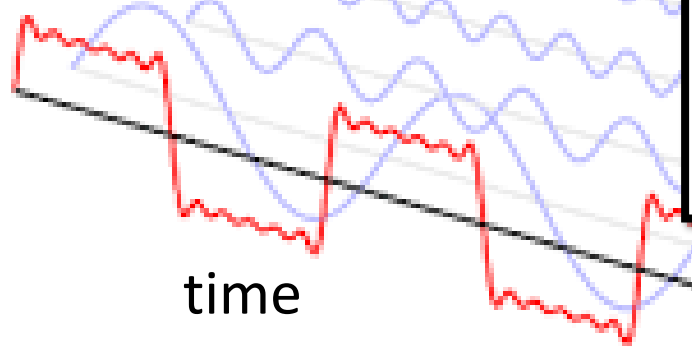
微分方程、信號與系統

Fourier Transform of $x(t)$: $\mathcal{F}[x(t)]$ or $X(\omega)$:

$$X(\omega) = \int_{-\infty}^{\infty} x(t)e^{-j\omega t} dt$$

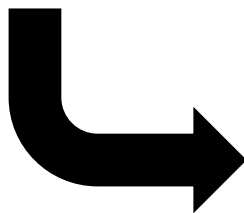
Inverse Fourier Transform of $X(\omega)$: $\mathcal{F}^{-1}[X(\omega)]$:

$$x(t) = \frac{1}{2\pi} \int_{-\infty}^{\infty} X(\omega)e^{j\omega t} d\omega$$

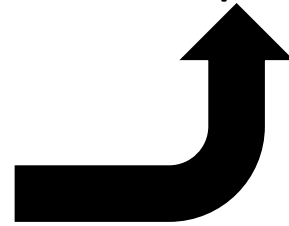


time

frequency



Fourier
Transform



Linear System

Complex ...
but linear