

Recitation #3

Topics Covered

- Impulses: $\delta(t)$ and $\delta[n]$
- Decomposition of functions into impulses:

$$\begin{aligned} \text{(continuous time)} \quad x(t) &= \int_{-\infty}^{\infty} x(\tau)\delta(t - \tau) d\tau \\ \text{(discrete time)} \quad x[n] &= \sum_{k=-\infty}^{\infty} x[k]\delta[n - k] \end{aligned}$$

- System examples
- Linearity

We [engineers] have a different approach. And our fundamental tools... are pretty powerful.

◇ Prof. Thomas Kailath ◇

Prof. Kailath received his Sc.D. in electrical engineering from MIT in 1961, the first Indian-born student to do so. He has been a professor at Stanford's electrical engineering department throughout his professional career. He was awarded the 2007 IEEE Medal of Honor, the highest award of the society. The above quote was from the feature article in *IEEE Spectrum* in May 2007.