Week 2 – Book References

Cross-correlation, Auto-correlation, Signal Energy/Signal Power – Lecture Notes – Week 2

Spectral analysis - motivation – Lecture Notes – Week 2

Discrete Time Fourier Transform (DTFT): Schaum – Chapters 2.5 and 2.6

- Mapping from a sequence into a set of complex functions with real domain
- Produces a decomposition of the input sequence into a set of basis functions (complex exponentials)

DTFT spectrum - Lecture Notes – Week 2

- When input of the DTFT represents a real-valued signal, the output is called DTFT spectrum.
- DTFT spectrum for a real-valued signal is a decomposition of the input signal into a set of harmonic functions sine and cosine with varying frequency.