

EE 210 Signals and Systems

Week 3 Summary:

1. C-T and D-T LTI systems
2. Signal representation in terms of impulse function
3. Impulse response characterization of C-T and D-T LTI systems
4. Convolution integral, convolution sum
5. Properties of LTI systems inter-connections: parallel, cascade
6. Properties of LTI systems in terms of constraints on the impulse response : Memory, Invertibility, Causality, Stability
7. Differential and difference equations

Homework exercises (all problems from the textbook):

2.6, 2.11, 2.21 (d), 2.22 (a,c), 2.23, 2.28 (a,d,f), 2.29 (a,b,e), 2.30, 2.31, 2.44, 2.49

Textbook: Alan V. Oppenheim and Alan S. Willsky with S.H. Nawab, Signals and Systems, Second Edition, PHI (Indian reprint: 2014)