Agenda CENG 3315 March 2, 2022

We Reviewed Exam 1 - See Course Content in Blackboard

Please watch the videos in HW3 to help understand the HW.

Review of Sampling

Ch4_AliasingProblemSession1.pdf
Ch4_AliasingProblemSession2a.pdf

Watch videos on Sound - practical

Jason Rodd (The Sonic Experience) There are two variables that determine the accuracy of a digital representation of an analog sound wave.. Bit Depth and Sample rate. In this video I explain how analog to digital conversion works.

https://www.youtube.com/watch?v=-0rIU9FHiU0&t=285s

Bit Depth and Sample Rate

35,181 views Feb 6, 2015 5:51

Sound is naturally continuous analog information, so in order to store this wave of continuous information on a computer, it needs to be converted to numbers that represent this information. Each number represents a discrete point in the analog wave as it goes up and down for amplitude information, and left to right for timing information. Your computer has to play a game of connect the dots with these numbers to reconstruct the sound wave in a language it can understand. The extent to which digitized sound matches the original sound depends on the accuracy at which the computer, or interface, samples this analog information. It helps to have a basic understanding of how sound waves work in the physical world before you get into how the digital world represents them.

So here's a link to my video on phase and the physics of sound if you haven't already seen it.

https://www.youtube.com/watch?v=GohIVYK1bzQ&t=294s

Understanding Phase and the Physics of Sound

6,265 views Jan 30, 2015 6:49

Ch4_AliasingProblemSession1.pdf

Ch4_AliasingProblemSession2.pdf

SAMPLING AND ALIASING REFERENCES_CH 4.pdf

Chapter 5

Chapter 5: Lecture_5_1 Lecture5_2

ProblemSession1_Ch5

MATLAB_Ch5

Two_Interesting_FIR_Examples

Euler_Convolve_Review

Ch5_Moving_Avg Ch5_Impulse_Response Ch5_LTI_Convolve

A short review of Exam 1.

Last Lecture – Review These

Chapter4 Ch4_Sampling1 Ch4_Sampling2

Chapter 4: HW3 Lecture4_1 Check out some videos to prove Aliasing

Lecture4_3 D to A Ch4References Videos and Article