

MUS 470/470L Take Home Midterm Exam

Fall 2018

Due date: Tuesday, October 23.

1. Write a one page summary of what it would take you to implement a first order ambisonics encoder and decoder. Refer to any online articles that you find useful. Focus on outline of the implementation, not the theory.
2. Explain what first order ambisonics has to do with your first project assignment in this class.
3. Find the coefficients of a cubic spline

$$g(t) = a_0 + a_1t + a_2t^2 + a_3t^3 + b_1(t-1)_+^3 + b_2(t-2)_+^3 + b_3(t-3)_+^3,$$

so that $g(0) = 1$, $g(1) = 0$, $g(2) = -1$, $g(3) = 0$, $g(4) = 1$, $g''(0) = g''(4) = 0$.