

GEORGIA INSTITUTE OF TECHNOLOGY
School of Electrical and Computer Engineering

Course EE 6416

Multidimensional Digital Signal Processing

Assigned: October 23, 1998

Due: October 30, 1998

Due (video): November 13, 1998

Problem Set #5

Reading: Read Sections 3.5 in the notes. Also read Sections 3.1 and 3.2 in the chapters copied from Dudgeon and Mersereau.

Problem 5.1: Work problem 3.19 in the notes.

Problem 5.2: Work problem 3.20 in the notes.

Problem 5.3: Work problem 3.23 in the notes.

Problem 5.4: Work problem 3.24 in the notes. The formula for the DST should be

$$X_s[k] = \sum_{n=0}^{N-1} 2x[n] \sin\left(\frac{\pi k}{2N}(2n+1)\right)$$

Problem 5.5: Work problem 3.25 in the notes.