

Exploring Spectral Analysis: PSET 5

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Abstract

This is the paper's abstract . . .

1 Introduction

Introduction

Outline The remainder of this article is organized as follows. Section 2 introduces the implications of sampling and aliasing. Our new and exciting results are described in Section 3. Finally, Section 4 gives the conclusions.

2 Nyquist Sampling

Nyquist sampling follows the theorem that for a given signal $f(x)$ composed of frequencies ω , $f(x)$ can be recovered using a sampling rate of $\frac{1}{\Delta x} \geq 2 \times \omega_{\max}$

3 Results

In this section we describe the results.

4 Conclusions

We worked hard, and achieved very little.

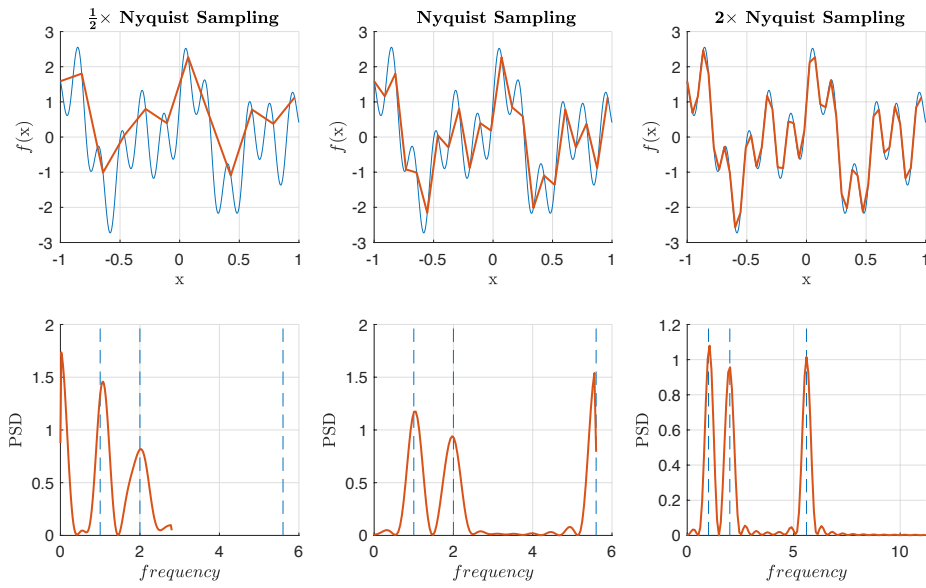


Figure 1: Sampling (in red) of the signal $f(x) = \cos(2\pi \times x) + \sin(2\pi \times 2x) + \sin(2\pi \times 5.6x)$ (in blue) at various sampling rates, where “Nyquist Sampling” is defined as a sampling rate of $\frac{1}{\Delta x} = 2 \times 5.6$.