

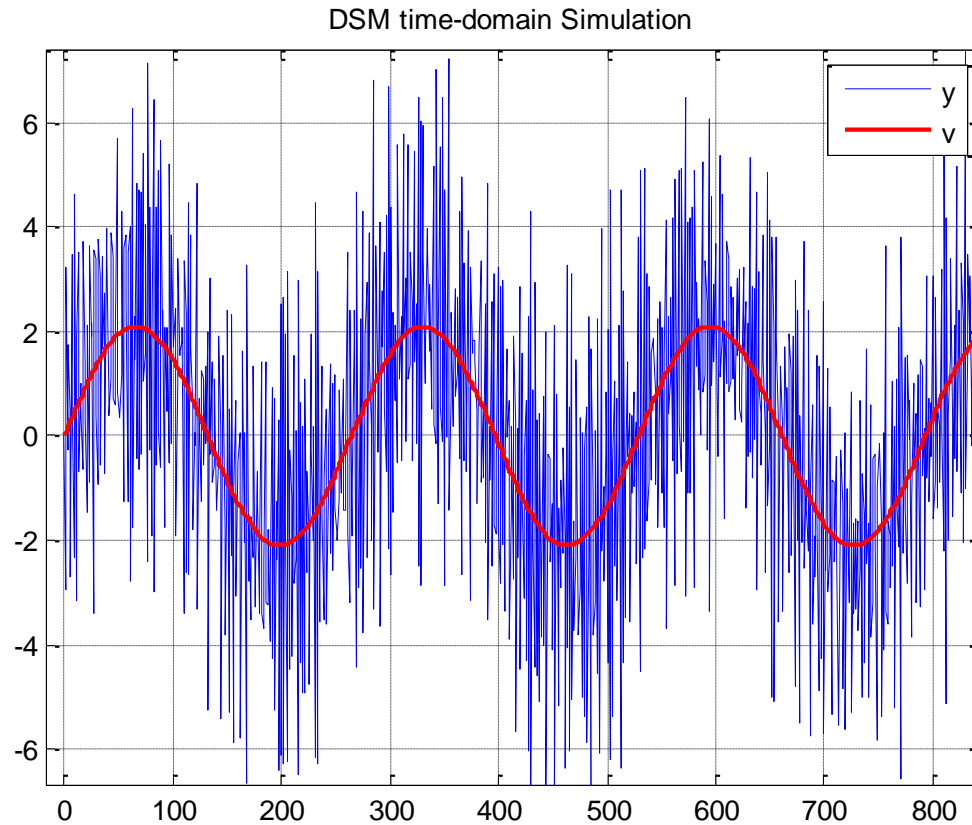
ECE 697 Delta-Sigma Converters Design

Lecture#13 Slides

Vishal Saxena

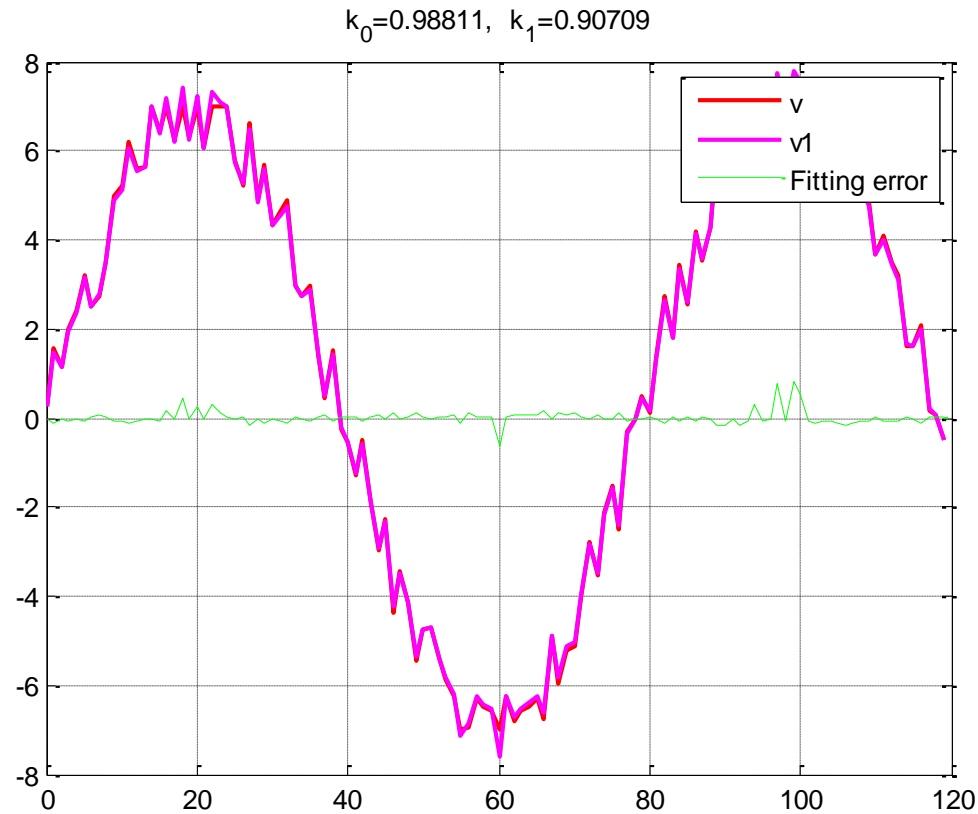
(vishalsaxena@u.boisestate.edu)

Accumulated Noise at the Quantizer Input



File:Third_Order_DSM_1.m

Describing Function Analysis: Curve Fitting

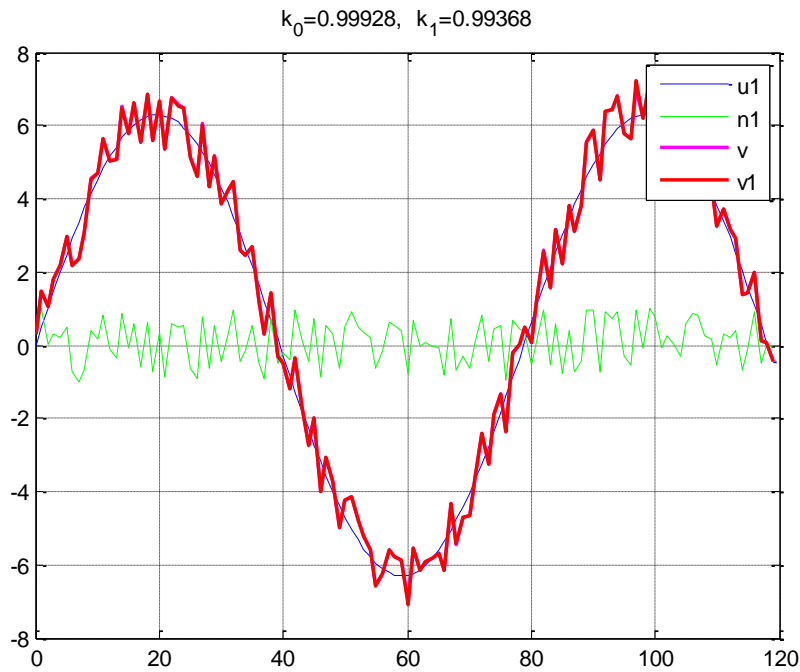


File: Describing_Function_Analysis.m

Describing Function Analysis

Amplitude = 0.9 FS

$k_0 \approx 1, k_1 \approx 1.$

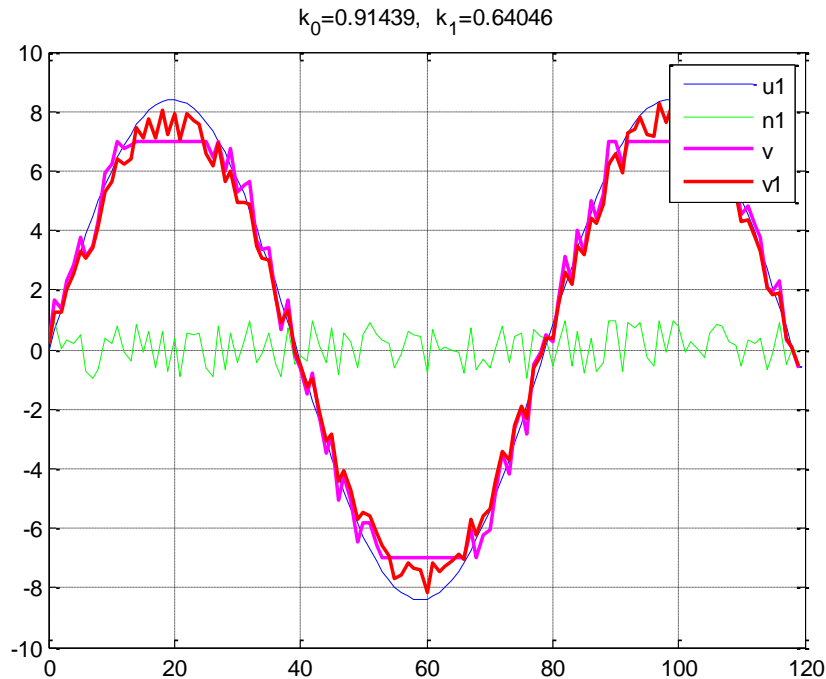


File: Describing_Function_Analysis.m

Describing Function Analysis contd.

Amplitude = 1.2 FS

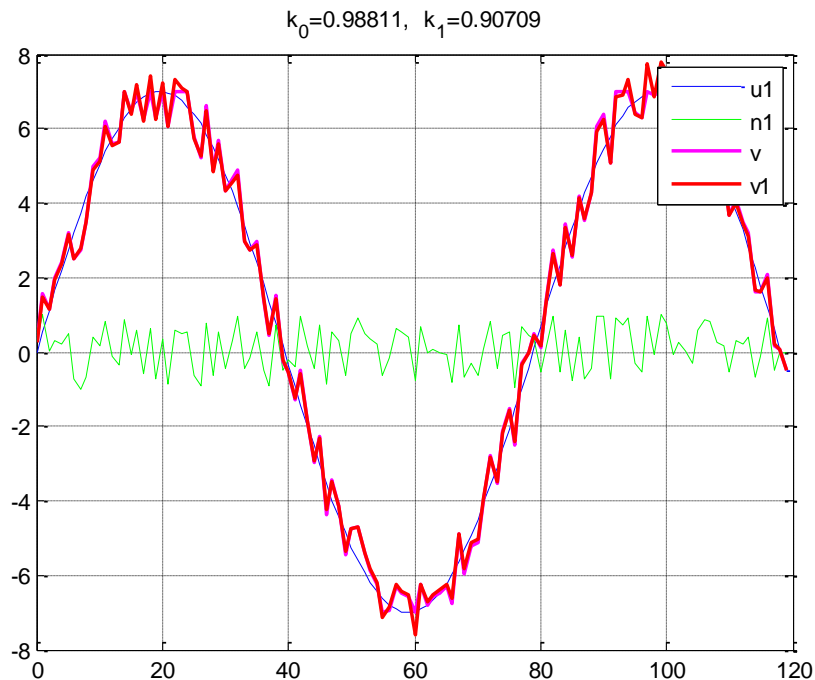
$k_0 = 0.91$, $k_1 = 0.64$.



File: Describing_Function_Analysis.m

Describing Function Analysis contd.

- Amplitude = 1.5 FS
- $k_0 = 0.78, k_1 = 0.44.$

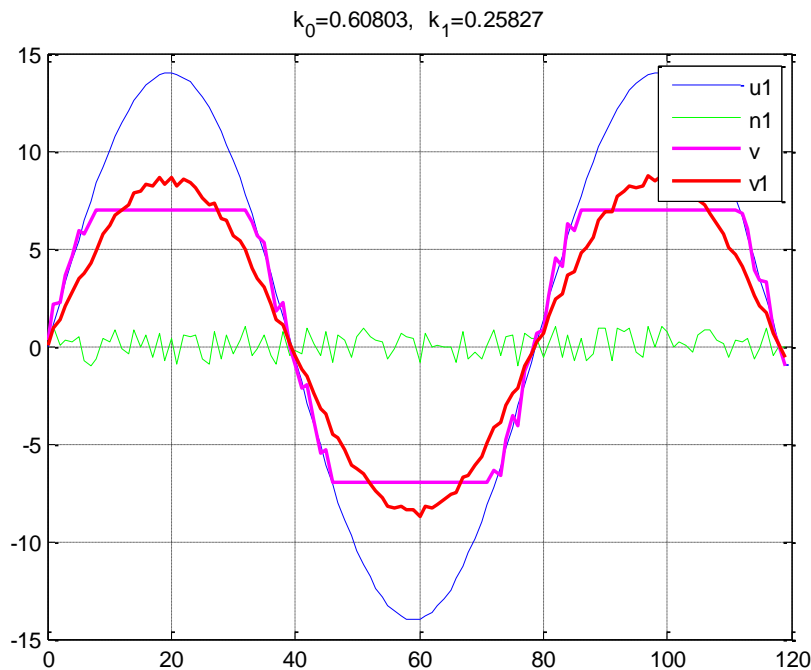


File: Describing_Function_Analysis.m

Describing Function Analysis contd.

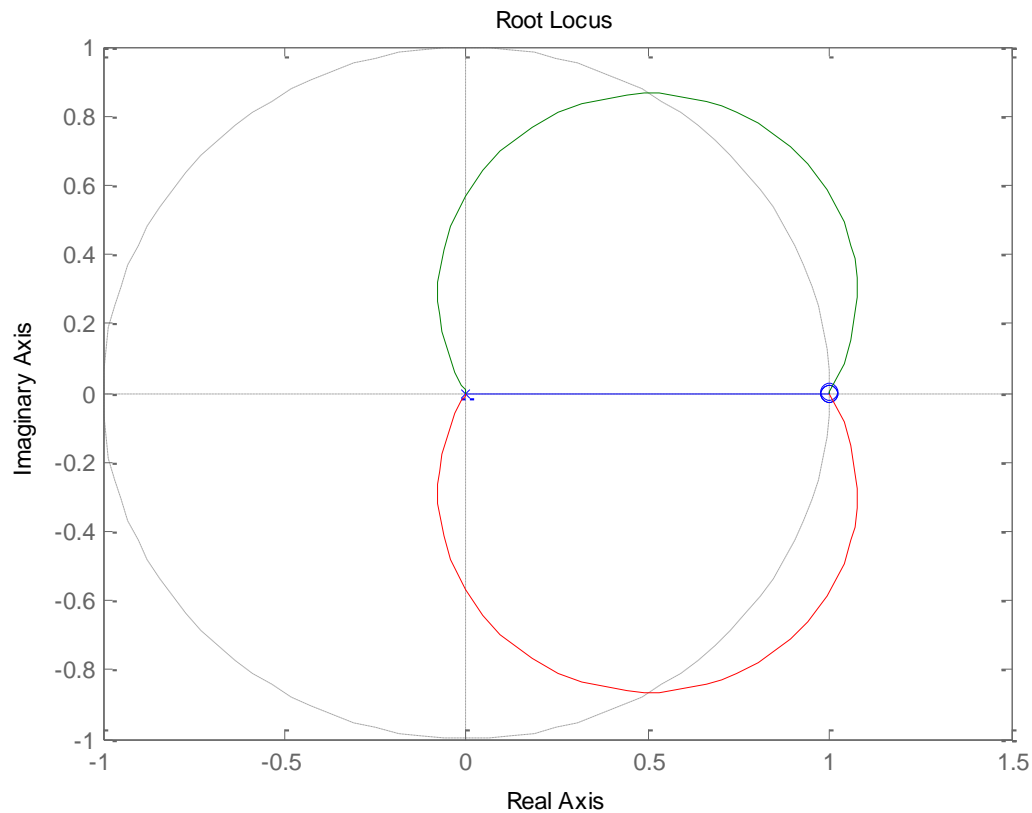
Amplitude = 1.5 FS

$k_0 = 0.61$, $k_1 = 0.26$.



File: Describing_Function_Analysis.m

3rd-Order DSM: NTF Root Locus



File: Third_Order_DSM_Root_Locus.m