

998-42-19

John J Benedetto* (jjb@math.umd.edu), Department of Mathematics, University of Maryland, College Park, MD 20742, **Alexander M Powell** (apowell@math.princeton.edu), Department of Mathematics, Princeton University, Princeton, NJ, and **Ozgur Yilmaz**, Department of Mathematics, University of Maryland, College Park, MD. *Finite frame sigma-delta quantization*. Preliminary report.

It is shown that sigma-delta quantization algorithms can be used to quantize finite frame expansions for Euclidean space. Error estimates are derived for various quantized frame expansions; and, in particular, it is proven that finite frame sigma-delta quantizers outperform the standard pulse code modulation schemes. (Received December 22, 2003)