

1030-42-252

Bernhard G Bodmann* (bgb@math.uh.edu), Department of Mathematics, 651 Philip G Hoffman Hall, University of Houston, Houston, TX 77204. *Cyclic frames, burst erasures and statistics.*

This talk is concerned with the linear, redundant encoding of vectors using frames for the purpose of loss-insensitive data transmission. Our specific goal is to minimize the mean-square reconstruction error for cyclic burst erasures with known burst-length statistics. For cyclic frames, this problem is reduced to a discrete optimization problem. We provide an upper and lower bound for the mean-square error and discuss a family of frames for which both bounds coincide while the upper bound is minimized. (Received August 04, 2007)