Lossy Source Coding of Oversampled Data

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Abstract—Issues arising in dense sensor networks have spurred interest in determining the efficiency of various lossy source coding methods applied to the samples of a continuous-time stationary random process when the sampling rate is asymptotically large. This paper compares and contrasts results on several of these methods. One such method is a fixed scalar quantizer followed by an ideal entropy-rate coder that is optimized for the sampling rate. Another is a dithered quantization scheme, like that of Cvetkovic and Daubechies. Yet another is ideal lossy block coding.