1009-94-208   **C. Sinan Güntürk*** (`gunturk@cims.nyu.edu`), Courant Institute of Mathematical Sciences, 251 Mercer Street, New York, NY 10012. *Coarse quantization strategies for tree-structured data and applications to digital halftoning.* Preliminary report.

We introduce a general class of methods for rounding real-valued, tree-structured data under the constraint that each parent node value is the sum of the values of its children (satisfied by both the original and the quantized data). We apply the method to digital halftoning of gray scale images and analyze its approximation properties. Time permitting, a hybrid version of the method that employs error diffusion will also be discussed. (Received August 16, 2005)