1038-94-288 **Christine A. Kelley*** (`ckelley@math.ohio-state.edu`), Department of Mathematics, University of Nebraska-Lincoln, Lincoln, NE 68588, and **Deepak Sridhara**, Seagate Technology, Pittsburgh, PA 15222. *Pseudocodeword weights and the parity-check matrix redundancy of linear codes.*

Unlike the minimum distance $d_{min}$ which is unique to a code regardless of representation, the set of pseudocodewords, and therefore also the minimum pseudocodeword weight $w_{min}$, depends on the graph representation used in decoding as well as on the communication channel. This means that a judicious choice of parity-check matrix is crucial for realizing the best potential of any graph-based code. One parameter of interest is the pseudoweight redundancy, which is the smallest number of rows needed for a parity-check matrix to have $d_{min} = w_{min}$. In this talk, we review this notion and present some bounds on the pseudoweight redundancy for a variety of codes. (Received February 12, 2008)