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**Debra Boutin\*** (dboutin@hamilton.edu). *The Cost of 2-Distinguishing.*

A graph is said to be *2-distinguishable* if there is a labeling of the vertices with two labels so that only the trivial automorphism preserves the vertex labels. Define the *cost of 2-distinguishing*  $G$ , denoted  $\rho(G)$ , to be the minimum size of a label class in such a labeling. A *determining set* of a graph is a subset of its vertices with the property that each automorphism of the graph is uniquely determined by its action on the set; its minimum size is denoted  $\text{Det}(G)$ . Determining sets can be an elegant first approximation for a label class of a 2-distinguishing labeling. Using these, this talk will examine a few classes of graphs for which  $\rho(G) \in \{\text{Det}(G), \text{Det}(G) + 1\}$ . These classes contain some Kneser graphs, hypercubes, and other Cartesian powers. (Received January 13, 2012)