1092-94-355 **Elizabeth Weaver*** (elizweav@ius.edu) and **Heide Gluesing-Luerssen**. *Recovering the Factors of a Product Trellis.*

Trellises are graphical representations of codes that are useful when decoding with the Viterbi algorithm, a graph search process similar to Dijkstra's algorithm. While there are many ways of creating such graphs, we will focus on the product construction. This method combines smaller trellises representing subcodes of the desired code by using a direct product to obtain a trellis representing the desired code itself. In this talk, we will present an algorithm which recovers the factors of a given product trellis and show that while such a set of factors may not be unique, all such sets will generate isomorphic trellises. (Received August 13, 2013)