1073-13-90   **Juan C. Migliore*** (`migliore.1@nd.edu`), Dept of Mathematics, University of Notre Dame, Notre Dame, IN 46556. *Unimodality (or not) of pure O-sequences.*

A pure O-sequence is the vector counting the monomials, in each degree, of a pure monomial order ideal. Alternatively, it is the Hilbert function of a level artinian monomial algebra. These arise in many different contexts. It has long been known that pure O-sequences are not necessarily unimodal. However, on one hand we can ask "how non-unimodal can they be," and on the other hand we can ask for situations where they *are* necessarily unimodal. In this talk we present results of both types, and give some idea about the proofs. Some results are due to Boij, Migliore, Miró-Roig, Nagel and Zanello, while others are due to Bernadette Boyle. (Received July 27, 2011)

1