1090-13-386 **Silvia Saccon*** (ssaccon@math.arizona.edu), Department of Mathematics, The University of Arizona, Tucson, AZ 85721. *Ranks and decompositions of modules.*

Given a commutative ring R and a class $\mathcal{C}$ of R-modules closed under isomorphism, finite direct sums, and direct summands, one can ask whether every module in $\mathcal{C}$ decomposes uniquely as a direct sum of indecomposable modules in $\mathcal{C}$. We restrict our attention to one-dimensional Noetherian local rings $(R, \mathfrak{m})$ whose $\mathfrak{m}$-adic completion is reduced, and we study the direct-sum behavior of maximal Cohen-Macaulay modules over R. Such behavior is captured by the monoid of isomorphism classes of maximal Cohen-Macaulay modules (together with $[0_R]$) with operation induced by the direct sum. To understand this monoid, it suffices to determine which ranks occur for indecomposable modules. (The *rank* of an R-module M is the tuple consisting of the vector-space dimensions of M_P over R_P, where P ranges over the minimal prime ideals of R.) While it is known which ranks occur for indecomposable modules when the ring has finite Cohen-Macaulay type, the question is still open when the ring has infinite Cohen-Macaulay type. In this talk, we will discuss progress made in this direction, and describe the direct-sum behavior of modules when the ring has *infinite* Cohen-Macaulay type. (Received March 05, 2013)