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*Number of Prime Factors with a Given Multiplicity*

In this talk, we study a variation of the  $\omega$  function. More precisely, given the positive integer  $k$ , let  $\omega_k(n)$  denote the number of distinct prime factors of  $n$  which occur with multiplicity  $k$ . We will prove that  $\omega_1(n)$  has the normal order  $\log \log n$ , while  $\omega_k(n)$  does not have normal order. This is joint work with Ertan Elma.