

Families of congruences for partition functions

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The values of the partition function, as well as those of other partition functions which can be described combinatorially by eta-quotients, are known to be coefficients of weakly holomorphic modular forms. By finding congruences between the latter and holomorphic modular forms, K. Ono (in the case of the partition function) and later S. Treneer (in a more general situation) were able to prove, for each prime m , the existence of infinite families of arithmetic progressions over which the aforementioned values vanish modulo m . In this talk we will discuss how to obtain explicit (members of these) families for different types of partition functions; particularly, for the overpartition function. This is joint work with Nathan Ryan and Adrian Barquero-Sanchez, among others.

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