1016-11-83 **Michael J Larsen*** (larsen@math.indiana.edu), Department of Mathematics, Indiana University, Bloomington, IN 47405, and **Alexander Lubotzky**, Institute of Mathematics, Hebrew University, Jerusalem, 91904. *Representation Zeta Functions.*

If G is a group which has finitely many irreducible representations of each degree, we can encode the number of such representations into a "zeta function" of G. I will discuss the ways in which such series do and do not behave like honest zeta functions and explain what is known about their analytic properties, with emphasis on the case that G is an arithmetic group. (Received February 02, 2006)