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Krishnaswami Alladi* (alladi@math.ufl.edu), Department of Mathematics, University of Florida, Gainesville, FL 32606. *Series and polynomial representations for weighted Rogers-Ramanujan partitions and products modulo 6.*

Infinite series representations are now obtained for certain weighted Rogers-Ramanujan partitions which we recently showed are related to partitions into parts not congruent to 0, i or $-i \pmod{6}$, for $i=1,2,3$. We also show that our series can be transformed into series previously obtained by Bressoud which connect partitions into parts not congruent to 0, i , or $-i \pmod{6}$ to partitions with prescribed bounds on their successive ranks. Finally we obtain finite or polynomial versions of our identities which tend to the infinite series identities when certain parameters tend to infinity. This is joint work with Alexander Berkovich. (Received March 01, 2006)