1085-11-79 **Krishnaswami Alladi*** (alladik@ufl.edu), Department of Mathematics, 358 Little Hall, University of Florida, Gainesville, FL 32611. *Partitions with non-repeating odd parts and q-hypergeometric identities.*

By considering 2-modular Ferrers graphs and a Durfee square analysis of them, we obtain a two parameter key identity in which the product term is the generating function of partitions where the odd parts do not repeat. This two variable identity leads to a unified treatment of several important q-hypergeometric identities and also provides extensions of some of them. These include the famous Lebesgue identity and its special case the Gauss triangular series theorem, and the Rogers-Fine identity. The approach also yields an analytic representation for a variation of the deep theorem of Göllnitz in the form of a three parameter identity. (Received August 31, 2012)