

1102-05-50

**William J Keith\*** ([wjkeith@mtu.edu](mailto:wjkeith@mtu.edu)). *Colored partitions with restrictions on the colors appearing.*

Overpartitions, which have attracted much study and have many useful features, can be considered 2-colored partitions in which only 1 color may be used per size of part. The natural generalization is to  $k$  colors, of which  $j$  colors may appear per size of part. We consider such partitions and find many pleasing results, such as congruences, connections to divisor sums, and a relationship with the hooklength formula. A wealth of interesting questions present themselves. (Received July 10, 2014)