Title: An Introduction to Combinatorial Matrix Theory mod k

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Abstract: The combinatorial theory of matrices with real, nonnegative, integral, $(0,1)$ entries is well established and ongoing in its developments. There does not seem to have been a concerted effort to develop a combinatorial theory of matrices with entries from the integers mod k using mod k arithmetic, $(Z_k, +_k)$ where $Z_k = \{0, 1, \ldots, k-1\}$. In this talk we shall give a introduction to some recent work on this topic with Seth Meyer.