1107-05-260 **Eric H. Kuo*** (ehkuo@alum.mit.edu), 1400 Worcester Road Apt. 7407, Framingham, MA 01702.

Condensation Approach to Enumerating Cyclically Symmetric Plane Partitions.

The number of cyclically symmetric plane partitions that fit in an $n \times n \times n$ box is equal to the number of perfect matchings of a particular bipartite graph G_n. With the aid of a theorem that generalizes graphical condensation, we can express this number of perfect matchings of G_n as a determinant of a matrix M_n whose entries are the numbers of perfect matchings of subgraphs of G_n. The entries in M_n can be computed recursively, and determinants of submatrices of M_n also have a combinatorial interpretation. (Received January 16, 2015)